DEVIL CANYON PROJECT RELICENSING
FERC PROJECT NO. 14797

INITIAL STUDY/
DRAFT NEGATIVE DECLARATION

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State of California
California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES
Hydropower License Planning and Compliance Office

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COMMONLY USED TERMS, ACRONYMS & ABBREVIATIONS

§	Section
AB	Assembly Bill
ADA	Americans with Disabilities Act
AF	acre-feet
AIS	aquatic invasive species
APE	Area of Potential Effects
AQMP	Air Quality Management Plan
BGEPA	Bald and Golden Eagle Protection Act
BLM	U.S. Department of the Interior, Bureau of Land Management
BMP	best management practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CALNAGPRA	California Native American Graves Protection and Repatriation Act of 2001
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
Cfs	cubic feet per second
CFHC	California Health and Safety Code
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CWA	Clean Water Act
DCPD	Devil Canyon Power Development

DLA	Draft License Application
DOC	California Department of Conservation
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
DPS	Distinct Population Segment
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EA	Environmental Assessment
EAP	Emergency Action Plan
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
existing DCPD boundary	The existing delineated boundary as approved by FERC in the existing license
FERC	Federal Energy Regulatory Commission
FGC	California Fish and Game Code
FLA	Final Application for a New License Major Project – Existing Dam for the Devil Canyon Project, FERC Project No. 14797
FMMP	Farmland Mapping and Monitoring Program
FP	Fully Protected
FPA	Federal Power Act
FSS	Forest Service Sensitive
GGERP	Greenhouse Gas Emissions Reduction Plan
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
HCP	Habitat Conservation Plan
HDR	HDR Engineering, Inc.

HPMP	Historic Properties Management Plan
IS/ND	Initial Study/Negative Declaration
ITA	Indian Trust Assets
IVMP	Integrated Vegetation Management Plan
kW	kilowatt
LEO	Uniformed Law Enforcement Officer
LFR	Las Flores Ranch
LMP	Land Use Management Plan
LTS	localized significance threshold
$MMTCO_2e$	million metric tons of carbon dioxide equivalent
Morongo	Morongo Band of Mission Indians
MRZ	mineral resource zone
MWA	Mojave Water Agency
MWD	Metropolitan Water District of Southern California
MWH/year	Megawatt-hours per year
NAAQS	national ambient air quality standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NEHRP	National Earthquake Hazards Reduction Program
NFS	National Forest System
NHPA	National Historic Preservation Act
NMWSE	normal maximum water surface elevation
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
O&M	operations and maintenance

OHV	Off Highway Vehicle
PAD	Pre-Application Document
PCT	Pacific Crest National Scenic Trail
PCTA	Pacific Crest Trail Association
PFC	Properly Functioning Condition
PM	particulate matter
$PM_{2.5}$	particles less than 2.5 micrometers in diameter
PM_{10}	particles less than 10 micrometers in diameter
PM&E measures or PM&Es	Protection, Mitigation, and Enhancement measures
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code
proposed Project	Continued operation of the DCPD, modification of the existing DCPD boundary, addition of 1 existing reservoir gage (USGS gage no. 10260790) and 10 existing roads as Project facilities under the new license, and 12 proposed environmental measures.
proposed Project boundary	The boundary of the proposed Project as proposed by DWR, pending approval from FERC in the new license. Includes all existing Project facilities, but adjusts the boundary to: (1) add lands to the existing DCPD boundary that are currently utilized with a preponderance of use related to Project O&M, and (2) remove lands from the existing DCPD boundary that do not have Project facilities and are not used or necessary for Project O&M. Also includes proposed changes to the existing DCPD boundary around the Project reservoir and impoundments from surveyed coordinates to a contour located above the NMWSE to reflect FERC's preferred method of defining a project's boundary and to more accurately represent lands required for Project O&M around the Project reservoir.
RCRS	Resources Conservation and Recovery Act

Relicensing Participants	Federal and State agencies, local governments, Native American tribes, non-governmental organizations, businesses, and unaffiliated members of the public that have participated in the Devil Canyon Project relicensing
RMP	Recreation Management Plan
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
San Manuel	San Manuel Band of Mission Indians
SB	Senate Bill
SBNF	San Bernardino National Forest
SCAQMD	South Coast Air Quality Management District
SCC	Species of Special Concern
SFD	Southern Field Division
SGMA	Sustainable Groundwater Management Act
SHPO	State Historic Preservation Officer
SIO	Scenic Integrity Objectives
SIP	State implementation plan
SRA	State Recreation Area
Stantec	Stantec Consulting Services Inc.
SVP	Society of Vertebrate Paleontology
SWC	State Water Contractors
SWP	State Water Project
SWPPP	Stormwater Pollution and Prevention Program
SWRCB	State Water Resources Control Board
TAC	toxic air contaminates
TLP	Traditional Licensing Process
TCP	Traditional Cultural Properties
TCR	Tribal Cultural Resource
U.S.	United States

UBC	Uniform Building Code
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
WQC	Water Quality Certification
WQO	water quality objectives

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1.0 INTRODUCTION

1.1 OVERVIEW

The California Department of Water Resources (DWR) owns and operates the Devil Canyon Power Development (DCPD), an existing power recovery project that includes hydroelectric facilities, access roads, maintenance areas, recreation areas, rights-of-way, and other appurtenant facilities. DWR operates the DCPD under an existing Federal Energy Regulatory Commission (FERC) license that expires on January 31, 2022. DWR is undergoing the Traditional Licensing Process (TLP) to renew its license with FERC pursuant to the Federal Power Act (FPA).

On November 20, 2019, DWR filed with FERC its *Final Application for a New License Major Project – Existing Dam for the Devil Canyon Project, FERC Project No. 14797* (FLA). DWR submitted additional filings to FERC on January 14, July 9, July 15, and September 25, 2020 – updating and amending the FLA.

The FPA authorizes FERC to regulate non-federal hydropower projects. As such, FERC is the lead federal agency for the relicensing of DWR's DCPD. Prior to the issuance of a new license, and pursuant to the FPA and the implementing regulations for the TLP at Title 18 of the Code of Federal Regulations (CFR) Part 4, Subparts D-H and, as applicable, Part 16, FERC will comply with the National Environmental Policy Act (NEPA) and will prepare and issue an Environmental Assessment (EA).[1]

Following the completion of FERC's relicensing proceeding, FERC will decide on the issuance of a new license. When FERC provides to DWR the *Order Issuing New License*, DWR will have 30 days to request a rehearing or reject the new license. The new license will become effective on the date identified in the order, which is usually the first day of the month in which the order is issued. Beginning on the effective date, DWR will comply with the new license to continue operations and maintenance (O&M) of the DCPD facilities.

DWR's proposed Project, for the purpose of the California Environmental Quality Act (CEQA), is the continued operation of the DCPD, including the hydroelectric, recreation, and appurtenant facilities, in accordance with DWR's proposed terms and conditions for inclusion in a new FERC license, as described in DWR's FLA, as amended that was filed with FERC. The proposed Project includes a change in the existing DCPD boundary, resulting in an overall reduction in land area and still encompasses all existing facilities necessary for the O&M of the DCPD; the administrative designation of Primary Project Roads currently maintained by DWR that are used exclusively for accessing the DCPD facilities; the administrative addition of a lake level gage; and implementation of the anticipated, license-stipulated Protection, Mitigation, and Enhancement measures (PM&E measures or PM&Es), including upgrades to existing developed recreation facilities.

[1] In its April 16, 2020, Notice of Application Accepted for Filing and Soliciting Motions to Intervene and Protests, FERC expressed its intent to issue an EA for the relicensing.

This document analyzes the potential for significant impacts to a range of environmental resources under DWR's proposed Project and assesses impacts from proposed Project-related changes to baseline conditions (CEQA Guidelines Section [§] 15125). Section 1.0 provides an overview of FERC's relicensing process, DWR's discretionary action to operate the proposed Project under the required terms and conditions of a new FERC license, and the CEQA process. Section 2.0 describes the proposed Project's objectives, including the purpose of and need for the DCPD and its continued operation under DWR's proposed Project; location of the DCPD; existing and proposed O&M activities; the proposed activities' implementation schedule; a regulatory compliance overview; and the scope of this Initial Study and Draft Negative Declaration (IS/ND). Section 3.0 of this document presents the completed environmental checklist form found in Appendix G of the CEQA Guidelines and analyzes potential impacts of the proposed Project implementation. Section 4.0 contains a list of the preparers of this document, and Section 5.0 lists the references cited in this IS/ND.

1.1.1 Relicensing Process Overview

DWR completed the pre-filing requirements of the TLP and, as noted above, prepared and filed an FLA–and subsequent amendment to the FLA–with FERC pursuant to 18 CFR, Part 4, Subparts D-H and, as applicable, Part 16. Under 18 CFR § 16.9 (b), DWR was required to file its FLA at least 24 months before the expiration of the existing license (i.e., no later than January 31, 2020). Information related to DWR's proposed Project and filings completed throughout the process were made available to the public on the relicensing website for the DCPD (http://devil-canyon-project-relicensing.com/) and in the DCPD docket on FERC's online eLibrary (https://www.ferc.gov/ferc-online/elibrary).

1.1.1.1 Relicensing Process Steps

Below is a description of the DCPD relicensing process completed to date, as well as the remaining process steps that have yet to be completed.

- On August 1, 2016, DWR filed with FERC its Pre-Application Document (PAD) and Notice of Intent to File an Application for a New License for the DCPD and requested FERC's approval to use the TLP to relicense the DCPD. The PAD contains:
    - A synopsis of the existing, relevant, and reasonably available information pertinent to the DCPD relicensing at that time when the PAD was filed
    - A detailed description of the DCPD and DWR's proposed Project at the time the PAD was filed
    - An explanation of the relicensing process and the schedule to be followed
    - DWR's suggested studies and investigations to fill information gaps

- On September 30, 2016, FERC issued the Notice of Intent to File License Application, Filing of Pre-Application Document, and Approving the Use of the Traditional Licensing Process.

- DWR invited federal and State agencies, local governments, Native American Tribal representatives, non-government organizations, businesses, and unaffiliated members of the public (collectively Relicensing Participants) to participate in a site visit on November 2, 2016, and a joint agency and public meeting on November 3, 2016. The Relicensing Participants that participated in the site visit and meeting included: the United States (U.S.) Department of Agriculture, Forest Service (USFS); the Metropolitan Water District of Southern California (MWD); the National Park Service (NPS); the California Department of Parks and Recreation (DPR); the California Trout, Inc.; the San Manuel Band of Mission Indians (San Manuel); and the State Water Resources Control Board (SWRCB). DWR discussed the following at the joint agency and public meeting with the Relicensing Participants:

    - An overview of DWR's proposed TLP process for relicensing the DCPD

    - Studies to be conducted by DWR needed to augment existing, relevant, and reasonably available information about the resources potentially affected by the DCPD

    - Issues to be addressed in DWR's license application

- On January 30, 2017, Relicensing Participants provided DWR with written comments identifying their recommendations for studies to be performed or information to be provided by DWR in the license application.

- Studies were conducted between January 31, 2017, and March 22, 2019. Additionally, DWR conducted a desktop study of the West Fork Mojave River between April 16, 2020 and July 15, 2020.

- On April 10, 2019, DWR provided Relicensing Participants with a copy of the Draft License Application (DLA) for a 90-day review. In addition, a draft confidential privileged Historic Properties Management Plan (HPMP)[2] was distributed to the following for review along with the DLA: FERC, DPR, the State Historic Preservation Officer (SHPO), San Bernardino National Forest (SBNF) under the USFS, and Native American tribes. DWR requested comments on the draft HPMP by July 26, 2019, as part of a formal request for review under Section 106 of the National Historic Preservation Act (NHPA). Additionally, a confidential privileged Tribal Resources Study Report[3] was prepared and reviewed by those parties during the consultation process and concurrence from

[2] The HPMP is privileged and confidential and has been filed as privileged and confidential with FERC.
[3] The Tribal Resources Report is considered to be privileged and confidential. This report has been filed as privileged and confidential with FERC.

the SHPO was received on May 1, 2020. Both documents were filed with FERC on June 24, 2020. On September 25, 2020, DWR filed with FERC a final HPMP.

- Other Section 106 consultation activities included the following:
  - DWR requested a list of tribes and individuals potentially interested in participating in the relicensing from the California Native American Heritage Commission (NAHC) on June 1, 2015. The NAHC also performed a search of their Sacred Lands Files for sensitive resources potentially located within the Area of Potential Effects (APE). The NAHC provided DWR with a contact list on July 17, 2015 and responded that a search of the Sacred Lands Files did not contain any sensitive resources within the APE.
  - DWR requested another search of the Sacred Lands Files and an updated contact list from the NAHC on May 10, 2019. The NAHC provided an updated contact list on May 29, 2019 and responded that the second search of the Sacred Lands Files provided a positive result. Consultation was conducted with the NAHC, participating tribes identified from the NAHC contact list and by FERC for the proposed Project APE. DWR consulted with federally recognized tribes including San Manuel and the Morongo Band of Mission Indians (Morongo), who did not identify any tribal cultural resources within the APE or information to address the positive result of the NAHC's Sacred Lands Files search at the time. Consultation with non-federally recognized tribes also did not reveal any tribal cultural resources within the APE. DWR again requested a contact list from the NAHC on August 18, 2020, for the purposes of comparing against DWR's list of tribes that requested consultation under Assembly Bill (AB) 52 (Ch. 532, Stats. of 2014). Between September 25, 2020 and October 9, 2020, DWR conducted additional outreach to tribes that did not submit a request for AB 52 notification.
  - The 2019 NAHC contact list included one newly identified tribe, the Chemehuevi Indian Reservation, in addition to those included on the 2015 list, and three new contacts to replace those previously listed for the Serrano Nation of Mission Indians and the San Fernando Band of Mission Indians. DWR consulted with the newly identified contacts and each responded that they declined to participate or be interviewed as part of the Tribal Resources Study.
  - DWR held a Section 106 kick-off meeting in 2017 with participating tribes and agencies to discuss the relicensing process, the schedule and Section 106 process. Between June 2019 and February 2020, agencies and tribes from the NAHC list were invited to four Section 106 consultation meetings to provide updates on the schedule and status of the proposed Project relicensing. Participants at these consultation meetings included staff from: DWR, Stantec Consulting Services Inc. (Stantec), HDR Engineering, Inc. (HDR), FERC, DPR, SBNF, SHPO, Morongo, and San Manuel. DWR has continued to conduct outreach and consultation with other Native American

tribes and individuals who did not participate in Section 106 meetings. They have remained included in mailings and distributions.

- DWR determined that the APE encompasses the lands and facilities of the proposed Project boundary including the DCPD dams, Cedar Springs Dam spillway, Devil Canyon Powerplant, recreation areas, and other appurtenant facilities where Project-related activities have the potential to impact historic properties. The SHPO agreed with the proposed APE in a letter dated September 21, 2017.
- Following the SHPO's agreement on the APE in 2017, DWR identified Primary Project Roads for inclusion in the new license that necessitated the need to revise the APE. DWR transmitted the revised APE to participating tribes and agencies for a 30-day review and comment period beginning on May 31, 2019. San Manuel commented on June 28, 2019 that the tribe had no objections to the proposed revised APE changes. The revised APE was presented and discussed during an NHPA Section 106 consultation meeting held on July 12, 2019 in Loma Linda, California, where attendees from San Manuel, Morongo, SBNF, and DPR agreed to proceed with the revised APE. DWR requested the SHPO's review of the revised APE in a July 30, 2019 letter. The SHPO provided its agreement of the revised APE in a September 13, 2019 letter and stated that the revised APE was "sufficient for the identification of historic properties for the undertaking."

- By July 8, 2019, Relicensing Participants provided written comments on the DLA within 90 days of the distribution.
- On August 22, 2019, DWR met with Relicensing Participants to discuss studies and to resolve any differences between DWR's proposed measures in the DLA and those measures proposed by agencies.
- DWR filed the FLA with FERC on November 20, 2019.
- On December 3, 2019, FERC issued a Notice of Application Tendered for Filing with the Commission and Soliciting Additional Study Requests and Establishing Procedural Schedule for Relicensing.
- On April 16, 2020, FERC issued a Notice of Application Accepted for Filing and Soliciting Motions to Intervene and Protests.
- On September 25, 2020, DWR filed the HPMP with FERC.
- On October 22, 2020, DWR mailed out Notice of Opportunity for Consultation under AB 52 letters to tribes that requested notification. The list of tribes included the San Manuel Band of Mission Indians (San Manuel), the Morongo Band of Mission Indians (Morongo), the Serrano Nation of Mission Indians, and the Gabrieleño/Tongva San Gabriel Band of Mission Indians. Refer to Appendix A for

responses to DWR's October 22, 2020 letters requesting consultation on the proposed Project.

The next steps in completing the relicensing and the federal environmental review processes are as follows:

- FERC issued Scoping Document 1 on December 2, 2020. Pending comments received from interested parties, FERC may issue Scoping Document 2.
- Under FERC's regulations, once FERC issues its public notice that DWR's FLA is Ready for Environmental Analysis, DWR will have 60 days to file with FERC either (1) a copy of a Water Quality Certification (WQC) issued by the SWRCB as the State of California certifying agency under Section 401 of the Federal Water Pollution Control Act, also known as the Clean Water Act (CWA) as amended in 1972, (2) a request to the SWRCB for a WQC, or (3) a waiver for a WQC.
- DWR will complete the CEQA process, which concludes with a discretionary decision by DWR on whether to approve the proposed Project on the basis of the prepared CEQA document.
- The SWRCB will either issue a WQC, waive the need for one, or deny a WQC. If the SWRCB issues a WQC, FERC will include all valid section 401 WQC conditions in any new license issued for the proposed Project
- In compliance with NEPA, FERC will conduct an environmental review, and will prepare and issue a final EA.
- FERC will comply with its Section 7 Endangered Species Act (ESA) and Section 106 NHPA requirements and will document its compliance with other federal statutes and regulations as provided for in its implementing regulations under the FPA.
- FERC will issue a new license to DWR, or otherwise dispose of the application.

1.2 CALIFORNIA ENVIRONMENTAL QUALITY ACT

1.2.1 Background

The State of California has enacted a series of statutes and regulations, which are designed to publicly disclose potential environmental impacts that may result from the approval of proposed projects within the State. These statutes and regulations can be found in Public Resources Code (PRC) § 21000 *et seq.*, as well as the Guidelines for Implementation of CEQA contained in Title 14 of the California Code of Regulations (CCR) § 15000 *et seq*. These statutes and regulations are referred to as CEQA and the CEQA Guidelines, respectively. The basic purposes of CEQA include, among other things, informing governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and preventing or lessening such

effects through the use of feasible mitigation measures or project alternatives. The CEQA process also provides an opportunity for the public to participate in the development of environmental documents and identification of mitigation measures.

When an activity or action is determined to be a “project” under CEQA, then a lead agency will initially assess whether that project will result in any significant impacts. If an activity or action is not found to be exempt from CEQA, a proposed project may be evaluated in one of three types of environmental documents: a Negative Declaration; a Mitigated Negative Declaration; or an Environmental Impact Report.

Under CEQA Guidelines, the impacts of a proposed project are evaluated by comparing expected environmental conditions after project implementation to conditions at a point in time, which is referred to as the baseline. This CEQA document analyzes the potential for significant impacts to environmental resources under DWR’s proposed Project and assesses impacts from proposed Project-related changes to baseline conditions and current practices and operations (CEQA Guidelines § 15125). In accordance with CEQA Guidelines, a significant impact on the environment is defined as a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by a proposed project, including but not limited to land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance (CEQA Guidelines § 15382).

The CEQA Guidelines specify that the timeframe in which the environmental review begins "will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant" (14 CCR § 15125[a]). The CEQA Guidelines also state that, while assessing a proposed project's impacts on the environment, the lead agency should "normally limit its examination to the existing physical conditions in the affected area" at the onset of the CEQA analysis (14 CCR § 15126.2). If environmental conditions change or fluctuate over time, then the lead agency may use historical conditions to define the "existing conditions" baseline (14 CCR § 15125[a][1]). The CEQA Guidelines state that existing conditions may be defined "by referencing historic conditions" that are supported by substantial evidence, "where necessary to provide the most accurate picture practically possible of the project's impacts" (14 CCR § 15125[a][1]).

For changes to an existing operation or an existing facility, ongoing activities occurring at the time CEQA review begins are treated as the existing baseline conditions (*Communities for a Better Environment v. South Coast Air Quality Management Dist.* [2010] 48 Cal.4th 310). In such cases, the baseline may reasonably include the facility’s established levels of permitted use that are representative of the facility’s actual operations (*Fairview Neighbors v. County of Ventura* [1990] 70 Cal.App.4th 238).

As described above, DWR’s proposed Project, for the purpose of CEQA analysis, is the continued operation of the DCPD. This includes the hydroelectric, recreation, and appurtenant facilities in accordance with DWR’s proposed terms and conditions for inclusion in the new FERC license. Therefore, the baseline conditions for DWR’s proposed Project include the existing environment and the real conditions “on the

ground" in the proposed Project area during current operations under the existing FERC license. The proposed Project does not include any structural changes to the existing DCPD hydroelectric facilities, but does include an administrative change in the existing DCPD Project boundary, resulting in an overall net reduction in land area under the federal license that still encompasses all existing facilities necessary for the O&M of the DCPD (i.e. proposed Project boundary); the administrative designation of Primary Project Roads currently maintained by DWR that are used exclusively for accessing the DCPD facilities; and implementation of anticipated, license-stipulated PM&E measures, including upgrades to existing recreation facilities.

If FERC or the SWRCB includes in the new license a condition that is not proposed by DWR as part of its proposed Project, DWR will consider whether such a change requires DWR to revise and recirculate this IS/ND or to prepare an Environmental Impact Report, pursuant to CEQA Guidelines § 15073.5. DWR considers its decision on whether to accept the new license to be a "discretionary project" under CEQA (CEQA Guidelines § 15357):

> "Discretionary project" means a project which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity. The key question is whether the public agency can use its subjective judgment to decide whether and how to carry out or approve a project.

The lead agency has primary responsibility for completing CEQA review for a proposed project. CEQA defines "lead agency" as "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment" (PRC § 21067). As such, DWR, as a State of California public agency and the lead agency for the proposed Project, has initiated the CEQA process to inform its discretionary decision on whether to accept the new FERC license, or request rehearing on a new license when issued or otherwise challenge its issuance, or reject the new license.

Based on this IS/ND, DWR has determined that the potential environmental impacts associated with implementation of the proposed Project would be less than significant and, therefore, would not require the preparation of an Environmental Impact Report; rather an IS/ND is the appropriate CEQA disclosure document.

Appendix G of the CEQA Guidelines contains an Environmental Checklist Form which indicates the chosen format of environmental review, as well as a sample list of potential environmental impacts that may be associated with specific resource areas. This checklist, once completed, serves as the basis of the Initial Study for the environmental analysis contained in this IS/ND.

In accordance with the CEQA Guidelines, this IS/ND will be circulated for a 30-day public review and comment period, along with a notice of DWR's intent to adopt the IS/ND and approve the proposed Project.

2.0 PROJECT DESCRIPTION

2.1 PROJECT OBJECTIVES

2.1.1 Project Purpose

The existing licensed DCPD is part of a larger water storage and delivery system, the State Water Project (SWP), which is the largest State-owned and operated water supply project of its kind in the U.S. The purpose of the existing DCPD is to support the SWP operations in providing southern California with:

- Clean Hydropower – As part of the water delivery system, hydropower facilities are strategically located to maximize production of clean and reliable power. In addition to offsetting water delivery costs, the DCPD helps reduce dependency on fossil fuel-based power generation in the State-wide power portfolio by generating hydroelectric power. Clean hydropower avoids the emission of pollutants such as hydrocarbons, nitrogen oxides, carbon monoxide, and particulate matter.

- Hydropower that Integrates Green Energy – The operational flexibility and rapid response of the existing DCPD and the SWP in general facilitates the integration of wind and solar into California's renewable energy portfolio, promoting necessary stability and reliability to the grid. As such, power from the DCPD contributes to a diversified generation mix and helps meet power needs within and beyond the immediate region.

- Affordable Water Supply – About one-fifth of southern California's water supply flows through the DCPD facilities. The energy required to transport water makes up the single largest cost to deliver water to southern California. The revenue from power generation through these facilities offsets the cost of delivering water to southern California, keeping water more affordable in the region and preserving economic vitality and quality of life for residents.

- Public Recreation Opportunities – The major reservoir of the DCPD, Silverwood Lake, and the surrounding State Recreation Area (SRA), provides diverse and valuable outdoor recreation opportunities for southern California residents and visitors.

2.1.2 Need for a New License

The Statewide benefits of the DCPD facilities are only available if they can be operated, which is made possible by the renewal of the FERC license. More specifically, the continued operation of the DCPD is critical for the following reasons. First, the power generated at the DCPD is critical for supporting SWP operations. While Devil Canyon Powerplant output is delivered to the California Power Grid, its output effectively helps DWR partially offset the costs and energy needed for operating the SWP. Additionally, the DCPD is necessary in both the short and long term to maintain system reliability,

operational flexibility, and low-cost power. Furthermore, the continued operation of the DCPD for power generation alleviates the need for new power resources that would otherwise be required to replace the power capacity and generation that is vital to the State, such that it provides a sizable portion of the electricity needed to pump water throughout the SWP service area at a lower cost than potential replacement power sources.

As noted above, the DCPD also provides recreational resources for the public at Silverwood Lake, described in further detail under Section 2.3.

2.2 PROJECT LOCATION

The DCPD operates along the southern end of the East Branch of the SWP in the County of San Bernardino, California, between the Cities of Hesperia and San Bernardino (Figure 2.2-1).

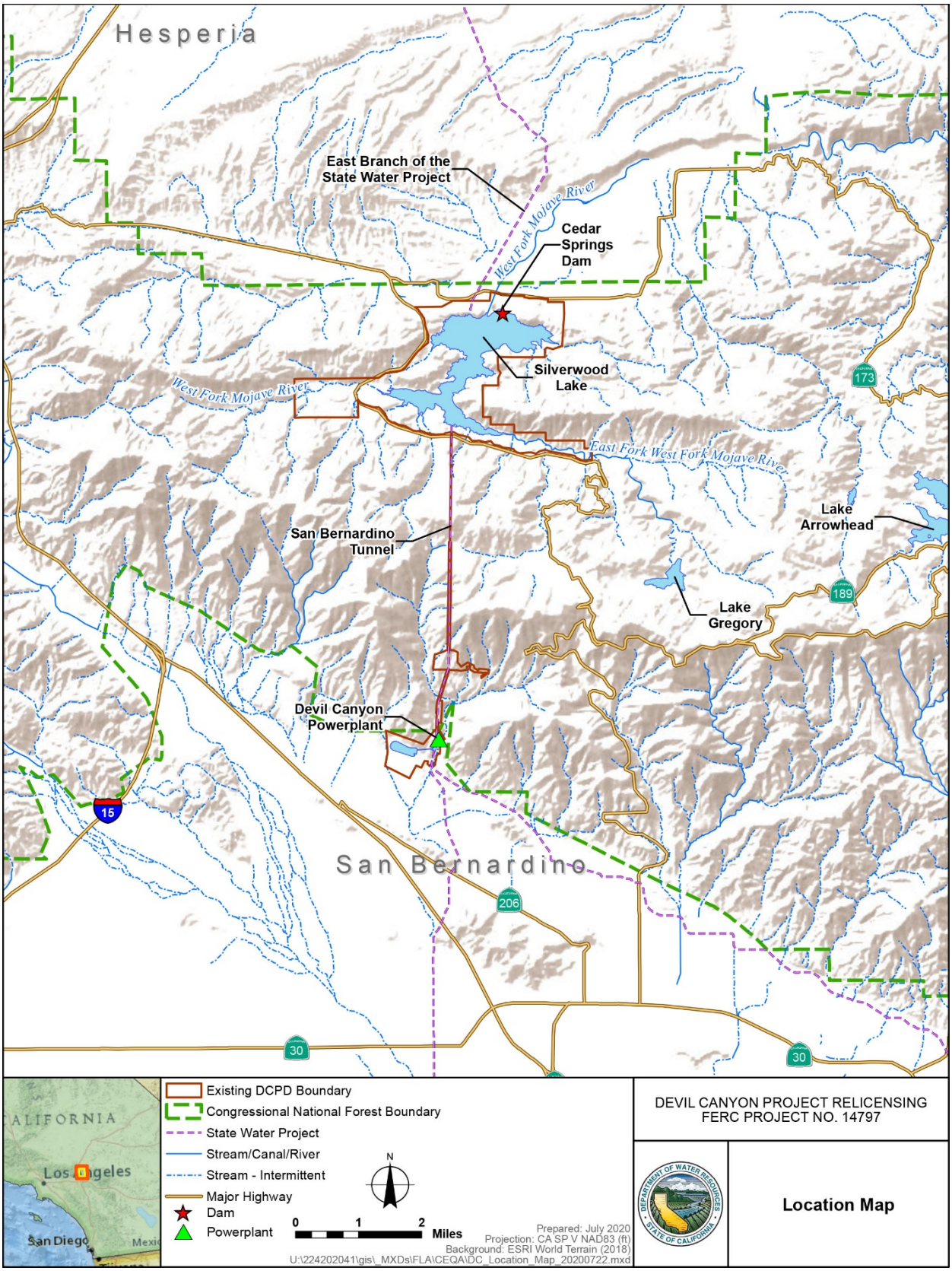

Figure 2.2-1. DCPD Location

2.2.1 Existing DCPD Boundary

FERC project boundaries are used to designate the geographic extent of the lands and waters necessary for the routine operation and maintenance of a project and for other project purposes such as recreation, shoreline control, or protection of environmental resources. The existing DCPD boundary (Figure 2.2-2) comprises 3,744.0 acres of land. Within the total acreage, 221.0 acres are federal lands managed by USFS as part of the SBNF (Table 2.2-1).

Table 2.2-1. Land Ownership Within the Existing DCPD Boundary

Development	USFS	State of California	Private	Total
DCPD (acres)	221.0	3,501.3	21.7	3,744.0
Percent	5.9	93.5	0.6	100.00

Source: Compiled by the California Department of Water Resources – Geodetic Branch – Property Management and Land Records section from Department land records and County Assessor Data.
Key:
DCPD = Devil Canyon Power Development
State of California = Lands owned by DWR and the California Department of Parks and Recreation
USFS = U.S. Department of Agriculture, Forest Service

2.3 EXISTING DCPD FACILITIES AND OPERATIONS

DCPD facilities range in elevation from 3,378 feet to 1,778 feet, and include: Cedar Springs Dam, Silverwood Lake, San Bernardino Tunnel and Surge Chamber, Devil Canyon Powerplant Penstocks, Devil Canyon Powerplant and Switchyard, Devil Canyon Afterbay and Dam, Devil Canyon Second Afterbay and Dam, recreational facilities, and appurtenant facilities. The current operation of DCPD facilities is accomplished in accordance with the existing license as described below.

2.3.1 Existing DCPD Facilities

The DCPD can store approximately 76,051 acre-feet (AF) of SWP water, and, on average from 2010 through 2017, generated 836,000 megawatt-hours per year. The DCPD's FERC-licensed authorized installed capacity is 272,796 kilowatts (kW) and the DCPD's calculated dependable capacity is 250,100 kW. Table 2.3-1 and Table 2.3-2 summarize key information for the DCPD powerplant and for reservoirs and impoundments, respectively.

2.3.1.1 Cedar Springs Dam and Silverwood Lake

Cedar Springs Dam and Silverwood Lake, located on the West Fork Mojave River, are about 90 miles southeast of the bifurcation of the East and West Branches of the SWP and 25 miles north of the City of San Bernardino. Completed in 1971, Cedar Springs Dam is a 249-foot-tall, earth and rockfill dam, with a dam crest that is 42 feet wide and 2,230 feet long, at an elevation of 3,378 feet. It contains approximately 7.6 million cubic yards of embankment. At the normal maximum water surface elevation (NMWSE) of 3,355 feet, Silverwood Lake has a storage capacity of 75,000 AF, a usable storage

capacity of 33,820 AF, normal maximum surface area of 995 acres, and a shoreline length of about 13 miles.

The Cedar Springs Dam Spillway is located on the left abutment of the dam and consists of a 120-foot-long, ungated crest with a rectangular-lined concrete channel. The Cedar Springs Dam low-level outlet works is located in the left abutment of the dam directly below the spillway. The low-level outlet works consists of an ungated intake tower, a pressure tunnel connecting the intake tower to a gate chamber, a free-flow tunnel downstream from the gate chamber that discharges into the spillway chute just upstream from the stilling basin, and an air intake that also serves as an emergency exit. The maximum capacity of the low-level outlet works is 5,000 cubic feet per second (cfs).

Table 2.3-1. Devil Canyon Powerplant – Key Information

Powerplant	Unit	Turbine Type	Rated Head (feet)	Rated Hydraulic Capacity (cfs)		Generation Capacity (kW)		Average Annual Energy (MWh/yr)[2]
				Minimum	Maximum	Installed	Dependable[1]	
Devil Canyon	1	Pelton	1,357	50	670	59,850	--	--
	2	Pelton	1,357	50	670	59,850	--	--
	3	Pelton	1,250	50	800	76,548	--	--
	4	Pelton	1,250	50	800	76,548	--	--
Total	**4**	**--**	**--**	**200**	**2,940**	**272,796**	**250,100**	**836,000**

Sources: ACES the California Independent System Operator NERC Registry, Mapper Reservoir Storage Software, Operation Control Office
Notes:
[1]DWR calculated dependable capacity by multiplying the Devil Canyon Powerplant's average monthly Resource Adequacy data for 2013 through 2017 by the yearly Resource Adequacy capacity.
[2]DWR calculated average annual energy by multiplying the DCPD's installed capacity by the reported Devil Canon Powerplant operating availability average of 89.31 percent for the 2010 through 2017 period.
The maximum capacity of the San Bernardino Tunnel and penstocks is 2,811 cfs.
Key:
cfs = cubic feet per second
kW = kilowatt
MWh/yr = megawatt-hours per year

Table 2.3-2. Devil Canyon Reservoirs and Impoundments – Key Information

Reservoir	NMWSE (feet)[1]	Gross Storage (AF)[1]	Usable Storage[1,2] (AF)	Surface Area[1,3] (acres)	Maximum Depth[1] (feet)	Shoreline Length[1]	Drainage Area[1,3] (square miles)
Silverwood Lake	3,355	75,000	33,820	995	236	13 miles[1]	144.8
Devil Canyon Afterbay	1,932.6	49	43	4	15	1,940 feet	None
Devil Canyon Second Afterbay	1,930.5	1,002	620	36	40	5,500 feet	None
Total	**--**	**76,051**	**34,483**	**1,035**	**--**	**--**	**--**

Notes:
[1]All values are based on the normal maximum operating levels.
[2]Storage between operating maximum 3,355 feet and operating minimum pool 3,312 feet.
[3]At the dam, drainage areas are not additive.
The following data corresponds to the operating maximum elevation of the facility:
Silverwood: NMWSE – 3,353 feet, gross capacity – 73,032 AF, surface area – 962 acres
Devil Canyon Afterbay: NMWSE – 1,932 feet, gross capacity – 49 AF, surface area – 4 acres
Devil Canyon Second Afterbay: NMWSE – 1,930 feet, gross capacity – 960 AF, surface area – 36 acres
Key:
AF = acre-feet
NMWSE = Normal Maximum Water Surface Elevation

2.3.1.2 San Bernardino Tunnel and Surge Chamber

The San Bernardino Tunnel intake is a vertical reinforced concrete tower on the south end of Silverwood Lake that draws water from the reservoir and conveys it into the San Bernardino Tunnel.

The San Bernardino Tunnel is a pressure conduit, which conveys water from Silverwood Lake to the Devil Canyon Penstocks. The 3.81-mile-long, concrete-lined tunnel has a design capacity of 2,811 cfs at Silverwood Lake NMWSE and is primarily 13 feet in diameter until the lower 425 feet, which is 12.75 feet in diameter and is both steel- and concrete-lined.

The San Bernardino Tunnel Surge Chamber is 120 feet in diameter and 383 feet in height, of which 225 feet is underground. The underground portion is concrete and is steel lined throughout. A steel tank forms the above-ground, 158-foot portion of the surge chamber. A 108-foot-long juncture structure connects the surge chamber to the tunnel through a 28-foot diameter riser.

2.3.1.3 Devil Canyon Powerplant Penstocks

Water enters the Devil Canyon Powerplant via two surface penstocks. One of the penstocks, which is constructed of steel, is 1.3 miles long, with a diameter varying from 9.5 feet at the south portal (i.e., where the tunnel transitions to a penstock) to 8 feet at the powerplant. The other penstock, constructed of steel, is also 1.3 miles long, and has a diameter varying from 12.5 feet at the south portal to 8 feet at the powerplant. Both penstocks are supported by a set of ring girders resting on a single concrete pier. The aboveground penstocks run parallel, generally following the ground slope from the south portal to the Devil Canyon Powerplant. The maximum capacities of the two penstocks at Silverwood Lake NMWSE are approximately 1,200 cfs and 1,600 cfs, respectively.

2.3.1.4 Devil Canyon Powerplant

The Devil Canyon Powerplant is located at the base of the San Bernardino Mountains in the City of San Bernardino and is designed to recover power from the waters of the SWP as it drops from the high desert through the Devil Canyon Powerplant turbines. The elevation drop from Silverwood Lake provides the Devil Canyon Powerplant with a normal static head of 1,406 feet at the NMWSE of Silverwood Lake.

The Devil Canyon Powerplant has four generation units. These include one Baldwin-Lima-Hamilton Pelton-type turbine and one Sulzer Escher Wyss Pelton-type turbine, each with 1,357 feet of rated head, 277 revolutions per minute of runner speed, 81,000 horsepower of rated output, 670 cfs of approximate rated discharge, and a licensed capacity of 59,850 kW. The other two are Voith Pelton-type turbines, each with 1,250 feet of rated head, 277 revolutions per minute of runner speed, 102,064 horsepower of rated output, 800 cfs of approximate rated discharge, and a licensed capacity of 76,548 kW.

2.3.1.5 Devil Canyon Switchyard

The Devil Canyon Switchyard includes four step-up transformers. Multiple current transformers and potential transformers are in the switchyard. The main function of the transformers is metering and protection. The ratings of the current transformers and potential transformers, which are part of the interconnected transmission system, are Critical Energy Infrastructure Information and thus, are not further described. The DCPD does not include a primary transmission line but connects to the Southern California Edison interconnected system at the switchyard.

2.3.1.6 Devil Canyon Afterbay and Dam

Water from the Devil Canyon Powerplant flows to the off-channel Devil Canyon Afterbay, which has a surface area of four acres at a NMWSE of 1,932.6 feet, a capacity of 49 AF, and an embankment crest elevation of 1,940 feet. Completed in 1974, the afterbay provides a minimal amount of regulatory capacity for matching the powerplant's inflows and outflows to different pipelines for SWP water deliveries outside of the existing DCPD boundary.

SWP water supply in the Devil Canyon Afterbay is conveyed to either the Devil Canyon Second Afterbay for future delivery or via four pipelines to meet downstream water supply demands. SWP water is delivered to the Devil Canyon Second Afterbay via the 1,100-foot-long, 40-foot-wide, 27-foot-deep, concrete-lined Cross Channel, with an approximately 13-foot-high uncontrolled weir structure at the inlet to the Cross Channel. SWP water scheduled to meet downstream water supply demands is delivered through the following four non-DCPD pipelines: the Rialto Pipeline, Azusa Pipeline, Santa Ana Pipeline, and San Bernardino Pipeline. The quantity and timing of releases are determined by water supply contracts and agreements and are not dictated by hydropower operations. The valves, turnouts, meters, and connections for these pipelines, as well as the pipelines themselves, are not part of the DCPD facilities.

The Devil Canyon Afterbay includes a spillway structure designed for emergency purposes, but the structure has never been used and is obsolete due to the construction of the Devil Canyon Second Afterbay. There are no other releases from the Devil Canyon Afterbay.

2.3.1.7 Devil Canyon Second Afterbay and Dam

Completed in 1995, the Devil Canyon Second Afterbay was added to the DCPD to increase the operational flexibility and capacity of the Devil Canyon Powerplant. The Devil Canyon Second Afterbay NMWSE is 1,930 feet, has a gross storage capacity of 960 AF, and a surface area of approximately 36 acres. The Devil Canyon Second Afterbay is an off-channel water holding structure situated below the original ground level.

All operational releases from the Devil Canyon Second Afterbay occur through the outlet structure. SWP water can be delivered through the outlet structure via one of three non-DCPD pipelines: the Rialto Pipeline, Santa Ana Pipeline, and Inland Feeder

Pipeline. The Devil Canyon Second Afterbay also has an emergency overflow spillway discharge outlet, as well as a low-level emergency outlet release. The emergency overflow spillway has never been used and the low-level emergency outlet is tested once every 3 years and each test releases less than 0.5 acre-feet of water. The Rialto Pipeline, Santa Ana Pipeline, and Inland Feeder, including their valves, turnouts, meters, and connections within the existing DCPD boundary, are non-DCPD facilities.

2.3.1.8 Existing DCPD Gages

The existing FERC license does not include any streamflow or reservoir stage gages as licensed facilities.

2.3.1.9 Existing Access Roads

Primary Project Roads: Primary Project Roads are used exclusively for accessing the DCPD facilities. Primary Project Roads are located on a combination of City of San Bernardino, State of California, and National Forest System (NFS) lands within the existing DCPD boundary. The existing FERC license does not identify any Primary Project Roads that DWR is responsible for maintaining. Nonetheless, regardless of ownership, DWR currently maintains approximately 7.6 miles of these roads that are used exclusively to access DCPD hydropower facilities (see Section 2.3.3.5). The road widths range from 15 feet to 35 feet and have both paved and unpaved surfaces. The Primary Project Roads are closed to the public by locked gates or other restrictive barriers for security and safety reasons. DWR staff typically access the DCPD hydropower facilities one to two times a day via Primary Project Roads.

Recreation Facilities Access Roads: Nine roads or loops are used almost exclusively to access DCPD recreation facilities. These paved access roads are located on State of California lands and total approximately 6 miles in length, with an average width of 25 feet. The DCPD recreation roads are open to the public. Other roads in the area, often connecting to these recreation roads, also provide access for the recreating public but are used for other types of uses (i.e., multiple use roads), including access to NFS lands. These roads are not managed by DWR as part of the DCPD, nor are they proposed to be managed by DWR under the proposed Project.

2.3.1.10 Existing DCPD Recreation Facilities and Trails

DPR, on behalf of DWR, maintains and operates the Silverwood Lake-associated DCPD recreation facilities as part of the Silverwood Lake SRA. Table 2.3-3 lists DCPD recreational facilities, all of which are located at Silverwood Lake and are accessed by existing recreation access roads (refer to Figure 2.3-1 for facility locations). Devil Canyon Afterbay and Devil Canyon Second Afterbay are not accessible to the public and do not have recreational facilities due to security and safety concerns.

Table 2.3-3. DCPD Recreation Facilities

Silverwood Lake SRA Recreational Facility	Description
Rio Group Camp	Group camping facility with 100-person capacity
Barranca Group Camp	Group camping facility with 100-person capacity
Valle Group Camp	Group camping facility with 100-person capacity
Cleghorn Day Use Area	Day use shoreline facility with swim beach and picnicking sites
Cleghorn Boat Launch	Day use facility with boat launch and courtesy dock, and restrooms
Garces Overlook	Developed overlook viewpoint
New Mesa Campground	Campground with 42 full hook up individual camping units
Entrance Station	Kiosk entry station for recreationists
Nature Center	2,700-square foot facility for interpretive programs
Mesa Campground	Campground facility with 107 individual camping units
Campfire Center	Outdoor amphitheater for interpretive programs
Sawpit Canyon Picnic Area 3	Day use facility with 57 picnicking units
Sawpit Canyon Picnic Area 2	Day use facility with 45 picnicking units
Sawpit Canyon Picnic Area 1	Day use facility with 10 picnicking units
Sawpit Canyon Day Use Area	Day use shoreline facility with a swim beach, multiple picnicking facilities, and concessionaire store
Black Oak Picnic Area	Day use facility with 84 picnicking units
Sawpit Canyon Marina	Marina facilities with mooring for 61 boats and concessionaire boat rentals
Sawpit Canyon Boat Launch	7-lane boat launch and courtesy docks
Jamajab Point Overlook	Developed overlook viewpoint
Serrano Landing Day Use Area	Boat-in/hike-in shoreline day use site with picnicking facilities
Miller Canyon Picnic Area	Bike-in/hike-in day use site with 12 picnicking units
Lynx Point Overlook	Developed overlook viewpoint
Devil's Pit Overlook	Developed overlook viewpoint with wooden viewing platform
Miller Canyon Group Camp	Group camping area with 3 sites holding up to 40 persons each
Miller Canyon Trailhead	Developed trail head for accessing all Miller Canyon facilities and shorelines
Sycamore Landing Day Use Area	Boat-in day use site with 13 picnicking units
Live Oak Landing Day Use Area	Boat-in/hike-in day use site with 8 picnicking units
Chamise Day Use Area	Boat-in day use site with 7 picnicking units
Garces Trail	0.4-mile-long trail linking Cleghorn Day Use area to Garces Overlook

Table 2.3-3. DCPD Recreation Facilities (continued)

Silverwood Lake SRA Recreational Facility	Description
Miller Canyon Trail	1.6-mile-long asphalt surfaced trail linking Miller Canyon Group Camps to the Silverwood Bike Path
East Fork Trail	0.3-mile long asphalt surfaced trail
Silverwood Bike Path	5.6-mile-long paved bike path connecting Serrano Landing Day Use Area in Miller Canyon to Cleghorn Day Use Area on the west end of Silverwood Lake SRA

Key:
SRA = State Recreation Area

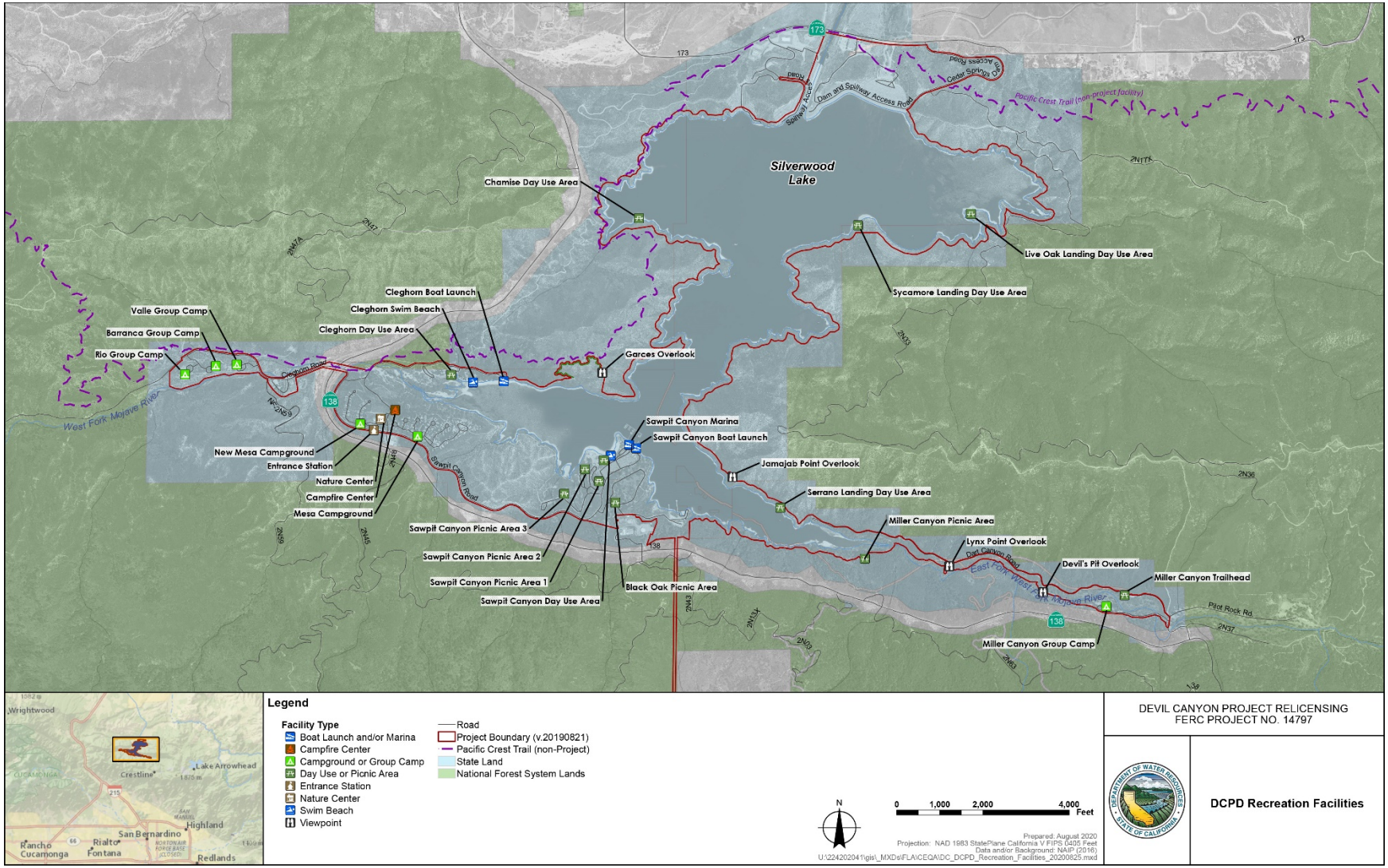

Figure 2.3-1. DCPD Recreation Facilities

2.3.1.11 Features Not Included as Part of the DCPD

The following facilities located within the proposed Project boundary or in its vicinity are not regulated by the terms of the FERC license and management of these facilities is not part of the licensing action nor expected to change under the new license. As such, since the O&M of these facilities and features are not part of the proposed Project, they are not subject to analysis in this document.

- Inlet Works at Silverwood Lake, including the transition structure, chute, energy dissipation structure, and associated riprap, which is part of the conveyance from the Mojave Siphon on the East Branch of the SWP outside of the existing DCPD boundary
- Fenced-in laydown and storage yard at the base of Cedar Springs Dam that is used by DWR for DCPD O&M
- The water intake, treatment facilities, and distribution facilities of the Crestline-Lake Arrowhead Water Agency
- The Cleghorn Wastewater Treatment Plant, collection system, water storage tank, and outflow pipeline of the Crestline Sanitation District on the west side of State Highway 138, near the DPR administration building
- The DPR Administrative Building and other DPR administrative and maintenance facilities
- The Pacific Crest National Scenic Trail (PCT)
- A small section of State Highway 138 – Rim of the World Scenic Byway
- General public multiple use access roads
- The Southern California Edison transmission system
- The San Bernardino Valley Municipal Water District's San Bernardino Pipeline, the SWP's Santa Ana Pipeline, the San Gabriel Valley Municipal Water District's Azusa Pipeline, and MWD's Rialto Pipeline from the Devil Canyon Afterbay, including their valves, turnouts, meters, and connections
- The Santa Ana Pipeline, Rialto Pipeline, and the Inland Feeder Pipeline from the Devil Canyon Second Afterbay, including their valves, turnouts, meters, and connections

2.3.2 <u>Current DCPD Operations</u>

The following discusses current hydropower and recreation facilities operation.

2.3.2.1 Current DCPD Hydropower Operations

As noted earlier, the existing DCPD is operated as a power recovery project using SWP water. For that reason, DCPD operations do not vary based on changes in local hydrological conditions. The DCPD generates power using SWP water as it is provided for downstream use. The DCPD's installed capacity is 272,796 kW, and the DCPD's calculated dependable capacity is 250,100 kW. The existing DCPD generates an average of 836,000 megawatt-hours per year.

The DCPD does not use natural flow into Silverwood Lake for power generation; power is generated using only SWP water. The DCPD has no rights to the natural inflow to Silverwood Lake and releases that inflow into the West Fork Mojave River in accordance with existing water rights and water delivery agreements that are not related to SWP power generation. There is no minimum release flow requirement under the current license.

2.3.2.2 Current DCPD Recreation Facilities Operation

DCPD-associated recreational facilities described in Table 2.3-3 are provided for public use facilities and are oriented to a variety of users, including boaters, anglers, swimmers, campers, hikers, and picnickers year-round, but are particularly used during summer months. Current recreation operations are at or near capacity during summer months and at very low capacity during winter months, with several recreation amenities temporarily closed. DCPD recreational facilities are publicly owned by the State and managed by DPR. The responsibilities of DWR and DPR are in State statutes and agreements between the two agencies. Under FERC regulations, DWR is responsible for the provision of public access to DCPD recreational opportunities including those associated with Silverwood Lake under the proposed Project. Ongoing DPR operation management duties for Silverwood Lake SRA include the following:

- Safety and enforcement on both land and water
- Interpretive activities
- Park and natural resource management
- Concession operation management
- Park operation administration
- Monitoring and operation strategic planning

In addition, DPR is responsible for park equipment, facilities maintenance, and support systems maintenance, as described in the maintenance section below.

Other USFS-managed recreation facilities are both within and outside of the existing DCPD boundary, including the PCT and off-road vehicle routes as part of the Pilot Rock

area trail system. Therefore, the USFS shares responsibility for managing the operation of some recreation resources within and adjacent to the existing DCPD boundary.

2.3.3 Current Routine Maintenance Activities

This section discusses currently implemented routine maintenance activities conducted by DWR within the existing DCPD boundary.

2.3.3.1 Current DCPD Hydropower Facilities Maintenance Activities

The San Bernardino Tunnel is always pressurized, except for once every 10 years when it is dewatered for inspection. In addition, DWR conducts annual mechanical and electrical inspections and ongoing maintenance at the Devil Canyon Powerplant to maintain the structural and functional integrity of the facilities and to prevent conditions that might disrupt operations. The annual mechanical and electrical inspections and maintenance of the generation units are typically done one unit at a time and occur in the spring and fall timeframe while keeping other units available for water delivery. These annual inspections typically run about 25 days each. In the fall, half of the powerplant is taken offline at a time for three days to conduct switchyard inspections and maintenance. Penstock inspections are performed individually and usually occur in the late fall or early winter, again affecting half the powerplant at a time and leaving two units available for power generation and water delivery.

2.3.3.2 Current Primary Project Roads and Recreation Access Roads Maintenance

In general, DWR's maintenance program has two components regarding the timing of Primary Project Road and recreation access road maintenance activities: short-term and long-term maintenance. Short-term maintenance is defined as routine or periodic repairs, inspections, and maintenance activities that are conducted annually, periodically, or seasonally to address normal wear and tear during roadway use under typical annual weather conditions. Long-term maintenance is defined as repairs that are scheduled around specific events that impact the overall integrity of a given road, such as heavy haul events or unusually heavy storm events; such events require repairs that are beyond the scope and budget of the short-term maintenance procedures. Long-term repairs are normally undertaken in addition to short-term maintenance activities. Further details regarding components of the short- and long-term maintenance programs are described below.

Short-Term Maintenance of Primary Project Roads and Recreation Access Roads

Short-term maintenance of Primary Project Roads and recreation access roads include annual maintenance of the travel surface, such as spot treatment of asphalt paving, blading dirt and aggregate surfaces, filling pot holes, minor and major trimming of vegetation along the travel surface edge to maintain a line of sight for safety purposes and to provide ample room for vehicle travel, and repairing/replacing signs and markers. Short-term maintenance also includes routine inspection and maintenance of drainage features, such as periodically inspecting and clearing culverts and drainage ditches,

rock fall cleanup, and landslide cleanup and repair as needed to mitigate erosion, stabilize hillsides, and restore proper function of drainage features. In addition, work includes maintaining water bars for roads that are infrequently used and maintaining gates. Primary Project Roads and recreation access roads are inspected regularly throughout the year by DWR operations staff as they travel the roads of the DCPD, with increased attention paid to reporting/repairing drainage and damage issues observed during periodic rainfall and runoff events.

Under short-term maintenance, repairs are typically completed as soon as possible after issue identification, often related to a periodic weather event. Depending upon the identified problem (e.g., plugged culvert and road obstruction), DWR prioritizes scheduling the needed repair with respect to safety, impacts, and liabilities, and completes the needed repair as soon as possible. For other repairs, such as a damaged or missing sign, a replacement sign is installed.

DWR also address hazard trees under short-term maintenance. A hazard tree is a tree along a Primary Project Road or recreation access road that is likely to fall under natural conditions within the foreseeable future and that will pose a risk to the road, the public using the road, or DWR operations staff maintaining the road. Hazard trees may or may not be within the existing DCPD boundary. DWR typically handles hazard trees on a case-by-case basis and based on visual inspection by DWR operations staff. Annually, and after a large event (e.g., fire, heavy rains, or early/late snowfall or windstorm), Primary Project Roads and recreation access roads are usually examined for hazard trees that may represent a hazard to public safety and infrastructure.

Long-Term Maintenance of Primary Project Roads and Recreation Access Roads

Long-term maintenance of Primary Project Roads and recreation access roads is geared towards major repairs that occur infrequently and are related to road damage caused by a heavy haul project, a major flood event that caused washouts, and other road damage at a scale that is beyond the scope of the short-term maintenance schedule and budget. Long-term maintenance may also occur at the end of a road's expected life, such as repaving the entire road. Long-term maintenance activities are completed in a timely manner when public safety or additional facilities/resource damage is a concern.

2.3.3.3 Current Recreation Facilities Maintenance

DPR conducts routine maintenance and repair of recreation facilities at a level that provides for public recreation to occur in a safe and enjoyable manner. O&M activities to support recreation development and use include, but are not limited to, maintaining parking areas, lawns, restrooms, lights, water, power, sewer, shelters, boat launch, and picnic and campground equipment.

DPR provides the necessary personnel, equipment, and materials to achieve the maintenance standards.

2.3.3.4 Other Current General Maintenance Activities

Routine maintenance and periodic repair activities within DWR's Southern Field Division (SFD) Maintenance Area for the SWP operations, which covers the DCPD area, typically entail the following: removing debris, sediment, vegetation, rubbish, downed trees, and other material that could obstruct the natural flow; controlling weeds, grasses, emergent vegetation, and woody vegetation; repairing gates, barricades, and structures; making repairs to control erosion and stabilize banks; repairing culverts, overchutes, and stream gauging stations; and other work necessary to maintain the functional and structural integrity of the SWP facilities located in the SFD Maintenance Area, including facilities within the existing DCPD boundary (DWR 2015).

2.3.3.5 Current Rodent Pest Management

DWR implements rodent control as needed in facility interiors (i.e., Devil Canyon Powerplant), recreation areas, and facility infrastructure to protect public health and the safe operation of DCPD infrastructure by applying non-restricted rodenticides in accordance with label instructions. Nuisance rodent activity at DCPD facilities threatens public safety by heightening the potential for the spreading of disease (including plague) and compromising the structural integrity of facilities if rodent populations are left unchecked. Prior to administering a rodenticide, the feasibility of using non-chemical methods are evaluated to avoid potential effects of carcass consumption by scavenging wildlife. All rodenticides are used in accordance with the California Department of Pesticides Regulation statutes and regulations. DWR staff locate and dispose of rodent carcasses on a weekly basis.

While uncommon, sudden population increases of non-game rodents can result in public safety and structural concerns. Rodents considered as pests, including mice and California ground squirrels (*Otospermophilus beecheyi* and *Otospermophilus douglasii*), can invade and colonize areas rapidly causing considerable damage on, below, and within earthen structures. Most rodents, including mice and California ground squirrels, can harbor disease such as bubonic plague, caused by *Yersinia pestis.* Diseases can be transmitted to humans, pets, and other animals at recreation areas. When population increases occur, rodenticides are necessary to control the targeted species of rodents in the area for health and safety reasons in accordance with State and federal statutes and regulations. In addition, the California Fish and Game Code (FGC) states that non-game mammals, including California ground squirrels, can be controlled in any legal manner if they are causing injury or damage to property (FGC §4152). Additionally, the current practices are in compliance with AB 1788 (Ch. 250 Stats. of 2020), also known as the California Ecosystem Protection Act of 2020. The act prohibits the use of certain second generation anticoagulants; however, the act includes an exemption for use of second generation anticoagulant rodenticides by government agencies for the control of rodent infestations associated with public health activities or needs, including the protection of water supply infrastructure and associated facilities. DWR complies with all applicable State and federal laws and regulations (including § 12978.7[e][2] of the Food and Agricultural Code) and will comply with any future amendments.

2.3.4 Currently Implemented Environmental Protective Measures

This section describes the current standard protective methods DWR employs to protect the following resources: geology and soils, water resources, aquatic resources, vegetation and wildlife, recreation resources, land use, visual resources, and cultural resources. These current operational activities are considered a part of the baseline conditions.

2.3.4.1 Geology and Soils – Current Erosion Control Protections

Silverwood Lake

Since Silverwood Lake is kept at a relatively constant level, shoreline wave effects are concentrated on the same shoreline level that result in easily identifiable locations of shoreline erosion. Erosion of the Silverwood Lake shoreline was assessed in 2011 as part of the Seventh Five-Year FERC Part 12D site inspection. The shoreline was also visually inspected in November 2014 as part of the Eighth Five-Year FERC Part 12D site inspection and was found to be satisfactory. Recommendations for mitigation of shoreline erosion were implemented by November 2015. Continued annual inspections are performed and shoreline erosion is addressed as needed.

When applicable, DWR or DPR may add riprap or gabions to specific areas for lake shoreline erosion control.

Other Current Erosion-Control Practices

Much of the terrain in which the DCPD resides is subject to ongoing natural erosion and sedimentation, which at times are exacerbated by heavy rains and loss of vegetation due to wildfires. As such, DWR maintains and replaces, as needed, erosion control features located within the existing DCPD boundary, including culverts, drains, ditches, and water bars.

Maintenance activities for erosion control include routine inspection and maintenance of DCPD roadway drainage features, such as periodically inspecting and clearing culverts and drainage ditches, rock fall cleanup, and landslide cleanup and repair, as needed, to maintain proper function of drainage features. Repairs are typically completed as soon as possible after identification of a problem, often related to a periodic weather event. Depending on the identified problem (e.g., plugged culvert and road obstruction), DWR usually prioritizes scheduling the needed repair with respect to safety, impacts, and liabilities, and completes the needed repair as soon as possible.

There are designated large spoil sites located in upland areas throughout the SFD Maintenance Area that are used to store spoil material, including concrete, rock, gravel, sand, silt, and cleared vegetation as part of SWP operations including at the DCPD facilities. They can serve as borrow sites when material is needed to repair erosion damage. The designated spoil areas are located away from all drainage channels and basins, and no hazardous materials are stored at these sites. The sites are continually utilized for routine maintenance activities. Activities include the stockpiling or excavating

of material using dump trucks, front-end loaders, crane with a bucket, or similar heavy equipment. Existing access routes to the spoil sites may be cleared and graded as necessary (DWR 2015).

DWR applies erosion and sediment control best management practices (BMPs) to ground disturbing activities. For construction activities ground disturbance over one acre in size, these BMPs can also be stipulated in a SWRCB-approved Stormwater Pollution and Prevention Program (SWPPP) as part of SWRCB-issued permits. DWR's standard erosion and sediment control BMPs are as follows:

- Surface roughening
- Mulching
- Erosion control blankets
- Installation of straw waddles
- Dust control

2.3.4.2 Water Resources – Current Flow Commitments and Water Quality Monitoring and Protections

Current Water Flow Commitments

Following several miles of canals and other DWR facilities along the East Branch of the SWP, SWP water enters the DCPD's uppermost facility, Silverwood Lake. In Silverwood Lake, the SWP water mixes with the natural inflow from the West Fork Mojave River, the East Fork of the West Fork Mojave River, and local runoff. The SWP water then passes through the San Bernardino Tunnel and Devil Canyon Powerplant where it generates power. SWP water flows into the Devil Canyon Afterbay and Devil Canyon Second Afterbay; neither engineered afterbay receives local surface water. The SWP water is released from the afterbays through one of the following five pipelines, each of which provides SWP water to downstream consumptive water users: (1) San Bernardino Pipeline; (2) Santa Ana Pipeline; (3) Azusa Pipeline; (4) Rialto Pipeline; and (5) Inland Feeder Pipeline. The valves, turnouts, meters, and connections for these pipelines are not part of the DCPD facilities.

DWR does not have water rights for the natural inflow to Silverwood Lake and releases such inflow into the West Fork Mojave River in accordance with existing water rights and water delivery agreements with the Crestline-Lake Arrowhead Water Agency, Las Flores Ranch (LFR), and Mojave Water Agency (MWA) that are not related to power generation. Agreements between DWR, MWA, and LFR include an agreed-upon method for determining natural inflow into Silverwood Lake. Releases into the non-Project pipelines at the Devil Canyon Afterbay and at the Devil Canyon Second Afterbay are made into the pipelines based on downstream water contracts.

Releases from Silverwood Lake are governed by two primary operational categories: (1) deliveries to SWP contractors and (2) deliveries of natural inflow to the users identified in a Mojave River Adjudication Decree issued by the Riverside County Superior Court in 1996. The decree adjudicated the rights of all users of water within the Mojave River basin. Based on the statutory authority granted to MWA by the California Legislature in 1959, MWA is the Watermaster in charge of administering the decree. In its role as Watermaster, MWA is responsible for managing the water supplies released from Silverwood Lake for downstream use.

Article 58 of the existing FERC license requires DWR to maintain Silverwood Lake surface elevations at the highest, most practicable level commensurate with DCPD purposes during the summer recreation season. Additional water surface elevation restrictions for Silverwood Lake are found in the DWR and USFS 1968 Memorandum of Understanding (MOU) as amended, and the DWR and CDFW 2003 MOU. As noted above, the DCPD does not use any local surface water, including natural inflow into Silverwood Lake, for power generation; power is generated using only SWP water.

Current Water Quality Monitoring and Protections

SWP water from Silverwood Lake is considered a source of raw water supply. When DWR's water is delivered to the State Water Contractors' (SWC) member agencies, the water is treated to State and federal drinking water standards by the member agencies at their respective water treatment plants.

DCPD water quality monitoring has been conducted by DWR since 1968 for the SWP. The water quality program monitors for eutrophication, salinity, and other parameters of concern for drinking water, recreation, and fish and wildlife purposes. These data are collected outside of the existing FERC license requirements, under the existing SWC's contracts and other requirements to verify water quality objectives (WQO) are being met. The monitoring program consists of collection, analysis, data archiving, and dissemination of data. Phytoplankton data are provided to the SWCs. Methyl tert-butyl ether data are collected as part of DWR's routine SWP pesticides and organics sampling, and reservoir profile data are provided to MWD.

Algae can produce compounds that cause unpleasant taste and odors. Taste and odor problems are generally considered a nuisance in finished drinking water. Consumers can detect levels of geosmin and 2-Methylisoborneol as low as 5 nanograms per liter (5 parts per trillion) and 10 nanograms per liter (10 parts per trillion), respectively. State and federal secondary maximum contaminant levels for finished drinking water, considered as consumer acceptance contaminant levels, provide thresholds that assist in the management of public water systems for taste and odor considerations and are applicable to treated drinking water sources. Secondary drinking water standards are set on the basis of taste and odor concerns that are not considered to present a risk to human health. The U.S. Environmental Protection Agency (EPA) and the SWRCB established, three threshold odor limits for finished drinking water (EPA 2020; Title 22 CCR, § 64449). DWR coordinates with MWD for water quality monitoring at Silverwood Lake, including taste and odor monitoring and laboratory analyses.

In addition, DWR conducts routine monitoring of and early detection for cyanobacteria, of which certain species can produce cyanotoxins that are potentially harmful to humans if present in high concentrations. While cyanobacteria are not introduced species, cyanobacteria can become a nuisance when present in high concentrations, resulting in potential harmful algal blooms. DWR routinely monitors for cyanotoxins produced by cyanobacteria through microscopic examination and chemical analysis of water samples. Water samples are collected from Silverwood Lake on a monthly basis from spring through fall.

DWR does not generally apply algaecides to Silverwood Lake to manage lake-wide algal blooms. Algaecides are applied on an as-needed basis consistent with a SWRCB-issued National Pollutant Discharge Elimination System (NPDES) permit to manage aquatic weeds and algae, such as filamentous green algae, in nearshore shallow water areas to protect public safety and minimize recreational hazards, as outlined in DWR's Aquatic Pesticide Application Plan for the SWP. For cyanobacteria blooms, DWR coordinates with the SWRCB and the California Department of Public Health and follows the voluntary guidance document that provides reservoir managers and operators with guidance on managing algal blooms.

On a voluntary basis, DWR coordinates with the SWRCB and the California Water Quality Monitoring Council, which includes the California Cyanobacteria and Harmful Algal Bloom Network of which DWR is a participating member. DWR shares the monitoring results from harmful algal blooms in SWP reservoirs, including Silverwood Lake. The data are posted to the California Water Quality Monitoring Council's website (http://mywaterquality.ca.gov).

California cyanotoxin advisory levels were established in the *California Voluntary Guidance for Response to HABs in Recreational Inland Waters* that was prepared by the SWRCB, the California Office of Environmental Health Hazard Assessment, and California Department of Public Health through the California Cyanobacteria and Harmful Algal Bloom Network, using a three-tiered advisory system as shown in Table 2.3-4.

Table 2.3-4. Trigger Levels for Posting Public Advisories

Criteria	No Advisory	Caution (Tier 1)	Warning (Tier 2)	Danger (Tier 3)
Total microcystins (sum of all measured congeners)	< 0.8 µg/L	0.8 µg/L	6 µg/L	20 µg/L
Anatoxin-a	Non-detect	Detected	20 µg/L	90 µg/L
Cylindrospermopsin	< 1 µg/L	1 µg/L	4 µg/L	17 µg/L

Source: California Water Quality Monitoring Council (https://mywaterquality.ca.gov/habs/resources/habs_response.html). Accessed: June 13, 2020.
Key:
µg/L = micrograms per liter

Based on the results of the laboratory analyses and DWR's environmental health hazard assessment, DWR, in cooperation with DPR, the California Office of Environmental Health Hazard Assessment, and DPH, posts public signage if cyanotoxins are detected at or above warning levels. The health advisory signs notify the public of unsafe water activities associated with each threshold trigger level. Recreational activities are managed through the issuance of recreational health advisories that include outreach and education, press releases, swim beach closures when needed, recommendations to not eat fish, and other public protection measures. These advisories increase as the level of exposure danger increases. When the criteria for "No Advisory" are met for a minimum of two weeks, DWR, in coordination with DPR, has discretion over whether to continue posting public advisory signs. In addition, DWR will be a participant along with other agencies to address incident response to harmful algal blooms as prescribed in AB 834 (Statutes of 2019, Chapter 354).

2.3.4.3 Current Aquatic Resource Protections

Aquatic invasive species (AIS) are aquatic organisms that include aquatic plants and invertebrates which can invade ecosystems beyond their natural, historic range and may harm native ecosystems and affect commercial, agricultural, or recreational activities. AIS may affect native and desired introduced species through competition, predation, and changes in habitat conditions.

To protect aquatic resources against AIS at the DCPD and throughout the SWP, DWR has implemented an Early Detection Monitoring Program for planktonic veligers (larval life stage of mussels), as well as adult quagga and zebra mussels in select locations throughout the SWP including Silverwood Lake and the DCPD afterbays (DWR 2010). The program provides for regular monitoring in Silverwood Lake and the afterbays, reporting to CDFW, and consultation with CDFW should quagga or zebra mussels be detected at the DCPD. In addition, to prevent the introduction of quagga and zebra mussels, DPR, which maintains and operates the Silverwood Lake-associated DCPD recreation facilities, inspects watercraft intending to use Silverwood Lake.

As discussed above in Section 2.3.4.2, DWR adheres to the NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications for the SWP, which requires monitoring and reporting, and applies treatment of aquatic weeds and algae in Silverwood Lake.

2.3.4.4 Current Terrestrial Vegetation and Wildlife Protection Activities

<u>Current Vegetation Management Activities</u>

Vegetation management is conducted within the existing DCPD boundary as necessary to reduce fire hazard, to provide for adequate DCPD facility access and inspection, to protect DCPD facilities, and to provide for worker and public health and safety. In general, vegetation management is implemented within approximately 75 feet of the powerplant and switchyard; within approximately 15 feet on either side of roads and trails to DCPD facilities; and within and adjacent to recreation areas.

Vegetation management implemented by DWR at DCPD facilities, in addition to what is mentioned above, includes identifying, assessing, monitoring, and controlling non-native invasive plants that threaten natural areas in the DCPD area. Herbicide application and hand trimming are conducted to manage vegetation on an annual basis at DCPD facilities located on DWR-owned property. All herbicide applications are supervised by a Qualified Applicator under the direction of a licensed Pest Control Advisor. The Pest Control Advisor prepares pest control recommendations consistent with the specific herbicide label(s) for each site, prescribing specific application directions and associated precautions. All-terrain vehicles, other vehicles (e.g., pick-up trucks), backpack sprayers, or small hand-held sprayers are used to apply herbicides. Herbicide application typically occurs twice annually, at a minimum. These applications occur between December 1 and March 31, as determined by the Pest Control Advisor for pre-emergent vegetation. Follow-up visits to apply post-emergent herbicides and/or additional treatments (as needed) are seasonally dependent, and typically occur between April 1 and June 30. A third cycle, if determined necessary, may be completed between July 1 and October 14.

Current Standard Vegetation and Wildlife Protections

Under current conditions, the following standard practices are implemented, as needed, for ground disturbing activities:

- The proposed activity is reviewed for environmental constraints, and an initial assessment for regulatory permitting is conducted.
- Permits are obtained if the activity is not exempted or has the potential to impact protected species or habitats.
- Preconstruction surveys are conducted, where necessary (e.g., in areas with potential for nesting birds and protected sensitive resources). DWR avoids construction during nesting season to the extent practicable. If this is not feasible, then DWR conducts pre-construction surveys, consults with the appropriate resource agencies, monitors, and applies appropriately sized buffers and flagging to areas where active nests and sensitive resources are identified.
- Exclusion fencing or other barriers are installed to limit the areas of disturbance and protect sensitive resources, if necessary.
- Equipment from out of the area is cleaned to reduce the potential for spreading noxious weeds.
- Worker environmental awareness training is conducted if there are sensitive resources in the area.
- Site stabilization is implemented with commercially available native seed mixes.

2.3.4.5 Current Recreation Resources-Related Protective Activities

Recreation facilities are maintained to a level that provides a safe and enjoyable experience. These facilities include parking areas, lawns, restrooms, lights, water, power, sewer, shelters, and picnic and campground equipment.

Current litter control involves weekly patrols to clean the shoreline and empty the trash receptacles at the three boat-in sites using a large maintenance barge. In and around the other developed sites in the Silverwood Lake SRA, DPR maintenance crews have daily patrols to empty trash receptacles and collect accumulated litter.

As mentioned in Section 2.3.4.2, DWR currently conducts sampling and monitoring for harmful algal blooms, which could produce cyanotoxins, and implements a notification program at Silverwood Lake to warn the public about the potential harm caused by water contact with harmful algal blooms. Notices are posted and press releases provided when any of three established water quality advisory levels are advised: (1) Caution; (2) Warning; and (3) Danger.

Current erosion treatment projects in the recreation areas are planned in advance or are initially implemented as preventive or emergency actions and are conducted in consultation with the appropriate resource agency, as necessary, including the Lahontan Regional Water Quality Control Board (RWQCB) and CDFW.

2.3.4.6 Land Use – Current Fire Safety Activities

Fire suppression within the proposed Project boundary is the responsibility of three agencies: the California Department of Forestry and Fire Protection (CAL FIRE) for areas in Silverwood Lake SRA; the USFS for NFS lands; and the City of San Bernardino Fire Department for the Devil Canyon Powerplant and associated facilities.

DPR currently implements fire restrictions at Silverwood Lake SRA during peak fire season. Fire restrictions (DPR 2015) are as follows:

- Backcountry areas are closed to the public.
- Open fires, including campfires and barbecues, are prohibited. Portable propane or gas stoves are permitted for cooking within designated campsites and day use areas.
- Fireworks are prohibited.
- Smoking is only permitted within designated areas of developed facilities or vehicles.

These Silverwood Lake SRA fire restrictions are in conjunction with similar restrictions implemented by USFS within the SBNF. No public access is permitted to the Devil Canyon Powerplant, Devil Canyon Afterbay, Devil Canyon Second Afterbay, or penstocks area. Therefore, no public use fire restrictions are required.

Fire and fire suppression are the major components of the USFS Fire and Aviation program. When a wildland fire is reported, fire personnel are dispatched to the fire. Other fire stations may also provide assistance. Related actions, including evacuations, are coordinated by USFS, adjoining fire department jurisdictions, and with various law enforcement agencies to protect the public. Fires are suppressed on the ground with engines, hand crews, and machinery, and from the air with helicopters and air tankers. Physical barriers, such as hand and dozer lines and fire-retardant drops, are used to slow fire progress so that fires can be more effectively contained. Once a fire is contained, NFS lands damaged by fire suppression activities are evaluated and then rehabilitated. Effects of the fire and the potential for post-fire effects to life, property, and natural resources are also evaluated and mitigated as needed by a team of resource specialists as part of the Burned Area Emergency Response (USFS 2005).

All wildland fires on NFS lands within the SBNF are considered to be a potential threat to communities. The USFS Fire Management Program emphasizes preparation for aggressive fire suppression and implementing prevention strategies to achieve objectives, including protecting life and property from wildland fire and subsequent floods (USFS 2005).

2.3.4.7 Current Visual Resources Preservation Activities

As described in its Water Resources Engineering Memorandum No. 30a, dated March 15, 1984, DWR has established an architectural motif which, consistent with economy and operational efficiency, is applied to all SWP facilities, which include DCPD facilities. The State Water Project Architectural Motif applies to SWP facilities on lands other than NFS lands. For DCPD facilities on NFS lands, DWR follows USFS policies and directives for aesthetics. The objective of the architectural motif is to create an identifiable, aesthetically pleasing, and unifying appearance throughout the SWP.

As a participant in the planning and design of new facilities, or the modification of existing facilities, the DWR Architectural Section is responsible for application of the motif consistent with site conditions. The Architectural Section reviews contract drawings and specifications for conformity with the motif. The DWR Division of Operations and Maintenance is responsible for application of the motif to existing facilities. Existing facilities requiring repainting are brought into compliance with the motif.

2.3.4.8 Current Cultural Resources Protection Activities

As standard practice, prior to beginning an activity involving ground disturbance or a scheduled non-routine maintenance activity, DWR obtains any necessary permits or authorizations and then conducts a cultural resources review of the location, consisting of archival research and a pedestrian survey of the area to identify cultural resources; the identification efforts are typically followed by an evaluation of identified resources for their potential eligibility to the National Register of Historic Places (NRHP) and/or California Register of Historical Resources (CRHR). If significant resources (historic properties, historical resources, unique archaeological resources and tribal cultural

resources) are found and if it is determined that impacts to those resources may occur, then DWR would initiate the SHPO consultation process under applicable regulations and agreements and initiate consultation with affiliated Native American tribes and the appropriate agencies. Following the completion of agency and tribal consultation, and at the conclusion of the SHPO review process, DWR would then begin ground disturbance activities with any appropriate measure in place and upon obtaining any additional permits or authorizations.

As part of standard cultural resource protection practice, DWR conducts Worker Environmental Awareness Program training, tailgate meetings each day prior to beginning work, and subsequent trainings, as necessary. If cultural resources or tribal cultural resources are inadvertently discovered, DWR staff would cease work temporarily within approximately 100 feet of the area until the findings can be assessed by a qualified archaeologist (i.e., meets the Secretary of the Interior standards for professional qualifications), and an appropriate course of action is determined. If the discovered resources are potential tribal cultural resources, DWR contacts affiliated Native American tribes and provides them an opportunity to participate in the evaluation of the find. DWR will generally implement avoidance measures and prefers measures to preserve resources in place as this maintains the important relationship between artifacts and their archaeological context and serves to avoid conflict with traditional and religious values of groups who may ascribe meaning to the resource.

If avoidance of a significant resource is not feasible, then DWR's qualified archaeologist will develop and implement an archaeological resources data recovery and treatment plan in consultation with the SHPO and appropriate Native American tribes and agencies. If during construction an inadvertent discovery of human remains is encountered, work is halted, and the County Coroner is contacted as required by California statutes and regulations.

DWR implements similar practices for inadvertent discoveries of paleontological resources including ceasing work within the immediate area of the discovery, creating appropriate buffers, and obtaining professional staff or contractors to assess and identify appropriate treatment of the find.

2.3.5 Existing DCPD Safety and Best Management Practices

DWR's first and foremost consideration when operating the DCPD is the safety of the public, DWR employees, and DWR contractors. DWR's next consideration is the safety of its facilities and downstream facilities. The following describes DWR's current DCPD safety and BMPs undertaken to protect people and property.

2.3.5.1 Current Operations During Flood Conditions

The DCPD is not operated for flood control protection. The DCPD storage and afterbay reservoirs do not include dedicated flood control space, and DCPD spillways are not constrained for flood control periods. However, DCPD facilities are designed to

minimize the impacts during high flow periods. For example, the Cedar Springs Dam Spillway is designed to handle high flows.

2.3.5.2 Current Warning Devices for Public Safety

As described in its current Project Safety Plan, DWR has implemented practices and devices to help protect the public and DWR employees (DWR 2020). DWR uses warning devices, such as signs, buoy lines, and alarms, to warn the public of dangers or hazards. Signs inform the public that areas are dangerous and that public access is prohibited; others inform the public that entry to certain areas is only on foot, with no bicycles or vehicles, or inform the public of extreme dangers such as high voltage power lines.

In addition, DWR uses exclusion barriers, such as fences, gates, and boat barriers, to exclude the public from unsafe areas. Almost all DCPD facilities are surrounded by 6-foot-high chain link fence topped with three-strand barbed wire. Manually operated gates are locked with chains and special locks made solely for DWR staff. Electric gates require a specific key or authorized security badge for access, and the Devil Canyon Powerplant has security cameras with an operator and security guard which monitor 24 hours a day, 7 days a week.

2.3.5.3 Current Emergency Action Plan

DWR conducts annual reviews and provides updates to the Emergency Action Plan (EAP) for the Cedar Springs Dam. In addition to the EAP updates, DWR conducts annual orientations, tabletop exercises, annual drills, and emergency equipment testing for the facility.

2.3.5.4 Current Monitoring and Surveillance

DWR has many safety standards in its dam-specific FERC EAP, internal regulations, and daily DCPD operations. Daily patrols are conducted, and all safety procedures and implementations are checked. If anything is damaged or needs repair or replacement, a Trouble Report is generated, and action is taken to isolate the danger and to make the needed repair/replacement.

Cedar Springs Dam and its facilities are visually inspected daily for anomalies of its hydraulic structures. Any observed damage or failures of these structures are immediately reported to the SFD Area Control Center. Detection of a dam safety emergency or incident at Cedar Springs Dam will generally fall under one of three categories: visual observations, a Supervisory Control and Data Acquisition instrumentation alarm, or dam safety instrumentation.

2.4 PROPOSED PROJECT

This section describes DWR’s proposed changes to the existing DCPD, which is the subject of this CEQA analysis.

2.4.1 Proposed Administrative Changes

2.4.1.1 Proposed Project Boundary

DWR proposes changes to the existing DCPD boundary to more accurately define lands needed for the safe operation of the DCPD and other project-related purposes, such as recreation, shoreline control, and protection of environmental resources. The proposed Project boundary changes include: the addition of lands to the existing DCPD boundary that are used for O&M (e.g., the drainage area west of the Devil Canyon Second Afterbay), and proposed removal of lands from the existing DCPD boundary that do not have DCPD facilities on them and are not used or necessary for DCPD O&M (e.g., certain areas between Silverwood Lake and State Highway 138).

In many places around Silverwood Lake, these proposed changes are made by following land contours located above the NMWSE. These changes reflect the preferred method of defining a project's boundary, as outlined in the FERC Drawing Guide, and accurately represent lands required for DCPD O&M around the DCPD reservoir (FERC 2014).

The net effect of modifying the existing DCPD boundary is the reduction of area within the boundary from 3,744.0 acres to 2,079.2 acres (Figure 2.4-1). This change would reduce the 221.0 acres of federal land to 125.7 acres of federal land. Table 2.4-1 shows DWR's proposed changes to the existing DCPD boundary.

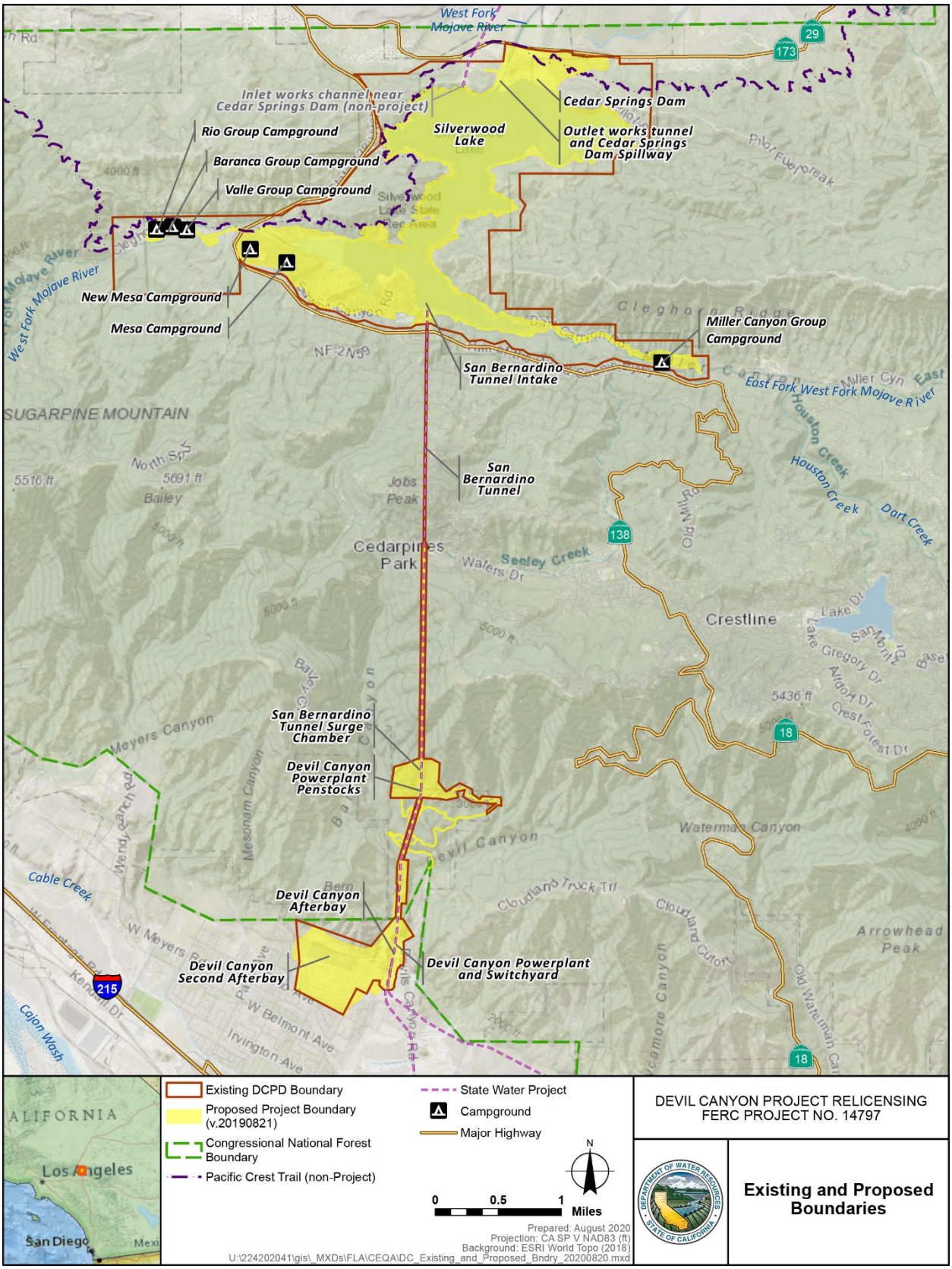

Figure 2.4-1. Existing DCPD and Proposed Project Boundaries

Table 2.4-1. Proposed Changes Within Existing DCPD Boundary by Land Ownership

Development	USFS (acres)	State of California (acres)	Private (acres)	County (acres)	Total (acres)
Existing DCPD Boundary	221.0	3,501.3	21.7	0.0	3,744.0
Proposed Project Boundary	125.7	1,923.3	7.2	23.0	2,079.2
Change to Existing DCPD Boundary	-95.3	-1,578.0	-14.5	+23.0	-1,664.8
% Change to Existing DCPD Boundary	-43.1%	-45.1%	-66.8%	--	-44.5%

Source: Compiled by the California Department of Water Resources – Geodetic Branch – Property Management and Land Records section from Department land records and County Assessor Data.
Key:
DCPD = Devil Canyon Power Development
State of California = Lands owned by DWR and DPR
USFS = U.S. Department of Agriculture, Forest Service
% = percent

The boundary change includes the delineation of a 100-foot buffer from Silverwood Lake's NMWSE to define the proposed Project boundary around portions of the lake, which reduces the land area within the administrative licensed boundary on the eastern, western, and southern sides of Silverwood Lake.

The proposed changes are consistent with FERC regulations and are based on DWR's current and historical use of land for the DCPD; DWR's comprehensive review of facilities, operations, and current land information; and additional new information and data available for facilitating a more refined boundary delineation. All Primary Project Roads and DCPD recreation facilities, including trails, are within the proposed Project boundary. Multiple use roads (i.e., roads used by multiple parties, not just used to access the DCPD) may be within the boundary, but they are not considered Primary Project Roads and are not proposed Project facilities for the purpose of the FERC license (refer to Section 2.4.1.3 below regarding Primary Project Roads). The existing DCPD boundary is an administrative marker to clearly delineate those lands and waters necessary for O&M of the DCPD and associated facilities.

2.4.1.2 Proposed Addition of Existing Lake Level Gage to FERC License

For the purpose of documenting lake elevation conditions, an existing reservoir gage will be added as a proposed Project facility for monitoring reservoir levels (Table 2.4-2). This gage already exists, and therefore, the proposed addition represents incorporation of the DCPD lake level monitoring program in the new license. DWR does not propose to add any new streamflow gages to the DCPD.

Table 2.4-2. Existing Lake Level Gage Proposed for Addition to the DCPD FERC License

USGS Gage No.	Gage Name	Purpose of Gage as Related to the DCPD
10260790	Silverwood Lake, Near Hesperia, CA	Record Silverwood Lake stage

Key:
CA = California
DCPD = Devil Canyon Power Development
DWR = California Department of Water Resources
FERC = Federal Energy Regulatory Commission
No. = Number
USGS = U.S. Geological Survey

2.4.1.3 Proposed Addition of Existing Access Roads to FERC License

DWR does not propose to construct any new roads under the proposed Project. Rather, DWR proposes to include in the new license a Primary Project Road designation for existing access roads. Specifically, there are 10 existing access road segments totaling approximately 7.6 miles currently maintained by DWR that are proposed to be designated as “Primary Project Roads” under the new license (Table 2.4-3 and Figure 2.4-2). A Primary Project Road is defined as any road or segment of a road operated by DWR within the FERC boundary, used almost exclusively to access the hydropower generation and associated licensed facilities. Short- and long-term maintenance activities of the Primary Project Roads and recreation roads are discussed in Section 2.4.3.

Table 2.4-3. Existing Primary Project Roads Proposed for Addition to the DCPD FERC License

Designation	Begins	Ends	Land Ownership	Distance (miles)	Purpose
Tunnel Outlet Access Road	Locked gate on Devil Canyon Road	San Bernardino Tunnel Outlet	City of San Bernardino, State of California, and USFS	2.4	Access to San Bernardino Tunnel Outlet
Surge Chamber Access Road	Tunnel outlet access road	San Bernardino Tunnel Surge Chamber	USFS	0.5	Access to San Bernardino Tunnel Surge Chamber
Upper Penstocks (West) Access Road	San Bernardino Tunnel Outlet	San Bernardino Penstocks	City of San Bernardino, State of California, and USFS	1.2	Access to west side of upper portion of Devil Canyon Penstocks
Upper Penstocks (Upper East) Access Road	Tunnel outlet access road	San Bernardino Penstocks	City of San Bernardino and State of California	0.7	Access to east side of upper portion of Devil Canyon Penstocks
Upper Penstocks (Lower East) Access Road	Tunnel outlet access road	San Bernardino Penstocks	City of San Bernardino and State of California	0.1	Access to east side of upper portion of Devil Canyon Penstocks
Lower Penstocks Access Road	Devil Canyon Powerplant Complex	San Bernardino Penstocks	City of San Bernardino and State of California	0.9	Access to lower portion of Devil Canyon Penstocks
Dam and Spillway Access Road	Locked gate	Silverwood Lake	State of California	1.0	Access to Cedar Springs Dam and east side of Cedar Springs Dam Spillway
Dam Downstream Face Access Road	Locked gate	Downstream Face of Cedar Springs Dam	State of California	0.4	Access to downstream face of Cedar Springs Dam
Spillway Access Road	Mojave Power/Pumping Plant Road	Silverwood Lake	State of California	0.3	Access to west side of Cedar Springs Dam Spillway
Intake Access Road	Locked gate	San Bernardino Tunnel Intake	State of California	<0.1	Access to San Bernardino Tunnel Intake
			Total miles:	**~ 7.6**	

Key:
DCPD = Devil Canyon Power Development
FERC = Federal Energy Regulatory Commission
DWR = California Department of Water Resources
USFS = U.S. Department of Agriculture, Forest Service

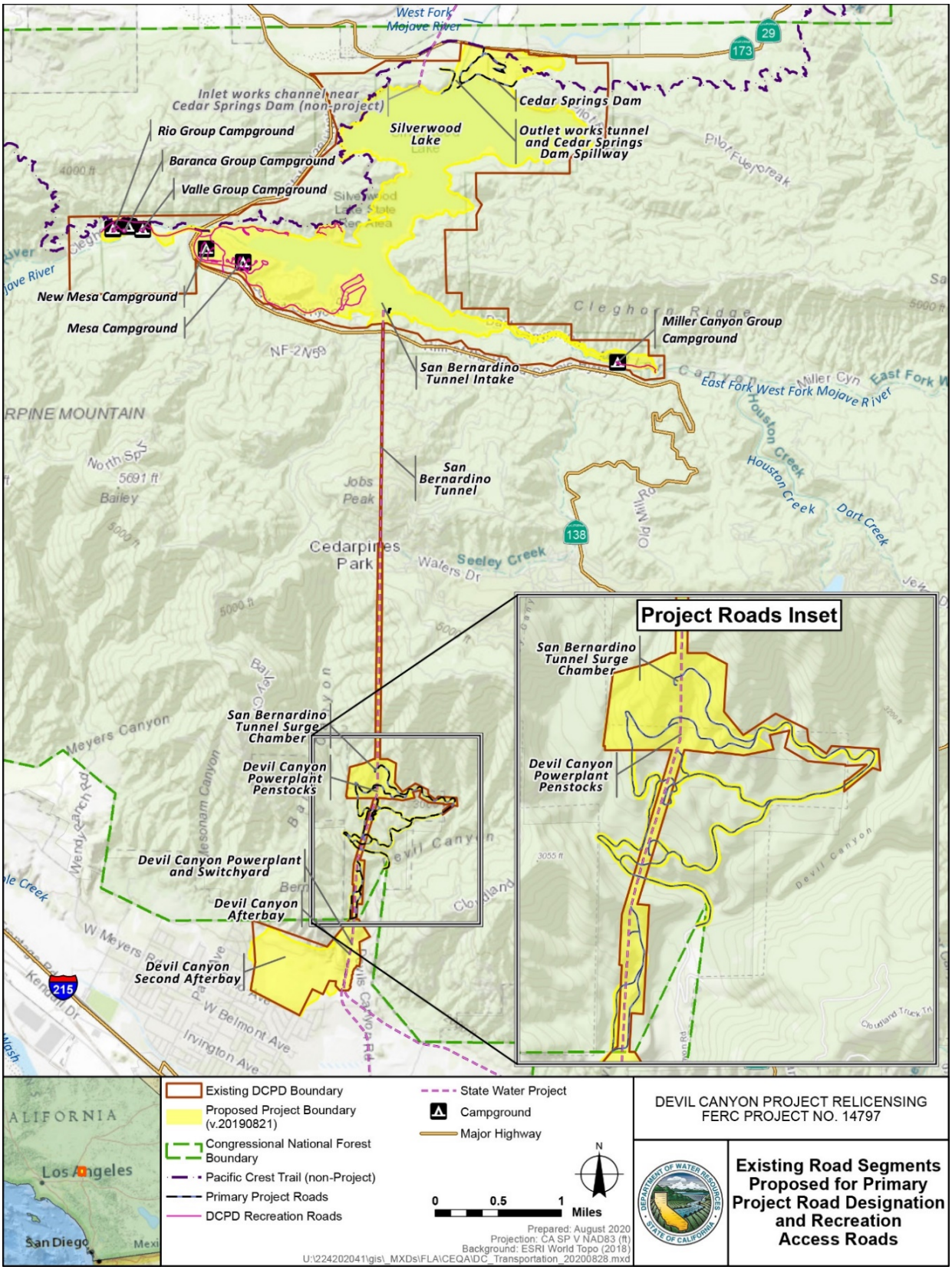

Figure 2.4-2. Existing Road Segments Proposed for Primary Project Road Designation Including Recreation Access Roads

2.4.2 Proposed DCPD Operation

DWR does not propose any changes to existing DCPD hydropower operations. DWR proposes to continue operating the DCPD by generating power as SWP water is delivered to downstream SWP water users, as described in Section 2.3.2. Additionally, DWR does not propose any changes to the general operation of the existing DCPD recreational facilities.

2.4.3 Proposed Continuation of Routine Maintenance Activities

DWR will continue to conduct routine maintenance activities within the existing DCPD boundary as discussed in Section 2.3.3. This includes maintenance of DCPD hydropower facilities and recreation facilities general maintenance and periodic repair activities; rodent pest management; and short- and long-term maintenance associated with DCPD Primary Project Roads and recreation access roads. Routine maintenance of the proposed upgraded recreation facilities is not anticipated to differ from existing activities.

2.4.4 Proposed Improvements to Recreation Facilities

DWR does not propose adding additional recreation facilities. DWR, in partnership with DPR, proposes to continue managing and improving the management of recreation use around Silverwood Lake and provide regular maintenance to the existing 28 developed sites, 3 trails, and access roads that are included as part of the DCPD (Section 2.3.3.2). These include maintenance activities for public safety and recreation use on public lands in and around public roads, and other trails within the existing DCPD boundary.

Additionally, as a part of the anticipated license-stipulated PM&E measures which are defined and further described in Section 2.4.4 below, some specific recreation facility improvement measures would be implemented at four groups of developed recreation areas around Silverwood Lake.

DWR, in partnership with DPR, and in compliance with the anticipated terms and conditions of the new license would, therefore, implement the following specific improvements within the first 10 years of operation. Refer to Figure 2.4-1 for the locations of these facilities. Table 2.4-1 also summarizes the proposed upgrades and schedule for these day use area improvements.

Rio, Barranca, and Valle Group Camps Rehabilitation

The existing group camps in the West Fork Area of Silverwood Lake are in need of repair and improvement based on relicensing condition assessment study work (DWR 2019). The improvements for these three group camps entail rehabilitation of the existing facilities, including installation of a new concrete pad, new metal roof and shade ramada at each site, new picnic tables, barbeque grills, hot coal bins, fire pits, improvements to the equestrian facilities, and restroom roof repair. Facility improvements will involve use of Americans with Disabilities (ADA)-compliant amenities,

and the rehabilitation will include other ADA access improvements, such as designated parking and handrails.

Sawpit Canyon Picnic Area Improvements

During 2017 relicensing recreation inventory surveys, the three Sawpit Canyon Picnic Areas were found to be in fair condition. Several improvements will be implemented to renew this facility's full function and enhance the aesthetics for recreation users. Improvements will include clearing vegetation along access routes, replacing picnic tables, replacing trash receptacles with bear-proof cans, and resurfacing road and parking pavement.

Sawpit Canyon Day Use Area Improvements

Several improvements are proposed for this facility. Improvements include replacing picnic tables, barbeques, and hot coal bins. Additionally, trash receptacles will be replaced with bear-proof cans, and parking areas and existing walking paths will be resurfaced. Repairs include replacing and updating public use water spigots and drinking fountains.

Live Oak Landing Day Use Area and Dispersed Use Area Trail Improvements

Several updates are proposed to improve and harden this remote developed site on the eastern shoreline of Silverwood Lake. The site is primarily used by boaters, but some users access the site from Forest Service Road 2N33. The proposed improvements include replacing picnic tables, marking primary user trails from the shoreline to the facilities, and adding additional bear-proof trash receptacles. Directional signage also will be added. A study will also be undertaken with representatives from DWR, DPR, and USFS to assess and possibly plan for closing user-made trails using natural barriers and other means. The intent of those measures is to concentrate use in and around the site so that the most suitable, least erosive, and least environmentally damaging trails would be used by recreationists. The treatment plan may include installation of natural barriers, buffer treatments, or other appropriate measures. Trails to be retained will be those with the least potential for erosion and with suitable grades. The work may include rock placement, signage, construction of rock steps, large woody debris treatments, construction of wood crib walls, slope stabilization, and revegetation. The study will be completed within one year of license issuance and involve the following components:

- Problem Description – Collect Inventory and Monitoring Data
- Evaluate Impact Acceptability
- Evaluate Causes and Alternative Solutions
- Apply Site and/or Visitor Management Actions

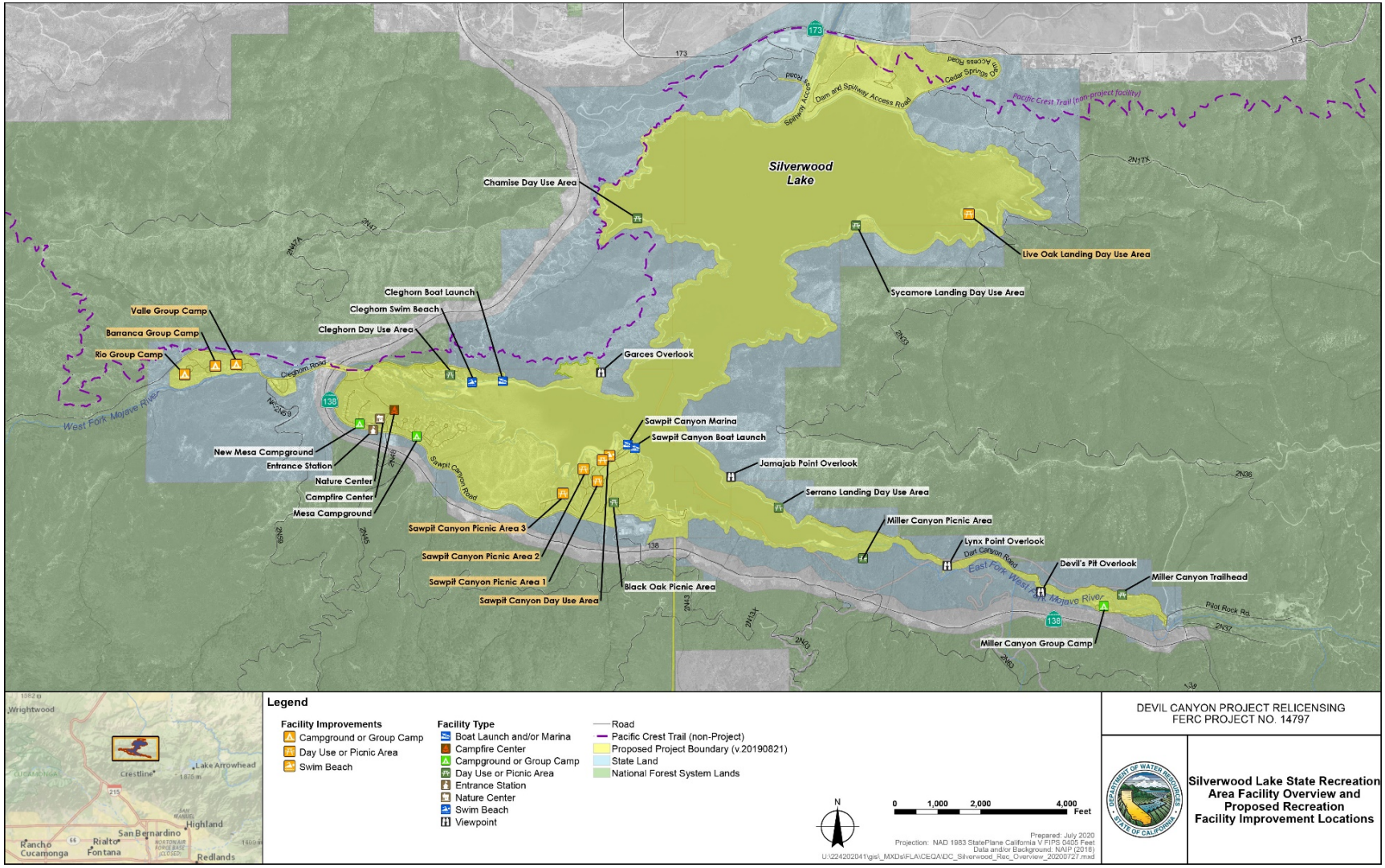

Figure 2.4-3. Silverwood Lake State Recreation Area Facility Overview and Proposed Recreation Facility Improvement Locations

Table 2.4-4. Proposed Recreation Site-Specific Improvements and Timeline

Proposed Recreation Site Improvements	Anticipated Construction Equipment	Anticipated Construction Duration	Completion Timeline
Rio Group Camp Rehabilitation: Resurface road and access paths, and replace barbeque grills, picnic tables, and shade ramada. Add ADA improvements, such as designated parking and handrails.	Primarily hand tools, flatbed trucks possibly with a small crane, forklift, and paving and pavement striping equipment	Less than six months and may occur at various intervals during specific short periods to avoid and minimize recreation impacts and minimize construction during times of rain	By year two of the new license – except road and parking area resurface by year six of the new license
Barranca Group Camp Rehabilitation: Resurface road and access paths, and replace barbeque grills, picnic tables, and shade ramada. Add ADA improvements, such as designated parking and handrails.	Same as estimated above	Same as estimated above	By year six of the new license
Valle Group Camp Rehabilitation: Resurface road and access paths, and replace barbeque grills, picnic tables, and shade ramada. Add ADA improvements, such as designated parking and handrails.[1]	Same as estimated above	Same as estimated above	By year 10 of the new license
Sawpit Canyon Picnic Area Improvements: Resurface road and parking pavement, clear vegetation on access routes, and replace picnic tables and trash receptacles with bear-proof cans. Rehabilitate water spigots and drinking fountains.	Primarily hand tools, flatbed trucks, paving and pavement striping equipment, vegetation removal equipment likely consisting of hand tools or a small tractor	Same as estimated above	By year six of new license–except road and parking, resurface by year eight of the new license

Table 2.4-4. Proposed Recreation Site-Specific Improvements and Timeline (continued)

Proposed Recreation Site Improvements	Anticipated Construction Equipment	Anticipated Construction Duration	Completion Timeline
Sawpit Canyon Day Use Area Improvements: Resurface road and parking pavement, clear vegetation on access routes, and replace picnic tables and trash receptacles with bear-proof cans.	Primarily hand tools, flatbed trucks, paving and pavement striping equipment, vegetation removal equipment likely consisting of hand tools or a small tractor	Same as estimated above	By year six of the new license
Live Oak Landing Day Use Area Improvements: Update site with new picnic tables. Add bear-proof trash receptacles. Designate and mark shoreline trails. Harden site with more formal paths from boat-in areas to ramadas and restrooms. Restore vegetation where possible by using deterrents to keep users away from vegetated buffer areas. Develop plan that may close some user-made trails using natural barriers and other means in order to concentrate use in and around the most suitable trail locations. Monitor dispersed use patterns in this area and adjoining shorelines on Silverwood Lake.	Primarily hand tools, flatbed truck to carry barriers, vegetation removal equipment likely consisting of hand tools or a small tractor	Likely less than three months	Develop plan for assessing and possibly closing user-made trails using natural barriers and other means within year two of the new license; other improvements to site within year three of the new license

Key:
ADA = Americans with Disabilities Act
Note:
[1]Inputs and analysis in the Air Quality, Greenhouse Gases, and Transportation sections in Section 3.0 of this document are based on a worst case assumption that all three main recreation area upgrades (the Group Camp Sites, the Saw Pit Sites, and Live Oak Landing Site) would happen simultaneously, and require the following: heavy vehicle traffic including two large trucks for two weeks, two delivery trucks per day for six months, and five employee cars for six months. To facilitate construction flexibility up to but not to exceed the amount of vehicle traffic during construction, as discussed in the Section 3.0 impact analyses, all travel distances are estimated to be on average 50 miles round trip. This estimate is an overestimate of construction related to vehicle travel.

2.4.5 Proposed New Environmental Protection, Mitigation, and Enhancement Measures

O&M activities are not anticipated to change from baseline conditions. PM&E measures will be implemented in accordance with the new FERC license. While PM&E measures are intended to protect resources against potential DCPD operational impacts, mitigate impacts from continued O&M, and enhance protection of resources potentially affected by DCPD operation, PM&E measures in a FERC relicensing process are not the equivalent to CEQA mitigation measures (CEQA Guidelines §§ 15370 and 15126.4). PM&E measures are not necessarily applied to reduce a potentially significant impact to a less-than-significant level, nor do they guarantee such a reduction in the level of a CEQA-specific impact. Rather, "PM&E" is a FERC term applied to measures proposed through a coordinated stakeholder outreach effort during relicensing to update, upgrade, and add to existing protective measures or activities. As such, the PM&Es would become a FERC license stipulation and would be required for the continued operation of the DCPD under the new license. However, PM&E measures may or may not act as mitigation to reduce a potential impact to a less-than-significant level as defined by CEQA. Additionally, the PM&E measures required in the new FERC license may have impacts to other resources assessed in the CEQA review process.

Some PM&E measures proposed for the new license are nearly identical to existing practices and therefore are simply codifying the existing BMPs designed for the DCPD operation under the new FERC license. Such currently implemented BMPs constitute a part of the environmental baseline conditions, as described in Section 2.3.4. Other PM&E measures involve minor upgrades or adjustments and, therefore, are considered new activities that are different from baseline conditions. The proposed new component of each protective measure is described below and analyzed in this document for its impact to environmental resources beyond those that it is designed to protect. For example, this analysis evaluates whether the implementation of an erosion control PM&E could have a potential adverse impact to aesthetic resources, or whether a visual resource PM&E could have a potential for cultural resource impacts.

PM&E measures can serve as CEQA mitigation measures if it is determined that the proposed Project would have a significant, adverse impact on a particular environmental resource, and the relevant PM&E measure would eliminate such an impact or reduce it to a less-than-significant level. CEQA requires implementation of feasible mitigation measures that can minimize a project's significant environmental effects (CEQA Guidelines §§ 15370 and 15126.4). CEQA mitigation measures can take the form of avoiding the impact; minimizing the impact by limiting the degree or magnitude of the action; rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; reducing or eliminating the impact over time by preservation and maintenance operations; or providing compensation for the impact (CEQA Guidelines § 15370). To ensure informed decision-making and informed public participation, the determinations regarding the significance of the proposed Project's impacts in the impact analysis section of this document, Section 3.0 (Impact Analysis), have been initially made without considering relevant PM&E measures (*Lotus v. Department of Transportation* [2014] 223 Cal.App.4th 645). On the basis of that analysis, it has been

determined that none of the proposed PM&E measures qualify as CEQA mitigation measures because the proposed Project's potential impacts, associated with the environmental resources that such PM&Es are designed to protect or enhance, would be less than significant, thus not requiring mitigation under CEQA. Therefore, this analysis evaluates the potential impacts from the proposed Project against the existing environmental conditions including analyzing potential impacts from implementing the PM&Es (further described below). Incorporated into this are the recreation facility improvements under PM&E measure RR1 (RMP) as well as the administrative changes discussed above (modifications to Project boundary, and addition of a lake level gage and Primary Project Roads).

As noted above, the PM&Es were developed through a coordinated stakeholder outreach effort during the relicensing process. More specifically, between April 2018 and December 2019, 13 meetings were held regarding the development of the PM&Es. These meetings included participation from: USFS, NPS, USFWS, SWRCB, CDFW, Stantec, DWR, Pacific Crest Trail Association (PCTA), San Bernardino County Fire Department, SBNF, California State Parks, California Department of Transportation (Caltrans), and the Morongo and San Manuel tribes. The San Manuel and Morongo tribes have been actively involved in the HPMP development; other Native American tribes and individuals have been included in mailings and distribution throughout the relicensing. The meetings culminated in the development of the 12 PM&E measures that are expected to be required under the anticipated terms of the new FERC license.

Facility-specific recreation improvements that are anticipated to be implemented as part of the license-stipulated PM&E measures are addressed in Section 2.4.4. In addition, the following PM&E measures are included as part of the proposed Project as proposed by DWR in its FLA.

2.4.5.1 Geology and Soils (Erosion Control) Measures

No new license-required erosion control protections are anticipated. Rather, the anticipated license requirements would codify existing practices in the following management plan.

GS1: Erosion and Sediment Control Plan. This plan captures existing DCPD O&M practices (see Section 2.3.4.1) for minimization of site-specific erosion and sedimentation, including potential slope failures, new construction, and/or reconstruction. This includes specifications for maintenance BMPs on NFS lands, and emergency erosion control events, and monitoring of erosion and sediment control measures. Specific erosion control BMPs are in the Erosion and Sediment Control Plan and pertain to construction scheduling to reduce work during rainy periods to the extent feasible; preservation of existing vegetation to reduce bare soil exposure and associated potential runoff; site stabilization measures, such as mulch application and revegetation; silt fencing placement standards; storm drain inlet protection specifications, including material specifications and rock size specifications; buffer guidelines for areas along waterways; fugitive dust suppression standard practices, including watering access roads and vehicle speed limitations, among others;

stabilization specifications for construction entrances, including roadway cleaning and road base instructions; and waste management stipulations, including concrete handling specifications and stockpile and trash management.

Implementation of the Erosion and Sediment Control Plan has benefits similar to the hazard materials handling practices (Section 2.4.5.2), preventing pollutant discharges in the form of sedimentation and turbidity in DCPD water bodies. Furthermore, application of the Erosion and Sediment Control Plan complies with cultural resource avoidance measures in DWR's HPMP, and biological resource measures in DWR's Integrated Vegetation Management Plan (IVMP).

2.4.5.2 Water Resources (Flows and Water Quality) Protections

No new license-required water resource protections are anticipated. Rather, the anticipated license requirements would codify existing practices as follows.

WR1: Silverwood Lake Minimum Pool and Water Surface Elevations. This anticipated FERC license requirement is essentially a continuation of Article 58 of the existing license. This measure maintains a minimum pool and limits water surface elevation fluctuations in Silverwood Lake for the benefit of fisheries and recreation. Measure WR1 incorporates the minimum pool and water surface elevation restrictions from the DWR and USFS 1968 MOU, as amended, and the provisions of the 2003 MOU between DWR and CDFW.

WR2: Hazardous Materials Management Plan. This anticipated FERC license requirement continues existing DCPD O&M practices (Sections 2.3.2 and 2.3.3) and compliance with existing State and federal regulations as currently practiced under the existing license to manage hazardous materials and prevent their inadvertent releases. It also codifies response and clean-up requirements and practices for hazardous materials releases, should they occur. The Hazardous Materials Management Plan is designed to protect public and employee health and safety, and avoid and minimize the negative effects to water quality from hazardous materials.

2.4.5.3 Aquatic Resources Measures

No new license-required aquatic resource protections are anticipated. Rather, the anticipated license requirements would codify existing practices as follows.

AR1: Silverwood Lake Fish Stocking Measure. This anticipated FERC license requirement is similar to Exhibit S under Article 51 of the existing license and therefore does not represent a change in baseline conditions. Measure AR1 includes measures to maintain the recreational trout fishery, including periodic angler surveys and annual fish stocking with an annual target of 20,000 pounds of stocked trout.

AR2: Aquatic Invasive Species Management Plan. This plan incorporates measures already practiced as part of the larger SWP including DCPD impoundments to prevent the introduction and spread of AIS as the most effective means of management currently available. The Aquatic Invasive Species Management Plan applies to

Silverwood Lake, afterbays, and downstream reaches. The plan includes measures to prevent the introduction and spread of AIS and implementation of BMPs during proposed Project activities. Although not a component of the plan, nor have there been any indications of dreissenid mussels present in the lake, consideration is given to DWR's Early Detection Monitoring Program for monitoring zebra and quagga mussels in SWP waters, including Silverwood Lake. Consideration is also given to DWR's compliance with its NPDES permit issued by the SWRCB for the application of algaecides for managing aquatic weeds and algae that can pose a safety risk and hazard to the public in SWP waters.

2.4.5.4 Terrestrial Vegetation and Wildlife Measures

TR1: Implement the Integrated Vegetation Management Plan (IVMP). This plan models existing practices under the current license (Section 2.3.4.4), and includes measures for controlling non-native plant species, protecting special-status species and cultural resources during vegetation management activities, providing for the safe application of herbicides, and revegetating disturbed areas. The goals of this plan are to continue to prevent the introduction or establishment of non-native and invasive plants, and to control the spread of known infestations through surveying and documentation, avoidance, and long-term monitoring and management. This plan is applicable to all other plans where ground disturbance occurs. The IVMP includes already-practiced measures to protect known special-status plants and sensitive natural communities that could be affected by future activities, including the revegetation of natural landscapes, conservation of wetland resources, reduction of soil erosion, and herbicide application at appropriate locations.

2.4.5.5 Recreation Resources Measures

RR1: Implement the Recreation Management Plan (RMP). The intent of the new recreation measures in this plan is to better address recreation use and crowd management through implementation of peak use management actions at Silverwood Lake. These management actions outline the steps that staff may take to regulate increasing crowd levels during busy summer weekends and holidays. Additionally, the peak use management actions outline how staff can better manage visitor expectations in a way that may help alleviate the number of "turn-aways" on those weekends when the park is filled to capacity or closed. Such a program will better inform visitors of site conditions and disseminate real-time information on park capacity so users know in advance of arriving at Silverwood Lake what to expect regarding park access, and/or access to the various destinations and facilities within the Silverwood Lake SRA. The RMP also includes a series of measures aimed to help reduce littering and litter accumulation around Silverwood Lake. The RMP also outlines a monitoring program that helps to identify changes in recreation use and needs over time so that the plan can be adjusted in the future as conditions change. Lastly, the RMP prescribes the recreation facility upgrades described in detail in Section 2.4.4. These facility upgrades are described separately for project-specific analyses for the proposed site-specific ground disturbing elements of the RMP.

2.4.5.6 Land Use – Fire Safety Measures

No new license-required fire safety activities are anticipated. Rather, the anticipated license requirements would codify existing practices as follows.

LU1: Transportation System Management Plan. This plan provides guidance for the maintenance of existing roads and trails and does not differ from current practices. Therefore, the only proposed changes are those associated with the expansion of DWR maintenance to include approximately 7.6 miles of existing roadways now identified as part of the DCPD through the Primary Project Road designation. This plan also includes provisions for emergency response preparedness and fire control/extinguishing during DCPD O&M.

LU2: Fire Prevention and Response Plan. This plan provides measures for preventing, reporting, and investigating DCPD-related wildfires in a manner consistent with current practices. This plan codifies the existing response plans coordinated with USFS, CAL FIRE, and the San Bernardino County Fire Department.

LU3: Project Safety Plan. This measure is similar to Articles 60 and 402 in the existing license, and provides measures for installing and maintaining signs, lights, sirens, and other devices at DCPD facilities. As such, the Project Safety Plan incorporates measures already implemented under the existing license.

2.4.5.7 Visual Resources Preservation Measures

VR1: Visual Resources Management Plan. This plan includes measures to reduce the visual contrast of some DCPD facilities and provides a framework for addressing visual quality when there are changes to the DCPD. The plan includes installing an interpretive sign where the Cedar Springs Dam complex is first viewed by PCT users, replacing fence slats as-needed (as currently occurs), and re-painting existing facilities as needed (as currently occurs).

2.4.5.8 Cultural Resources Protection Measures

CR1: Historic Properties Management Plan (HPMP). This confidential and privileged plan describes actions and processes to manage historic properties and/or historic resources as well as unevaluated resources within the APE under the new license. It serves as a guide for DWR when performing DCPD O&M activities and identifies treatments for historic resources designed to address potential ongoing and future effects to resources. More specifically, the HPMP provides avoidance measures for resources that include placement of restrictive/protective signs, fencing (temporary or otherwise), berms, barriers, barricades, vegetation, or similar physical obstructions to reduce or limit access to historic sites. It also includes processes for establishing no work zones to protect sensitive resources.

2.4.6 DCPD Safety and Best Management Practices

DWR would continue the safety practices and BMPs described in Section 2.3.5. Additionally, DWR assumes that FERC's requirements regarding inspections of DCPD facilities (e.g., annual FERC inspections, Title 18 of the CFR Subpart 12D Dam Safety Inspections, and Environmental and Public Use Inspections) and other similar general FERC requirements (e.g., requirement for EAPs) will apply to the proposed Project under the new license. DWR also assumes that the specific requirements for approvals, such as dam certificates issued by the California Division of Safety of Dams for DCPD dams within their jurisdiction, and appropriated water rights issued by the SWRCB for power generation, would not change under a new license.

2.5 PROPOSED PROJECT ACTIVITIES SCHEDULE

DWR would implement the proposed Project including the PM&E measures following FERC's issuance of a new license as specified in Table 2.5-1.

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Table 2.5-1. Anticipated Proposed Project Activities Implementation Locations and Schedule

Proposed Activities	Applicable Location(s)	Anticipated Timing/Duration	Additional Schedule Information
Administrative Changes	Project boundary adjustment, gage designation, and Primary Project Road and recreation road designations within the proposed Project boundary	Immediately upon FERC license issuance. To continue for the duration of the FERC license.	N/A
Operation	Hydropower generation facilities, recreation facilities, access roads, associated appurtenances, and land management within the proposed Project boundary	Ongoing, no substantial change upon license issuance. To continue for the duration of the FERC license	N/A
Maintenance	Applicable to the hydropower generation facilities, recreation facilities, access roads, associated appurtenances, and land management within the proposed Project boundary	Ongoing – no substantial changes upon license issuance. To continue for the duration of the FERC license	N/A
PM&Es			
Erosion and Sediment Control Plan Implementation (GS1)	Applicable within the proposed Project boundary	Plan document developed, codifies existing practices, continued implementation upon license issuance. To continue for the duration of the FERC license.	To be applied in anticipation and as remediation for natural and/or planned ground disturbances.
Silverwood Lake Minimum Pool and Water Surface Elevations Implementation (WR1)	Silverwood Lake	Ongoing, will continue upon FERC license issuance. To continue for the duration of the FERC license.	For general recreation use at Silverwood Lake, DWR will operate Silverwood Lake with the objective of maintaining the water surface elevation (WSE) in the lake as follows: From March 1 through September 15 of each year, maintain the WSE within a range of not more than 11 inches each day, and within a range of not more than 30 inches each 7-day period (beginning at midnight on Sunday), with the following exceptions: DWR may exceed the 11-inches-per-day WSE fluctuation limit by 3 inches, for a total of 15 days between March 1 and September 15. DWR may raise the WSE by up to 18 inches on weekends (i.e., midnight on Friday to midnight on Sunday). DWR may exceed the 30-inches-per-day WSE weekly fluctuation limit if required during certain months to allow DWR to economically meet its commitments for delivery of water under existing water supply contracts. DWR will use best efforts not to lower the WSE by more than 3 feet from April 1 through June 30 of each year to protect the bass spawning in Silverwood Lake. In the event that DWR lowers the WSE 3 feet or more between April 1 and June 30, DWR will notify CDFW.
Hazardous Materials and Management Plan Implementation (WR2)	Applicable within the proposed Project boundary	Management Plan developed, codifies existing practices. Continued implementation upon FERC license issuance. To continue for the duration of the FERC license.	To be applied to all hazardous materials handling for the duration of the renewed FERC license.

Table 2.5-1. Anticipated Proposed Project Activities Implementation Locations and Schedule (continued)

Proposed Activities	Applicable Location(s)	Anticipated Timing/Duration	Additional Schedule Information
Silverwood Lake Fish Stocking Implementation	Silverwood Lake	Beginning the first calendar year after license issuance and annually thereafter during the stocking season (October 1 through May 30).	Beginning in the first full calendar year after license issuance and annually thereafter during the stocking season (October 1 to May 30), DWR will provide for the stocking of Silverwood Lake with a target of 20,000 pounds of catchable trout (i.e., approximately two fish per pound). This poundage is an average annual target that may fluctuate slightly from year to year. The average will be measured as a five-year running average to maintain consistent stocking over the term of the new license. In consultation with CDFW, fish will be stocked at an appropriate time of the year, which is anticipated to typically be at least two events per month between October 1 and May 30 of each year. Beginning in the first full calendar year after license issuance and once every six years thereafter, DWR will conduct an angler survey at Silverwood Lake. The surveys will be performed approximately 8 to 10 days during each month from October 1 (or after the first stocking event, whichever is later) through May 30 (or no later than 10 days after the last seasonal stocking event), for a total of 64 to 80 survey days. The specific days to be surveyed in each month will be randomly selected, with five days in each month in two strata: (1) a high-use stratum (i.e., Saturday, Sunday, and federal holidays); and (2) a low-use stratum (i.e., Monday through Friday, excluding federal holidays). The time that the survey begins each day will be randomly selected between a morning start and an afternoon start, but all surveys will be performed in the daytime. The duration of each survey day will be four hours. By December 31 in the third full calendar year after license issuance and every other year thereafter (i.e., in license years 5, 7, 9, 11, etc.), DWR will file with FERC a report documenting Silverwood Lake trout stocking in the previous October to May stocking season, and any DWR-conducted angler surveys in those calendar years. If DWR performed an angler survey in one of the two previous calendar stocking seasons, the report will include the results of the survey. If an angler survey was performed in one of the two previous stocking seasons, the report will include a comparison of that season's angler survey results to other trout angler surveys performed by DWR under this condition. In years in which the report includes angler survey results for the previous two calendar years, prior to filing the report with FERC, DWR will provide a draft of the report to CDFW and consult with CDFW regarding the fish stocking program. CDFW will have 30 calendar days to provide written comments on the draft report, including recommending any changes to the fish stocking program. DWR will include all relevant documentation of consultation with CDFW in the final report filed with FERC. If DWR does not adopt a particular written recommendation by CDFW, the final report will include DWR's reasoning for the decision.
Aquatic Invasive Species Management Plan Implementation (AR2)	Applicable to waterways within the proposed Project boundary	Management Plan developed, codifies existing practices. Continued implementation upon FERC license issuance. To continue for the duration of the FERC license.	Aquatic Invasive Species activities will be ongoing and implemented beginning with year one of the license issuance.
Integrated Vegetation Management Plan Implementation (TR1)	Applicable within the proposed Project boundary	Management Plan developed, codifies existing practices. Continued implementation upon FERC license issuance. To continue for the duration of the renewed FERC license.	Integrated Vegetation Management Plan activities will be ongoing and implemented bringing with year one of the license issuance. Fire response will be triggered by fire events.

Table 2.5-1. Anticipated Proposed Project Activities Implementation Locations and Schedule (continued)

Proposed Activities	Applicable Location(s)	Anticipated Timing/Duration	Additional Schedule Information
Recreation Management Plan Implementation (RR1), including recreation facility improvements	Recreation facilities within the proposed Project boundary.	Management Plan developed, codifies existing practices and adds protections and facilities upgrades. Continued implementation upon FERC license issuance for the duration of the renewed FERC license.	Maintenance activities will be ongoing and implemented beginning with year one of the license issuance. Upgrades to Barranca Group Camp would be completed by year two of the new license – except road and parking resurface which will occur by year six of the new license. Improvements to Valle Group Camp would be completed by year six of the new license. Improvements to Sawpit Canyon Picnic Areas would be completed by year 10 of the new license. Improvements to Sawpit Canyon Day Use Area would be completed by year six of new license–except road and parking area resurface by year eight of the new license Improvements to Live Oak Landing Day Use Area would be completed by year six of the new license. Develop plan for assessing and possibly closing user-made trails using natural barriers and other means within year two of the new license; other improvements to site within year three of the new license.
Transportation System Management Plan Implementation (LU1)	Applicable within the proposed Project boundary including access roads.	Management Plan developed, generally codifies existing practices and adds protections and facility upgrades. Continued implementation upon FERC license issuance for the duration of the issued FERC license.	Road maintenance and management activities will be ongoing and implemented bringing with year one of the license issuance.
Fire Prevention and Response Plan Implementation (LU2)	Applicable within the proposed Project boundary	Management Plan developed, generally codifies existing practices and adds protections and facility upgrades. Continued implementation upon FERC license issuance for the duration of the issued FERC license.	Fire prevention activities will be ongoing and implemented bringing with year one of the license issuance. Fire response will be triggered by fire events.
Project Safety Plan Continued Implementation (LU3)	Applicable within the proposed Project boundary.	Management Plan developed, generally codifies existing practices and adds protections and facility upgrades. Continued implementation upon FERC license issuance for the duration of the issued FERC license.	Project Safety Plan will be ongoing and implemented bringing with year one of the license issuance. Emergency response will be triggered by emergency events.
Visual Resources Management Plan Implementation (VR1)	Applicable within the proposed Project boundary.	Management Plan developed, generally codifies existing practices and adds protections and facility upgrades. Continued implementation upon FERC license issuance for the duration of the issued FERC license.	Visual resource management will be used over the term of the new license and implemented bringing with year one of the license issuance.
Historic Properties Management Plan Implementation (CR1)	Applicable within the proposed Project boundary.	Management Plan developed, generally codifies existing practices and adds protections to cultural resources. Continued implementation upon FERC license issuance for the duration of the renewed FERC license.	To be applied during ground disturbing activities (maintenance or other operational activities).

Key:
CDFW = California Department of Fish and Wildlife
DWR = California Department of Water Resources
FERC = Federal Energy Regulatory Commission
N/A = not applicable

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2.6 REGULATORY COMPLIANCE

2.6.1 NEPA and CEQA Compliance

FERC's FLA review and decision to issue a new license for the continued operation of the DCPD facilities triggers the need for NEPA compliance. As such, FERC will lead the development of an EA and the corresponding NEPA documents.

In addition, DWR has determined that the decision on accepting a new FERC license to continue operation of the DCPD, including the hydroelectric power generation, recreation, and appurtenant facilities, along with the terms and conditions as proposed by DWR in its FLA, as amended, is a discretionary action triggering CEQA compliance, which is the subject of this document and is discussed in detail under Section 1.2.

In addition, it is anticipated that the SWRCB will rely upon this CEQA document to inform their decision in issuing a CWA Section 401 WQC.

2.6.2 Regulatory Approvals Related to FERC's Licensing Decision

The issuance of a new FERC license is a federal action. FERC has sole jurisdiction for issuance of licenses for non-federal hydropower projects. As such, FERC is the lead federal agency for compliance with NEPA. FERC is also subject to other federal laws, such as the CWA, the ESA, and the NHPA. FERC designated DWR as FERC's non-federal representative for initiating consultation under both Section 7 of the ESA and Section 106 of the NHPA.

Informal ESA consultation was completed when the USFWS issued a concurrence letter on May 8, 2020 stating that the proposed Project under the new license is not likely to adversely affect federal ESA-listed species or designated critical habitat (USFWS 2020).

FERC and DWR will complete consultations with the SHPO, affected Native American tribes, and federal land management agencies under Section 106 of the NHPA. Specifically, in compliance with Section 106 of the NHPA, a Programmatic Agreement will be executed between FERC, the SHPO, and as applicable, the Advisory Council on Historic Preservation for the relicensing undertaking. As a condition of the Programmatic Agreement, an HPMP will be implemented and will be the basis for facilitating compliance with Section 106 during the term of the new license. As such, through the relicensing process, it is anticipated that the required federal authorizations will be complete.

The EPA has delegated its authority for CWA Section 401 WQCs to the SWRCB, as the State of California certifying agency. Therefore, the SWRCB, typically upon completion of the CEQA process, will decide whether to issue a CWA Section 401 WQC.

2.6.3 Future Activity-Specific O&M and Routine Maintenance Permitting

Project O&M and routine activity-specific maintenance regulatory permitting are not anticipated because the PM&E measures in the new license are specifically designed for regulatory compliance and minimize the need for activity-specific maintenance permitting. That said, if a DCPD maintenance activity entails construction work that disturbs a land area greater than 1 acre, then that activity may be subject to a Statewide General Permit for Stormwater Discharge associated with construction discharges that may require a Stormwater Pollution Prevention Plan. Any additional permitting needs would be determined by DWR's regulatory compliance specialists on a case-by-case basis.

Activities beyond routine O&M and the PM&E measures defined in DWR's FLA are not addressed in this IS/ND and would be assessed for CEQA compliance and permitting requirements separately as any non-routine O&M projects arise.

2.7 SCOPE OF INITIAL STUDY

As the lead agency under CEQA, DWR is responsible for compliance with the environmental review process prescribed by PRC § 21000 *et seq.* and CEQA Guidelines § 15000 *et seq*. This IS/ND focuses on the environmental issues identified as possibly significant in the CEQA checklist and by the CEQA Guidelines. As such, a complete description of the proposed Project has been included, all areas of concern relevant to the proposed Project are analyzed and references are provided.

DWR, as the lead agency, has augmented existing, relevant, and reasonably available information by conducting several studies as part of the DCPD relicensing process. The results of the studies listed below have been incorporated into the analyses contained in Section 3.0 of this document:

- Aquatic Invasive Species
- Botanical Resources
- Cultural Resources
- ESA-Listed Bird Species, Riparian Habitat Evaluation
- ESA-Listed Plant Species
- Non-Native Invasive Plants
- Recreation Facilities Condition and Demand Assessment
- Scenic Integrity
- Special-Status Terrestrial Wildlife Species – California Wildlife Habitat Relationships

- Tribal Resources
- Water Quality and Temperature

For the remaining resource areas discussed in Section 3.0 of this document, DWR determined that existing, relevant, and reasonably available information was sufficient to determine the potential effects of DWR's proposed Project on these resources, and to inform any relevant requirements for the new license.

In accordance with CEQA requirements, this document assesses impacts resulting from changes to environmental baseline conditions, as defined in Section 1.2.1. Therefore, the scope of the analysis contained in Section 3.0 of this document will primarily focus on the effects of changes to the DCPD operations under the new license. These include:

1. Administrative changes (i.e., the boundary adjustment, and the addition of an existing lake level gage and the Primary Project Road designations)
2. Facility improvements (associated with, for example, recreation facility ADA Accessibility)
3. O&M adjustments, primarily associated with the PM&E measures anticipated in the new license

The potential environmental impacts of these three types of changes associated with the proposed Project – the proposed operation of the DCPD under a new FERC license – are analyzed in Section 3.0 of this document.

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3.0 IMPACT ANALYSIS

Environmental Checklist

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this proposed Project, involving at least one impact that requires mitigation to reduce the impact from "potentially significant" to "less than significant" as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Greenhouse Gas Emissions and Energy Resources	☐ Public Services
☐ Agricultural and Forestry Resources	☐ Hazards and Hazardous Materials	☐ Recreation
☐ Air Quality	☐ Hydrology and Water Quality	☐ Transportation
☐ Biological Resources	☐ Land Use and Planning	☐ Tribal Cultural Resources
☐ Cultural Resources	☐ Mineral Resources	☐ Utilities and Service Systems
☐ Geology and Soils	☐ Noise	☐ Wildfires
	☐ Population and Housing	☐ Mandatory Findings of Significance

Determination:

On the basis of this initial evaluation:

☒	I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☐	I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed Project MAY have a significant effect on the environment, and an environmental impact report is required.
☐	I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

Ted Craddock
Signature

3/11/2021
Date

Ted Craddock
Printed Name

3.1 INTRODUCTION

In accordance with the CEQA Guidelines §§ 15063 and 15070, this IS/ND identifies and focuses on the potentially significant direct and indirect environmental effects of the proposed Project compared to baseline conditions, considering both its potential short-term and long-term effects. Short-term effects are generally those associated with construction activities, while long-term effects are generally those associated with operation of the proposed Project components. Each resource area requires the following:

3.1.1 Analysis Methods

3.1.1.1 Analysis Components

Each environmental resource analyzed in Section 3.0 contains the following components: CEQA Checklist, which is the basis for analysis; Regulatory Setting; Environmental Setting; and Environmental Impact. Each component is further explained below.

The CEQA Checklist presents the thresholds of significance used in this IS/ND that were developed using criteria from the 2019 CEQA Guidelines' Appendix G Checklist; State, federal, and local regulatory schemes; local and regional plans and ordinances; accepted practices; consultation with recognized experts; and other professional opinions.

Regulatory Setting

The Regulatory Setting presents the statutes, regulations, plans, and policies that are relevant to each issue area. Regulations originating from the federal, State, or local levels are each discussed as appropriate. The majority of the DCPD falls within State and federal lands; however, there are portions that overlap with local jurisdictions (City and County of San Bernardino), and therefore, where applicable, city and county plans, policies, and ordinances were also considered in the analysis. Also, there are several laws that add important context for various sections, such as the FPA and the CWA, among others. To avoid repetition, these laws are described generally in this introductory section and then where applicable in specific resource sections.

In addition, given the expanse of the proposed Project area, some regulations may be more applicable to specific locations based on land ownership and management responsibilities. The proposed Project is located on USFS (221.0 acres), State of California (3,501.3 acres), and privately-owned lands (21.7 acres) within the northern area of the City and County of San Bernardino (Figure 2.2-1 and Table 2.2-1).

Environmental Setting

The Environmental Setting presents the existing environmental conditions within the DCPD and surrounding geographic area appropriate to establish baseline conditions for a particular resource, in accordance with CEQA Guidelines § 15125. The extent of the

environmental setting area evaluated differs among resources, depending on the locations where impacts would be expected. For example, air quality impacts are assessed for the air basin (macro-scale), as well as the site vicinity (micro-scale), whereas aesthetic impacts are only assessed for the general vicinity.

Environmental Impact Analysis

The Environmental Impact Analysis section includes an analysis of the proposed Project's potential to cause a significant environmental impact, if any. Potential impacts are assessed by evaluating the proposed Project's potential to result in a substantial adverse change from the baseline conditions established in the Environmental Setting and determined by a comparison with the thresholds of significance set forth in the CEQA Checklist table at the beginning of each resource section. If a potentially significant impact were to be identified, mitigation would also be identified and described for how it reduces potential impacts to less-than-significant levels.

3.1.1.2 PM&E Impact Assessment Approach and Groupings

PM&E Approach

The PM&Es described in Section 2.4, Proposed Project – if they are directly applicable – act as a benefit or improvement that would, by their nature as a management practice, lessen a potential environmental impact. The effects of the proposed Project are analyzed both before and after implementation of that measure to fully understand and disclose the extent of the potential impact.

PM&E General Groupings

Where feasible to simplify the results of impact analysis, the PM&Es were grouped as follows:

Ground-disturbing PM&Es. These are the PM&Es with a greater potential for earth moving activities during the term of the new license, as follows:

- GS1: Erosion and Sediment Control Plan. The erosion control plan entails ground disturbance, but it is temporary and focuses on site stabilization of already disturbed areas
- WR2: Hazardous Materials Management Plan. In the event of a hazardous material spill, this plan codifies clean up and containment activities that may entail excavation or soil removal
- TR1: IVMP. The main ground disturbing aspects of the vegetation management activities are generally focused on non-native invasive plant controls and fostering native vegetation
- RR1: RMP. The main ground disturbing activities related with this PM&E are generally associated with recreation facility improvements

- LU1: Transportation System Management Plan. The main ground disturbing aspects of the transportation system management activities are generally road maintenance and signage

- LU2: Fire Prevention and Response Plan. The main ground disturbance for fire prevention and response entails vegetation management to create defensible spaces around facilities and clearance requirements followed by site stabilization and revegetation

- VR1: Visual Resources Management Plan. The main ground disturbance associated with visual resource management is focused on replacing signs and slats on fences along the PCT. The footprints would generally be in the same location as existing signs and thus in previously disturbed areas

- CR1: HPMP. The potential ground disturbance associated with historic properties management, including archaeological and tribal resources, would entail exclusion fencing and potential excavations in the case of site treatment and recovery for an inadvertent discovery of potential cultural resources, if complete avoidance is not feasible

The ground disturbing or earth moving PM&Es primarily affect resources in upland areas.

Aquatic Focused PM&Es. These two PM&Es include activities in waterways with aquatic resources and one that pertains to water level elevation:

- AR1: Silverwood Lake Fish Stocking. Implementation of this management plan entails the stocking of catchable trout in Silverwood Lake

- AR2: Aquatic Invasive Species Management Plan. Implementation of this management plan entails specific BMPs and treatments in waterways to prevent the introduction and spread of aquatic invasive species

- WR1: Silverwood Lake Minimum Pool and Water Surface Elevations. While this measure does not entail work in waterways, it dictates water elevations of Silverwood Lake

The aquatic-focused PM&Es would primarily affect areas along waterways.

Primarily Management PM&Es. The remaining PM&Es are generally associated with facility safety management activities. These include the following PM&E measures and safety practices:

- LU3: Project Safety Plan

- DCPD Safety and Best Management Practices

These management activities generally include safety provisions for facilities and staff.

These general groupings are not absolute (i.e., the IVMP is focused on upland areas, but also relates to wetlands and riparian habitat along waterways). However, the rough categorization is utilized in the impact analysis section to help describe the types and locations of potential impacts from PM&E measures on each resource area. In addition, deviations from these general groupings are identified on a case-by-case basis.

3.1.2 Resource Section Contents

The resources sections in this chapter are organized as follows:

- Resource Title
  - Basis of Analysis Table
  - Regulatory Setting
  - Environmental Setting
  - Environmental Impact Analysis
  - Mitigation Measures
  - References

The Environmental Setting is a general description of the surrounding area. However, Section 3.5, Biological Resources, and Section 3.6, Cultural Resources, also include a specific methodology description of the desktop and field data collection approaches necessary to define the environmental setting. This is accomplished by screening the locations and status of potential sensitive habitat, special-status species occurrences, and cultural resources.

3.1.3 Broad Regulatory Context

The environmental and regulatory settings are presented in each section to provide the context to address the CEQA Guidelines Appendix G impact assessment questions. However, there are several regulatory authorities that provide context to many of the resource areas. These include the following:

3.1.3.1 Federal Regulations

Federal Power Act

The FPA (16 United States Code [U.S.C.] § 791a et seq.) gives FERC (42 U.S.C. § 7172) authority to issue licenses to private, municipal, and State (i.e., non-federal) hydropower projects. When a license expires, FERC can issue a new license for a term of typically 30 to 50 years. FERC must also comply with other federal statutes covering environmental reviews and protection and historic preservation. As such, FERC

completes NEPA compliance prior to the issuance of the new DCPD FERC hydropower license. DWR is seeking a 50-year license from FERC for the DCPD.

National Forest Management Act

The National Forest Management Act of 1976 requires that the USFS assess the nation's renewable resources to develop a program of use and subsequently develop a Land Use Management Plan (LMP) for each National Forest. As such, the Southern California National Forests Vision LMPs (i.e., Angeles, Cleveland, Los Padres, and San Bernardino National Forests) describe the strategic direction at the broad program level for managing NFS lands and resources over the next 10 to 15 years. Activities within the SBNF are guided by the SBNF LMP.

Of the 3,744 acres within the proposed Project boundary, 221 acres are NFS lands within the SBNF (Table 2.2-1 and Figure 2.2-1). The USFS uses the LMP to help guide the management of lands and resources (USFS 2005).[4] The LMP includes guidance pertaining to various resource areas including aesthetics, agriculture (timber), biological resources, and cultural resources. Therefore, conformance with the LMP is assessed and disclosed in this document where applicable.

Clean Water Act

The Federal Water Pollution Control Act, or commonly referred to as the CWA (33 U.S.C §1251 et seq. [1972]) regulates discharges of pollutants into the nation's waters and is administered by the EPA, which sets water quality standards for contaminants in surface waters. The EPA has delegated some responsibility for implementing portions of the CWA to the SWRCB and the nine RWQCBs, including water quality control planning and programs in California.

Sections of the CWA (i.e., Sections 401, 402, and 404) provide regulatory context for impact assessments to:

- biological resources (i.e., lake, stream, and wetland habitats if considered jurisdictional waters of the US)
- geology and soils (sediment controls)
- hydrology and water quality

Under Section 401 of the CWA, a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into waters of the United States unless a Section 401 WQC is issued, verifying compliance with water quality requirements, or certification is waived. In California, the SWRCB and the nine RWQCBs have the primary responsibility for administering State and federal regulations

[4] United State Forest Service (USFS). 2005. Land Management Plan. Part 1 – Southern California National Forests Vision. Website: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev7_007721.pdf. Accessed August 2020.

related to water quality, including the Section 401 WQC. Based on review of a project, the SWRCB can issue, waive, or deny the WQC.

Section 402 of the CWA established the NPDES Program, which requires any discharge of pollutants into waters of the United States to comply with the provisions of a NPDES permit. The CWA 1987 amendments added Section 402(p) that provided a framework for regulating municipal and industrial stormwater discharges under an NPDES Program. Although the regulations allow for two permitting options (Individual Permits and General Permits), the SWRCB in California, elected to adopt a single Statewide NPDES General Construction Permit that regulates stormwater discharges associated with construction activities that disturb one or more acres of land or projects that disturb less than one acre of land but are part of a larger common plan of development or sale resulting in disturbances that total one or more acres. The NPDES General Construction Permit requirements apply to construction activities that include clearing, grading, grubbing, and disturbances to the ground such as excavation. However, it does not apply to certain activities such as regular maintenance activities to maintain the original line and grade, hydraulic capacity or original purpose of a facility, as well as construction activities that disturb less than one acre of land (unless the construction activities are part of a larger common plan of development or sale with land disturbances occurring on one or more acres of land). Project applicants are required to submit a Notice of Intent (NOI) with the SWRCB's Division of Water Quality. The NOI includes general information on the types of construction activities that would occur on the site. Applicants are also required to submit a site-specific SWPPP for construction activities. The SWPPP would include a description of BMPs to minimize the discharge of pollutants from the site during construction as well as appropriate monitoring, sampling, and reporting.

Section 404 of the CWA prohibits discharge of fill or dredge material into waters of the United States, including wetlands. Wetlands are defined, for regulatory purposes, as areas inundated or saturated by surface water or groundwater, at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated solid conditions (33 CFR § 328.3). If a project discharges any fill materials into waters of the United States – including wetlands, before and after the project actions – then a permit must be obtained from the U.S. Army Corps of Engineers in addition to any applicable Section 401 WQC requirements from the SWRCB and RWQCBs. Section 404 compliance is discussed further in Section 3.5, Biological Resources, Section 3.7 Geology and Soils, and Section 3.10 Hydrology and Water Quality.

3.1.3.2 State Regulations

<u>Porter-Cologne Water Quality Control Act of 1969</u>

The SWRCB was established in 1967 by the California legislature and it absorbed the functions of the former State Water Rights Board and the State Water Quality Control Board. The nine RWQCBs were established through the passage of the Dickey Water Pollution Control Act of 1949. The SWRCB and nine RWQCBs together enforce the

Porter-Cologne Water Quality Control Act (Porter-Cologne Act) which established the California Water Code. The Porter-Cologne Act expanded the enforcement responsibilities of the SWRCB and nine RWQCBs. The nine RWQCBs have the primary responsibility for the coordination and control of water quality within their respective jurisdictional boundaries. Under the Porter-Cologne Act, WQO are limits or levels of water quality constituents or characteristics established for the purpose of protecting beneficial uses.

The Porter-Cologne Act requires the RWQCBs to establish WQOs while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. Designated beneficial uses, together with the corresponding WQOs, and an antidegradation policy, also constitute water quality standards under the federal CWA. The WQOs detail the requirements for water quality control.

3.1.3.3 Local General Plans

The San Bernardino County General Plan and the City of San Bernardino General Plan set forth development goals and policies for each jurisdiction. As a State agency, DWR generally works to align its policies and procedures to conform with such plans to the extent feasible. These local plans provide important context for managing and improving human and natural resources in these areas. The proposed Project is evaluated in the impact analyses for several resource areas with respect to the General Plan goals and policies or applicable ordinances.

3.2 AESTHETICS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public Views are those that are experienced from a publicly accessible vantage point). If the Project is in an urbanized area, the potential of the project to conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.2.1 Regulatory Setting

The proposed Project is located on NFS, State of California, and privately-owned lands within the northern area of the City and County of San Bernardino. The questions listed in the table above include terminology such as “State scenic highway” and a reference to “consistency with applicable regulations governing scenic quality”. As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.2.1.1 Federal

National Trail System Act (1968)

The PCT was designated as a National Scenic Trail by congress in 1968 “to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities” (16 U.S.C § 1241-

1251 [1968]). [5] Three segments of the PCT traverse through the proposed Project boundary along the north and west shores of Silverwood Lake. Those segments of the PCT were relocated onto State lands through DWR and DPR's issuances of two separate easements to the USFS.

San Bernardino National Forest Land Management Plan

The SBNF LMP, established under the National Forest Management Act, applies to the 221.0 acres of NFS lands within the existing DCPD boundary (inclusive of the 125.7 acres of NFS lands within the proposed Project boundary) (Figure 2.2-1). Relative to scenic resources, the LMP includes six Scenic Integrity Objectives (SIO) derived from the landscape's attractiveness and the public's expectations or concerns. Generally, landscapes that are most attractive and viewed from popular travel routes are assigned higher SIOs.

The information on relevant SIO designation(s) for NFS lands is included in Section 3.2.2, Environmental Setting below.

3.2.1.2 State

California's Scenic Highway Program (1963)

State scenic highways were created by the Legislature in 1963 and are managed by the Landscape Architecture Division of Caltrans. The purpose of State-designated scenic highways is to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. A highway's scenic designation depends upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which the built environment intrudes upon the traveler's enjoyment of the view.

Water Resources Engineering Memorandum No. 30a, dated March 15, 1984

DWR has established an architectural motif which is consistent with economical and operational efficiency and is applicable to all DCPD facilities. While this policy may be updated if and when needed, it is included here to demonstrate that there is an aesthetic quality that is consistent among upgrades to DWR facilities. Additional details are included in Section 2.3.4.6, Current Visual Resources Preservation Activities.

[5] The National Trails System Act of 1968 (as amended), 16 U.S.C § 1241-1251 (1968).

3.2.1.3 Local

San Bernardino County General Plan

The Open Space Element of the San Bernardino Country General Plan includes a visual goal to maintain and enhance the visual character of scenic routes (San Bernardino County 2007).[6]

San Bernardino County designates the following scenic routes including:

- Sawpit Canyon Road/Sawpit Creek Road
- California State Highway 138 from Crestline cutoff at State Highway 18 northwest to the Los Angeles County line
- California State Highway 173 from State Highway 18 northwest to Hesperia

City of San Bernardino General Plan

The southern portion of the proposed Project consists of the Devil Canyon Powerplant and associated facilities, which are located at the northern edge of the City of San Bernardino. The City of San Bernardino General Plan includes goals and objectives for visual quality, which generally apply to residential and commercial developments (City of San Bernardino 2005).[7]

3.2.2 Environmental Setting

The northern portion of the proposed Project includes the Silverwood Lake SRA. Silverwood Lake represents a major scenic attraction for the area and is managed as a State Recreation Area within the California State Park system. While the reservoir is a scenic asset, it also has hydropower and recreation facilities throughout the area. There are no designated State scenic highways within the proposed Project boundary. However, State Highway 138 (Rim of the World Scenic Highway) and California State Highway 173 are considered eligible for designation as State scenic highways by Caltrans (Caltrans 2013).[8] State Highway 138 also includes one formal vista point with parking along the west side of Silverwood Lake; it provides expansive views of the proposed Project reservoir and the facilities near the dam. In addition, there are several roadside pull off areas along the south side of the proposed Project area that provide limited views of the proposed Project reservoir and facilities. Much of the roadside pull

[6] San Bernardino County. 2007. San Bernardino County General Plan. Adopted March 13, 2007. Effective April 12, 2007. Amended April 24, 2014.
[7] City of San Bernardino. 2005. City of San Bernardino General Plan. Adopted November 1, 2005.
[8] California Department of Transportation (Caltrans). 2013. Scenic Highway Routes: Caltrans Landscape Architecture Program. Eligible and Officially Designated Routes. Available online: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/cahisys.htm. Updated December 19, 2013. Accessed: June 4, 2018.

offs along the southern side of the reservoir lack views of the proposed Project area due to thick vegetation.

The PCT traverses the proposed Project area from north to south. Fencing along the PCT screens views of the Cedar Springs Dam on Silverwood Lake. The majority of the PCT in the proposed Project area traverses the west shoreline of Silverwood Lake, which provides panoramic and expansive views of the lake and the surrounding mountains to the east and north, particularly along the northern portion of the PCT segment. The DCPD facilities, including Cedar Springs Dam and select recreation facilities are visible at times, but are subordinate in the expansive viewshed. As the PCT nears the southwestern portion of the proposed Project area, the overall views and views of the DCPD facilities are limited as the trail is further removed from the shoreline and vegetation screens the views.

The southern portion of the DCPD consists of the Devil Canyon Powerplant and associated facilities. This part of the DCPD is located at the northern edge of the City of San Bernardino in a landscape that provides a scenic backdrop to the urban areas located immediately south. Views of the southern portion of the proposed Project area vary throughout the year from clear conditions to hazy or mountain cloud cover conditions that dramatically reduces visibility. The primary view area for these facilities is from the residential communities located east of Interstate 215 and generally south of the proposed Project. Views are from individual homes, apartments, businesses, and public roads.

Pursuant to the SBNF LMP, the SIO for NFS lands within and around the proposed Project boundary is “High” (i.e., landscape appears unaltered). Deviations from the natural landscape may be present, but they must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident (USFS 2005).[9]

3.2.3 Environmental Impact Analysis

Would the proposed Project:

a) Would the proposed Project have a substantial adverse effect on a scenic vista?

Finding: Less-than-Significant Impact

A vista is a view from a location or composite views along a roadway or trail. Scenic vistas often refer to views of natural lands but may also be compositions of natural and developed areas, or even entirely unnatural areas, such as a scenic vista of a rural town or agriculture area. Typically, a view that is widely considered a scenic vista has

[9] U.S. Department of Agriculture, Forest Service (USFS). 2005. Land Management Plan Part 2, SBNF Strategy. USFS. Pacific Southwest Region. R5-MB-079. September 2005.

remarkable or unique scenery or resources that are indigenous to a specific area, including areas around major highways or designated visual resources.

Given the rural setting, much of the area within the proposed Project boundary includes scenic vistas. In addition, the formal vista point and additional roadside pullouts along Highway 138 provide scenic views of Silverwood Lake and the surrounding environment.

The proposed Project would appear generally similar in nature and character to the existing DCPD facilities; no new facilities are proposed to be constructed under the new license that could otherwise pose an adverse effect on a scenic vista.

The proposed Project administrative changes (including the proposed Project boundary change, the addition of a lake level gage and the designation of Primary Project Roads) would not impact the scenic vistas because they do not entail ground disturbance, construction, or new facilities.

The proposed Project will not greatly change the character of NFS lands, such that it would become visually incompatible or visually unexpected when viewed in the context of the existing DCPD facilities. As such, the proposed Project would have a less-than-significant impact to scenic vistas in the SBNF and its surroundings. Therefore, no mitigation is required.

The proposed Project recreation facility improvements associated with the RMP (i.e., Measure RR1), are generally minor and pertain to parking pavement, replacement of barbeque grills, shade ramada upgrades at existing sites and grades, and the addition of ADA improvements such as handrails, and other similar upgrades as discussed above (Table 2.4-1). Construction activities will be localized and temporary (Figure 2.4.2). In addition, consistent with current practices, the proposed recreation facility improvements would follow DWR and DPR's current architectural standards and procedures at the time of the respective improvements. Since the proposed recreation facility improvements are generally minor, located at existing developed sites, and would follow current architectural standards, there would be no substantial changes to the visual character of vistas, and the impact would be considered less than significant.

When considered with the remaining ground disturbing PM&E activities such as the installation of fencing or barricades to limit access to cultural resources, biological resources, or construction areas, there may be limited or temporary changes to the localized visual character. However, visual contrast from such changes would either be none or minor. Those activities would: (1) be subordinate to the existing visual character, (2) not result in blocked or impaired views, and (3) be temporary (on the order of weeks or months). PM&E-related tree removal activities associated with O&M as discussed in Measures LU1 (Transportation System Management Plan), LU2 (Fire Prevention and Response Plan), and TR1 (IVMP) would be generally consistent with current practices and focused on limited areas near DCPD facilities. Therefore, the PM&Es associated with the proposed Project would result in a less-than-significant impact to scenic vistas.

Aquatic-resource related PM&E measures or those PM&Es that generally pertain to operations management (see Section 3.1.1.2) do not include development or activities that would alter scenic vistas. Rather, they entail the stocking of trout or the continuation of current water level management.

Given the information above, the proposed Project prior to the application of Measure VR1 (Visual Resources Management Plan) and related PM&E measures with visual resource considerations would not: (1) perceptibly change the existing physical features of the landscape that are characteristic of the locale, (2) introduce new features to the landscape that are perceptibly uncharacteristic of the locale (or become visually dominant in the viewshed), or (3) block or totally obscure the aesthetic features of the landscape. Therefore, it does not entail a significant impact to a scenic vista.

The addition of Measure VR1 (Visual Resources Management Plan) and related PM&E measures would enhance the aesthetic character within the proposed Project boundary by coating the equestrian corrals at one recreation site, and replacing slats of fencing along the PCT. These are considered enhancement measures that would improve already scenic vistas.

The proposed Project, when evaluated with and without the related PM&E measures, would have a less-than-significant impact on scenic vistas. Therefore, no mitigation is required.

b) Would the proposed Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

Finding: No Impact

A State scenic highway must be officially designated as such by Caltrans. There are no State-designated scenic highways within, or near, the proposed Project boundary. Although State Highways 138 and 173 are eligible as scenic highways, they have not been officially designated by Caltrans. As such, the proposed Project when evaluated with or without the PM&Es (including VR1 [Visual Resources Management Plan]) does not entail the potential for damage to scenic resources along such a highway. No impact would occur as there is no such State highway designation in the area. Therefore, no mitigation is required.

c) In non-urbanized areas, would the proposed Project substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public Views are those that are experienced from a publicly accessible vantage point). If the proposed Project is in an urbanized area, the potential of the project to conflict with applicable zoning and other regulations governing scenic quality?

Finding: Less-than-Significant Impact

The northern area of the DCPD is a non-urbanized setting. The proposed Project would not substantially degrade the character or quality of public views, including the view from the PCT. This is due to the limited change the proposed Project would have to the overall visual character within the proposed Project boundary.

Specifically, the PCT currently includes a fence that partially blocks views of Cedar Springs Dam. While there are no proposed Project changes to the Cedar Springs Dam, the fence slats are important for creating a feeling of remoteness – distant from large infrastructure projects. DWR replaces these slats when they become damaged or lost. As such, the continued degradation of this fence line is currently avoided through ongoing maintenance activities and will continue under the proposed Project.

The public views from other areas along the PCT or along roadways and public vantage points would not be substantially degraded for the following reasons: (1) the proposed Project administrative changes do not entail physical disturbance or construction and thus would not alter public views; and (2) the proposed Project recreation facilities upgrades are located within existing recreation areas and include temporary construction, with limited, low profile, and small footprint permanent physical adjustments (Table 2.4-1). These changes are improvements and minor in scale; therefore, they would have a less than significant impact, and have a slightly beneficial impact to public views at recreation sites.

Implementation of the remaining ground disturbing or earth moving PM&E measures (see Section 3.1.1.2 [PM&E Impact Assessment Approach and Groupings]) includes activities such as road maintenance, vegetation removal, temporary exclusion fencing, revegetation, traffic signage, waste management controls, erosion and sediment controls, among others described in Section 2.4, (Proposed Project). These PM&E activities are small in scale and short in duration, and therefore, are not anticipated to impact public views. Additionally, on NFS lands, the proposed Project will include activities which will improve its compatibility with the SBNF LMP.

The proposed Project will not greatly change the character of the area, such that it would become visually incompatible or visually unexpected when viewed in the context of the existing DCPD facilities. As such, the proposed Project would have a less-than-significant impact on the visual character or public views of the site and its surroundings in non-urbanized areas and therefore no mitigation is required.

In the southern area of the DCPD is a more urbanized area. In and near the City of San Bernardino, local ordinances governing scenic quality primarily pertain to the protection of vistas associated with locally designated scenic roadways and tree protections. The SBNF LMP provides guidance for visual character consistency, such as architectural styles and paint colors. The proposed Project would not conflict with regional plans addressing scenic quality including the SBNF LMP.

More specifically, the proposed Project administrative changes do not include ground disturbance or construction activities and therefore, would not conflict with the SBNF LMP or local plans regarding visual resources, and thus, there are no significant impacts.

The proposed Project recreation facility improvements are not located in an urbanized area and therefore are addressed above, under the non-urbanized area analysis. No significant impacts were identified.

The remaining PM&E measures with ground disturbance or a potential for visual resource impacts are not substantially different from existing activities. The measures entail road maintenance, erosion control grading, vegetation removal, temporary exclusion fencing, revegetation, traffic signage and waste management controls, and erosion and sediment controls among others described in Section 2.4 Proposed Project. These activities are not activities explicitly excluded in local plans governing visual quality, and thus, no significant impact would occur.

Since the proposed Project does not propose to substantially change the DCPD's site character such that it would become visually incompatible or visually unexpected when viewed in the context of the existing DCPD facilities, the proposed Project would have a less-than-significant impact on visual character and public views of the site and its surroundings. In addition, in the southern urbanized area the proposed Project would not conflict with any local plans or zoning governing scenic quality. As such, the impacts on scenic resources would be less than significant with, and without, implementation of the visual resource-related PM&E measures. Therefore, no mitigation is required.

d) Would the proposed Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Finding: Less-than-Significant Impact

Existing light and glare under current conditions is minor and predominately from safety lights and public area lighting. It is anticipated that with the proposed Project the relatively limited light and glare conditions would not change substantially from existing baseline levels. This is because operations will remain largely the same. The proposed Project administrative changes are not physical improvements, and thus, are not associated with light and glare. Construction of the proposed Project recreation facility improvements would be completed during day light hours, avoiding significant construction lighting. These facilities would also continue to operate as they are now.

Although no new operational or maintenance light sources are planned as part of the proposed Project, there is the possibility that during normal O&M, lighting at facilities may need to be updated to address safety, energy conservation, or technology changes. These O&M activities could occur any time during the life of the license and could result in a non-substantial change to the amount or hue of lighting and would result in a less-than-significant impact.

The remaining PM&Es do not entail activities that add substantial light or glare to those facilities, rather their focus is on recreation improvements, erosion control, non-native invasive species control, and integrated vegetation management among other protections that do not entail substantial lighting (see Section 2.4 [Proposed Project]).

Additionally, no specific PM&E in the proposed Project (see Section 2.4, [Proposed Project]), including Measure VR1 (Visual Resources Management Plan), was designed or needed for reducing light and glare from DCPD facilities. Those visual impacts are considered to be less than significant.

The proposed Project, when evaluated with, and without, the related PM&E measures, would have a less-than-significant impact to light and glare in the area. Therefore, no mitigation is required.

3.2.4 Mitigation Measures

Based on the impact analysis (see Section 3.2.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Aesthetic Resources, when analyzed with and without the related PM&Es, are considered less-than-significant. Therefore, no mitigation is required.

3.3 AGRICULTURE AND FORESTRY RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forestland to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

3.3.1 Regulatory Setting

The questions listed in the table above includes references to important farmlands as mapped by the Farmland Mapping and Monitoring Program (FMMP), Williamson Act contracts, and PRC definitions. As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.3.1.1 Federal

Farmland Protection Policy Act

The Farmland Protection Policy Act of 1981 (7 USC § 4201 *et seq*.) requires the Secretary of Agriculture to establish and carry out a program to "minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to the extent practicable, will be compatible with State, units of local government, and private programs and policies to protect farmland" (7 USC § 4201[b]).

3.3.1.2 State

California Public Resources Code

The following PRC sections apply to the impact analysis below.

PRC § 12220(g): "Forest land" is land that can support a 10 percent native tree cover of any species (including hardwoods) under natural conditions. It allows for management of one or more forest resources, including: timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

PRC § 4526: "Timberland" is land that is not owned by the federal government and has been designated by the board [Board of Forestry and Fire Protection under the California Department of Forestry and Fire Protection] as experimental forest land, which is available for and capable of growing a crop of trees of a commercial species used to produce lumber and other forest products (e.g., Christmas trees). Commercial species are determined by the board on a district basis.

California Government Code

Government Code § 51104(h): “Timberland” means privately owned land, or land acquired for State forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.

Government Code § 51104(g): "Timberland production zone" is an area which has been zoned pursuant to PRC §§ 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone".

California Farmland Mapping and Monitoring Program

The FMMP, which monitors the conversion of the State’s farmland to and from agricultural use, was established by the California Department of Conservation (DOC) under the Division of Land Resource Protection. The DOC compiles FMMP Important

Farmland maps pursuant to § 65570 of the California Government Code. The FMMP is derived from the Natural Resources Conservation Service soils surveys, Natural Resources Conservation Service land inventory and monitoring criteria, and land use and water availability. The topography, climate, soil quality, and available irrigation water identified from these sources are evaluated to identify lands that have significant agricultural production values. The result is the FMMP layer, which classifies assessed lands into the following categories:

- Prime Farmland. Prime Farmland is land that has been used for irrigated agricultural production and meets the physical and chemical criteria for Prime Farmland as determined by the U.S. Department of Agriculture, Natural Resources Conservation Service. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Farmland of Statewide Importance. Farmland of Statewide Importance is similar to Prime Farmland but generally includes steeper slopes or less ability to store soil moisture. In order to be classified as Farmland of Statewide Importance, the land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Unique Farmland. Unique Farmland is farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards. Land must have been farmed at some time during the four years prior to the mapping date.

- Farmland of Local Importance. Farmland of Local Importance is land important to the local economy as determined by the County Board of Supervisors and a local advisory committee. This land includes dryland grain producing lands and farmlands that are presently irrigated but do not meet the soil characteristics of Prime Farmland or Farmland of Statewide Importance.

- Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- Urban and Built-Up Land. Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- Other Land. Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres.

- Water. This category includes perennial water bodies with an extent of at least 40 acres.

California Open Space Subvention Act

The California Open Space Subvention Act (CGC § 16143) states that land will be deemed for open space uses of Statewide significance if it meets the following criteria:

a) It could be developed as prime agricultural land, or

b) It is open-space land as defined in § 65560 which constitutes a resource whose preservation is of more than local importance for ecological, economic, educational, or other purposes. The Secretary of the Resources Agency will be the final judge of whether the land is in fact devoted to open-space use of Statewide significance.

California Land Conservation Act

The California Land Conservation Act of 1965, also known as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive lower property tax assessments because they are based upon farming and open space uses as opposed to full market value.

The California DOC assists all levels of government and landowners in the interpretation of the Williamson Act related to the California Government Code. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the Williamson Act within their jurisdiction. These rules include but are not limited to: enrollment guidelines, acreage minimums, enforcement procedures, allowable uses, and compatible uses.

3.3.1.3 Local

No local goals, plans, or policies relating to the protection of agriculture or forestry resources would apply to the proposed Project.

3.3.2 Environmental Setting

3.3.2.1 Regional Setting

According to the 2018 San Bernardino County Crop Report, the overall value of agriculture in the County totaled $493,393,000, which represents a 7.5 percent increase

from 2017 agricultural production value in the County (San Bernardino County 2019a).[10] The main agricultural commodities for total value of production include milk, cattle, eggs, trees and shrubs, indoor decorative plants, citrus fruit, oriental vegetables, groundcover plants, and alfalfa. This indicates that the County relies heavily on agricultural production operations and contains large portions of agricultural lands (San Bernardino County 2019a).[11]

3.3.2.2 Local Setting

Most of the land within the proposed Project boundary is used for non-agricultural purposes such as hydropower operation, recreation, flood control, utilities, and open space.

Farmland

According to the FMMP, no farmland, classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance exists within the proposed Project boundary. Most of the proposed Project boundary is not mapped by the FMMP with small portions of land in the southern part of the proposed Project area designated as “grazing land” and as “Urban and Built-Up Land” (DOC 2020).[12]

Additionally, there are no parcels within or adjacent to the proposed Project boundary zoned for agricultural use. The SBNF lands within the proposed Project boundary are zoned as Developed Area Interface, Back Country, and Back Country Non-Motorized. San Bernardino City and County lands adjacent to the proposed Project boundary are generally land uses designated as Floodway or Publicly Owned Flood Control, Rural Living, or Resource Conservation (City of San Bernardino 2020[13]; San Bernardino County 2020).

Furthermore, there are no lands within the proposed Project boundary that are under a Williamson Act contract (City of San Bernardino 2020[14]; San Bernardino County 2020[15]).

Forest and Timber Lands

Most of the land within the proposed Project boundary does not meet the definition of forest land or timberland (see Section 3.3.1), but rather has low lying chaparral shrubs and arid lands with minimal vegetation. However, some areas in the proposed Project

[10] San Bernardino County. 2019a. Annual Crop Report 2018. Available online: http://cms.sbcounty.gov/Portals/13/CropReports/2018CropReport.pdf?ver=2020-03-20-152920-220. Accessed: September 2020.
[11] Ibidem (Ibid).
[12] California Department of Conservation (DOC). 2020. Farmland Mapping and Monitoring Program. Available online: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed: September 2020.
[13] City of San Bernardino. 2020. General Plan Zoning Maps. Available online: https://www.sbcity.org/pdf/maps/Zoning-42x42-MasterPlanUpdate.pdf. Accessed: September 2020.
[14] Ibid
[15] Ibid

area, in particular near the Silverwood Lake SRA, contain Sierran Mixed Conifer, Montane Hardwood, and Montane Hardwood-Conifer which could meet the definition of forest land. There are no lands zoned as timberland or that are timber land production zones (City of San Bernardino 2020[16]; San Bernardino County 2020[17]).

3.3.3 Environmental Impact Analysis

Would the proposed Project:

a) Would the proposed Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Finding: No Impact

As discussed in Section 3.3.2, (Environmental Setting), most of the land within or adjacent to the proposed Project boundary is not mapped by the DOC or subject to the FMMP. No land within or adjacent to the proposed Project boundary is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The small portions of land in the southern portion of the proposed Project area are mapped and designated as “grazing lands” and “Urban and Built-Up Lands” (DOC 2020).[18] Because no farmlands exist and the proposed Project does not propose to convert any existing land uses under the new license, the proposed Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, the proposed Project would have no impact on State designated farmland.

Additionally, no specific PM&E measure in the proposed Project (see Section 2.4, [Proposed Project]), including Measure TR1 (IVMP), was designed or needed to reduce the potential farmland conversions because there are no such risks under current or proposed Project conditions.

The proposed Project, when evaluated with and without the related PM&E measures, would not result in the conversion of farmland, and thus, would have no impact. Therefore, no mitigation is required.

b) Would the proposed Project conflict with existing zoning for agricultural use or a Williamson Act contract?

Finding: No Impact

The Williamson Act enables private landowners to contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. In return

[16] Ibid
[17] Ibid
[18] Ibid

for this guarantee by landowners, the government jurisdiction assesses taxes based on the agricultural value of the land rather than the market value, which typically results in a substantial reduction in property taxes. According to the 2019 San Bernardino Countywide Plan Draft Environmental Impact Report, there were 4,993 acres of Williamson Act lands in the County in 2016, with approximately 70 percent of these lands located in the North Desert Region of the County (San Bernardino County 2019b).[19] However, no properties within the proposed Project boundary are under such contracts and the proposed Project does not entail land use changes, and therefore the proposed Project would not conflict with any Williamson Act Contracts.

There are no parcels within or adjacent to the proposed Project boundary zoned for agricultural use. The SBNF lands within the proposed Project boundary are zoned as Developed Area Interface, Back Country, and Back Country Non-Motorized. San Bernardino City and County lands adjacent to the proposed Project boundary are generally designated with land uses of Floodway or Publicly Owned Flood Control, Rural Living, or Resource Conservation (City of San Bernardino 2020[20]; San Bernardino County 2020[21]). Additionally, the proposed Project does not include novel land uses related to agricultural resources; as such, the proposed Project would not conflict with existing land use zoning.

Additionally, no specific PM&E measures in the proposed Project (see Section 2.4, Proposed Project), including Measure TR1 (IVMP), was designed or needed to reduce potential conflicts with agriculture zoning or Williamson Act contract lands because there are no such conflicts under current or proposed Project conditions.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have no impact on existing zoning for agricultural use or Williamson Act contract lands.

c) Would the proposed Project conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?

Finding: No Impact

As described in Section 3.3.1, Regulatory Setting above, “forestland” is defined by PRC § 12220(g) as land that can support 10 percent native tree cover of any species. Vegetation communities within the proposed Project area were identified in DWR’s Special-Status Terrestrial Wildlife Species-California Wildlife Habitat Relationships Study in which habitat within the proposed Project boundary was mapped using the CDFW California Wildlife Habitat Relationships classification system. This study was

[19] San Bernardino County. 2019b. San Bernardino Countywide Plan Draft Environmental Impact Report, Chapter 5.2, Agricultural and Forestry Resources. Available online: http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-02-AG.pdf. Accessed: September 2020.
[20] Ibid
[21] Ibid

conducted from May 17, 2017 through July 19, 2017. The communities mapped are as follows: Sierran Mixed Conifer, Montane Hardwood, Montane Hardwood-Conifer, Valley Foothill Riparian, Mixed Chaparral, Chamise-Redshank Chaparral, Coastal Scrub, and Annual Grassland, with the forest lands located primarily in the northern portion of the proposed Project area near the Silverwood Lake SRA.

Although some lands within the proposed Project area meet the definition of forest land as defined by PRC § 12220(g), there are no lands within the proposed Project area that are zoned as forest land, timberland, or timberland production zones (City of San Bernardino 2020[22]; San Bernardino County 2020[23]). Furthermore, DWR does not propose to seek land use designation or zoning changes within the proposed Project boundary, nor does DWR propose any changes to existing uses and facilities on private, local, State, or federal land that would affect existing forestland or any other zoning. In addition, none of the PM&Es would result in changes that conflict with forest zoning within the proposed Project boundary. Therefore, the proposed Project would not conflict with existing zoning for, or cause the rezoning of, forestland or timberland. There would be no impact.

Additionally, no specific PM&E measure in the proposed Project (see Section 2.4, Proposed Project), including Measure TR1 (IVMP), was designed or needed to reduce potential conflicts with existing forestland or timberland zoning because there are no such conflicts under current or proposed Project conditions.

The proposed Project, when evaluated with and without the related PM&E measures, would have no impact on existing zoning for forestland, timberland, or timberland zoned Timberland Production.

d) Would the proposed Project result in the loss of forestland or conversion of forestland to non-forest use?

Finding: No Impact

As discussed under question ”c” above, the proposed Project area contains some land that meets the definition of forest land, as defined by PRC § 12220(g). However, DWR does not propose any changes to existing uses and facilities on private, local, State (or federal) land that would affect existing forestland within the area, nor does the proposed Project include changes in use that would convert existing forestland to non-forest use. Therefore, there would be no impact.

Additionally, no specific PM&E in the proposed Project (see Section 2.4 [Proposed Project]), including Measure TR1 (IVMP), was designed or needed to reduce conversion of existing forestland in the area because there are no such conflicts under current or proposed Project conditions.

[22] Ibid
[23] Ibid

The proposed Project, when evaluated with and without the related PM&E measures, would not result in the conversion of farmland and therefore, would have no impact.

e) Would the proposed Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?

Finding: No Impact

As discussed above, the area within the proposed Project boundary does not contain any designated important farmlands (questions “a” and ”b” above); rather, only small portions are designated under the FMMP as potential grazing lands. Continued operation of the DCPD under the proposed Project would not involve any significant land use or facilities use changes from the current condition. Therefore, there would be no impact related to conversion of agriculture land to non-agricultural use.

In addition, although the proposed Project area does contain forested areas, the continued operation of the facilities under the new license would not include changes to forested areas, or conversion of forest land to non-forest use. Therefore, since the proposed Project does not propose a conversion of farmland to non-agricultural use or conversion of forestland to non-forest use, no impacts would occur.

Additionally, no specific PM&E measure in the proposed Project (see Section 2.4, Proposed Project), including Measure TR1 (IVMP), was designed or needed to reduce conversion of existing farmland or forestland to non-agricultural or forest uses. There are no farmland or forestland use conflicts under current or proposed Project conditions.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have no impact on agricultural use or forestland conversion.

3.3.4 Mitigation Measures

Based on the impact analysis (see Section 3.3.3 [Environmental Impact Analysis]), the proposed Project’s potential impacts to Agriculture and Forestry Resources, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.4 AIR QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.4.1 Regulatory Setting

The questions listed in the table above include terminology such as cumulatively considerable, criteria pollutant, non-attainment under applicable federal and State standards, and sensitive receptors. There is also a reference to consistency with an applicable air quality plan. As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.4.1.1 Federal

Clean Air Act and National Ambient Air Quality Standards

The federal Clean Air Act (CAA) promulgated in 1963 and amended several times thereafter – including the 1990 CAA amendments – establishes the framework for modern air pollution control. The CAA directs the EPA to establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, sulfur dioxide and particulate matter (PM). PM is divided into particles less than 2.5 microns in diameter ($PM_{2.5}$) and particles less than 10 microns in diameter (PM_{10}).The NAAQS are divided into primary and secondary standards; the primary standards are set to protect human health within an adequate margin of safety, and the secondary standards are set to protect environmental values, such as plant and animal life. Table 3.4-1 summarizes the NAAQS. Table 3.4-1 also lists the California Ambient

Air Quality Standards (CAAQS) for the six criteria pollutants and four other pollutants, which are discussed below. Table 3.4-2 summarizes the sources and health effects of the six criteria pollutants and pollutants regulated in the State of California.

Table 3.4-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1,3]	National Standards[2]	
			Primary[3,4]	Secondary[3,5]
Ozone	8 hour	0.07 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)
	1 hour	0.09 ppm (180 µg/m^3)	N/A	N/A
Carbon monoxide	8 hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	N/A
	1 hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	N/A
Nitrogen dioxide	Annual Average	0.030 ppm (57 mg/m^3)	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)
	1 hour	0.18 ppm (339 mg/m^3)	100 ppb (188 µg/m^3)	N/A
Sulfur dioxide	Annual Average	N/A	80 ug/m^3 (0.03 ppm)	N/A
	24 hour	0.04 ppm (105 mg/m^3)	0.14 ppm (365 µg/m^3)	N/A
	3 hour	N/A	N/A	0.5 ppm 1,300 µg/m^3
	1 hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	N/A
PM_{10}	Annual	20 µg/m^3	N/A	N/A
	24 hour	50 µg/m^3	150 µg/m^3	150 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3	15 µg/m^3
	24 hour	N/A	35 µg/m^3	35 µg/m^3
Sulfates	24 hour	25 µg/m^3	N/A	N/A
Lead[6, 7]	30 day	1.5 µg/m^3	N/A	N/A
	Quarterly	N/A	1.5 µg/m^3	1.5 µg/m^3
	Rolling 3 Month Average[7]	N/A	0.15 µg/m^3	0.15 µg/m^3

Table 3.4-1. National and California Ambient Air Quality Standards (continued)

Pollutant	Averaging Time	California Standards[1,3]	National Standards[2]	
			Primary[3,4]	Secondary[3,5]
Hydrogen Sulfide	1 hour	0.03 ppm (42 µg/m^3)	N/A	N/A
Vinyl Chloride[(6)]	24 hour	0.010 ppm (26 µg/m^3)	N/A	N/A
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per kilometer; visibility of 10 miles or more due to particles when relative humidity is less than 70 percent.	N/A	N/A

Notes:
°C = degrees Celsius
CARB = California Air Resources Board
µg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
N/A = not applicable
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
ppm = parts per million
torr. = unit of pressure defined as 1/760 of a standard atmosphere
[1]California standards for ozone, carbon monoxide, sulfur dioxide (1- and 24-hour), nitrogen dioxide, PM_{10} and $PM_{2.5}$ and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.
[2]National standards, other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean, are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
[3]Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 250°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 250°C and a reference pressure of 760 torr; ppm in this table refer to parts per million by volume (ppmv), or micromoles of pollutant per mole of gas.
[4]National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
[5]National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
[6]CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
[7]National lead standard, rolling 3-month average: final rule signed October 15, 2008.
Source: CARB 2016[24]

[24] CARB. 2016a. Ambient Air Quality Standards. https://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed: August 2020.

Table 3.4-2. State and Federal Criteria Air Pollutants Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
O_3	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known TACs. Biogenic VOC may also contribute.	Low-altitude O_3 is almost entirely formed from ROG/VOC and NOx in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
CO	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical O_3. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
PM_{10}	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some TACs. Many toxic and other aerosol and solid compounds are part of PM_{10}.	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
$PM_{2.5}$	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a TAC – is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of $PM_{2.5}$	Combustion engine exhaust including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO_X, SO_X, ammonia, and ROG.
NO_2	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the "NO_X" group of O_3 precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
SO_2	Irritates respiratory tract; injures lung tissue. Can cause yellowing of plant leaves. Destructive to marble, iron, and steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
Pb	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also, a TAC and water pollutant.	Pb-based industrial processes like battery production and smelters. Pb paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
Sulfate	Premature mortality and respiratory effects. Contributes to acid rain. Some TACs attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.

Table 3.4-2. State and Federal Criteria Air Pollutants Effects and Sources (continued)

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
H_2S	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, wastewater treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
VRP	Reduces visibility. Produces haze. Note: not directly related to the Regional Haze program under the federal CAA, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See $PM_{2.5}$ and PM_{10} above. May be related more to aerosols than to solid particles.
Vinyl Chloride	Neurological effects, liver damage, cancer. Also considered a TAC.	Industrial processes.

Key:
CO = carbon monoxide; FCAA = Federal Clean Air Act; H_2S = hydrogen sulfide; NO_2 = nitrogen dioxide; NO_X = nitrogen oxide; O_3 = ozone; Pb = lead; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter; PM_{10} = particulate matter less than 10 microns in diameter; ppm = parts per million; ROG = reactive organic gas; SO_2 = sulfur dioxide; SO_X = sulfur oxide; TAC = toxic air contaminant; VOC = volatile organic compound; VRP = visibility reducing particles

The CAA requires states to submit a State implementation plan (SIP) for areas in non-attainment for NAAQS. The SIP, which is reviewed and approved by the EPA, must demonstrate how the NAAQS would be achieved. Failing to submit a plan or secure approval can lead to denial of federal funding and permits. In cases where the SIP fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan.

Clean Air Non-Road Diesel Rule

To reduce emissions from off-road diesel equipment, the EPA established a series of increasingly strict emission standards for new engines. Locomotives and marine vessels are exempt from this rule. Manufacturers of off-road diesel engines are required to produce engines meeting certain emission standards based on the model year that the engine was manufactured according to the following compliance schedule:

- Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category
- Tier 2 standards were phased in from 2001 to 2006
- Tier 3 standards were phased in from 2006 to 2008
- Tier 4 standards, which require add-on emissions-control equipment to attain them, were phased in from 2008 to 2015

3.4.1.2 State

The California Air Resources Board (CARB) is responsible for establishing and reviewing the State standards, compiling the California SIP and securing approval of that plan from the EPA, conducting research and planning, and identifying toxic air contaminates (TAC). CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles. It also oversees the activities of California's air quality management districts (AQMD), which are organized at the county or regional level. AQMDs are primarily responsible for regulating stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal CAA and California CAA.

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the State legislature adopted the California CAA, which established a Statewide air pollution control program. Unlike the federal CAA, the California CAA does not set precise attainment deadlines. Instead, the California CAA requires all AQMDs in the State to endeavor to meet the CAAQS by the earliest practical date. Each air district's clean air plan is specifically designed to attain the standards and must be designed to achieve an annual 5 percent reduction in district-wide emissions of each non-attainment pollutant or its precursors. When an AQMD is unable to achieve a 5 percent annual reduction, the adoption of all feasible measures on an expeditious schedule is acceptable as an alternative strategy (Health and Safety Code § 40914[b][2]). CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

The CARB and local AQMDs are responsible for achieving CAAQS, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, the EPA has delegated authority to the CARB to prepare SIPs. In turn, CARB has delegated that authority to individual AQMDs. The CARB traditionally has established State air quality standards, maintains oversight authority in air quality planning, develops programs for reducing emissions from motor vehicles, develops air emission inventories, collects air quality and meteorological data, and approves SIPs.

The California CAA substantially adds to the authority and responsibilities of AQMDs. The California CAA designates AQMDs as lead air quality planning agencies, requiring them to prepare air quality plans, and grants them authority to implement transportation control measures. The California CAA also emphasizes the control of indirect and area-wide sources of air pollutant emissions and gives local AQMDs explicit authority to regulate indirect sources of air pollution.

Toxic Air Contaminants

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The *California Almanac of Emissions and Air Quality*[25] presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data (CARB 2013). These TACs are as follows: acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, paradichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel PM (DPM).

DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

3.4.1.3 Local

South Coast Air Quality Management District

The 1977 Lewis Air Quality Management Act created the South Coast Air Quality Management District (SCAQMD) to coordinate air quality planning efforts throughout southern California. Specifically, the SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. The SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

Air Quality Management Plan

All areas designated as non-attainment under the California CAA are required to prepare plans showing how the area would meet the CAAQS by its attainment dates. The Air Quality Management Plan (AQMP) is the SCAQMD plan for improving regional air quality. It addresses CCAA requirements and demonstrates attainment with State and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. It incorporates the latest scientific and technological information and planning

[25] CARB. 2013. The California Almanac of Emissions and Air Quality. California Air Resources Board. https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac. Accessed: August 2020.

assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2016 AQMP includes the integrated strategies and measures needed to meet the NAAQS.

SCAQMD Significance Criteria

Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the SCAQMD's *CEQA Air Quality Handbook*. Table 3.4-3 lists the daily thresholds for construction and operational emissions that have been established by the SCAQMD and will be used in the analysis of air quality impacts for the proposed Project to determine significance.

Table 3.4-3. SCAQMD Air Quality Thresholds of Significance

Pollutant	Construction (pounds/day)	Operation (pounds/day)
NO_X	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550

Source: SCAQMD 2020
Key:
CO = Carbon Monoxide
NOx = Oxides of Nitrogen
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
SOx = Oxides of Sulfur
SCAQMD = South Coast Air Quality Management District
VOC = Volatile Organic Compounds

3.4.1.4 Localized Significance Thresholds

SCAQMD has developed localized significance threshold (LST) methodology and mass rate look-up tables by source receptor area that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area. LSTs are derived based on the location of the activity (i.e., the source receptor area); the emission rates of NOx, carbon monoxide,$PM_{2.5}$, and PM_{10}; the size of the project study area; and the distance to the nearest exposed individual. The proposed Project area is located within source receptor area No. 37 (Central San Bernardino Mountains). Table 3.4-4 lists the LST emission rates for a 5-acre site located within 100 meters of a sensitive use.

Table 3.4-4. SCAQMD Localized Significance Thresholds

Pollutant	Construction (pounds/day)	Operation (pounds/day)
NO_X	378	378
CO	4,142	4,142
PM_{10}	65	16
$PM_{2.5}$	17	5

Source: SCAQMD 1993
Key:
CO = Carbon Monoxide
NOx = Oxides of Nitrogen
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
SCAQMD = South Coast Air Quality Management District

3.4.2 Environmental Setting

California is divided into 15 air basins, each of which is associated with one or more AQMDs. San Bernardino County, where the proposed Project is located, is within the South Coast Air Basin portion of the SCAQMD. The topography and meteorology of San Bernardino County and the San Bernardino Mountains are important factors in the environmental effects of air quality in the proposed Project vicinity. Dispersion of high pollutant concentrations is influenced by the mountainous topography with wind flows directed around mountains in some areas and can result in air stagnation in downwind basins.

The proposed Project is situated within geographic areas that are currently designated as attainment/maintenance for carbon monoxide, PM_{10}, and nitrogen dioxide, and non-attainment for ozone and $PM_{2.5}$ by the EPA for the NAAQS. Under the CCAA, the San Bernardino County portion of the South Coast Air Basin is designated as a non-attainment area for ozone, $PM_{2.5}$, and PM_{10} for the CAAQS.

3.4.3 Environmental Impact Analysis

Would the proposed Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Finding: Less-than-Significant Impact

For a project to be consistent with the 2016 AQMP, the pollutants emitted from a project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality (SCAQMD 2005). However, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, a project is deemed consistent with the AQMP. No substantial change in emissions is expected to occur over the term of the new license. As discussed below, the proposed Project's short-term construction emissions associated with construction equipment, removal of

existing recreation facility related structures and features, and limited ground disturbing activities would not exceed the SCAQMD's significance thresholds and will be localized. Thus, the impacts are considered less than significant.

The addition of Measures GS1 (Erosion and Sediment Control Plan), LU1 (Transportation System and Management Plan) and WR2 (Hazardous Materials Management Plan), and associated dust controls that includes fugitive dust suppression standard practices such as watering access roads and unpaved areas, limiting vehicle speeds (see Section 2.4 [Proposed Project]), would further codify existing practices for the proposed Project and thus would result in a less-than-significant and possibly beneficial impact. As discussed below, compliance with the watering and associated dust-control measures included in SCAQMD Rules 402 and 403 would reduce fugitive dust (PM2.5 and PM10) emissions by 55 percent.

The proposed Project, when evaluated with and without related PM&E measures, is considered less than significant. Therefore, no mitigation is required.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard?

Finding: Less-than-Significant Impact

<u>Construction</u>

Short-term proposed Project-related activities, such as recreation facilities upgrades or non-native invasive species controls, may entail use of additional vehicles, construction equipment, and haul trucks on a temporary or an intermittent basis. The scale of activity typically would entail less than 10 additional construction vehicles and personal vehicles over current traffic. The construction emission calculations assume that all three main recreation area upgrades (the Rio, Barranca and Valle Group Camp sites, the Saw Pit sites, and Live Oak Landing site) would happen simultaneously, and require the following: heavy vehicle traffic including two large trucks for two weeks, two delivery trucks per day for six months, and five employee cars for six months. Further the assumptions include some construction flexibility up to, but not to exceed, the amount of vehicle traffic during construction. All travel distances are estimated to be on average 50 miles round trip. This estimate is an overestimate of construction related to vehicle travel. The most recent version of the CalEEMod model (Version 2016.3.2) was used to calculate the construction emissions associated with the proposed improvements (see Appendix B). The construction-related emissions generated during peak construction days for the proposed Project are presented in Table 3.4-5. Because construction operations on-site must comply with dust control and other measures prescribed by SCAQMD Rules 402 and 403 so that short-term construction impacts are minimized, compliance with these rules is assumed in Table 3.4-5. The PM_{10} and $PM_{2.5}$ emissions incorporate 55 percent control of fugitive dust as a result of watering and associated dust-control measures. The emissions presented in Table 3.4-5 are based on the best information available at the time of calculations.

Table 3.4-5. Construction Period Emissions[1]

Construction	Criteria Pollutants (Pounds per day)						CO_2e
	ROG	NO_X	CO	SO_X	PM_{10}[2]	$PM_{2.5}$[2]	
Regional Emissions							
Peak Daily Emissions	8.74	93.36	58.15	0.14	17.34	10.31	13,902.33
SCAQMD Threshold	75	100	550	150	150	55	N/A
Exceed Threshold?	No	No	No	No	No	No	N/A
Localized Emissions[3]							
Peak Daily Emissions	8.08	86.90	52.03	0.10	15.03	9.69	9,771.07
SCAQMD Threshold	N/A	378	4,142	N/A	65	17	N/A
Exceed Threshold?	N/A	No	No	N/A	No	No	N/A

Key:
CO = carbon monoxide
CO_2e = Carbon Dioxide Equivalent
NO_X = Oxides of nitrogen
N/A = not applicable
PM_{10} = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
ROG = Reactive Organic Gases
SO_X = Oxides of Sulfur
Notes:
[1]The emissions are calculated using the assumption that all sites are under construction concurrently as a worst case scenario.
[2]PM_{10} and $PM_{2.5}$ emissions estimates assume compliance with SCAQMD Rule 403.
[3]Localized emissions thresholds are based on the following: source receptor area 37, 5-acre site area, and 100 meter receptor distance.

As shown in Table 3.4-5, both localized and regional construction emissions would remain below SCAQMD significance thresholds and are considered less than significant when considered without the application of PM&Es with air quality components.

The addition of PM&E Measures GS1 (Erosion and Sediment Control Plan), LU1 (Transportation System and Management Plan) and WR2 (Hazardous Materials Management Plan) and their associated dust controls, among other air quality control elements (see Section 2.4 [Proposed Project]), would further codify existing practices for the proposed Project and thus would result in a less-than-significant and possibly beneficial impact.

The potential impacts associated with criteria pollutant exceedances are considered less than significant with, and without, the related PM&Es. It is also anticipated that the short-term proposed Project-related construction activities would occur infrequently as specified in the schedule for each applicable PM&E over the span of the new license term and thus, resulting in fewer emissions occurring at once. Therefore, no mitigation is required.

Operation

DWR proposes to operate the proposed Project as it has historically; it does not propose any changes to facility operations, or the construction of any new facilities or

features that could adversely impact air quality. Moreover, the proposed Project does not include any new permanent sources of air pollutants, and no substantial change in emissions are expected to occur for the term of the new license.

Project O&M and the use of recreation facilities would continue to generate some minor amount of air pollutant emissions, mainly in the form of automobile emissions, motorized watercraft emissions, and campfires during recreation facility use. However, these emissions would be locally minor, mostly seasonal, and similar to current conditions.

Operations under the proposed Project would not differ from existing conditions and therefore would not result in a cumulatively considerable net increase of any criteria pollutant, including for 8-hour ozone, nitrogen dioxide (federal only), $PM_{2.5}$, and PM_{10}.

The proposed Project, including the ground disturbing PM&Es like Measure TR1 (IVMP and Measure GS 1 (Erosion and Sediment Control Plan) among others (see Section 2.4.5 and Section 3.1.2), would also be similar to current operational activities and would not conflict with or obstruct implementation of the applicable air quality plan, or result in a cumulatively considerable net increase of any criteria pollutant which might categorize the proposed Project area as non-attainment under an applicable federal or State ambient air quality standard. As such, a less-than-significant impact would occur.

The addition of PM&E Measure GS1 (Erosion and Sediment Control Plan) and associated dust controls, among other PM&Es with air quality control elements (see Section 2.4 [Proposed Project]), would further codify existing practices for the proposed Project, and thus, would result in a less-than-significant and possibly beneficial impact.

Therefore, the potential impacts associated with criteria pollutant exceedances are considered less than significant with, and without, the related PM&E measures. Therefore, no mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Finding: Less-than-Significant Impact

The SCAQMD defines sensitive receptors as “any residence including private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing.”[26] Sensitive receptors in the proposed Project vicinity include scattered residences along highways outside of the proposed Project’s recreational construction work areas, with the nearest individual residence located 3,800 feet northeast of the Live Oak Landing Day Use Area. The closest sensitive land uses to the proposed Project boundary are the existing homes located approximately 400 feet from the Devil

[26] South Coast Air Quality Management District. Undated. Guidance Document, Chapter 2: Air Quality Issues Regarding Land Use. Available online: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/chapter-2---air-quality-issues-regarding-land-use.pdf. Accessed: January 13, 2020.

Canyon Second Afterbay, but no anticipated or proposed construction activities are planned to take place in this part of the Project. There are no operational activities proposed above the San Bernardino Tunnel that could potentially expose sensitive receptors to substantial air quality pollutants as the tunnel is underground, and DWR does not conduct any O&M in that area. Additionally, the recreation facility improvements would be limited to the Silverwood Lake SRA.

Construction activities would result in short-term proposed Project-generated emissions of DPM from the exhaust of diesel-powered equipment. DPM contains gaseous hazardous air pollutants including acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer time period. Health risk assessments, which determine the exposure of sensitive receptors to hazardous air pollutant emissions, are typically based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed Project. As presented earlier in Table 3.4-2, maximum daily particulate emissions, which include DPM, would be relatively low. Furthermore, the construction period would be relatively short (approximately six months), especially when compared to the 70-year exposure period. Combined with the highly dispersive properties of DPM, construction-related emissions of hazardous air pollutants would not expose sensitive receptors to substantial emissions of hazardous air pollutants. A less-than-significant impact is identified for this issue area.

The proposed Project operation under the new license does not entail any significant changes to current operations and therefore, new sources of pollutants are not anticipated in the area.

The proposed Project recreation facility improvements associated with Measure RR1 (RMP), do not include increases in capacity (Table 2.4-1), nor would the operation significantly differ from current conditions. For example, since no additional campsites will be constructed, the future use of campfires, for example, would remain substantially the same as the current use, or potentially become stricter with increasing fire hazards in the region.

The remaining PM&Es (see Section 2.4 [Project Description]) generally include repeated actions that are anticipated to be small in scale and short in duration, with minimal exposure of sensitive receptors to pollutant concentrations, if at all. Measure VR1 (Visual Resources Management Plan) includes some short duration painting. Measure AR2 (Aquatic Invasive Species Management Plan) includes the use of herbicides, which are applied by a qualified applicator and according to label instructions. Following label instructions reduces potential exposure due to drift through prescriptive limits for application temperature, humidity, wind speed, and method of application. Therefore, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations, and thus, impacts would be less than significant.

The addition of the protective elements of PM&E Measures GS1 (Erosion and Sediment Control Plan), LU1 (Transportation System and Management Plan) AR2 (Aquatic Invasive Species Management Plan), and WR2 (Hazardous Materials Management Plan) including air quality control best practices and hazardous materials management prescriptions (see Section 2.4, [Project Description]), would further codify existing practices for the proposed Project, and thus, would result in a less-than-significant impact and possibly a beneficial impact.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have a less-than-significant impact from substantial pollutant concentration exposures to sensitive receptors. Therefore, no mitigation is required.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Finding: Less-than-Significant Impact

Ground disturbing activities under the proposed Project could result in emission of odors from construction equipment and vehicles (e.g., diesel exhaust or asphalt paving). It is anticipated that these odors would be short-term, limited in extent at any given time, and distributed sporadically in a few areas within the proposed Project area during the duration of construction, and, therefore, would not inconvenience a substantial number of individuals. Therefore, a less-than-significant impact associated with this issue would occur with implementation of the proposed Project.

As previously discussed, no substantial change in emissions are expected to occur for the term of the new license. O&M under the proposed Project would result in a continuation of the same minor, localized air pollutant emissions that the DCPD currently generates, including the potential for minor upgrades to recreation facilities. Therefore, the proposed Project does not entail ongoing emissions and emissions associated with short-term O&M activities beyond current conditions. Furthermore, the implementation of the PM&Es is not anticipated to cause or increase emissions leading to odors near a substantial number of people.

3.4.4 Mitigation Measures

Based on the impact analysis (see Section 3.4.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Air Quality, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.5 BIOLOGICAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

This section provides technical information and reviews the proposed Project in sufficient detail to determine to what extent the proposed Project may affect special-status species, other fish and wildlife, and sensitive habitats.[27]

3.5.1 Regulatory Setting

The questions listed in the table above include references to species protections afforded by the CDFW or USFWS; State or federally protected wetlands; local policies or ordinances protecting biological resources; adopted habitat conservation plans; natural community conservation plans; or other approved local, regional, or State habitat conservation plans. As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.5.1.1 Federal

Endangered Species Act

The federal ESA was passed by the U.S. Congress in 1973 to protect and recover imperiled species and the habitat upon which they depend (50 CFR § 17.12 for listed plants, 50 CFR § 17.11 for listed animals, and various notices in the Federal Register for proposed species and designated critical habitats). The federal ESA is administered by the USFWS and the NMFS. The federal ESA lists protected species in danger of extinction throughout all or a significant region of the species range as “endangered” and species likely to become endangered as “threatened” within the foreseeable future (National Archives and Records Administration 2020). The term “take”, under the Federal ESA means to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” with an endangered or threatened species (USFWS 1973).[28]

Consultation with USFWS occurs when a proposed action of a project has the potential to affect federally listed species, as well as designated critical habitat for those species. Informal Section 7 consultation with the USFWS is complete, as described in the Project Description.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.) protects migratory bird species and prohibits take (i.e., harm or harassment) through setting hunting limits and seasons and protecting occupied nests and eggs. The USFWS administers the Migratory Bird Treaty Act and reviews actions that may affect species protected under the act.

[27] Under CEQA, special-status species include any species listed on the FESA, the California Endangered Species Act or meeting the definition of CEQA Guidelines § 15380(d). These species have been identified and assigned a status ranking by governmental agencies such as CDFW, USFWS, and private organizations such as CNPS.
[28] United States Fish and Wildlife Service (USFWS). 1973. Endangered Species Act. https://www.fws.gov/endangered/laws-policies/index.html. Accessed October 2020.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) is the primary federal law protecting eagles. The USFWS oversees enforcement of this act. BGEPA prohibits take of eagles without a permit (16 USC §§ 668-668c). BGEPA's defines take as to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb," and prohibits the take of individuals and their parts, nests, or eggs (USFWS 1973).[29] In addition to immediate impacts, this definition also covers impacts that result from disturbance, including human-induced alterations initiated around a previously used nest site during a time when eagles are not present. If, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment, those impacts would qualify under the BGEPA definition of disturb[30].

USFWS is authorized to permit the take of eagle nests that interfere with resource development or recovery operations subject to regulations that became effective on November 10, 2009 (50 CFR 22.26, 22.27). Under these rules the USFWS can issue permits that authorize individual instances of take of bald and golden eagles when the take is associated with, but not the purpose of, an otherwise lawful activity, and cannot practicably be avoided.

Clean Water Act: Sections 401, 402, and 404

The CWA as amended in 1972 is described in Section 3.0 of this document. Relative to the biological resources impact assessment, key components of the CWA pertain to water quality and dredge/fill placement in wetlands and other waters of the United States, as referenced in the impact analysis question "c". Other waters of the United States include lakes, rivers, streams, and their tributaries meeting the criteria under the CWA and implementing regulations.

Wetlands are defined, for regulatory purposes, as areas inundated or saturated by surface water or groundwater; at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated solid conditions (33 CFR § 328.3). If a project discharges any fill materials into waters of the United States – including wetlands, before and after the project actions – then a permit must be obtained from the U.S. Army Corps of Engineers.

[29] Ibid
[30] Ibid

San Bernardino National Forest Land Management Plan

The SBNF LMP as subsequently amended is described in Section 3.0 of this document.[31] This document contains biological-resource related goals and policies as referenced in the FLA (DWR 2019).

Forest Service Manual – Forest Service Sensitive Species

The Forest Service Manual contains legal authorities, objectives, policies, responsibilities, instructions, and guidance needed on a continuing basis by USFS line officers and primary staff throughout the system. The Forest Service Manual includes eight series, the second of which (Series 2000) is for National Forest Resource Management. This series includes chapter 2670 on threatened, endangered, and sensitive plants and animals (USFS 2020).[32]

According to chapter 2670 of the Forest Service Manual, 'sensitive species are defined as "plant and animal species identified by a regional forester for which population viability is a concern" (USFS 2006). These species are required to receive special management to keep them from further endangerment that might require their formal listing under the ESA. All potential impacts to these species must be analyzed for adverse effects on the population and habitat and management practices for their protection need to be developed and implemented (USFS 2006).[33]

Section 2672.11 requires Regional Foresters to identify sensitive species occurring in the region (USFS 2006).[34] In Region 5 (California), the most recent list was finalized in 2013 and includes all species considered Forest Service Sensitive (FSS) by the San Bernardino National Forest (USFS 2013).[35]

3.5.1.2 State

California Endangered Species Act

CDFW has jurisdiction over plant and wildlife species listed as threatened or endangered under § 2080 of the FGC. The California Endangered Species Act (CESA)

[31] U.S. Department of Agriculture, National Forest Service. 2005. Land Management Plan Part 2, San Bernardino National Forest Strategy. USFS. Pacific Southwest Region. R5-MB-079. September 2005.
[32] U.S. Department of Agriculture, National Forest Service. 2020. Forest Service Manual. Available online: <https://www.fs.fed.us/im/directives/dughtml/fsm.html#:~:text=The%20Forest%20Service%20Manual%20%28FSM%29%20contains%20legal%20authorities%2C,programs%20and%20activities.%201000%20-%20Organization%20and%20Management>. Accessed November 25, 2020. Last updated January 2020. USFS. National Headquarters, Washington, D.C.
[33] U.S. Department of Agriculture, National Forest Service. 2006. Forest Service Manual 2600, Chapter 2670-Threatened, Endangered, and Sensitive Plants and Animals. USFS. National Headquarters, Washington, D.C.
[34] Ibid
[35] U.S. Department of Agriculture, National Forest Service. 2013. Region 5 Regional Forester's Sensitive Animal Species List for the Tahoe National Forest. Available online: <https://www.fs.usda.gov/main/r5/plants-animals/wildlife>. Accessed: August 19, 2020. Last updated 2013. USFS. Pacific Southwest Region.

prohibits take of State-listed threatened or endangered species. CDFW defines take as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CDFW may authorize take under CESA through § 2081 of the FGC if that take is incidental to otherwise lawful activities and if certain conditions are met (CDFW 2020d).

The State of California designates Species of Special Concern (SSC) as wildlife and plant species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, and/or educational values. These species do not have legal protection but may be added to official lists in the future (CDFW 2017b). In addition, prior to the enactment of CESA, CDFW created a designation to provide additional protection to rare species. This designation remains today and is referred to as "Fully Protected" species, and those species listed "may not be taken or possessed at any time" (CDFW 2020e).

California Environmental Quality Act Guidelines Section 15380

The CEQA Guidelines mandate the assessment and disclosure of potential project-related impacts to federal and State listed species, as well as species not listed federally or by the State that may be considered rare, threatened, or endangered, if the species can be shown to meet specific criteria for listing outlined in CEQA Guidelines § 15380(b). Species that meet these criteria can include "candidate species", species "proposed for listing", and "species of special concern" as defined by USFWS, CDFW, and other federal, State, and local agencies. Plants appearing in the California Native Plant Society (CNPS) California Rare Plant Ranking System, including species ranked 1, 2, and sometimes 4, meet CEQA's § 15380 criteria.

Section 15380 of the CEQA Guidelines was included to address a potential situation in which a public agency is to review a proposed project that may have a significant effect on, for example, a "candidate species", which has not yet been listed by the USFWS or NMFS under the ESA or by CDFW under CESA. Therefore, CEQA enables an agency to protect a species from significant project impacts until the respective government agencies have had an opportunity to list the species as protected, if warranted (CDFW 2016).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act places the responsibility of the State for water rights and water quality protection on the SWRCB and directs the nine RWQCBs to develop and enforce water quality standards within their jurisdiction. The DCPD is located in two RWQCB jurisdictions; the northern portion of the proposed Project boundary including Silverwood Lake is located within the Lahontan RWQCB jurisdiction, while the southern portion of the proposed Project boundary including the surge chamber, penstocks, Devil Canyon Powerplant, and afterbays are located within the Santa Ana RWQCB jurisdiction. The Porter-Cologne Act requires any entity discharging waste, or proposing to discharge waste, within any region that could affect the quality of the "waters of the State" to file a "report of waste discharge" with the appropriate RWQCB. The appropriate RWQCB then must issue a permit, referred to as a waste discharge requirement. Waste

discharge requirements implement water quality control plans and take into consideration the beneficial uses to be protected, the WQO reasonably required for that purpose, other waste discharges, and the need to prevent nuisances (California Water Code § 13263) (FindLaw 2020).

Additionally, in April 2020 the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submittal, review and approval of applications for WQCs and waste discharge requirements for dredge or fill activities.

California Fish and Game Code Sections 1600–1616: Streambed Alteration Agreement

The California FGC includes multiple sections that regulate fish and wildlife, and their aquatic habitat which were contemplated in the impact discussion. Key sections, among many, described here and below are for general context.

Under FGC Code §§ 1600-1616, CDFW has the authority to regulate actions that would substantially divert, obstruct, or change the natural flow of a river, stream, or lake; substantially change the bed, channel, or bank of a river, stream, or lake; or use material from a streambed.

California Fish and Game Code Sections 3503, 3503.5, and 3800

Nesting migratory birds and raptors are protected under FGC §§ 3503, 3503.5 and 3800 which prohibit the take, possession, or destruction of birds, their nests, or eggs. Implementation of take provisions require that project-related disturbance, within active nesting territories, be reduced or eliminated during critical phases of the nesting cycle (approximately March 1–August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young), or the loss of habitat upon which birds are dependent, is considered "taking", and it is potentially punishable by fines and/or imprisonment (California Legislative Information 2020). Such taking would also violate federal law protecting migratory birds under the Migratory Bird Treaty Act.

California Ecosystems Protection Act of 2020 (AB 1788)

The California Ecosystems Protection Act of 2020 would prohibit the use of certain second-generation anticoagulant rodenticides. This act does not apply to government agencies and its employees to control rodent infestations associated with public health activities or needs, including protection of water supply infrastructure and associated facilities in compliance with State and federal laws and regulations (see Section

12978.7[e][2] of the statutes). For DWR's current practices on rodent control see Section 2.3.3.5 (Current Rodent Pest Management).

3.5.1.3 Local

City and County of San Bernardino General Plans

The southernmost section of the proposed Project is in the City of San Bernardino (2020).[36] As described in Section 3.0, DWR seeks consistency with applicable City and County General Plans. However, county policies do not directly pertain to DWR or national forest management, as the proposed Project is primarily on State and federal lands, and the county land planning policies are directed at private and county/municipal lands. The City of San Bernardino does not have a tree ordinance; however, the following city policies and ordinances may be applicable.

- 12.40.060 Authorized removal of tree - Criteria

  The Director of Public Services is authorized to remove or approve the removal of those trees which are diseased; constitute a traffic hazard; threaten to damage sidewalks, curbs or gutters; are not in conformity with adopted specifications; interfere with street widening; are located in a business district; obstruct the moving of houses; block proposed driveways or entrances to private property; or interfere with or damage sewers or water lines. (Ord. MC-344, 2-22-84; Ord. MC-325, 12-06-83; Ord. 3016, 9-23-69; Ord. 1655, 4-08-41)

- 12.40.070 Permit required for cutting, trimming, etc.

  It is unlawful for any person, persons, or corporation to cut down, trim, take up, remove, prune or injure any trees, shrubs, palms, or flowers that are now planted or grown on any of the public streets, sidewalks, parkways, lanes, alleys, parks or other public places of the City, except after procuring a permit from the office of the Director of Public Services.

Applicable Habitat Conservation Plans

The proposed Project is not located within the footprint of any adopted local conservation plans. There are four conservation plans in the region:

- The Devil Canyon Powerplant, Devil Canyon Afterbay, and Devil Canyon Second Afterbay and associated facilities are included in the proposed Upper Santa Ana River Habitat Conservation Plan (HCP) planning area. This HCP has been proposed by a group of 11 water and utility districts and 10 federal and State agencies, not including DWR. The proposed HCP was anticipated to be

[36] City of San Bernardino. 2020. Municipal Code. Available online: <http://www.ci.san-bernardino.ca.us/residents/municipal_code.asp>. Accessed: September 9, 2020. Last updated June 2020. City of San Bernardino, CA.

completed in 2020, but it has not been finished at the time of this IS/ND preparation (ICF International 2020).[37]

- The Western Riverside County Multiple Species HCP/Natural Community Conservation Plan (NCCP), which is outside the Project Area.
- The Orange County Transportation Authority HCP/NCCP, which is also outside the proposed Project Area (CDFW 2019).[38]
- The Desert Renewable Energy Conservation Plan was developed by the California Energy Commission, CDFW, BLM, and USFWS as a long-term protection of the plant and wildlife, cultural and tribal, and recreational areas of the Mojave and Colorado/Sonoran Desert, including portions of seven California counties (Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego) and encompasses 22.5 million acres. The Plan also identifies appropriate areas for utility-scale development projects for wind, solar, and geothermal energy projects. The proposed Project Area is approximately seven miles south of Desert Renewable Energy Conservation Plan boundary.

3.5.2 Environmental Setting

This section describes the regional and local environmental setting for biological resources. As described in Section 3.1.2, this section, different than most sections, includes a methodology section to describe the extensive literature and field screening processes essential for establishing the biological resources setting.

3.5.2.1 Methodology

The environmental setting was characterized and potential effects on biological resources from proposed Project-related activities was determined using information from literature reviews and relicensing-related field studies.

The biological study area encompasses the proposed Project boundary as defined in Section 2.0, Project Description.

Literature Review

Proposed Project-related documentation was reviewed for site-specific data regarding known occurrences and habitat suitability for special-status species. In addition, database searches were performed to identify special-status species and their habitats, as well as aquatic resources, with the potential to occur in the proposed Project

[37] ICF International. 2020. Upper Santa Ana River Sustainable Resources Alliance. Available online: <http://www.uppersarhcp.com/,> Accessed September 18, 2020. Last updated 2020.
[38] CDFW/ 2019. 2019. NCCP Plan Summaries. Available online: <https://wildlife.ca.gov/Conservation/Planning/NCCP/Plans.> Accessed: September 18, 2020. Last updated 2019. CDFW, Sacramento, CA.

boundary. The following sources were drawn upon to characterize the environmental setting related to biological resources:

- DWR's Application for New License for Major Project – Existing Dam for the Devil Canyon Project Relicensing, FERC Project Number 14797 filed with FERC on November 20, 2019
- DWR's Additional Information Request Response - Existing Dam for the Devil Canyon Project Relicensing, FERC Project Number 14797 filed with FERC on July 15, 2020
- U.S. Fish and Wildlife Service (USFWS) *Information for Planning and Consultation* (2020a)[39]
- USFWS *Critical Habitat Mapper* (2020b)[40]
- CDFW *California Natural Diversity Database* (CNDDB) QuickView Tool in BIOS 5 (2020a)[41]
- CDFW *CNDDB* RareFind 5 (2020b)[42]
- California Native Plant Society (CNPS) *Inventory of Rare, Threatened, and Endangered Plants of California* (2020)
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) California species list tools (NMFS 2016)[43]

[39] USFWS. 2020a. Information for Planning and Consultation (IPaC). Available online: <https://ecos.fws.gov/ipac/>. Accessed: August 20, 2020. Last updated August 20, 2020. USFWS, Sacramento, CA.
[40] USFWS. 2020b. USFWS Critical Habitat Mapper. Available online: <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>. Accessed: August 30, 2020. Last updated August 30, 2020. USFWS, Sacramento, CA.
[41] CDFW. 2020a. *California Natural Diversity Database* (CNDDB) QuickView Tool in BIOS 5. Available online: <https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data#43018410-cnddb-quickview-tool>. Accessed: September 1, 2020. Last updated September 1, 2020. CDFW, Sacramento, CA.
[42] CDFW. 2020b. *CNDDB* RareFind 5. Available online: <https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data#43018407-rarefind-5>. Accessed: August 19, 2020. Last updated August 19, 2020. CDFW, Sacramento, CA.
[43] U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS). 2020. California Species List Tools. Available online: <https://archive.fisheries.noaa.gov/wcr/maps_data/california_species_list_tools.html>. Accessed: August 20, 2020. Last updated August 20, 2020. NMFS, Sacramento, CA.

- USFS, *Region 5 Regional Forester's Sensitive Animal Species List for the San Bernardino National Forest* (USFS 2013a)[44]
- *Google Earth* aerial imagery
- U.S. Geological Survey (USGS) topographic maps

On August 19 and 30, 2020, the USFWS databases were queried to identify federally listed species and designated critical habitat that have the potential to be in the proposed Project boundary and that may potentially be affected by the proposed Project. A query of the CNDDB on August 20, 2020 provided a list of processed and unprocessed occurrences for special-status species in the Apple Valley South, Cajon, Devore, Harrison Mountain, Hesperia, Lake Arrowhead, San Bernardino North, Silverwood Lake, and 15-Mile Valley, California, USGS 7.5-minute quadrangles. The CNPS database was queried to identify special-status plant species with the potential to occur in the aforementioned USGS quadrangles. The NMFS database was also queried on August 20, 2020 in the USGS quadrangles that overlap with the proposed Project boundary to identify species and designated critical habitat under the jurisdiction of NMFS with the potential to occur. Lastly, the NFS' sensitive species lists were reviewed to identify any plant and wildlife species that are recognized by the NFS as sensitive (i.e., FSS) on NFS lands. Raw data from the database queries are provided in Attachment B with the exception of the five CNDDB rare find results, as they are not able to be shared publicly. The current status of listed species was confirmed using the State and Federally Listed Endangered and Threatened Plant and Animal Lists (CDFW, 2020f).[45]

Field Studies

From 2017 to 2019, DWR completed relicensing field studies in support of the existing DCPD including multiple studies assessing and inventorying biological resources. These biological resource studies included vegetation mapping; wetland and riparian assessments; surveys and assessments for aquatic invasive species, special-status plants, non-native invasive plants, the southwestern willow flycatcher (*Empidonax traillii extimus*), and the least Bell's vireo (*Vireo bellii pusillus*), a habitat-based assessment for other special-status terrestrial wildlife; and a field reconnaissance and desktop study of potential habitats for special-status aquatic species and aquatic invasive species within the West Fork Mojave River downstream of the DCPD (DWR 2020a; DWR 2020b). Biological information gathered during these relicensing studies was considered when defining the environmental setting for the proposed Project. Results of these studies can

[44] USFS. 2013a. *Region 5 Regional Forester's Sensitive Animal Species List for the San Bernardino National Forest* Available online: <https://www.fs.usda.gov/main/r5/plants-animals/wildlife>. Accessed: August 19, 2020. Last updated 2013. USFS, Pacific Southwest Region.
[45] CDFW. 2020. *Status of listed species.* Available online: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405&inline>
Available online: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline> Accessed November 2, 2020. Last updated November 2, 2020. CDFW, Sacramento, CA.

be found on the DWR Devil Canyon Project relicensing webpage (http://devil-canyon-project-relicensing.com/studies/).

3.5.2.2 Local Setting

The proposed Project is located in San Bernardino County, California. Elevation in the proposed Project ranges from 1,778 feet to 3,378 feet above mean sea level. The proposed Project falls within the Mojave River watershed (Hydrologic Unit Code 18090208) at Silverwood Lake and the Santa Ana River watershed (Hydrologic Unit Code 18070203) at the Devil Canyon Powerplant and appurtenant facilities (CDFW 2020c).[46]

3.5.2.3 Sensitive Natural Communities

Natural communities were identified in DWR's Special-Status Terrestrial Wildlife Species -California Wildlife Habitat Relationships Study in which habitat within the proposed Project boundary was mapped using CDFW's California Wildlife Habitat Relationships classification system[47]. Sensitive natural communities as defined by CDFW are those with a State rarity ranking of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable). These studies were informed by desktop research and were conducted in the field from April 5, 2017 through July 19, 2017. The communities mapped are as follows: Sierran Mixed Conifer, Montane Hardwood, Montane Hardwood-Conifer, Valley Foothill Riparian, Mixed Chaparral, Chamise-Redshank Chaparral, Coastal Scrub, and Annual Grassland. In addition, riparian and wetland areas were identified, as well as barren areas.

3.5.2.4 Federally Protected Wetlands/Waters of the United States

DWR performed field surveys between April 4, 2017 and April 20, 2017 to map and assess wetland and riparian habitats using the U.S. Department of the Interior, Bureau of Land Management's (BLM) Properly Functioning Condition (PFC) assessment, which– since it does not look at soil conditions– may also yield and overestimate wetlands. During field surveys, a qualified team of field staff assessed the condition of wetland and riparian habitat using the PFC qualitative methods for wetlands (i.e., lentic) (Prichard et al. 2003).[48] DWR identified 18 wetland areas (approximately 12.20 acres) within the proposed Project boundary. In addition, the riverine and lake habitat in the proposed Project area equates to approximately 964.6 acres. No formal jurisdictional

[46] CDFW. 2020c. *CNDDB* in BIOS. Available online: <https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data#43018408-cnddb-in-bios>. Accessed August 19, 2020. Last updated August 19, 2020. CDFW, Sacramento, CA.
[47] Mayer, K. E. and W. F. Laudenslayer, Jr. 1988. A Guide to Wildlife Habitats of California. 1988. State of California, Resources Agency, Department of Fish and Game Sacramento, California. 166 pp.
[48] Prichard, D., F. Berg, W. Hagenbuck, R. Krapf, R. Leinard, S. Leonard, M. Manning, C. Noble, and J. Staats. 2003. Riparian area management: A user guide to assessing proper functioning condition and the supporting science for lentic areas. Bureau of Land Management, National Applied Research Science Center, Technical Reference 1737-16, Denver, Colorado. Available online: https://www.blm.gov/or/programs/nrst/files/Final%20TR%201737-16%20.pdf.

determination has been made. Regardless, potential proposed Project-related impacts to such habitats are addressed herein.

3.5.2.5 Wildlife Movement Corridors

Wildlife movement corridors are used to link otherwise fragmented habitats to: (1) sustain species with specific foraging requirements, (2) preserve a species' distribution potential, and (3) retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife movement corridors to be a sensitive resource.

The essential connectivity areas layer [layer ds623], the natural landscape blocks layer [layer ds621], and the missing linkages in California layer [layer ds420] were included in the data used for research on wildlife movement corridors and linkages via the CDFW BIOS 5 Viewer (2020c). The entire proposed Project area is encompassed by an essential connectivity area, although the majority of the areas within the proposed Project boundary itself are considered "less permeable."[49] A natural landscape block (ID #20) runs through the middle and along the southern end of Silverwood Lake and covers the Devil Canyon Powerplant and surrounding proposed Project facilities. Additionally, running through the north edge of Silverwood Lake is an identified missing linkage (from the missing linkage layer) for a variety of species including: arroyo toad (*Anaxyrus californicus*), southwestern willow flycatcher, least Bell's vireo, American peregrine falcon (*Falco peregrinus anatum*), bald eagle (*Haliaeetus leucocephalus*), and large mammals.[50]

The Cedar Springs Dam acts as an existing aquatic barrier to the movement of fish and other aquatic species, while Silverwood Lake acts as a barrier to smaller terrestrial species, but is used by some migratory birds as a stop for foraging and resting along the Pacific Flyway (DPR 2016).[51] DCPD facilities, including dams, have been in place for over 45 years and no new dam structures are proposed, nor will the operation of the dams or the water releases change.

The frequently dry upper West Fork Mojave River has had southern western pond turtle (*Actinemys [Emys] pallida*) documented historically, but this semi-aquatic species moves overland in response to seasonal drying. DCPD-related infrastructure may function as localized barriers to terrestrial wildlife that may delay or temporarily hinder movement; however, DCPD infrastructure does not appear to represent a major impediment or to expose wildlife to risk by forcing them into more dangerous alternative routes. After over 45 years of existence, many of the DCPD features are long-term parts of the landscape, and wildlife movement patterns have likely adapted to their presence.

[49] Essential connectivity areas are large remaining blocks of intact habitat or natural landscape and model linkages between them that need to be maintained, particularly as corridors for wildlife (CDFW 2014a).
[50] Missing links are described as "highly impacted area currently providing limited to no connectivity function, but based on location, one that is critical to restore connectivity" (CDFW 2016).
[51] California Department of Parks and Recreation (DPR). 2016. Silverwood Lake State Recreation Area. Available online: http://www.parks.ca.gov/pages/650/files/SilverwoodLakeSRAWeb2016.pdf. Accessed _ 2016.

The overwhelming majority of lands adjacent to the DCPD facilities can be characterized as contiguous open space associated with the SBNF, and capable of facilitating unburdened wildlife movement. There is no evidence that movement between these open space areas is impeded by DCPD, nor would the proposed Project activities or construction substantially decrease the ability for wildlife to move through the area.

3.5.2.6 Special-Status Species

For the purposes of this biological review, special-status species are defined as any species that is listed by a federal, State, or local agency under their respective regulatory authorities. This includes the following:

- Listed, proposed, or candidates for listing under the federal ESA (50 CFR § 17.11 – listed; 61 Federal Register 7591, February 28, 1996 candidates)
- Listed or proposed for listing under CESA (FGC § 2050 et seq.; 14 CCR § 670.1 et seq.)
- Designated as a SSC by the CDFW
- Designated as Fully Protected (FP) by the CDFW (FGC §§ 3511, 4700, 5050, 5515)
- Species that meet the definition of rare or endangered under CEQA (14 CCR § 15380) including CNPS List Rank 1, 2, 3, and 4
- Species designated as sensitive for the SBNF under USFS Manual 2672.11, 2670.44 - 2670.5, and occur on NFS lands.

The results of the USFWS, NMFS, USFS, CDFW, and CNPS queries identified 81 special-status wildlife species that could potentially occur within the proposed Project boundary and be impacted by activities related to the proposed Project. The tables provided in Appendix B describe the habitat requirements for each of these species and provide conclusions regarding the potential for each species to be impacted by the proposed Project. In cases where a determination was made that no suitable habitat for a given species was present, that species is not analyzed further in this document.[52] Conversely, when information about the presence of a particular special-status species was unknown, but suitable habitat was present, DWR assumed the presence of that special-status species. In addition, seven special-status plant species were identified as potentially occurring within the proposed Project boundary.

[52] For the purpose of this section, habitat is suitable for a given species if a) the species is known to utilize the habitat and/or b) a habitat has sufficient resources required for any necessary species' life stage activity (e.g., foraging, nesting, shelter). There were 20 species that did not have suitable habitat in the proposed Project boundary.

Table 3.5-1 provides a summary of those species and their associated vegetation communities determined to have the potential to occur within the proposed Project boundary and that could potentially be affected by proposed Project-related activities.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
Plants			
Nevin's barberry (*Berberis nervosa*)	FE, SE	Perennial native to chaparral and in washes with scattered occurrences in Riverside, Los Angeles, and San Bernardino Counties at 1,400 to 2,000 feet elevation; known occurrences include transplants outside of natural range	One CNDDB record more than 5 miles from the proposed Project described as a transplant outside of the species' native range, and subsequently extirpated (CDFW 2020b).
Threadleaved brodiaea (*Brodiaea filifolia*)	FT, SE	Perennial herb in moderately wet to occasionally moist grasslands, on floodplains or associated with vernal pools at 200 to 1,000 feet elevation	Two CNDDB records about 3.7 and more than 4 miles from the proposed Project (CDFW 2020b). No records from the Mojave River drainage.
Plummer's mariposa lily (*Calochortus plummerae*)	CRPR 4.2	Granitic and rocky areas in Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, and Valley and foothill grassland	Numerous occurrences within proposed Project boundary primarily surrounding the area of Silverwood Lake with one occurrence along an access road near the penstocks. No occurrences were on NFS lands.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
Slender-horned Spineflower (*Dodecahema leptoceras*)	FE, SE	Annual herb found on floodplain terraces and sandy benches with alluvial fan scrub vegetation at about 660 to 2,300 feet elevation	Five CNDDB records associated with alluvial terraces and washes 4 to 6.5 miles from the proposed Project (CDFW 2020b). No records from the Mojave River drainage.
Santa ana river woollystar (*Eriastrum densifolium* ssp. *sanctorum*)	FE, SE	Perennial sub-shrub found on infrequently flooded, open, sandy, high alluvial terraces mostly in the Santa Ana River drainage at 500-2,000 feet elevation	Four CNDDB records associated with floodplain habitats within the Santa Ana River 1.25 to more than 4 miles from the proposed Project (CDFW 2020b). No records from the Mojave River drainage.
Southern California black walnut (*Juglans californica*)	CRPR 4.2	Alluvial substrates in Chaparral, Cismontane woodland, Coastal scrub, and Riparian woodland	Most occurrences are near the southern portion of the DCPD facilities including in the area of the surge chamber, penstocks, Devil Canyon Powerplant, afterbays and access roads leading to the penstocks. One occurrence is near the Silverwood Lake marina. Ten occurrences are on NFS lands, with the majority located along an access road
Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)	CRPR 4.2	Chaparral, Cismontane woodland, Coastal scrub, and Riparian woodland	East Fork of the West Fork Mojave River. No occurrences were found on NFS lands.
Invertebrates			
Crotch's bumblebee (*Bombus crotchii*)	SCE	Inhabits open grassland and scrub habitats (Williams et al. 2014)[53]	Historical CNDDB occurrence about 2 miles southwest of Devil Canyon Powerplant (CDFW 2020b).

[53] Williams, P.H., R.W. Thorp, L.L. Richardson, and S.R. Colla. 2014. Bumble bees of North America: an Identification Guide. Princeton University Press.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
Amphibians			
arroyo toad (*Anaxyrus [=Bufo] californicus*)	FE, SSC	MCH, VRI	Occurred historically in the area where Silverwood Lake was later created, but only one recorded observation of an individual more recently (2003, 2004). No individuals were incidentally observed during relicensing studies. Populations occur in Mojave River drainage downstream of the proposed Project, including the West Fork Mojave River, Horsethief Creek, and Deep Creek (CDFW 2020b).
large-blotched ensatina (*Ensatina eschscholtzii klauberi*)	FSS	CSC, MCH	One record in 2019 within San Bernardino County (iNaturalist 2020).[54]
California red-legged frog (*Rana draytonii*)	FT, SSC	AGS, CSC, MCH, MHC, MHW, VRI	Occurred historically (date unknown) downstream of the Project (CDFW 2020b), but no recent observations, and the species is regarded as extirpated in the Mojave River drainage (USFWS 2002).[55]
Southern California Distinct Population Segment (DPS) of mountain yellow-legged frog (*Rana muscosa*)	FE, SE	MHC, MHW, SMC, (but only where suitable aquatic habitat also occurs)	Documented historically (1947) upstream and downstream in the Mojave River drainage, but considered extirpated (CDFW 2020b) and not detected by recent USGS surveys.
western spadefoot (*Spea hammondii*)	SSC	AGS, CRC, CSC, LAC, MCH	The nearest CNDDB occurrence is about one mile south and south-southeast of the Devil Canyon Powerplant (CDFW 2020b). Not known to occur within the Mojave River basin.

[54] iNaturalist. 2020. Observations. Available online: https://www.inaturalist.org/observations. Accessed October 28, 2020. Last updated October 28, 2020.
[55] USFWS. 2002. Recovery plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon. 173 pp.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
Reptiles			
southern western pond turtle (*Actinemys [Emys] pallida*)	SSC	AGS, CRC, CSC, LAC, MCH, MHC, MHW, VRI	One incidental observation during relicensing field work at Silverwood Lake (on south-facing shore at Jamajab Point in 2017). Also occurs downstream of the proposed Project boundary on West Fork Mojave River and Horsethief Creek (CDFW 2020b, HELIX Environmental Planning 2014,[56] Aspen Environmental Group and Hunt & Associates Biological Consulting 2005[57]).
southern California legless lizard (*Anniella stebbinsi*)	SSC	Grassland, chaparral, pine-oak woodland, conifer woodland, desert scrub, sandy washes, riparian terraces (Nafis 2020)[58]	Three CNDDB records located less than 1.5 miles south and east of Devil Canyon Powerplant (CDFW 2020b).
California glossy snake (*Arizona elegans occidentalis*)	SSC	Deserts, chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grasslands (Zeiner et al. 1988-1990)[59]	Nine CNDDB records associated with alluvial fan sage scrub and grassland habitat, within a few miles of the Devil Canyon Powerplant (CDFW 2020b).
San Diegan tiger whiptail (*Aspidoscelis tigris stejnegeri*)	SSC	Chaparral, woodland, and riparian (Nafis 2020)	Four CNDDB records within 4 to 7 miles of the Devil Canyon Powerplant (CDFW 2020b).

[56] HELIX Environmental Planning, Inc. 2014. Tapestry Project. Biological Technical Report. November 2014. 160pp.
[57] Aspen Environmental Group Arroyo and Hunt & Associates Biological Consulting. 2005. Arroyo toad survey and habitat evaluation along the Horsethief Creek and Check 66 Access Road for the Horsethief Creek Repairs Project. Prepared for DWR. October 2005.
[58] Nafis, Gary. 2020. California Herps: A Guide to Reptiles and Amphibians of California. Available online: <http://www.californiaherps.com/>. Accessed October 28, 2020. Last updated 2020.
[59] Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1988-1990. California's Wildlife: Guide to the California Statewide Wildlife Habitat Relationships System. State of California. The Resources Agency, Department of Fish and Game. Sacramento, California.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
red diamond rattlesnake (*Crotalus ruber*)	SSC; FSS	AGS, BAR, CRC, CSC, MCH, VRI	One recent incidental observation in 2020 within Highland, over 50 miles south of Silverwood Lake (HerpMapper 2020).
San Bernardino ring-necked snake (*Diadophis punctatus modestus*)	FSS	AGS, CRC, CSC, MCH, URB, VRI	Four records located within a few miles northeast of Silverwood Lake (CDFW 2020b).
San Bernardino population of California mountain kingsnake (*Lampropeltis zonata parvirubra*)	FSS	MCH	Observed on a multi-use trail near the San Bernardino Tunnel Intake on Silverwood Lake during relicensing studies.
coast horned lizard (*Phrynosoma blainvillii*)	SSC	MHC, VRI, AGS	Two CNDDB reports within 2 miles north of Silverwood Lake (CDFW 2020b).
coast patch-nosed snake (*Salvadora hexalepis virgultea*)	SSC	AGS, BAR, CRC, CSC, MCH, VRI	One observation in 2019 within the Badger Percolation Basin, roughly 20 miles south of Silverwood Lake (iNaturalist 2020).
two-striped gartersnake (*Thamnophis hammondii*)	FSS, SSC	AGS, CRC, CSC, LAC, MCH, MHC, MHW, VRI	Nearest CNDDB records are from a tributary of the West Fork Mojave River (Grass Valley Creek) downstream outside of the proposed Project boundary. A two-striped gartersnake was also observed outside of the proposed Project boundary during surveys for the Horsethief Creek Bridge Replacement Project (Aspen Environmental Group and Hunt & Associates Biological Consulting 2005).
Birds			
tricolored blackbird (*Agelaius tricolor*)	ST, SSC	AGS, URB, VRI	No records in CNDDB within 15 miles of proposed Project, but reported at Silverwood Lake (eBird 2020).[60]
grasshopper sparrow (*Ammodramus savannarum*)	SSC	AGS	Observed in Butterfield Ranch, Chino Hills roughly 50 miles southwest of Silverwood Lake in October 2020 (iNaturalist 2020).

[60] eBird. 2020. Silverwood Lake Sightings. Available online: <https://ebird.org/hotspot/L474510>. Accessed on October 27, 2020. Last updated October 27, 2020.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
golden eagle (*Aquila chrysaetos*)	FP, FSS	AGS, BAR, CRC, CSC, MCH, URB, VRI	A single golden eagle was observed in Chamise Cove during relicensing studies.
short-eared owl (*Asio flammeus*)	SSC	MHC, AGS, URB, VRI	The closest observation was in October 2020 at Harper Dry Lake within San Bernardino County, roughly 80 miles north of Silverwood Lake (iNaturalist 2020).
long-eared owl (*Asio otus*)	SSC	AGS, CRC, MCH, VRI	The nearest reported CNDDB occurrence is approximately 5 miles to the northwest of the proposed Project (CDFW 2020b).
burrowing owl (*Athene cunicularia*)	SSC	AGS, BAR, CRC, CSC, MCH, URB	There are three CNDDB records approximately 6 miles southwest of the Devil Canyon Powerplant (CDFW 2020b).
redhead (*Aythya americana*)	SSC	LAC	No records in CNDDB within 15 miles of proposed Project, but reported at Silverwood Lake (eBird 2020).
mountain plover (*Charadrius montanus*)	SSC	AGS, BAR	The nearest reported CNDDB occurrence is approximately 40 miles to the northwest of the proposed Project (CDFW 2020b).
northern harrier (*Circus cyaneus*)	SSC	AGS, BAR, CRC, CSC, LAC, MCH, URB	Aspen Environmental Group (2006)[61] reported northern harriers within 1 mile north of Silverwood Lake.
olive-sided flycatcher (*Contopus cooperi*)	SSC	CRC, MCH	No records in CNDDB within 15 miles of proposed Project; however, this species has been reported at Silverwood Lake (eBird 2020).
white-tailed kite (*Elanus leucurus*)	FP	AGS, BAR, CRC, CSC, MCH, URB, VRI	The nearest reported CNDDB occurrence is approximately 30 miles to the southwest of the proposed Project (CDFW 2020b).

[61] Aspen Environmental Group. 2006. Mitigated Negative Declaration and Initial Study, Horsethief Creek Bridge Mojave Siphon Maintenance Road Project. Prepared for DWR. January 2006.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
southwestern willow flycatcher (*Empidonax traillii extimus*)	FE, SE	MRI, VRI	No known breeding occurrences within proposed Project boundary. Relicensing study survey results in 2017 included two detections of non-breeding migrant willow flycatchers (sub-species undetermined), but no subsequent detections or evidence of breeding. There are five CNDDB records of the southwestern willow flycatcher in the Project vicinity, all from within the Santa Ana River drainage, the nearest of which are 6.5 to more than 7.7 miles from the proposed Project (CDFW 2020b).
American peregrine falcon (*Falco peregrinus anatum*)	FP	AGS, BAR, CRC, CSC, LAC, MCH, URB, VRI	No records in CNDDB within 15 miles of proposed Project; however, this species has been reported at Silverwood Lake (eBird 2020).
common loon (*Gavia immer*)	SSC	LAC	Observed in cove where Sawpit Creek enters Silverwood Lake during relicensing studies in 2017.
California condor (*Gymnogyps californianus*)	FE, SE, FP	AGS, BAR, CRC, CSC, LAC, MCH, MHC, MHW, SMC	Known from Los Angeles County, though not previously observed at Silverwood Lake.
bald eagle (*Haliaeetus leucocephalus*)	SE, FP	AGS, BAR, CRC, CSC, LAC, MCH, VRI	One immature bald eagle was observed perched in upland habitat near Jamajab Point and one adult was observed flying overhead near Quarry Cove during relicensing studies.
yellow-breasted chat (*Icteria virens*)	SSC	CSC, VRI	An observation was recorded in September 2019 about 30 miles south of Silverwood Lake, in Live Oak Canyon, Redlands (iNaturalist 2020).
least bittern (*Ixobrychus exilis*)	SSC	LAC	One occurrence of least bittern was recorded in May 2019 in San Bernardino County, near Silver Peak (iNaturalist 2020).
loggerhead shrike (*Lanius ludovicianus*)	SSC	AGS, BAR, CRC, CSC, MCH, URB, VRI	Observed by DWR personnel at Silverwood Lake during relicensing studies.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
American white pelican (*Pelecanus erythrorhynchos*)	SSC	LAC, BAR	A group of six adult American white pelicans was incidentally observed in flight over Silverwood Lake near Sycamore Landing during relicensing studies.
coastal California gnatcatcher (*Polioptila californica californica*)	FT SSC	AGS, CRS, MCH, VRI	There are six CNDDB records ranging from 1 to 5.3 miles from the proposed Project (CDFW 2020b); none of the records are more recent than 2000 and are mostly detections of individual birds.
Oregon vesper sparrow (*Pooecetes gramineus affinis*)	SSC	AGS	No records in CNDDB within 15 miles of proposed Project; however, this species has been reported at Silverwood Lake (eBird 2020).
purple martin (*Progne subis*)	SSC	AGS, LAC, URB, VRI	No records in CNDDB within 15 miles of proposed Project; however, this species has been reported at Silverwood Lake (eBird 2020).
vermilion flycatcher (*Pyrocephalus rubinus*)	SSC	Desert riparian, chaparral, and hardwood woodland adjacent to irrigated fields, ditches, or other open wet areas (Zeiner et al. 1988-1990).	HELIX Environmental Planning (2014) reported vermilion flycatcher north of the Project.
Lucy's warbler (*Oreothlypis luciae*)	SSC	URB	Incidentally observed in a riparian area adjacent to Live Oak Landing during DWR's relicensing botanical surveys in 2017.
yellow warbler (*Setophaga petechia*)	SSC	CRC, CSC, MCH, URB, VRI	Incidentally observed in riparian habitat near a day-use area adjacent to Silverwood Lake during the 2017 relicensing surveys (CDFW 2020b).
California spotted owl (*Strix occidentalis occidentalis*)	SSC, FSS	VRI	A Forest Service Protected Activity Center for California spotted owl on NFS lands is located along approximately 1.5 miles of the southern edge of Silverwood Lake.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
Le Conte's thrasher (*Toxostoma lecontei*)	SSC	Desert wash, desert scrub, desert succulent scrub, and Joshua tree woodland (Zeiner et al. 1988-1990).	Observed by DWR on Silverwood Lake during routine Project O&M activities.
least Bell's vireo (*Vireo bellii pusillus*)	FE, SE	VRI	The nearest known recent detection was a single singing least Bell's vireo almost 1 mile downstream of the Project in 2013 on Horsethief Creek (HELIX Environmental Planning 2014). Six CNDDB records are all from within the Santa Ana River drainage, including a 1916 record somewhere on Devil Canyon and others 1.5 to 6.5 miles from the Project (CDFW 2020b).
yellow-headed blackbird (*Xanthocephalus xanthocephalus*)	SSC	AGS, LAC	The closest recorded observation of a yellow-headed blackbird was at Big Bear Lake within the SBNF in 2019, about 35 miles east of Silverwood Lake (iNaturalist 2020).
Bats			
pallid bat (*Antrozous pallidus*)	SSC, FSS	AGS, BAR, CRC, CSC, MCH, MHW	The nearest CNDDB records show 20th century museum specimens were collected in the vicinity of Castaic and Lebec (exact location unknown) at least 100 miles northwest of Silverwood Lake (CDFW 2020b).
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC, FSS	AGS, BAR, CRC, CSC	The nearest CNDDB record is approximately 8 miles northeast of Silverwood Lake (CDFW 2020b). One iNaturalist (2020) observation in 2020 recorded in the general vicinity of Silverwood Lake.
western mastiff bat (*Eumops perotis californicus*)	SSC	AGS, BAR, CRC, CSC, MCH, MHC, MRI, URB, VRI	The nearest CNDDB record is approximately 8 miles southeast of the Devil Canyon Powerplant (CDFW 2020b).

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
western red bat (*Lasiurus blossevillii*)	SSC	AGS, CRC, CSC	The nearest observation in Jurupa Valley in 2020, about 40 miles southwest of Silverwood Lake (iNaturalist 2020).
western yellow bat (*Lasiurus xanthinus*)	SSC	MRI, VRI	The nearest CNDDB record is approximately 10 miles southeast of the Devil Canyon Powerplant in Yucaipa (CDFW 2020b).
Other Mammals			
ringtail (*Bassariscus astutus*)	FP	AGS, BAR, CRC, CSC, MCH, VRI	Reported to occur in Silverwood Lake State Recreation Area by the Department of Parks and Recreation (DPR 2016).[62]
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	SSC	AGS, CRC, CSC	Found in San Diego County and portions of Riverside and San Bernardino Counties (SDMMP 2016).[63]
San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*)	FE, SSC	AGS, CSC, MCH	The nearest CNDDB records, mostly associated with Lytle and Cajon Creeks (CDFW 2020b), range in distance from 1.4 to nearly 10 miles from the proposed Project. The species does not occur in the Mojave River basin.
San Bernardino northern flying squirrel (*Glaucomys oregonensis californicus*)	SSC,FSS	MHC, VRI	One occurrence reported within the proposed Project boundary along the south side of Silverwood Lake (CDFW 2020b).
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC	AGS, CRC, CSC, MCH, URB	The nearest CNDDB occurrence within the Lytle Creek wash approximately 5 miles south of the Project (CDFW 2020b).

[62] California Department of Parks and Recreation (DPR). 2016. Silverwood Lake State Recreation Area. Available online: <http://www.parks.ca.gov/pages/650/files/SilverwoodLakeSRAWeb2016.pdf.>
[63] San Diego Management and Monitoring Program (SDMMP). 2016. Northwestern San Diego Pocket Mouse. Available online: <https://sdmmp.com/species_profile.php?taxaid=900826>. Accessed August 18, 2020. Last updated 2016.

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC	CRC, CSC, MCH	The nearest CNDDB occurrence is two miles east of the Devil Canyon Powerplant at the base of the San Bernardino Mountains (CDFW 2020b). Although no San Diego desert woodrats were observed during the 2017 relicensing surveys, stick houses were incidentally observed throughout the upland areas surrounding Silverwood Lake that may potentially indicate their presence.
southern grasshopper mouse (*Onychomys torridus ramona*)	SSC	AGS, CSC, MCH, VRI	The nearest CNDDB occurrence is 14 miles south of the Devil Canyon Powerplant outside of the proposed Project boundary (CDFW 2020b).
Tehachapi pocket mouse (*Perognathus alticola inexpectatus*)	SSC	MCH	There are no confirmed occurrences of this species near the proposed Project boundary, but the range overlaps.
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	SSC	AGS, CSC, MCH	The nearest CNDDB location is approximately 1.75 miles southeast of the Devil Canyon Powerplant (CDFW 2020b).

Table 3.5-1. Special-status Species Known to or with the Potential to Occur Within the Proposed Project Boundary and Associated Potential Habitat (continued)

Species	Special-status Designation	Potential Habitat within Proposed Project Boundary	Nearest Documented Occurrence to Proposed Project[1]
American badger (*Taxidea taxus*)	SSC	AGS, BAR, CRC, MCH	The nearest CNDDB occurrence two miles northwest of Silverwood Lake outside of the proposed Project boundary (CDFW 2020b).

[1]Based on database search of the USGS quadrangles surrounding the proposed Project.
Key:

Special-status Species Designations

CNPS Rank 4.2 = Watch List: Plants of limited distribution. Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
FT = Federally Threatened
FP = State Fully Protected
SE = State Endangered
ST = State Threatened
SSC = State Species of Special Concern
FSS = Forest Service Sensitive

Associated Vegetation Communities

AGS = Annual Grassland
BAR = Barren
CRC = Chamise-Redshank Chaparral
CSC = Coastal Scrub
LAC = Lacustrine
MCH = Mixed Chaparral
MHW = Montane Hardwood
MHC = Montane Hardwood – Conifer
MRI = Montane Riparian
SMC = Sierran Mixed Conifer
URB = Urban
VRI = Valley Foothill Riparian

3.5.3 Environmental Impact Analysis

Would the proposed Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Finding: Less-than-Significant Impact

Numerous special-status species are known to occur or have the potential to occur in the proposed Project boundary based on the results of the literature review and previous surveys (Table 3.5-1). The species or species groups identified below were determined to have the potential to be affected by proposed Project-related activities.

3.5.3.1 Federal Threatened and Endangered Species

A total of 13 species listed as threatened or endangered under the federal ESA, all of which are also State-listed, were evaluated for potential to be affected by the proposed Project, including:

- 4 plants – Nevin's barberry (FE, SE), thread leaved brodiaea (FT, SE), Santa Ana river woollystar (FE, SE), and slender-horned Spineflower (FE, SE)
- 1 fish – Mohave tui chub (FE, SE)
- 3 amphibians- arroyo toad (FE, SSC), California red-legged frog (FT, SSC), and southern California Distinct Population Segment (DPS) of mountain yellow-legged frog (FE, SE)
- 4 birds – California condor (FE, SE, FP), coastal California gnatcatcher (FT, SSC), southwestern willow flycatcher (FE, SE), and least Bell's vireo (FE, SE)
- 1 mammal – San Bernardino Merriam's kangaroo rat (FE, SSC)

DWR provides life history and habitat requirements corresponding to these 13 species identified in the FLA (DWR 2019).

Anadromous fish migrate to and from the ocean and their protection is regulated by NMFS (Section 3.4.1). However, the only drainages associated with the proposed Project, the Mojave River, flows inland not toward the ocean and no anadromous fish species occur. Thus, there are no listed anadromous fish species potentially impacted by the proposed Project. As a result, no federal ESA consultations with NMFS were conducted.

USFWS concluded federal ESA informal consultations through the issuance of an concurrence letter indicating that the proposed Project (i.e., Proposed Action) is *not*

likely to adversely affect[64] two federally endangered species with a potential to occur in the proposed Project area, least Bell's vireo and southwestern willow flycatcher (USFWS 2020). The reasoning for less-than-significant impact determinations for federal ESA-listed species are as follows.

Threatened or Endangered Plant Species

The proposed Project would have no impact on federal ESA-listed plants. There are no historical records of ESA-listed plant species within the proposed Project boundary and none were observed during focused botanical field surveys performed during appropriate bloom periods from 2017-2019. Suitable habitat for ESA-listed plant species is also largely absent.

Threatened or Endangered Fish

The proposed Project would have no impact on ESA-listed fish or their potential habitats. As indicated in Appendix C, the endangered inland fish species, Mohave tui chub (*Siphateles* [=*Gila*] *bicolor mohavensis*) occurred historically, but it is believed by USFWS and species' experts to have been extirpated and is not currently known to occur in the Mojave River or its tributaries.

Threatened or Endangered Amphibian Species

Arroyo toad, California red-legged frog, and the southern California DPS of mountain yellow-legged frog all occurred historically on the West Fork Mojave River, but current populations are likely limited to one species, arroyo toad, and only downstream of Silverwood Lake, including tributaries to the West Fork Mojave River. Although there are occurrence records for southern California DPS of mountain yellow-legged frog from in or near the proposed Project location ranging from 1941 to 1968, these likely represent populations that have long since been extirpated. The species is believed to have sharply declined throughout its range in the 1960s and disappeared from most sites, probably from disease and other stressors (Backlin et al. 2013[65]). Information regarding California red-legged frog is limited to an old undated record from about 3 miles downstream of the current location of Cedar Springs Dam, and there are no more recent observations. There are records of arroyo toad from the East Fork of the West Fork Mojave River at Miller Canyon as recently as 1967 and at Cedar Springs before the dam was constructed, but no more recent occurrences at these locations. During three years of surveys within the Silverwood Lake SRA, only a single arroyo toad was

[64] "May affect, not likely to adversely affect" means that all effects are beneficial, insignificant, or discountable. Beneficial effects have contemporaneous positive effects without any adverse effects to the species or habitat. Insignificant effects relate to the size of the impact and include those effects that are undetectable, not measurable, or cannot be evaluated. Discountable effects are those extremely unlikely to occur. These determinations require written concurrence from USFWS.

[65] Backlin, A. R., C. J. Hitchcock, R. N. Fisher, M. L. Warburton, P. Trenham, S. A. Hathaway, and C. S. Brehme. 2003. Natural history and recovery analysis for Southern California Populations of the Mountain Yellow-Legged Frog (*Rana muscosa*), annual report. Prepared for Cal Fish and Wildlife (Contract # P0185110), Angeles National Forest, San Bernardino National Forest, Mount San Jacinto State Park, Coachella Valley Association of Governments, and BLM.

found 500 to 1,000 feet upstream of Silverwood Lake on the West Fork Mojave River in Cleghorn Canyon (Hitchcock and Fisher 2004[66]). Under current baseline conditions, the 1-mile long reach of West Fork Mojave River upstream of Silverwood Lake lacks essential habitat elements to support arroyo toad.[67]

Silverwood Lake, as a large reservoir impoundment and lacustrine environment and is not suitable habitat for any of these amphibian species. Arroyo toad is only associated with streams. California red-legged frog and mountain yellow-legged frog are not known to occur in large lakes, particularly where predatory fish have been introduced. USFWS specifies that deep lacustrine habitats larger than 50.0 acres do not represent suitable breeding or dispersal habitat for California red-legged frog.[68]

The documented occurrences of southern California DPS of mountain yellow legged frog and California red-legged frog in the West Fork Mojave River are over 50 years old. Recent studies conclude that extirpation (local extinction) is likely.

- Records that document occurrences of the southern California DPS of mountain yellow-legged frog in or near the proposed Project location ranging from 1941 to 1968 likely represent populations that have since been extirpated. This conclusion is supported by lack of detection from recent USGS surveys (Backlin et al. 2003[69]; USFWS 2012[70]). Extant populations are known to occur in only 10 locations within the San Gabriel, San Bernardino, and San Jacinto Mountains. Currently, the only known extant populations are very small and are associated with perennial headwater streams with upstream barriers restricting access to predatory non-native trout. The only known extant population in the San Bernardino Mountains occurs along the East Fork City Creek in the San Bernardino Mountains Management Unit several miles southeast of the DCPD, south of Lake Arrowhead.

- The USFWS (2002) considers the California red-legged frog to be extirpated within the Mojave River basin. An old historical occurrence (date unknown) from

[66] Hitchcock, C.J. and R.N. Fisher. 2004. Surveys for arroyo toads (*Bufo californicus*) throughout the San Gabriel, San Bernardino, and San Jacinto Mountains, 2002-2003. U.S. Geological Survey report. 39 pp.
[67] Revised Critical Habitat Rule for the Arroyo Toad: Final Rule. 76 Federal Register 7246. February 9, 2011.
[68] 75 Federal Register 12816 (Revised Designation of Critical Habitat for the California Red-legged Frog, Final Rule, March 17, 2010).
[69] Backlin, A. R., C. J. Hitchcock, R. N. Fisher, M. L. Warburton, P. Trenham, S. A. Hathaway, and C. S. Brehme. 2003. Natural history and recovery analysis for Southern California Populations of the Mountain Yellow-Legged Frog (*Rana muscosa*), annual report. Prepared for Cal Fish and Wildlife (Contract # P0185110), Angeles National Forest, San Bernardino National Forest, Mount San Jacinto State Park, Coachella Valley Association of Governments, and BLM.
[70] USFWS. 2012. Mountain yellow-legged frog (*Rana muscosa*) Southern California Distinct Population Segment, 5-year review: summary and evaluation. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California. July 13, 2012.

about 3 miles downstream of Silverwood Lake is described as "presumed extant" (CDFW 2020b[71]), but there are no more recent sightings.

The arroyo toad is known to occur 0.4 miles downstream of Silverwood Lake in the West Fork Mojave River and its tributaries. The proposed Project would continue to have no effect on the magnitude and timing of water releases from Cedar Springs Dam into the West Fork Mojave River. Those releases are dictated by water rights, water supply agreements, and a court decree that specifies the MWA as the watermaster for the adjudicated Mojave River basin.

The West Fork Mojave River upstream of Silverwood Lake lacks essential habitat elements to support an arroyo toad population (76 FR 7246). USFWS described Cedar Springs Dam and Silverwood Lake as "insurmountable barrier[s] to further movement upstream" (2009). In addition, the section of State Highway 138 crossing Horsethief Creek that is located northwest of Cedar Springs Dam "serves as a barrier for arroyo toads to disperse into the area" (76 FR 7246).[72]

The proposed Project administrative changes (i.e., boundary change, designation of Primary Project Roads, among others) would not alter conditions within potential habitat for federally-listed amphibians relative to baseline conditions.

The proposed recreation facility improvements associated with PM&E Measure RR1 (RMP) are generally minor and pertain to parking pavement, replacement of barbeque grills, shade ramada upgrades, and the addition of ADA improvements such as handrails, among other similar upgrades (Table 2.4-1). They may include localized ground disturbing activities (Figure 2.4.2) but are not centered on drainages or locations with potential amphibian habitat. Additionally, Measure RR1 includes the installation of barriers for recreation crowd management, reduction of litter accumulation, and monitoring to identify any changes in future recreational use. Given this PM&E is generally located away from potential amphibian aquatic and breeding habitat, and it would reduce off trail uses, the PM&E would have a less-than-significant impact on federally-listed amphibians or their potential habitats.

Implementation of the remaining PM&E measures with ground disturbance elements (see Sections 2.4 and 3.1.1.2) could directly or indirectly impact amphibians or their habitat through (1) harm, harassment, or destruction during grading or other earth movement, (2) erosion and sediment runoff degradations to habitats, and (3) installation of exclusion area fencing that may impede or otherwise impact amphibian upland movement. However, given there is limited to no known federally-listed amphibians in the area where these PM&Es will be implemented, and DWR implements existing BMPs that involve conducting pre-construction surveys and ensuring protective measures are in place prior to any earth movement (see Section 2.3.4, [Currently Implemented

[71] Ibid
[72] Revised Critical Habitat Rule for the Arroyo Toad: Final Rule. 76 Federal Register 7246. February 9, 2011.

Environmental Protective Measures]), as well as conducts the appropriate agency consultations, this potential impact is considered less than significant.

The aquatic resources and general management-related PM&Es (see Sections 2.4.4 and 3.1.1.2), including Measure WR1 (Silverwood Lake Minimum Pool and Water Surface Elevations) and Measure AR1 (Silverwood Lake Fish Stocking) would codify existing Project-related activities and maintain current conditions. The continuation of a relatively stable lake level and fish stocking are not anticipated to increase potential impacts to federally-listed amphibians because Silverwood Lake does not contain suitable habitat for any of these species. For those reasons, the proposed Project PM&Es would have a less-than-significant impact. Similarly, Measure AR2 (Aquatic Invasive Species Management Plan) is a continuation of existing conditions and practices in an area where special-status amphibians are not anticipated to occur. AR2 considers existing aquatic herbicide treatments that are conducted in accordance with existing water quality control standards, the treatments of which were analyzed in DWR's 2014 Application of Copper to the State Water Project to Control Aquatic Weeds and Algal Blooms Initial Study and Final Mitigated Negative Declaration which includes Silverwood Lake (see Sections 2.3.4.and 2.4.4) (DWR 2014) [73]. It is estimated that the proposed Project, without these PM&Es, would not yield an increase in special-status amphibian populations, given these species thrive more in rivers and small ponded areas with emergent vegetation. Silverwood Lake, with and without the aquatic resource PM&Es, would not likely become suitable habitat. As such, the potential impact to federally listed amphibian species, as evaluated with and without the application of these aquatic resource-based PM&E measures, would be less than significant.

As a result of the less-than-significant finding for this impact without the application of relevant protective PM&E's such as PM&E Measure TR1 (IVMP), there is no need to develop mitigation measures to reduce this impact under CEQA. PM&E Measure TR1 would not serve as a mitigation measure under CEQA but would codify and enhance existing practices designed to avoid and minimize impacts to amphibian species and their habitat. Implementation of this PM&E measure is expected to further reduce potential impacts to amphibian species and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with and without related PM&E measures, is considered to have less-than-significant impacts to federally-listed amphibian species and their habitat. Therefore, no mitigation is required.

Threatened and Endangered Avian and Mammal Species

The proposed Project will have no impact on the California condor, coastal California gnatcatcher, or San Bernardino Merriam's kangaroo rat or their potential habitats. None of the aforementioned species are known to occur or have been historically documented within the proposed Project boundary.

[73] DWR. 2014. Application of Copper to the State Water Project to Control Aquatic Weeds and Algal Blooms Initial Study and Final Mitigated Negative Declaration. Sacramento, CA.

Although the wild population of the California condor is slowly increasing, the DCPD is not within the species' current range and is more than 80 miles from the nearest release sites, known nests, and roosting sites (AllAboutBirds.org 2020[74]; USFWS 2020c; USFWS 2020d[75]). However, California condors are wide-ranging when foraging and could foreseeably occur at some time in the future. The primary threats to California condors feeding on carrion include ingestion of lead ammunition and microtrash, factors unrelated to the proposed Project.

The coastal California gnatcatcher is not likely to be affected because suitable habitat is largely absent. Potentially suitable habitat is highly fragmented and near urban development, conditions that do not typically support nesting. In addition, the continued operation of the proposed Project is not in conflict with coastal California gnatcatcher ecology. Rather the proposed Project offers limited foraging and nesting habitat.

Suitable habitat for San Bernardino Merriam's kangaroo rat occurs south of the DCPD and is associated with Bailey Creek, Devil Canyon Creek, and tributaries of Cable Creek, including designated critical habitat approximately 1,000 feet from the Devil Canyon afterbays (USFWS 2020c).[76] However, it is anticipated that there will be no foreseeable effect to the species or its designated critical habitat because the proposed Project includes no new construction within potential habitat for the species nor changes to existing operations activities within the DCPD, which is not suitable habitat.

Ecological requirements and site-specific findings related to southwestern willow flycatcher and least Bell's vireo are presented in the Southwestern Willow Flycatcher and Least Bell's Vireo Habitat Evaluations Study (DWR 2019). A total of 10 patches of potential habitats were identified in the Silverwood Lake area and adjacent to the Devil Canyon Powerplant, including areas that may be marginal in quality because of small patch size or sparse willows. All of these areas were surveyed for least Bell's vireo and southwestern willow flycatcher. Surveyed sites were situated in 5 small coves on Silverwood Lake, Serrano Beach, Rio Group Campground on the West Fork Mojave River, Miller Canyon from the upper end of the lake to the Miller Canyon Group Campground, Cleghorn Day Use Area, and adjacent to the fenced Devil Canyon Powerplant. No least Bell's vireos were detected during the study. However, the study provides evidence that individual willow flycatchers of undetermined species occasionally utilize some of the small, scattered riparian patches within the proposed Project boundary. That utilization is brief in duration and only during migration from neotropical wintering habitats. The aforementioned species did not nest at any of the surveyed sites. Specifically, individual call response detections of a migrating willow flycatcher occurred in a riparian patch at Chamise Cove on Silverwood Lake as well as the Cleghorn Day Use Area on the East Fork of the West Fork Mojave River – areas where riparian habitat was determined to be in proper functioning condition (DWR

[74] https://www.allaboutbirds.org/guide/California_Condor/maps-sightings. Accessed: September 9, 2020.
[75] ECOS Environmental Conservation Online System: species profile for California condor (*Gymnogyps californianus*). Available online: https://ecos.fws.gov/ecp/species/8193. Accessed: September 9, 2020.
[76] ECOS Environmental Conservation Online System: species profile for San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*). Available online: https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=A0G8 Accessed: September 9, 2020.

2019). The survey results cannot predict whether or not either species might nest within the proposed Project boundary, particularly if these species increase in abundance or distribution. However, occurrences may continue to be limited to non-breeding birds in migration because most of the potential habitat for the species that occurs within the proposed Project boundary consist of relatively small, isolated patches limited by site topography and hydrologic conditions that will not be altered by implementation of the proposed Project. Some of these areas are also at or near existing recreation facilities, where baseline conditions include an existing level of noise and human presence that may be a deterrence to nesting.

The proposed Project administrative changes (i.e., boundary change and designation of Primary Project Roads among others) will not alter conditions within potential habitat for avian and mammal species relative to baseline conditions. The suggested change in the proposed Project boundary reduces the land area within the administrative, licensed boundary on the eastern, western, and southern sides of Silverwood Lake, primarily in areas of upland habitats where there are no DCPD facilities. These areas will continue to be managed by the State of California within the Silverwood Lake SRA and the USFS on NFS lands.

The proposed recreation facility improvements associated with the Measure RR1 (RMP) are generally minor and pertain to parking pavement modifications, the replacement of barbeque grills, shade ramada upgrades, the addition of ADA improvements such as handrails, among other similar upgrades (Table 2.4-1). They may include localized ground disturbing activities within approximately 61 acres of existing DCPD facilities (Figure 2.4.2) and are not centered in riparian areas or locations with sensitive avian or mammal habitat. Additionally, Measure RR1 includes the installation of barriers for management of recreationists, reduction of litter accumulation, and monitoring to identify any changes in future recreational use. Given the recreational facility upgrades are generally located away from potential listed avian and mammal species habitat and would also direct recreationalists away from such habitat, the PM&E would have a less-than-significant impact to threatened or endangered birds and mammals.

Implementation of the remaining PM&E measures with ground disturbance elements (see Sections 2.4 and 3.1.1.2) could directly, or indirectly impact listed birds and mammals or their habitat through (1) harm, harassment, or destruction during grading or other earth movement, and (2) erosion and sediment runoff degradations to habitats. However, this potential impact is considered less than significant because suitable habitat for these species within the proposed Project boundary is limited or is absent, and the existing environmental practices include scheduling activities to occur outside the avian nesting season to the extent practicable, conducting pre-construction surveys and implementing protective measures such as flagging and applying appropriately sized buffers prior to any earth movement (Section 2.3.4, Currently Implemented Environmental Protective Measures).

The aquatic resources and general management-related PM&E measures (see Sections 2.4 and 3.1.1.2) would generally maintain current conditions and would not change current impact levels. The continuation of a relatively stable lake level and fish

stocking are likely beneficial to species that prey on fish, including bald eagle and osprey. The current impact level would remain unchanged. As such, the impact from these aquatic resource-based PM&Es on threatened and endangered avian and mammal species, would be less than significant.

As a result of the less-than-significant finding for this impact without the application of relevant protective PM&E's such as PM&E Measure TR1 (IVMP), there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measure TR1 would not serve as a mitigation measure under CEQA but would codify and enhance existing practices designed to avoid and minimize impacts to special-status mammals and avian species and their respective habitats. Implementation of this PM&E measure is expected to further reduce potential impacts to special-status mammals and avian species and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with, and without related PM&E measures, is considered to have less-than-significant impacts to federally listed avian and mammal species and their associated habitat. Therefore, no mitigation is required.

3.5.3.2 California Endangered and Threatened Species and Fully Protected Species

The southern California DPS of mountain yellow-legged frog, southwestern willow flycatcher, California condor, and least Bell's vireo are listed under both the ESA and CESA, and are discussed above. Seven species listed under the CESA or as FP, but not listed under ESA, are known to occur or may occur in the proposed Project boundary. These are:

- tricolored blackbird (ST, SSC)
- golden eagle (FP, FSS)
- white-tailed kite (FP)
- American peregrine falcon (FP)
- bald eagle (SE, FP)
- ringtail (FP)
- Crotch's bumblebee, (SCE)

These seven species are discussed below.

<u>State Threatened, Endangered, and Fully Protected Avian Species</u>

The area within the proposed Project boundary may provide nesting, wintering and/or foraging habitat for the following four CESA and/or FP avian species.

- golden eagle (FP, FSS)
- white-tailed kite (FP)
- American peregrine falcon (FP)
- bald eagle (SE, FP)

In addition, habitats for three other State-listed species, California condor, southwestern willow flycatcher, and least Bell's vireo are addressed as federal listed species (refer to Section 3.5.3.1).

Both golden eagle and bald eagle have been observed within the proposed Project boundary. Ground disturbance, as well as vegetation and tree clearing during the nesting season, could result in direct effects on nesting birds should they be present in construction or O&M impacted areas. Furthermore, noise and other human activity may result in nest abandonment if nesting birds are present within 50-500 feet, depending on the species, of a work area (PG&E 2015).[77]

Consistent with the analysis discussed under the federally listed avian species section above, the proposed Project administrative changes, recreational facility upgrades and implementation of the ground disturbing, aquatic resource, and operation focused PM&Es (see Sections 2.1.1.2 and 2.42) would result in a less-than-significant impact to avian species. Disturbance from normal O&M typically do not occur near nesting habitat. Additionally, existing practices include protective measures for impact minimization and avoidance (Section 2.3.4). Thus, the proposed Project will have a less-than-significant impact on State threatened, endangered, and fully protected avian species.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. Relevant PM&E measures, such as TR1 (IVMP) would not serve as a mitigation measure under CEQA but would codify and enhance existing practices designed to avoid and minimize impacts to fully protected avian species and their habitat. Implementation of this PM&E measure is expected to further reduce potential impacts to avian species and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with, and without, related PM&Es, is considered to have less-than-significant impacts to State listed and designated fully protected avian species and associated habitat. Therefore, no mitigation is required.

[77] Pacific Gas and Electric Company. 2015. Nesting Birds: Species-Specific Buffers for PG&E Activities. Available online: <https://www.cpuc.ca.gov/Environment/info/panoramaenv/Fulton-Fitch/Application/Appendix_E_Birds.pdf>. November 2015.

Fully Protected Species—Ringtail

Suitable foraging and denning habitat for the ringtail occurs in the proposed Project boundary. Specifically, ringtail has been observed in the Silverwood Lake SRA by DPR. This species is predominantly nocturnal, closely associated with permanent water sources such as streams or rivers. Suitable habitat includes hollow snags, logs, trees, and cavities in talus and other rocky areas.

Consistent with the analysis discussed above for federally listed mammal species, the proposed Project's administrative changes, recreational facility upgrades and implementation of ground disturbing, aquatic resource, and operation focused PM&Es (see Sections 2.1.1.2 and 2.4) would result in less-than-significant impacts to ringtail. Disturbance from normal O&M is not anticipated to change from existing conditions, and existing protection measures, such as pre-construction surveys and protective measures for impact minimization and avoidance (see Section 2.3.4), will continue to be implemented.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. Relevant PM&E Measures, such as TR1 (IVMP), would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to ringtails and their habitat. Implementation of PM&E measures is expected to further reduce potential impacts to ringtails and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with, and without, related PM&Es, is considered to have a less-than-significant impact to ringtail and associated habitat. Therefore, no mitigation is required.

State Candidate Crotch's Bumblebee

Suitable habitat for Crotch's bumblebee may occur within the existing DCPD boundary, though it has not been observed. This species inhabits grassland and scrub habitats and nests underground.

Consistent with the analysis discussed under other listed species sections above, the proposed Project administrative changes, recreational facility upgrades and implementation of the ground disturbing, aquatic resource, and operation focused PM&Es (see Sections 2.1.1.2 and 2.4 2) would not operationally change the proposed Project. In addition, the proposed Project activities seldom entail excavation in open grassland or scrub habitats. Thus, the proposed Project will have a less-than-significant impact on Crotch's bumblebee.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. The relevant PM&E Measures, (e.g., TR1 [IVMP]), would not serve as a mitigation measure under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to this bumblebee and associated habitat. Implementation of this PM&E

measure may further reduce potential impacts to Crotch's bumblebee and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

3.5.3.3 Other Special-Status Species

Plants

A total of 43 individual occurrences of three special-status plant species were observed within the proposed Project boundary including Plummer's mariposa lily, Southern California black walnut, and Humboldt lily.

The proposed Project administrative changes would not alter conditions within potential habitat for these species relative to baseline conditions.

Three special-status plants (CNPS list 4.2) were documented in areas that could be affected by recreational improvements within the proposed Project boundary. However, under current practices, as described in the existing conditions section of the Project Description (Section 2.3.4), DWR implements measures for avoidance and protection of sensitive species. These practices have resulted in a sustained population documented during two years of surveys. Recreation upgrade activities would adhere to these ongoing baseline avoidance and minimization practices (Section 2.3.4). The IVMP (i.e., Measure TR1 [IVMP]) codifies existing practices that enforce avoidance and protection measures for sensitive plant species. Upon issuance of FERC's new license, and with the implementation of the proposed Project and PM&Es, such measures will continue to be enforced by FERC throughout the license term. As such, the potential impact to the three special-status plant species from recreation facility upgrades and O&M activities are considered less than significant. Therefore, no mitigation is required.

As such, the proposed PM&Es with protections relative to special-status plants, such as PM&E Measure TR-1 codify and enhance existing practices, yet are not necessary to reduce a potentially significant impact to a less-than-significant level.

The proposed Project, when evaluated with and without related PM&Es, is considered to have less-than-significant impacts to special-status plants. Therefore, no mitigation is required.

Special-Status Fish Species

There are no special-status fish species that have the potential to occur in the proposed Project boundary and none are currently known to occur in the proposed Project boundary area, so the proposed Project will have no effect on special-status fish species.

Other Special-Status Aquatic and Semi-Aquatic Species

The area within the proposed Project boundary may provide suitable habitat for western spadefoot, southern western pond turtle, and two-striped gartersnake. Of these three

species, only the southern western pond turtle has been observed within the proposed Project boundary.

The proposed Project administrative changes would not alter conditions within potential habitat for aquatic and semi-aquatic amphibian and reptile species relative to baseline conditions.

Construction activities proposed for recreational facilities under the proposed Project would provide improvements to existing recreation facilities and recreation management. They would concentrate recreational use in and around existing recreation sites, including trails so that the most suitable, least erosive and least environmentally sensitive areas would be used by recreationists. The proposed facility upgrades would occur in already disturbed habitats and thus would not impact State special-status amphibian or reptile species. Additionally, under current conditions DWR implements avoidance measures prior to construction activities (see Section 2.3.4). Therefore, implementation of recreational facility upgrades included in the proposed Project would have a less-than-significant impact on aquatic and semi-aquatic species or their potential habitats.

The additional ground disturbing PM&Es (see Section 3.1) are generally located in upland or disturbed areas, near or within existing DCPD facilities. These areas are generally not considered habitat for special-status aquatic and semi-aquatic species. As such the ground disturbing PM&Es which codify current activities and are generally applied to disturbed habitat, would have less-than-significant impacts to State special-status aquatic and semi-aquatic species.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. The relevant PM&E Measures, such as TR1 (IVMP) would not serve as a mitigation measure under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to State special-status aquatic and semi-aquatic amphibian and reptile species and associated habitat. Implementation of this PM&E measure may further reduce potential impacts to western spadefoot, southern western pond turtle, and two-striped gartersnake and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with and without related PM&E measures, is considered to have less-than-significant impacts to other special-status aquatic and semi-aquatic species. Therefore, no mitigation is required.

Special-Status Terrestrial Amphibians and Reptiles

Potential habitat for nine special-status reptile species was found within the proposed Project area, including habitat for:

- large-blotched ensatina (FSS)
- southern California legless lizard (SSC)

- California glossy snake (SSC)
- San Diegan tiger whiptail (SSC)
- red diamond rattlesnake (SSC)
- San Bernardino ring-necked snake (FSS)
- California mountain kingsnake (FSS)
- coast horned lizard (SSC)
- coast patch-nosed snake (SSC)

Of the above listed species, only the California mountain kingsnake has been observed within the proposed Project boundary.

Consistent with the analysis discussed under special-status species, the proposed Project administrative changes, construction activities proposed for recreational facilities, and implementation of PM&E Measures GS1 (Erosion and Sediment Control Plan), WR2 (Hazardous Materials Management Plan), TR1 (IVMP), RR1 (RMP), LU1 (Transportation System and Management Plan), LU2 (Fire Prevention and Response Plan), VR1 (Visual Resources Management Plan), and CR1 (HPMP) (all ground-disturbing PM&Es) would result in less-than-significant impacts on special-status terrestrial amphibians and reptiles. As a standard practice under current operations, DWR institutes pre-construction surveys and biological resource avoidance measures and protections (see Section 2.3, Existing DCPD Facilities and Operations) which would continue as a part of the proposed Project. All of the species listed above are primarily or entirely terrestrial. As such, implementation of the remaining PM&Es focused on aquatic resources and safety (i.e., Measures WR1 [Silverwood Lake Minimum Pool and Water Surface Elevations], AR1 [Silverwood Lake Fish Stocking], AR2 [Aquatic Invasive Species Management Plan]) are anticipated to have a less-than-significant impact to special-status reptiles. Therefore, the proposed Project as a whole will have a less-than-significant impact on special-status terrestrial amphibians and reptiles.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measures, such as TR1 (IVMP) would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to State special-status amphibian and reptile species and their habitat. Implementation of PM&E measures is expected to further reduce potential impacts to special-status terrestrial amphibians and reptiles and their habitat and, therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with, and without, related PM&E measures, is considered to have less-than-significant impacts to special-status terrestrial amphibians and reptiles and their associated habitat. Therefore, no mitigation is required.

Special-Status Avian Species

Suitable habitat for nesting, wintering, and/or foraging for up to 20 special-status avian species may occur within the existing DCPD boundary. Nesting, wintering and/or foraging habitat for other migratory birds and raptors not identified in Table 3.5-1 may occur within the existing DCPD boundary. Of those species listed in Table 3.5-1 above, the common loon, loggerhead shrike, American white pelican, Lucy's warbler, yellow warbler, and Le Conte's thrasher have all been observed in the proposed Project boundary. All native breeding birds regardless of their listing status, are protected under FGC § 3503, except game birds during the hunting season. Ground disturbance, as well as vegetation and tree clearing, during the nesting season could result in direct effects on nesting birds should they be present in construction or O&M impacted areas. Furthermore, noise and other human activity may result in nest abandonment if nesting birds are present within about 50 to 500 feet, depending on the species, of a work area (PG&E 2015).

Consistent with the analysis for State listed avian species, the application of administrative changes, construction activities proposed for recreational facilities (e.g., as seen in Measure RR1 [RMP]), and implementation of ground disturbing, water management, and other general PM&E measures would result in less-than-significant impacts on special-status avian species. As a standard practice under current operations, DWR institutes pre-construction surveys and biological resource avoidance measures and protections (see Section 2.3, Existing Conditions) which would continue as a part of the proposed Project, and disturbance from normal O&M is not anticipated to change from existing conditions. Therefore, the proposed Project would have a less-than-significant impact on special-status birds and raptors and their potential habitats.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measures would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to avian species and their habitat. For example, Measure TR1 (IVMP) includes a provision for surveying hazard trees for nesting birds and roosting bats prior to their removal, codifying existing practices.

Implementation of PM&E measures is expected to further reduce potential impacts to special-status avian species and their habitat and therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with, and without, related PM&E measures such as TR1 (IVMP) is considered to have less-than-significant impacts to special- status birds and their associated habitat. Therefore, no mitigation is required.

Special-Status Bats

Suitable habitat for pallid bat, western red bat, western mastiff bat, western yellow bat and Townsend's big-eared bat occurs in the proposed Project boundary. These species may utilize a variety of habitats and structures throughout the proposed Project, as well

as in adjacent areas, for roosting and foraging. Townsend's big-eared bats prefer cave or mine roosts and occasionally use buildings and may utilize areas within the proposed Project boundary for both roosting and foraging. Pallid bats, western mastiff bats, and western red bats may be found roosting in rock crevices, structures or hollow trees, and may also utilize the proposed Project boundary for roosting and foraging. Western yellow bats use riparian habitats and might be located in the patches of riparian habitat within the proposed Project boundary.

Consistent with the analysis discussed under other special-status species, the application of administrative changes, construction activities proposed for recreational facilities (e.g., as seen in Measure RR1 [RMP]), and implementation of ground disturbing PM&E measures (Sections 2.4.5 and 3.1.2) as part of the proposed Project would result in less-than-significant impacts on special-status bats. As a standard practice under current operations, DWR institutes pre-construction surveys and biological resource avoidance measures and protections (see Section 2.3, Existing Conditions) which would continue as a part of the proposed Project, and disturbance from normal O&M is not anticipated to change from existing conditions. Therefore, the overall proposed Project would have less-than-significant impacts on special-status bats.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measures would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to bats and their habitat. For example, Measure TR1 (IVMP) includes measures for removing non-native invasive plant species from the proposed Project boundary, which may improve some habitat for special-status bat species. The measure also includes a provision for surveying hazard trees for roosting bats prior to their removal, which will codify existing practices.

In addition, DWR agreed in the dispute resolution meeting summary to include in the first full calendar year of the new license, to conduct bat surveys in consultation with CDFW at existing DCPD recreation facilities and the timely installation of bat exclusion devices where bats are found. Where warranted, new recreation facilities would include appropriate bat exclusion devices.

The proposed Project, when evaluated with, and without, related PM&E measures such as TR1 (IVMP) is considered to have less-than-significant impacts to special-status bats and their associated habitat. Therefore, no mitigation is required.

Special-Status Mammals

An additional eight special-status terrestrial mammal species have the potential to occur within the proposed Project Boundary, including:

- American badger (SSC)
- Los Angeles pocket mouse (SSC)

- northwestern San Diego pocket mouse (SSC)
- San Bernardino northern flying squirrel (SSC, FSS)
- San Diego black-tailed jackrabbit (SSC)
- San Diego desert woodrat (SSC)
- southern grasshopper mouse (SSC)
- Tehachapi pocket mouse (SSC, FSS)

Of these, only the San Bernardino Northern flying squirrel has been observed within the proposed Project boundary; although, the presence of woodrat nests in the proposed Project boundary may indicate the presence of San Diego woodrat.

Consistent with the analysis discussed under other special-status species, the application of administrative changes, construction activities proposed for recreational facilities (e.g., as seen in Measure RR1 [RMP]), and implementation of ground disturbing PM&E measures as part of the proposed Project would result in less-than-significant impacts on special-status terrestrial mammals and their potential habitat.

As a standard practice under current operations, DWR institutes pre-construction surveys and biological resource avoidance measures and protections (see Section 2.3, Existing Conditions) which would continue as a part of the proposed Project, and disturbance from normal O&M is not anticipated to change from existing conditions. Therefore, the overall proposed Project would have less-than-significant impacts on special-status mammals.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measures would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to terrestrial mammals and their habitat. Implementation of PM&E measures is expected to further reduce potential impacts to special-status mammals and their habitat and therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with, and without, related PM&E measures such as TR1, the IVMP, is considered to have less-than-significant impacts to special-status mammals and their associated habitat. Therefore, no mitigation is required.

b) Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish or U.S. Fish and Wildlife Service?

Finding: Less-than-Significant Impact

Natural communities were identified in DWR's *ESA-Listed Terrestrial Wildlife Species - California Wildlife Habitat Relationships* and *Special-Status Terrestrial Wildlife Species - California Wildlife Habitat Relationships* studies, in which habitat within the proposed Project boundary was mapped using CDFW's California Wildlife Habitat Relationships classification system (Mayer et al. 1988).[78] This study was conducted from May 17, 2017 through July 19, 2017. The communities mapped are as follows: Sierran Mixed Conifer, Montane Hardwood, Montane Hardwood-Conifer, Valley Foothill Riparian, Mixed Chaparral, Chamise-Redshank Chaparral, Coastal Scrub, and Annual Grassland. Only one of these, Valley Foothill Riparian, is considered a riparian habitat. In addition, it is the only community considered a sensitive natural community by CDFW.

Within the proposed Project boundary, excluding the area above the San Bernardino Tunnel, 52 acres of Valley Foothill Riparian habitat occurs in a number of areas along the West Fork Mojave River and the East Fork of the West Fork Mojave River upstream of Silverwood Lake, including a portion on NFS lands. No additional sensitive habitats are defined by local or regional plans and policies.

The proposed Project administrative changes would not alter conditions for riparian or any vegetation communities because the changes do not entail physical disturbances.

Current lake level fluctuations can cause erosion of littoral habitats. Those fluctuations are kept to a minimum in accordance with existing license conditions (Section 2.3.4). During habitat function field surveys under current conditions, significant habitat degradation was not identified. For the proposed Project, DWR does not propose changes to current lake level management. As a result, the potential impact to riparian habitat from continued operations is considered less than significant.

The proposed Project recreation facility improvements includes Measure RR1 (RMP) which would occur within approximately 61 acres of previously disturbed sites, not in riparian or other sensitive habitats. As such, the proposed recreation facility improvements would result in a less-than-significant impact to designated sensitive habitats.

Consistent with the analysis discussed under special-status bird species, the application of administrative changes, construction activities proposed for recreational facilities (e.g., as seen in Measure RR1 [RMP]), and implementation of ground disturbing PM&E measures (see Sections 2.4.5 and 3.1) as part of the proposed Project would result in less-than-significant impacts on Valley Foothill Riparian; the only extant sensitive

[78] Mayer, K. E. and W. F. Laudenslayer, Jr. 1988. A Guide to Wildlife Habitats of California. 1988. State of California, Resources Agency, Department of Fish and Game Sacramento, California. 166 pp.

natural community within the proposed Project boundary. No other sensitive habitats are defined by local or regional plans and policies. Therefore, the proposed Project impacts to riparian habitat or sensitive natural communities, would be less than significant.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measures, such as TR1 (IVMP) would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to terrestrial mammals and their habitat. Implementation of PM&E measures is therefore, expected to further reduce potential impacts to special-status mammals and their habitat and therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with and without related PM&Es, is considered to have less-than-significant impacts to designated sensitive habitats. Therefore, no mitigation is required.

c) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Finding: Less-than-Significant Impact

DWR identified 18 wetland areas (approximately 12.2 acres) within the proposed Project boundary using the BLM's PFC assessment under the Botanical Resources Study. The PFC methods assumed that all wetlands or water bodies in question were jurisdictional, generally providing a conservative approach to mapping wetlands. A formal jurisdictional delineation was not conducted as part of the relicensing study.

The proposed Project administrative changes would not alter conditions for riparian or any vegetation communities because the changes do not entail physical disturbance.

The current minimal lake level fluctuations contribute to incision and erosion at littoral wetland features. No changes in lake level management are expected, thus continued incision and erosion of these areas is anticipated over the term of the new license, similar to current baseline conditions. These activities do not constitute direct removal, filling, or hydrologic interruptions of these wetlands; rather, they are the nature of wetlands adjacent to lacustrine habitats.

The proposed Project recreational facility improvements would occur at existing developed sites where there are no State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.). As such, these recreation site improvements will not substantially impact such wetland or other water features through direct removal, filling, hydrological interruption, or other means.

Consistent with the analysis discussed under special-status riparian habitats, the implementation of the remaining PM&E measures as part of the proposed Project would result in less-than-significant impacts on wetland and similar aquatic habitats.

Therefore, the proposed Project impacts to wetland or similar habitats are less than significant.

As a result of the less-than-significant finding for this impact, there is no need to develop any mitigation measures to reduce this impact under CEQA. PM&E Measures, such as TR1 (IVMP) would not serve as mitigation measures under CEQA, but would codify and enhance existing practices designed to avoid and minimize impacts to terrestrial mammals and their habitat. For example, TR1 includes training procedures, and protection measures for wetland and associated habitats, as well as measures for reducing the spread of non-native invasive plant species and guidelines for revegetating disturbed areas. Implementation of PM&E measures, therefore, is expected to further reduce potential impacts to wetland and associated habitats and therefore, could result in a beneficial environmental impact, when compared to the baseline conditions.

The proposed Project, when evaluated with and without related PM&E measures, is considered to have less-than-significant impacts to protected wetlands and similar habitats. Therefore, no mitigation is required.

d) Would the proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Finding: No Impact

According to CDFW and USFS, there are no defined terrestrial wildlife migratory corridors in the proposed Project boundary. However, common (species not considered special-status) and special-status avian, mammal, reptile, and amphibian species are mobile within their habitats. The existing infrastructure may act as a barrier for some species, such as fish.

The proposed Project does not include new facility construction. The recreation facility upgrades may include temporary construction fencing but given their isolated location, they would not be considered a barrier to wildlife movement. The IVMP encourages the use of erosion control measures (such as straw wattles) that do not cause a barrier to wildlife movement. None of the proposed Project changes to baseline conditions alter the facilities or O&M in such a way as to alter wildlife movement beyond baseline levels.

As discussed in question ”a” above, the proposed Project facilities will remain unaltered from baseline, except for minor updates to the recreation areas. Additionally, operations will not be changed, except for some administrative updates and the addition of non-native invasive plant management including removal from some areas. This might slightly improve natural habitats, but not enough to increase the permeability of these movement corridors. Therefore, the proposed Project, when evaluated with and without

PM&E measures, is considered to have no impact on established native resident or migratory wildlife corridors or nursery sites. Therefore, no mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Finding: No Impact

The proposed Project is located almost entirely on federal and State lands. Only 2 percent of the proposed Project area is subject to local jurisdiction, the City of San Bernardino. The City has a tree removal authorization policy (Policy 12.40.060) and a tree trimming policy (Policy 12.40.070). These policies prescribe specifications and a permitting process for tree removal within city limits. DWR does not anticipate tree removal or trimming within the city limits, given the lack of trees within this section of the proposed Project area. Therefore, proposed Project activities would not conflict with local policies or ordinances protecting biological resources, including city tree policies.

The proposed Project, when evaluated with and without related PM&E measures, is considered consistent with local policies and would have less-than-significant impacts on tree preservation ordinances. Therefore, no mitigation is required.

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan?

Finding: No Impact

For work conducted on NFS lands, all new management plans and PM&Es for the proposed Project would comply with the USFS' LMP to avoid conflict, including measures regarding federal ESA-listed species.

The proposed Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan. The Devil Canyon Powerplant, Devil Canyon Afterbay and Devil Canyon Second Afterbay and associated facilities are included in the proposed Upper Santa Ana River HCP planning area. This HCP has been proposed by a group of 11 water and utility districts and 10 federal and State agencies, not including DWR. The draft HCP was anticipated to be completed in 2020, but has not been finished as of this time (ICF International 2020).[79] The proposed Project falls outside of the Western Riverside County Multiple Species HCP and NCCP, the Orange County Transportation Authority HCP and NCCP (CDFW 2019)[80], and the

[79] ICF International. 2020. Upper Santa Ana River Sustainable Resources Alliance. Available online: <http://www.uppersarhcp.com/,> Accessed September 18, 2020. Last updated 2020.
[80] CDFW/ 2019. 2019. NCCP Plan Summaries. Available online: <https://wildlife.ca.gov/Conservation/Planning/NCCP/Plans.> Accessed September 18, 2020. Last updated 2019. CDFW, Sacramento, CA.

Desert Renewable Energy Conservation Plan. Therefore, the proposed Project would not conflict with any plans, and no impact is anticipated.

3.5.4 Mitigation Measures

Based on the impact analysis (See section 3.5.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Biological Resources, when analyzed with and without the related PM&Es, are considered less than significant Therefore, no mitigation is required.

3.6 CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

3.6.1 Regulatory Setting

Regulations pertinent to multiple resource sections are described at the beginning of Section 3.0 of this document. The following regulatory considerations provide additional information for the environmental analysis specific to Cultural Resources. The questions listed in the table above include references to the CEQA Guidelines § 15064.5 and terminology such as “historical resource” and “archaeological resource”, which include in their definition “unique archaeological resources”. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.6.1.1 Federal

National Historic Preservation Act

Section 106 of the NHPA requires federal agencies to consider the effects of their undertaking on historic properties. Historic properties are defined by the Advisory Council on Historic Preservation regulations (36 CFR Part 800) and consist of any prehistoric or historical archaeological site, building, structure, historic district, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the NRHP criteria (36 CFR Part 800.16[l]). For the purposes of NHPA and this IS/ND, an “action” or “undertaking” is synonymous with the proposed Project.

To determine whether an undertaking could affect NRHP-eligible properties, cultural resources (including archaeological, historical, and architectural properties) must be inventoried and evaluated for listing in the NRHP.

For projects involving a lead federal agency, cultural resource significance is evaluated in terms of eligibility for listing in the NRHP. For a property to be considered for inclusion in the NRHP, it must be at least 50 years old and meet the criteria for evaluation set forth in 36 CFR § 60.4.

The quality of significance in American history, architecture, archaeology, engineering, and culture must be present in districts, sites, buildings, structures, and objects that possess integrity of design, setting, materials, workmanship, feeling, and association. They must also meet one or more of the four criteria for inclusion on the NRHP:

- Criterion A: Association with events that have made a significant contribution to the broad patterns of history
- Criterion B: Association with the lives of persons significant in the past
- Criterion C: Embodiment of distinctive characteristics of a type, period, or method of construction, the work of a master, high artistic values, or a significant and distinguishable entity whose components may lack individual distinction
- Criterion D: History of yielding, or the potential to yield, information important in prehistory or history

If a cultural resources professional, who meets the Secretary of Interior's Qualification Standards, determines a particular resource meets one of these criteria, it is considered as an eligible historic property for listing in the NRHP. Among other criteria considerations, a property that has achieved significance within the last 50 years is not considered eligible for inclusion in the NRHP unless certain exceptional conditions are met.

3.6.1.2 State

<u>California Register of Historical Resources</u>

The CRHR is addressed in PRC § 5024.1. The term historical resource includes, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of the PRC (PRC § 5020.1[j]).

Historical resources may be designated as such through three different processes:

1. Official designation or recognition by a local government pursuant to local ordinance or resolution (PRC §5020.1[k])

2. A local survey conducted pursuant to PRC § 5024.1(g)

3. The property is listed in or eligible for listing in the NRHP (PRC § 5024.1[d][1])

The process for identifying historical resources is typically accomplished by applying the criteria for listing in the CRHR, which states that a historical resource must be significant at the local, State, or national level under one or more of the following four criteria, in association with events that have made a significant contribution to the broad patterns of:

1. California's history and cultural heritage

2. It is associated with the lives of persons important in our past

3. 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

4. It has yielded, or may be likely to yield, information important in prehistory or history (14 CCR § 4852)

To be considered a historical resource for the purpose of CEQA, the resource must also have integrity, which is defined as the authenticity of a resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance (14 CCR § 4852[c]). Resources, therefore, 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. It must also be judged with reference to the particular criteria under which a resource is eligible for listing in the CRHR.

Unique Archeological Resources

The PRC also requires a lead agency to determine whether or not the project would have a significant effect on unique archaeological resources (PRC § 21083.2[a]).

The PRC defines a unique archaeological resource as follows:

- An archaeological artifact, object, or site about which it can be clearly demonstrated that – without merely adding to the current body of knowledge – there is a high probability that it meets any of the following criteria:
    - Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
    - Has a special and particular quality such as being the oldest of its type or the best available example of its type

- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2)

In most situations, resources that meet the definition of a unique archaeological resource also meet the definition of a historical resource. As a result, it is a current professional practice to evaluate cultural resources for significance based on their eligibility for listing in the CRHR.

Discovery of Human Remains

Under the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001) and the implementing regulations at 43 CFR Part 10, the USFS is responsible for the protection of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on lands under the jurisdiction of the SBNF. NAGPRA requires that all human remains and potential human remains be treated with respect and dignity at all times. In the event that suspected human remains are discovered during proposed Project activities on USFS land, all activities in the immediate area will cease, and appropriate precautions will be taken to protect the remains and any associated cultural items from further disturbance. The USFS will follow the procedures outlined in 43 CFR § 10.4, Inadvertent Discoveries.

Regarding the discovery of human remains on non-federal lands, § 7050.5 of the California Health and Safety Code (CHSC) states the following:

a) Every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in § 5097.99 of the [PRC]. The provisions of this subdivision shall not apply to any person carrying out an agreement developed pursuant to subdivision (l) of § 5097.94 of the [PRC] or to any person authorized to implement § 5097.98 of the [PRC].

b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with § 27460) of Part 3 of Division 2 of Title 3 of the California Government Code [CGC], that the remains are not subject to the provisions of § 27491 of the CGC or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in § 5097.98 of the PRC. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

c) If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC (CHSC § 7050.5).

Of particular note to tribal resources is subsection (c), after notification the NAHC would follow the procedures outlined in PRC § 5097.98 including notification of most likely descendants, if possible, and recommendations for treatment of the remains. The most likely descendants would have 24 hours after notification by the NAHC to make their recommendation (PRC §5097.98). Knowing or willful possession of Native American human remains or artifacts taken from a grave or cairn is a felony under State law (PRC § 5097.99).

Sections 8010 and 8011 of the CHSC also address the protection of Native American human remains and cultural items as the California Native American Graves Protection and Repatriation Act of 2001 (CalNAGPRA). The intent of the Legislature is to:

- Apply the State's repatriation policy consistently with the provisions of NAGPRA.
- Provide a mechanism whereby California Indian tribes that file repatriation claims for human remains and cultural items under either NAGPRA or CalNAGPRA may request assistance in ensuring responses to those claims in a timely manner.
- Provide a mechanism whereby California tribes that are not federally recognized may file claims with agencies and museums for repatriation of human remains and cultural items.

3.6.1.3 Local

The San Bernardino General Plan Conservation Element has the following relevant goal and policies related to the protection of historic, cultural, and paleontological resources and also includes specific implementation programs to ensure adherence to the County's policies. These programs are consistent with the CEQA regulations described above and are not repeated here.

- **Goal CO 3:** The County will preserve and promote its historic and prehistoric cultural heritage.
- **Policy CO 3.1:** Identify and protect important archaeological and historic cultural resources in areas of the County that have been determined to have known cultural resource sensitivity.
- **Policy CO 3.2:** Identify and protect important archaeological and historic cultural resources in all lands that involves disturbance of previously undisturbed ground.
- **Policy CO 3.3:** Establish programs to preserve the information and heritage value of cultural and historical resources.

- **Policy CO 3.4:** The County will comply with Government Code § 65352.2 (SB 18) by consulting with tribes as identified by the California Native American Heritage Commission on all General Plan and specific plan actions.

- **Policy CO 3.5:** Ensure that important cultural resources are avoided or minimized to protect Native American beliefs and traditions.

The Southern California Association of Governments Regional Comprehensive Plan's Open Space and Habitat-Natural Lands Action Plan institutes policies and best practices regarding the protection of cultural resources, including:

- **OSN-6:** Southern California Association of Governments should encourage the implementation of measures aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.

3.6.2 Environmental Setting

3.6.2.1 Prehistoric, Ethnographic, and Historic Context Summary[81]

Archaeological evidence and historical documentation indicate that the region of the proposed Project has a long history of human occupation. The earliest of these occupations, the prehistoric era, is believed to have begun about 10,950 Before Present in the Paleoindian Period and continued to the Historic Contact Period, dating to around the mid-1700s with the arrival of the Spanish missionaries.

The proposed Project and the surrounding area are within lands once inhabited by the Serrano, who were part of an interdependent and extensive trade network that linked the Pacific coast with the Colorado River via the most widely traveled trade corridor in this region along the Mojave River. From 1819 to 1834, large numbers of Serrano-speaking Native Americans were taken into the San Gabriel Mission system and were forced to work on the San Bernardino cattle rancho and to participate in mission activities.

The historic period of southern California can be broken down into three major periods: Spanish (1769-1822), Mexican (1823-1848), and American (1848-present). From the early seventeenth century up to the middle of the nineteenth century, Spanish and

[81] Lloyd, John "Jay", Sandra S. Flint, Daniel Leonard, Leesa Gratreak, Michael Connolly, and Beniamino Volta. 2020. *Devil Canyon Project Relicensing, FERC Project No. 14797, Archaeological and Historical Built Environment Resources Survey, National Register of Historic Places Evaluation, and Finding of Effects, San Bernardino County, California*. Prepared by HDR Engineering, Inc. Sacramento, CA. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, CA.
Lloyd, John "Jay" and Daniel Leonard. 2020. *Devil Canyon Project Relicensing, FERC Project No. 14797, Archaeological and Historical Built Environment Resources Survey, National Register of Historic Places Evaluation, and Finding of Effects, San Bernardino County, California: Supplemental Archaeological Study Results and Recommendations*. Prepared by HDR Engineering, Inc. Sacramento, CA. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, CA.

Mexican governments established colonies, towns, and religious centers throughout the northern borderlands of the Spanish colonial empire. A total of 21 missions were established along the California coastline during the Spanish Period, spanning from San Diego in the south to Sonoma in the north. Mexico won its independence from Spain in 1822, signaling the waning of the mission system and shifting the control of many ranchos to the newly formed Mexican government. By 1835, nearly all missions in southern California had been secularized with ranchos established on their lands. The American Period was ushered in when the U.S. won the Mexican-American War and California became an occupied enemy territory in 1848.

Local developments during the historic era included the establishment of the SBNF in 1893 (initially known as the San Bernardino National Reserve), the subsequent management of local timber and fire, and by the 1920s, a new public interest in recreation with an increase in the use of cars and new road developments. By 1933, the Civilian Conservation Corps was in place and providing a work force to the USFS to build local trails and roads. Small-scale irrigation was initially used during the early nineteenth century, resulting in regular cultivation, but by 1869 further development of agrarian efforts, livestock farming, and diversification of crops would employ more people in California than mining. By 1879, it would surpass mining and become the chief element of the economy.

Throughout the 1850s and 1860s, the number of settlers in southern California continued to increase. However, San Bernardino was slower to develop compared to the more populated coastal areas, such as Los Angeles. In 1851, the first major settlement of the San Bernardino Valley was created when a large contingent of followers of the Church of Jesus Christ of Latter-day Saints arrived from Salt Lake City, Utah. The Southern Pacific Railroad bypassed the City of San Bernardino in 1875, building its depot in Colton after being unable to come to acceptable terms with the city. In 1883, however, another railroad – the California Southern Railroad – laid lines from San Diego to San Bernardino. Two years later, the Santa Fe Railroad acquired the California Southern Railroad and built a depot in San Bernardino as it laid track on a line northward towards San Francisco in the following year. As the Santa Fe Railroad and Southern Pacific Railroad lines crossed in San Bernardino, the city became a key transportation crossroad.

The development of affordable automobiles in the 1920s combined with the construction of improved, useable roads resulted in a population boom in the San Bernardino Mountains. New locations became accessible and settlements such as Dr. John Baylis' Pinecrest, Henry Gurnsey's Crestline, and Carl and Ella Hewitt's Cedar Springs Health Resort were established.

The 16-mile-long Mormon Road – the first road constructed from San Bernardino into the San Bernardino Mountains – led to the establishment of three sawmills in the mountains, which supplied lumber for the development of San Bernardino and Los Angeles. In 1957, the California Legislature recognized the growing demand for outdoor recreation and the lack of adequate facilities through the passage of the California Public Outdoor Recreation Plan Act, which provided a Statewide inventory of recreation

facilities and outlined goals moving forward for future recreation planning. In 1965, President Lyndon B. Johnson called for the development of a system of trails to enhance American's access to the outdoor environment. The PCT was designated as one of the nation's first national scenic trails.

Water scarcity in the rapidly-growing region of southern California directly prompted the development of a large-scale water supply and conveyance project that became known as the SWP. The SWP as a water project turned to hydroelectric power generation to offset the power needed to operate the water supply and conveyance system. The shift also reflected an increasing interest in clean and renewable energy production in California. The SWP is one of the largest water conveyance systems in the world. The California Aqueduct (constructed between 1960 and 1974) was incorporated into the Burns-Porter Act as a part of the SWP and was originally called the San Joaquin Valley-Southern California Aqueduct before being renamed simply the California Aqueduct. Construction of Cedar Springs Dam began in 1968 under the direction of the Morrison-Knudsen Company. Along with the construction of the earth-filled dam, the project included three main facets: the construction of the aqueduct in the area, the building of overshoots and culverts to carry runoff and creeks over or under the aqueduct, and a nearly 200-foot-tall concrete intake tower connecting to the tunnel that would carry water to the Devil Canyon Powerplant. Silverwood Lake and Cedar Springs Dam were completed in the summer of 1972, followed by the completion of the Devil Canyon Powerplant in December of that year. Construction of the hydroelectric plant began in 1969, and it is capable of producing 291 megawatts per hour in its four units.

3.6.2.2 Identification of Historical Resources

The cultural resource investigation for the proposed Project relicensing consisted of records searches, literature reviews, archival research, pedestrian surveys, and shallow excavations in vegetated areas considered to be potentially highly sensitive for cultural resources. The minor surface scrap excavation component of the investigation was conducted in consultation with and oversight from Tribal representatives. The archaeological study identified 28 previously recorded and newly identified archaeological sites within the APE as shown in Table 3.6-1. Eighteen of the 28 sites are not eligible for NRHP or CRHR listing and the 10 sites listed as unevaluated will be avoided and will not be impacted by the proposed Project as currently planned.

Table 3.6-1. Archaeological Sites Within the APE

Primary No.	Trinomial	USFS No./ Temporary No.	Description	NRHP and CRHR Eligibility[1]
Prehistoric Archaeological Sites				
P-36-000174	CA-SBR-0174	05-12-51-20	Bedrock milling site with lithic scatter	Unevaluated
P-36-008913	CA-SBR-8913	None	Flaked stone scatter with milling and other tools	Unevaluated[2]
None	None	DC-HDR-006	Bedrock milling station	Unevaluated
Historical Archaeological Sites				
P-36-013421	None	None	Devil Canyon Toll Road	Not Eligible[3]
P-36-024109	CA-SBR-15294H/ 15294H	None	Cedar Springs Dam access road	Not Eligible[3]
P-36-024794	CA-SBR-15835H	None	Dark Canyon Road (also called Miller Canyon Road)	Unevaluated
None	None	DC-HDR-001	Devil Canyon Powerplant access road	Not Eligible[3]
None	None	DC-HDR-002	Irrigation system	Not Eligible[3]
None	None	DC-HDR-003	Three modern segments of Pacific Crest National Scenic Trail	Not Eligible[3]
None	None	DC-HDR-005	Pilot Rock Truck Trail	Not Eligible[3]
None	None	DC-HDR-007	Unnamed road	Not Eligible[3]
None	None	DC-HDR-008	Building foundations and structural remains	Unevaluated
None	None	DC-HDR-009	Two road segments	Not Eligible[3]
None	None	DC-HDR-010	Two concrete dam features	Not Eligible[3]
None	None	DC-HDR-011	Scatter of bottles, cans, and other refuse	Not Eligible[3]
None	None	DC-HDR-012	Water retention feature	Not Eligible[3]
None	None	DC-HDR-014	Sawpit Canyon Road	Not Eligible[3]
None	None	DC-HDR-015	Cleghorn Road	Not Eligible[3]
None	None	DC-HDR-017	Concrete water control system	Not Eligible[3]
None	None	DC-HDR-018	Residential property remains	Unevaluated
None	None	DC-HDR-019	Concrete pad water pipes	Not Eligible[3]
None	None	DC-HDR-021	Road segment associated with former State Route 173/138	Unevaluated
None	None	DC-HDR-022	Cedar Springs Townsite (located under Silverwood Lake)	Unevaluated
None	None	DC-HDR-023	Existing, unimproved road	Not Eligible[4]
None	None	DC-HDR-024	Existing, dirt and gravel road	Not Eligible[4]

Table 3.6-1. Archaeological Sites Within the APE (continued)

Primary No.	Trinomial	USFS No./ Temporary No.	Description	NRHP and CRHR Eligibility[1]
None	None	PR-028864	Structural footings, glass scatter	Not Eligible[2]
Multicomponent Archaeological Sites				
P-36-000501	CA-SBR-501/H	None	Previously recorded occupation site with milling features, site not accessible and not visited during survey	Unevaluated[2]
P-36-003033	CA-SBR-3033/H	None	Mojave Trail; evidence of the trail was not found during the survey	Unevaluated

[1]Note: Lloyd et al. 2020[82], and Lloyd and Leonard 2020[83] contain full NRHP/CRHR evaluations.
[2]Note: P-36-008913 and P-36-000501 were both previously evaluated as Not NRHP Eligible, but were inundated and inaccessible during the relicensing survey. Thus, the sites were not reevaluated during the relicensing survey and are considered unevaluated. They will be managed as if eligible until when they become exposed during any planned scheduled drawdown and DWR can evaluate the sites in consultation with tribes, agencies, and the SHPO.
[3]Note: The SHPO concurred with this evaluation in a letter dated September 18, 2019.
[4]Note: The SHPO concurred with this evaluation in a letter dated January 9, 2020.
Key:
APE = Area of Potential Effects
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places
USFS = U.S. Department of Agricultural, Forest Service

The historical built environment resources investigation identified 12 resources in the APE, comprised of groupings of individual buildings, structures, or objects designed and constructed to operate as a unit (Table 3.6-2). Other historical built environment resources that are located within the APE, but are owned, operated, and maintained by other agencies or organizations, were excluded from the analysis as DWR is not proposing to include them as part of the proposed Project. The proposed Project does not impact those resources and, subsequently, they will not be managed by DWR. All 12 of the historical built environment resources were evaluated for NRHP and CRHR eligibility.

[82] Lloyd, John “Jay”, Sandra S. Flint, Daniel Leonard, Leesa Gratreak, Michael Connolly, and Beniamino Volta
2020 Devil Canyon Project Relicensing, FERC Project No. 14797, Archaeological and Historical Built Environment Resources Survey, National Register of Historic Places Evaluation, and Finding of Effects, San Bernardino County, California. Prepared by HDR Engineering Inc. Sacramento, CA. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, CA.
[83] Lloyd, John “Jay” and Daniel Leonard
2020 Devil Canyon Project Relicensing, FERC Project N0. 14797, Archaeological and Historical Built Environment Resources Survey, National Register of Historic Places Evaluation, and Finding of Effects, San Bernardino County, California: Supplemental Archaeological Study Results and Recommendations. Prepared by HDR Engineering Inc. Sacramento, CA. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, CA.

Table 3.6-2. Project-Specific Historical Built Environment Resources in APE

Category and Building/Structure Designation	NRHP/CRHR Eligibility[1]
Devil Canyon Project Resources	
Cedar Springs Dam	Eligible (Criteria A/1 and C/3)[2]
Silverwood Lake	Eligible (Criterion A/1)[2]
Cedar Springs Dam Spillway	Eligible (Criterion A/1)[2]
Cedar Springs Dam Low-Level Outlet Works	Not Eligible[2]
San Bernardino Tunnel Intake	Not Eligible[2]
San Bernardino Tunnel Surge Chamber	Not Eligible[2]
Devil Canyon Powerplant Penstocks	Not Eligible[2]
Devil Canyon Powerplant Facility	Not Eligible[2]
Devil Canyon Water Treatment Plant & Monitoring Station	Not Eligible[2]
Devil Canyon Recreation Resources	
Sawpit Canyon Marina and Day Use Facilities	Not Eligible[2]
Cedar Springs Community Resources	
Cedar Springs Historical Apple Orchard	Not Eligible[2]
Infrastructure Resources	
Bridge BR 54-325	Not Eligible[2]

[1]Note: Lloyd et al. 2020[84], and Lloyd and Leonard 2020[85] contain full NRHP/CRHR evaluations.
[2]Note: The SHPO concurred with this evaluation in a letter dated September 18, 2019.
Key:
APE = Area of Potential Effects
CRHR = California Register of Historical Resources
NRHP = National Register of Historic Places

[84] Lloyd, John "Jay", Sandra S. Flint, Daniel Leonard, Leesa Gratreak, Michael Connolly, and Beniamino Volta
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[85] Lloyd, John "Jay" and Daniel Leonard
2020 Devil Canyon Project Relicensing, FERC Project N0. 14797, Archaeological and Historical Built Environment Resources Survey, National Register of Historic Places Evaluation, and Finding of Effects, San Bernardino County, California: Supplemental Archaeological Study Results and Recommendations. Prepared by HDR Engineering, Inc. Sacramento, CA. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, CA.

3.6.3 Environmental Impact Analysis

Would the proposed Project:

a) Would the proposed Project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

Finding: Less-than-Significant Impact

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. A substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource would be significantly impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the NRHP, the CRHR, a local register of historical resources pursuant to § 5020.1(k) of the PRC, or a historical resources survey meeting the requirements of § 5024.1(g) of the PRC.

Proposed administrative changes to the existing DCPD include the overall reduction of area within the existing DCPD boundary, the addition of Primary Project Roads, and the addition of an existing lake level gage to the FERC license. Real property transfers (i.e., reducing/increasing the area managed under the FERC license) are typically considered to be undertakings subject to the review process under Section 106 of the NHPA. The NHPA Section 106 regulations state that the transfer or sale of a historic property (i.e., a cultural resource eligible for listing on the NRHP) out of federal ownership or control constitutes an adverse effect when undertaken without adequate and legally enforceable restrictions or conditions for the long-term preservation of the property's historic significance. Decreasing the existing DCPD boundary, as described above in Section 2.4.1.1, would not result in the exclusion of any archaeological site or historical built environment resource currently located within the existing DCPD boundary or the proposed Project boundary.

The Primary Project Roads in Table 2.4-3 were subject to the inventory and evaluation effort described in the cultural resource technical reports prepared as part of DWR’s

cultural resources investigation (Lloyd et al. 2020[86]; Lloyd and Leonard 2020[87])[88]. Two archaeological resources – DC-HDR-023 and DC-HDR-024 – were identified in association with the addition of the Primary Project Roads within the proposed Project boundary. However, as shown in Table 3.6-1 above, neither site is eligible for NRHP or CRHR listing and, therefore, neither qualifies as a historical resource.

Finally, the existing lake level gage proposed for inclusion within the proposed Project does not meet the minimum age criteria for consideration of NRHP and CRHR eligibility and, therefore, does not qualify as a historical resource. Therefore, the change to the existing DCPD boundary will have no impact on historical resources.

As described in Section 2.4.1, proposed upgrades to existing recreation facilities are limited to four recreation facility areas at Silverwood Lake and will be implemented within the first 10 years of operation under the new FERC license. These facilities are listed below and also include a study to assess and possibly plan for closing user-made trails using natural barriers and other means. See Figure 2.4-1 for facility locations and Table 2.4-1 for a summary of the proposed upgrades and schedule for these day use area improvements.

- Rio, Barranca, and Valle Group Camps
- Sawpit Canyon Picnic Area
- Sawpit Canyon Day Use Area
- Live Oak Landing Day Use Area

The Sawpit Canyon facilities were constructed in 1972–1973 and assessed for NRHP and CRHR eligibility as part the cultural resource technical study. As shown above in Table 3.6-2, the Sawpit Canyon facilities were found to be ineligible for NRHP or CRHR listing and, therefore, do not qualify as a historical resource. The built environment features at the remaining facilities were not built until the 1990s and 2000s and do not meet the 50-year-old minimum age criterion for NRHP and/or CRHR consideration. Improvements to these facilities, prior to their meeting the minimum age criteria, would

[86] Lloyd, John “Jay”, Sandra S. Flint, Daniel Leonard, Leesa Gratreak, Michael Connolly, and Beniamino Volta
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[87] Lloyd, John “Jay” and Daniel Leonard
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[88] The Cultural Resource Reports are considered to be privileged and confidential. These reports have been filed as privileged and confidential with FERC.

not be considered an impact to a historical resource. Under the proposed Project conditions, as under existing conditions, all improvements would follow a series of general assessment and avoidance measures outlined by law (see Section 2.3.4) and potential impacts would be considered less than significant.

Additionally, proposed improvements may also include minor ground-disturbing activities associated with the upgrades (see Section 2.4.4) in areas previously disturbed or filled by prior recreation infrastructure installation. Although unlikely, subsurface disturbances could potentially unearth, destroy, or damage undiscovered prehistoric or historic-era archaeological sites. If previously undiscovered sites are found during recreation facility upgrades and are determined to represent a historical resource as defined by CEQA, the existing Cultural Resources Protection Activities (see Section 2.4.4.8) implemented in accordance with State and federal regulations (see Section 3.6.2) would apply and potential impacts would be avoided. PM&E measure CR1 (HPMP) includes the implementation of an HPMP that was developed in consultation with Native American tribes and agencies. The SHPO agreed to the adequacy of the HPMP to manage resources during the new license term. The HPMP includes management measures such as avoidance measures, worker training, and measures to take during an inadvertent discovery. Therefore, Measure CR1 (HPMP) does not significantly alter current practices and is not required to reduce potentially significant impacts to a less-than-significant level. Rather, it codifies and enhances existing conditions, avoidance measures, and protection protocols.

O&M activities are not anticipated to change from baseline conditions, and existing protective measures are sufficient to avoid significant impacts as defined under CEQA.

Development of each of the PM&Es described in Section 2.4.5 has been conducted in accordance with the avoidance measures for all eligible and unevaluated cultural resources as stipulated in PM&E Measure CR1 (HPMP).

Implementation of the proposed Project would not impact any known historical resources given there are already general assessment and avoidance measures (see Section 2.3.4) in practice, which constitutes part of the baseline.

The proposed Project recreation facilities improvements and PM&Es with ground disturbance components (see Sections 2.4 and 2.3.1.2) are not in locations of known resources, but some measures (e.g., Measures GS1 [Erosion and Sediment Control Plan], WR2 [Hazardous Materials Management Plan], TR1 [IVMP], RR1 [RMP], LU1 [Transportation System and Management Plan], LU2 [Fire Prevention and Response Plan], VR1 [Visual Resources Management Plan], and CR1 [HPMP]) may result in the exposure of previously unidentified prehistoric or historic cultural resources. If these resources were determined to meet the criteria of a historical resource as defined by CEQA, the existing general assessment and avoidance measures would apply (Section 2.3.4) and potential impacts would be considered less than significant.

The PM&Es described in Section 2.4, Proposed Project, were developed to comply with current State and federal cultural resource regulations for eligible and unevaluated cultural resources.

Given the findings of this impact analysis, the addition of PM&E Measure CR1 (HPMP) is not required to reduce a potential historic resource impact to a less-than-significant level because DWR already implements general assessment, and avoidance and protective measures for ground disturbing activities that comply with State and federal regulations. Therefore, no mitigation is required.

Although not necessary given existing DWR cultural resource protection practices, the HPMP codifies and enhance existing DWR practices and provides a comprehensive site protection and mitigation program that will be in place throughout the life of the new license. Specifically, the HPMP contains specific measures regarding (among others): (1) avoidance procedures, (2) ongoing review and analysis of proposed Project O&M activity, (3) the NRHP and CRHR evaluation of archaeological sites and historic built environment resources when necessary, (4) the thresholds for when a proposed Project-related activity becomes a new project subject to evaluation, and (5) procedures to be followed in the case of an inadvertent discovery of an archaeological resource or exposure of human remains. However, because this PM&E measure is not necessary to reduce potentially significant impacts to a less-than-significant level. Therefore, no mitigation is required.

The proposed Project, when evaluated with and without related PM&E measures, is considered to have less-than-significant impacts to the significance of cultural resources. Therefore, no mitigation is required.

b) Would the proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Finding: Less-than-Significant Impact

Archaeological resources under CEQA may meet the definition of either a historical resource or unique archaeological resource (see Section 3.5.1). A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. A substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource would be significantly impaired when a project demolishes or materially alters – in an adverse manner – those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in either the CRHR or a local register of historical resources pursuant to § 5020.1(k) of the PRC. With regard to unique archaeological resources, in PRC § 21083.2[b] CEQA states that when a project will cause damage to a unique archaeological resource, reasonable efforts must be made to preserve the resource in place or left in an undisturbed state.

Implementation of the proposed Project would not impact any known unique archaeological resources. The application of the current DWR general resource assessment and avoidance measures (see Section, 2.3.4) will address and protect any previously unidentified prehistoric or historic cultural resources exposed during improvements and/or ground-disturbing activities associated with the proposed Project and any of the PM&Es (e.g., Measures GS1 [Erosion and Sediment Control Plan], WR2 [Hazardous Materials Management Plan], TR1 [IVMP], RR1 [RMP], LU1 [Transportation System and Management Plan], LU2 [Fire Prevention and Response Plan], VR1 [Visual Resources Management Plan], and CR1 [HPMP]). If these resources were determined to meet the criteria of an historical resource as defined by CEQA, general resource assessment and avoidance measures will facilitate impact avoidance and additional measures are not required.

Given the analysis above, the addition of Measure CR1 (HPMP) is not required to reduce potential impacts to archaeological resources to a less-than-significant level. Rather, it codifies and enhances existing Cultural Resources Protection Activities (see Section 2.4.4.8). Therefore, no mitigation is required.

The proposed Project, when evaluated with and without related PM&E measures, is considered to have less-than-significant impacts to the significance of an archeological resource. Therefore, no mitigation is required.

c) Would the proposed Project disturb any human remains, including those interred outside of formal cemeteries?

Finding: Less-than-Significant Impact

CHSC including the California Native American Graves Protection and Repatriation Act of 2001 (Ch. 818, Stats. of 2001) and NAGPRA recognize the need and provide measures to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction. No evidence of prehistoric or early historic interments was identified in the proposed Project APE as part of the cultural resources inventory efforts. However, this does not preclude the existence of buried human remains from the APE.

Implementation of the proposed Project would not impact any known human remains. However, any improvements or ground-disturbing activities associated with the proposed Project and implementation of the PM&Es (e.g., Measures GS1 [Erosion and Sediment Control Plan], WR2 [Hazardous Materials Management Plan], TR1 [IVMP], RR1 [RMP], LU1 [Transportation System and Management Plan], LU2 [Fire Prevention and Response Plan], VR1 [Visual Resources Management Plan], and CR1 [HPMP]) may result in the discovery of previously unidentified human remains. However, with current and ongoing DWR practices, the general assessment and avoidance measures (Section 2.3.4) would apply, and potential impacts are considered less than significant.

The proposed Project, when evaluated with and without related PM&E measures, is considered to have a less-than-significant impact in the case of the discovery of human

remains. Given the analysis above, the addition of Measure CR1 (HPMP) is not required to reduce potential impacts to human remains to a less-than-significant level. Rather, it codifies and enhances existing practices. Therefore, no mitigation is required.

3.6.4 Mitigation Measures

Based on the impact analysis (see Section 3.6.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Cultural Resources, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.7 GEOLOGY AND SOILS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.7.1 Regulatory Setting

The questions listed in the table above include references to earthquake hazard reductions, the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist, the Division of Mines and Geology Special Publication 42, and the Table 18-1-B of the Uniform Building Code (UBC). In addition, the table includes questions about erosion and topsoil controls and wastewater disposal systems, both regulated by the CWA. Finally, the table includes terminology such as “paleontological sites” and “unique geologic features”. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.7.1.1 Federal

Earthquake Hazards Reduction Act of 1977

The Earthquake Hazards Reduction Act of 1977 established the National Earthquake Hazards Reduction Program (NEHRP) to reduce the risks of life and property from future earthquakes in the U.S. through the establishment and maintenance of an effective earthquake hazards reduction program. The NEHRP Reauthorization Act significantly amended this program in 1990 by refining the description of the agency responsibilities, program goals, and objectives. The four principal goals of the NEHRP are:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems
- Improve earthquake hazards identification and risk assessment methods, and their use
- Improve the understanding of earthquakes and their effects

The NEHRP Reauthorization Act designates the Federal Emergency Management Agency as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities.

Code of Federal Regulations

Title 18 of CFR Subpart 12D includes requirements for regular inspections of waterpower projects, which are specific to dams that are more than 32.8 feet in height above the streambed, have an impoundment of more than 2,000 AF, or that have a high hazard potential (18 CFR § 12.30). Dams that meet one of these criteria must be inspected regularly pursuant to 18 CFR § 12.32, which states the following:

> *In accordance with the procedures in section 12.35, the project works of each development to which this subpart applies, excluding transmission and transformation facilities and generating equipment, must be periodically inspected and evaluated by or under the responsibility and direction of at least one independent consultant, who may be a member of a consulting firm, to identify any actual or potential deficiencies, whether in the condition of those project works or in the quality or adequacy of project maintenance, surveillance, or methods of operation, that might endanger public safety (18 CFR § 12.32).*

This inspection includes review and assessment of data concerning settlement, movement, erosion, seepage, leakage, cracking, deterioration, seismicity, and other factors that could potentially affect dam facilities (18 CFR § 12.35).

Uniform Building Code

Sections 1803 and 1804 of the UBC Chapter 18, Division 1, establish the methodology and scope for geotechnical investigations. They require an assessment of slope stability, soil strength, adequacy of load-bearing soils, the presence of compressible or expansive soils, and the potential for liquefaction. The required content of the geotechnical report includes recommendations for foundation type and design criteria as stated in UBC § 1803.6, and the required content and recommendations for a seismic site hazard report are included in UBC § 1803.7. Recommendations can include foundation design provisions that are intended to mitigate the effects of landslides, fault rupture, seiche, expansive soils, liquefaction, differential settlement, and other seismic hazards at the site (i.e., rock fall). In general, mitigation can be accomplished through a combination of ground modification techniques (e.g., stone columns, reinforcing nail and anchors, deep soil mixing), selection of an appropriate foundation type and configuration, and use of appropriate building and foundation structural systems. UBC § 1804 – Excavation, Grading, and Fill – requires the preparation of a geotechnical report where a building would be constructed on compacted fill (UBC 1994).[89] The UBC § 1803.2 mandates that special foundation design consideration be employed if the soil expansion index is 20 or greater, in accordance with Table 3.7-1.

[89] Uniform Billing Code (UBC). 1994. Uniform Building Code. Table 18-1-B. Uniform Building Code. Available online: http://digitalassets.lib.berkeley.edu/ubc/UBC_1994_v2.pdf. Accessed: September 2020.

Table 3.7-1. Classification of Potential Expansion of Soils Using Expansion Index

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-30	High
Above 130	Very High

Source: UBC 1994[90]

The International Building Code replaced earlier regional building codes (including the UBC) in 2000 and established consistent construction guidelines for the U.S. In 2006, the International Building Code was incorporated into the 2007 California Building Standards Code, and currently applies to all structures being constructed in California. Therefore, the national model codes are incorporated by reference into the building codes of local municipalities. The California Building Standards Code includes building design and construction criteria that take into consideration the State's seismic conditions.

Clean Water Act

The CWA pertains to various resource-specific impact analyses (i.e., biological resources and water quality, among others). As such, the CWA is described at the beginning of Section 3.1. Specific to geology and soils, the CWA focuses on sediment control for waters of the United States. Section 401 regulates discharges into navigable waters. Section 402 regulates point and non-point source discharges requiring a general or individual permit based on discharge type and size through the NPDES program. Under Section 402, there is a Statewide General Construction Permit that regulates erosion and sediment control for all ground disturbance greater than 1 acre. This process results in the development and implementation of a SWPPP and strict measures for erosion and sediment control as well as site stabilization post construction. Section 404 regulates the discharge of dredged or fill material into waters of the United States, including wetlands.

3.7.1.2 State

Alquist-Priolo Earthquake Fault Zoning Act

In 1972, the Alquist-Priolo Earthquake Fault Zoning Act was passed to mitigate the effects of surface faulting on structures designed for human occupancy. This act required the State Geologist to delineate Earthquake Fault Zones along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Earthquake Fault Zoning Act must meet the strict definition of being "sufficiently active" and "well-defined" for inclusion as an Earthquake Fault Zone.

[90] Ibid

The Earthquake Fault Zones are revised periodically, and they extend 200 to 500 feet on either side of identified fault traces unless in circumstances where a California State Geologist designates a wider zone. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise.

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act directs the DOC, California Geological Survey to identify and map seismic hazard zones to mitigate seismic hazards in accordance with the provision of the PRC, Division 2, Geology, Mines and Mining, Seismic Hazards Mapping – Chapter 7.8. The intent of the Seismic Hazard Mapping Act is to establish zones where earthquakes could cause hazardous ground shaking and ground failure, including liquefaction and landslides and generate Seismic Hazard Zone maps. These maps are distributed to local cities and counties within these zones to regulate building construction in order to minimize loss associated with these seismic hazards.

California Standard Building Code

Title 24, Part 2 of the California Standard Building Code of the CCR contains specific requirements for construction with respect to earthquakes and seismic hazards intended to be protective of public health. Chapter 16 § 1613, Earthquake Loads, of the 2016 California Standard Building Code (effective January 1, 2017) addresses structural design and requires that every structure and portion thereof, including non-structural components that are permanently attached to structures and their supports and attachments, be designed and constructed to resist the effects of earthquakes.

Government Code Section 65302(g)

Government Code § 65302(g) discusses the elements of safety for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; and other seismic hazards identified pursuant to Chapter 7.8, Division 2 of the PRC; as well as other geologic hazards known to the legislative body. This code requires mapping of known seismic areas and other geologic hazards. It also addresses evacuation routes, military installations, water supply requirements, and minimum road widths and clearances around structures as those items relate to identified geologic hazards.

Paleontological Resources

CEQA includes in its definition of historical resources “any object [or] site…that has yielded or may be likely to yield information important in prehistory” (14 CCR § 15064.5[a][3]), which is typically interpreted as including fossils and other paleontological resources. More specifically, destruction of a “unique paleontological resource or site or unique geologic feature” constitutes a significant impact under CEQA per CEQA Guidelines Appendix G. Treatment of paleontological resources under CEQA

is generally similar to treatment of cultural resources, requiring evaluation of resources in the project; assessment of potential impacts on significant or unique resources; and development of mitigation measures for potentially significant impacts, which may include monitoring, data recovery excavation and/or avoidance.

Society of Vertebrate Paleontology Guidelines

The Society of Vertebrate Paleontology (SVP) has guidance for assessing and mitigating paleontological resources which could potentially be impacted from land development. This guidance is included in SVP's Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. As part of the assessment process for paleontological resources, the SVP guidance groups rock units into a high, undetermined, low, or no potential category for containing significant paleontological resources. These categories then determine the level of mitigation required, or further assessment prior to construction, for adequate protection or salvage of paleontological resources within a project area. These categories are described further below (SVP 2010):[91]

- **High Potential:** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rock units classified as having a high potential for producing paleontological resources include, but are not limited to: (1) sedimentary formations and some volcaniclastic formations (e.g., ashes or tephras); (2) some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent; and (3) sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, and fine-grained marine sandstones).

- **Undetermined Potential:** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units' potential for the containment of significant paleontological resources is high or low.

- **Low Potential:** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow the determination that some rock units have a low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections or – based on general scientific consensus – only preserve fossils in rare circumstances. The presence of fossils is the exception not the rule (e.g., basalt flows or recent colluvium).

[91] SVP. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Available online: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx. Accessed: September 2020.

- **No Potential:** Some rock units, such as high grade metamorphic rocks (e.g., gneisses and schists) or plutonic igneous rocks (e.g., granites and diorites) have no potential to contain significant paleontological resources.

3.7.1.3 Local

Facility improvements associated with the proposed Project are largely located in the Silverwood Lake SRA. Ongoing maintenance to maintain the structural and functional integrity of these facilities currently occurs for DCPD facilities. Therefore, local building standards and regulations governed by the City and County of San Bernardino would not apply and the proposed Project would be instead governed by State and federal regulations included above.

3.7.2 Environmental Setting

3.7.2.1 Regional Geology

The proposed Project is located in the western end of the San Bernardino Mountains, approximately 5 to 10 miles east of Cajon Pass. The San Bernardino Mountains comprise the eastern portion of the Transverse Ranges Geomorphic Province. The San Bernardino Mountains comprise mainly granitic and metamorphic rocks of Mesozoic age.

3.7.2.2 Local Geology

The proposed Project is located within the San Bernardino Mountains, a range that comprises mainly granitic and metamorphic rocks of Mesozoic age. The current landscape of the San Bernardino Mountains, both in the proposed Project area as well as the surrounding region, is a product of rapid uplift and concurrent erosional dissection of the exposed rock surface by streams and rivers that gradually strip away soil and rock materials, carrying them downstream to coalescing alluvial fans and valley basins along the margins of the range. The San Bernardino Mountain block has been uplifted along a system of high-angle reverse and normal faults that are subparallel to the San Andreas fault. In a broad sense, the mountain mass appears to have a northward tilt toward the bordering Mojave Desert province (DWR 1994).[92]

Tertiary to Quaternary continental sediments along with older (Pleistocene) and younger (Holocene) alluvium are found locally within structural troughs and underlying valley floors of the mountain range occur at the Devil Canyon Powerplant (DWR 1994).[93] Holocene alluvium consisting of boulders and gravels with minor amounts of silt, clay, and sand is present in the beds of active streams in the region. While the deposits consist primarily of sandy gravel, boulders up to 15 feet in diameter and larger are present. Individual clasts are usually unweathered, hard, and strong. These relatively

[92] DWR. 1994. Division of Design and Construction. Geologic Data, San Bernardino Tunnel Intake Reconstruction, Project Geology Report D-149.
[93] Ibid

young alluvial materials are usually unconsolidated and highly permeable (DWR 1995).[94]

The bedrock encountered at the Devil Canyon Powerplant is white and alternating black laminated, hard, fractured gneiss that is intruded locally by small masses of granitic dikes and sills (Dibblee 2004).[95] The Devil Canyon Gneiss contains layers of interbedded white to gray-white calcitic or dolomitic marble. Due to the rugged mountain terrain with steeply sloped valley walls in areas near the Devil Canyon Powerplant and San Bernardino Tunnel there are local landslides of rock rubble. The bedrock near the San Bernardino Tunnel consists of intermediate plutonic rocks mainly quartz diorite and some monzodiorite and monzonite near Cedar Pine Park. Bedrock near the Silverwood Lake SRA is underline by granodiorite with local exposures of Tertiary Crowder Formation sandstone and Quaternary terrace gravels (Dibblee 1965).[96]

Erosion is an ongoing natural process within the proposed Project area making the influence of the proposed Project difficult to determine. The steep terrain in which most of the proposed Project resides is subject to ongoing erosion, which at times is exacerbated by heavy rains and loss of vegetation due to fire. The more developed areas such as the recreation facilities associated with the Silverwood Lake SRA contain paved and concrete areas, with less erosion and movement of soils, while other areas such as the area surrounding the penstocks contain less developed and disturbed soils, as well as steeper slopes, which lead to a higher erosion potential in these areas.

Figure 3.7-1 below shows these underlying geologic units within and surrounding the proposed Project boundary.

[94] DWR. 1995. Division of Design and Construction. Final Construction Geology Report, Devil Canyon Second Afterbay, Project Geology Report C-102.
[95] Dibblee, T.W., and Minch, J.A., 2004. National Geologic Map Database. Available online: https://ngmdb.usgs.gov/Prodesc/proddesc_71760.htm. Accessed: September 2020.
[96] Dibblee, T.W., Jr., 1965, Geologic map of the Hesperia quadrangle, San Bernardino County, California. Available online: https://pubs.usgs.gov/of/1965/0043/plate-1.pdf. Accessed: September 2020.

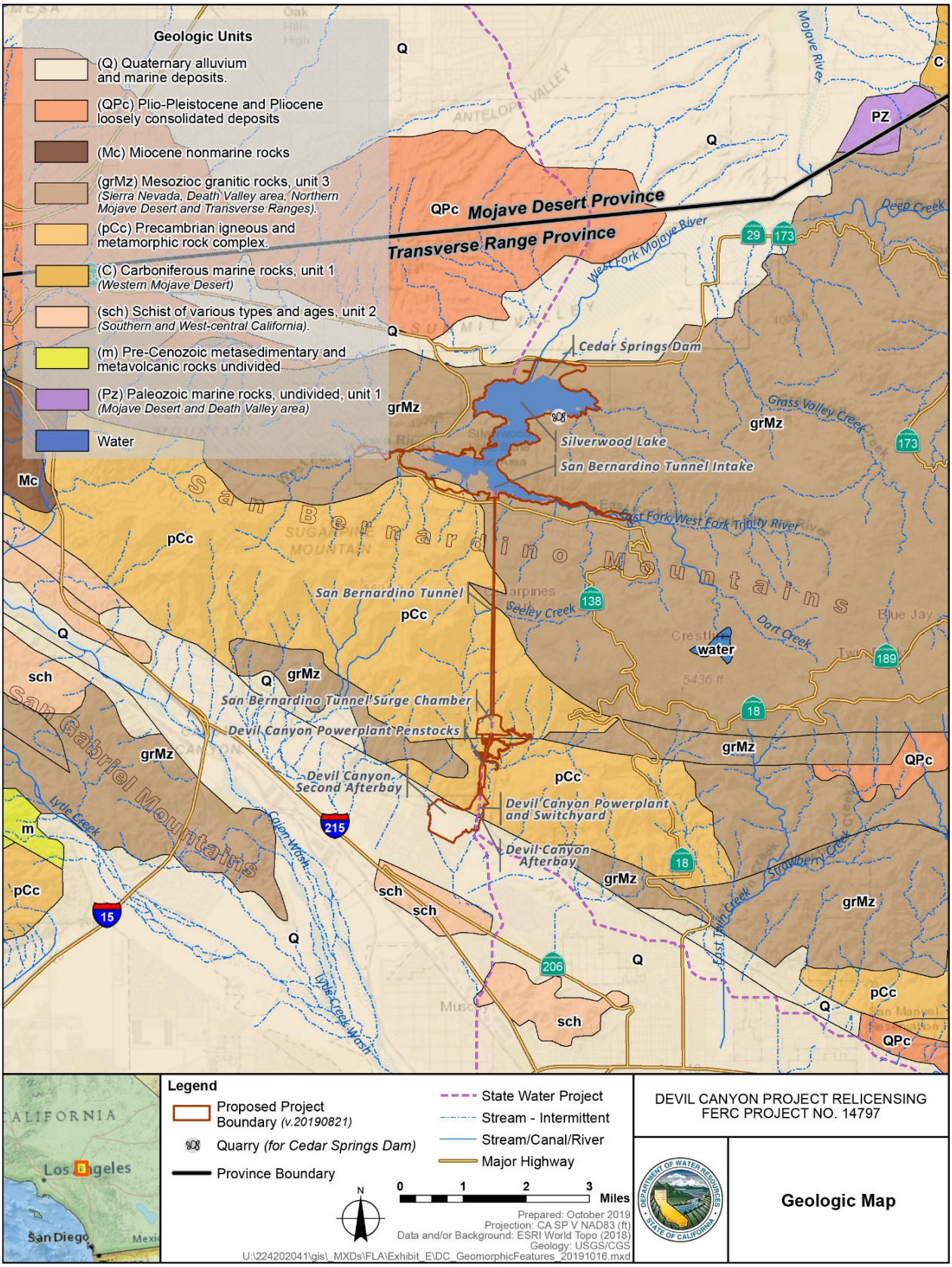

Figure 3.7-1. Geologic Map of the Proposed Project

3.7.2.3 Paleontology

Known Resources and Paleontological Potential

Most of the geologic units within the proposed Project boundary are intrusive, igneous, and metamorphic in nature and, based on the SVP's guidance above, possess no paleontological materials. However, in the area surrounding Cedar Springs Dam and within some areas of the Silverwood Lake SRA, are located in the Crowder Formation. Known resources associated with the Crowder Formation have been documented and contain resources such as fossilized insects, rodents, birds and larger mammals representing 29 taxa have been documented in the vicinity (Reynolds 1984).[97] The paleontological resource potential in this area is high because there are known and potentially undiscovered resources in these areas. However, those areas have previously been disturbed due to past construction, ongoing maintenance activities, and public recreation use. They are developed with existing structures including non-native fill material at the dam and at the built out recreation facilities.

3.7.2.4 Geologic Features

Cretaceous granitic rocks dominate the bedrock of the San Bernardino Mountains assemblage, although Jurassic and particularly Triassic granitic rocks are also abundant. An extensive unit of mixed gneiss and granitic rocks lie along the San Andreas Fault east of Cajon Canyon and north of Wrightwood. In both areas, the unit is made up of gneiss of probable Proterozoic age, intruded by very heterogeneous Mesozoic granitic rocks ranging in composition. Screens and irregularly shaped bodies of schist and marble probably derived from Paleozoic or Late Proterozoic sedimentary rocks are abundant locally. Major faults include the left lateral Cleghorn Fault, the south dipping thrust or reverse faults that bound the north side of the San Bernardino Mountains, the Squaw Peak Thrust Fault, and the western part of the reverse faults centering on Santa Ana Canyon. Nearly half the bedrock of the San Bernardino Mountains assemblage in the map area is covered by thick aprons of Quaternary deposits emanating from the San Gabriel and San Bernardino mountains. The USGS did not identify any particularly unique geologic features in their geologic description of local map units (USGS 2006).

3.7.2.5 Soil Types

Soils and underlying bedrock within the proposed Project area vary depending on the exact location within the area. Residual soils, stream gravels, and fanglomerates are found as irregular cappings on the bedrock surfaces. These deposits form terraces and benches adjacent to active streams, or fan-shaped deposits at the mouth of mountain canyons. Residual soils are formed in-place by the weathering of the underlying

[97] Reynolds, Robert E. 1984. Miocene Faunas in the Lower Crowder Formation, Cajon Pass, California: A Preliminary Discussion in the Association of Petroleum Geologists Pacific Section, 2009 – San Andreas Fault – Cajon Pass to Wrightwood.

bedrock. Such soils are typically found in areas of slight erosion. They consist commonly of silty or clayey sands that grade downward to deeply weathered bedrock.

In general, soils derived from the weathering of the granitic and metamorphic bedrock units are well to excessively well drained, with low to moderate erosion potential. However, once these oftentimes thin soils lying directly on hard bedrock become saturated, they may become highly erodible and subject to mass movement. Likewise, both the older and younger alluvial soils are well to excessively well drained. While these soils have a generally low to moderate erosion potential, they may erode when subjected to concentrated flows of water.

3.7.2.6 Geologic Hazards

Seismic Activity

The most prominent tectonic feature within the proposed Project boundary is the San Andreas Fault Zone. Segments of the main trace of the San Andreas fault pass through the Devil Canyon Powerplant, Switchyard, Devil Canyon Afterbay and Devil Canyon Second Afterbay. Other notable faults such as the Cleghorn fault system underline the Silverwood Lake SRA and the Waterman fault crosses through the Devil Canyon Powerplant Penstocks. The Northern Cleghorn section consists of the West and East Silverwood Lake faults and the Grass Valley fault; it is considered late Pleistocene and possible Holocene displacement along the East Silverwood Lake fault (USGS 2003).[98] The Southern Cleghorn section possibly ruptured in the Holocene, based on observation of offset drainages (USGS 2003).[99] An earthquake is caused by a sudden slip on a fault. The friction from the slip produces energy in the form of a soundwave that vibrates, thus producing shaking. Significant earthquakes (magnitude of 6.0 or greater on the Richter scale[100]) have occurred historically on six faults within 62 miles of the proposed Project. Figure 3.7-2 below shows the range of faults that have been historically seismically active in the proposed Project area and Table 3.7-2 shows the earthquakes with a magnitude of 6.0 or greater that have occurred in southern California since 1857.

[98] USGS. 2003. Quaternary Fault and Fold Database of the United States, Cleghorn fault zone, Northern Cleghorn section (Class A) No. 108b. Available at: https://earthquake.usgs.gov/cfusion/qfault/show_report_AB_archive.cfm?fault_id=108&section_id=b. Accessed: September 2020.
[99] Ibid.
[100] The Richter scale is the quantitative measure of an earthquake's magnitude. Magnitudes range from 2.0 M to 10.0 M with 2.0 M representing a micro earthquake and 7.0 M or greater resulting in serious damage over large areas.

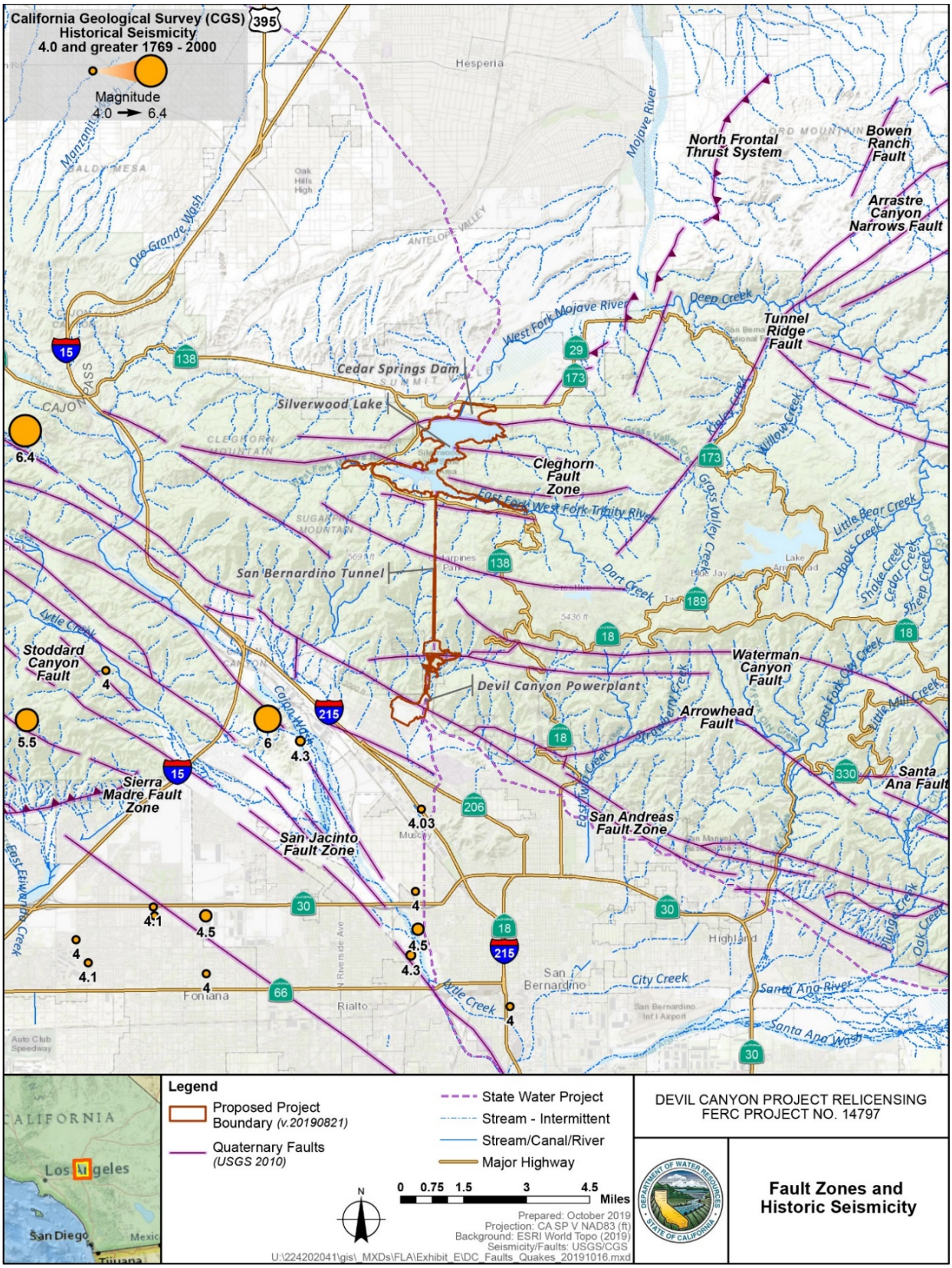

Figure 3.7-2. Fault Zones and Historic Seismicity Near the Proposed Project Boundary

Table 3.7-2. Earthquakes in California with a Magnitude of 6.0 or Greater

Fault Name	Distance (miles) / Direction from Proposed Project	Historic Event Date (year)	Historic Event Magnitude (M = Magnitude)	Comments
San Andreas	0	1857	M 7.9	Fort Tejon earthquake caused a 225-mile-long rupture from Parkfield to at least Cajon Pass.
San Jacinto	5 / SW	1899 1918 1968 1987	M 6.7 (est.) M 6.8 (est.) M 6.4 M 6.6	Fault merges with San Andreas in Cajon Pass; most seismically active fault in southern California.
San Fernando	55 / W	1971	M 6.6	Fault is a segment of the Sierra Madre-Cucamonga fault that comes within about 10 miles of the proposed Project.
Whittier-Elsinore	25 / SW	1910	M 6.0 (est.)	One of longest, but least active faults in southern California.
Newport-Inglewood	50 / SW	1934	M 6.4	Fault extends to San Diego after merging with Rose Canyon fault south and offshore of Newport Beach.
Faults of the Mojave Desert	45-60 / NE	1992	M 7.3	--

Source: SCEDC 2015[101]
Key: est. = estimated, M = magnitude, NE = northeast, SW = southwest, W = west

Ground Failure

Ground failure includes ground shaking, ground settlement, and surface rupture. Ground shaking is the vibration that radiates from the epicenter of an earthquake; topography, bedrock type, and the location and orientation of a fault rupture can cause variations in ground shaking intensity. Ground settlement is the lowering of the ground surface during seismic activity and is caused by consolidation of the underlying sediments, densification of soil material, or liquefaction (discussed below). Surface rupture is when some ground is raised or lowered leaving a visible crack in the Earth's surface. Ground failure can cause serious direct damage or collapse of infrastructure caused by seismic activity and is considered the second "primary" earthquake hazard. The severity of ground failure depends on the strength and depth of the earthquake, but there are several other contributing factors, such as the regional geology, local topography, and the site-specific ground characteristics within the proposed Project

[101] Southern California Earthquake Data Center (SCEDC). 2015. Website: http://scedc.caltech.edu/. Accessed: September 2020.

boundary (Branz 2019).[102] Specifically, the intensity of the vibration or shaking and its potential impact to buildings and other developments in the proposed Project boundary is determined by several factors including:

- The nature of the underlying materials, including rock and soil
- Structural characteristics of a building
- Quality of workmanship and materials used in a building's construction
- Location of the epicenter and the magnitude of the earthquake
- Duration and character of the ground motion

As such, some soils within the proposed Project boundary could be subject to ground shaking, settlement, and surface rupture should a major earthquake occur (see Seismic Activity discussion above).

Landslides and Lateral Displacement

Any slope where relatively large masses of material, such as rock or organic material, are supported by soil that is likely to soften under strain is prone to a landslide. The risk increases in areas where the ground is steep, weak, or fractured; is saturated by heavy rain; or is compromised by historical ground movements (Branz 2019).[103] Landslides occur most frequently during or following large storms or seismic activity and are most likely to take place in areas where large storms or seismic activity have previously occurred.

Lateral movement (i.e., displacement and spreading) occurs when seismic shaking causes a mass of soil to lose cohesion and move relative to the surrounding soil. Lateral movement can be entirely horizontal and can occur on flat ground, but it is more likely to occur on or around sloping ground such as hillsides and waterways (Branz 2019).[104]

Depending on the exact location within the proposed Project boundary, the potential for landslides, slope failure, and lateral displacement varies from low to high due to the overall topography of the area, slopes, and composition of soils. The California Geological Survey Landslide Inventory Map indicates that there is neither landslide information nor reports for the northern portion of the proposed Project area near the Silverwood Lake SRA. However, in the southern portion of the proposed Project area, near the Devil Canyon Powerplant Penstocks and Devil Canyon Afterbay and Dam,

[102] Branz. 2019. Earthquake Hazards. Seismic Science and Site Influences: Seismic Resilience-Minimizing Building Damage. Available online: http://www.seismicresilience.org.nz/topics/seismic-science-and-site-influences/earthquake-hazards/. Accessed: September 2020.
[103] Ibid.
[104] Ibid.

historically there have been reported landslides in the area (California Geological Survey 2020a).[105]

Liquefaction

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and take on the characteristics of a fluid, thus becoming similar to quicksand. Factors determining the liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits, along with recent Holocene age deposits, are more susceptible to liquefaction, while older deposits of clayey silts, silty clays, and clays deposited in freshwater environments are generally stable under the influence of seismic ground shaking.

Liquefaction can damage buildings, roads, and pipelines through loss of structural support capabilities and subsequent destabilization of soils. The proposed Project boundary consists of a range of silty and well drained soils to granite and marble cobbles which have a wide range of liquefaction potential. That, in combination with the seismically active nature of the area (see Seismic Activity discussion above), can potentially result in the proposed Project area having a moderate liquefaction potential, depending on the exact location within the proposed Project area. However, the California Geological Survey Earthquake Zones indicate that the proposed Project area does not include any liquefaction zones; therefore, the overall liquefaction potential for the proposed Project area is low (California Geological Survey 2020b).[106]

Seiche

Lakes in seismically active areas are at a significant risk for seiches. A seiche is a standing wave in a body of water; it is caused by strong winds or earthquakes and can flood a shoreline. The potential for a seiche is moderate to high at the Silverwood Lake SRA due to the proximity of the San Andres fault and the presence of a potentially active Cleghorn fault underneath the Silverwood Lake SRA.

3.7.3 Environmental Impact Analysis

Would the proposed Project:

a) Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for

[105] California Geological Survey. 2020a. Landslide Inventory Map. Available online: https://maps.conservation.ca.gov/cgs/lsi/app/. Accessed September 2020.
[106] California Geological Survey. 2020b. Earthquake Zones of Required Investigation. Available online: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed September 2020.

the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Finding: Less-than-Significant Impact

Major faults within and around the proposed Project boundary (Figure 3.7-2) have the potential to cause strong seismic ground shaking, seismic-related ground failure, and landslides (see Section 3.7.2 [Environmental Setting]). Failure of the Devil Canyon Afterbay and Devil Canyon Second Afterbay (with or without seismicity), could result in the flooding of downstream areas.

The original design of DCPD facilities mitigated for seismic hazards and they were designed to meet seismic standards. The facilities are inspected regularly and, should seismic standards change and needed seismic upgrades are identified, the upgrades are completed accordingly. The afterbays are inspected daily, as part of regular, ongoing safety reviews consistent with applicable State and federal regulations (including 18 CFR Subpart 12D) described in the Regulatory Setting above (see Section 3.7.1 [Regulatory Setting]). The afterbays will continue to be monitored regularly as part of the ongoing inspection and reporting process in accordance with existing dam safety regulations. The proposed Project does not include structural or operational changes that would increase the risk of failure.

As such, the risk of Devil Canyon Afterbay or Devil Canyon Second Afterbay failure (with or without seismicity) would continue to remain low for the following reasons: (1) the Devil Canyon Afterbay and Devil Canyon Second Afterbay facilities were originally constructed and continue to meet seismic standards; (2) no structural or operational changes are anticipated under the new license; and (3) monitoring, inspection, and maintenance will continue as currently practiced and in accordance with federal and State regulations.

Penstock rupture (with or without seismicity) could also result in the flooding of downstream areas. However, there is no evidence of such potential failure based on previous and ongoing inspections of the penstocks. The penstocks are monitored individually during late fall and winter as described in the Project Description (see Section 2.3.3.1 [Current DCPD Hydropower Facilities Maintenance Activities]). This is completed as a part of ongoing safety inspections and maintenance consistent with applicable State and federal regulations (including 18 CFR Subpart 12D) described in the Regulatory Setting (see Section 3.7.1). The same potential for penstocks rupture, either due to an earthquake or other natural activity, under existing conditions would be expected to continue for the life of the new license. Continued monitoring, inspection, and maintenance, combined with the fact that no structural changes are anticipated for the penstocks, means the risk of penstock rupture would remain low; and therefore,

potential seismic-related impacts related to penstock rupture would be less than significant.

Proposed Silverwood Lake SRA recreation facility improvements are generally minor and pertain to parking pavement, the replacement of barbeque grills, shade ramada upgrades, and the addition of ADA improvements such as handrails, among other similar upgrades (Table 2.4-1). Structural upgrades would be designed in accordance with current seismic specific design standards and codes, including the UBC and California Standard Building Code, as described in the Regulatory Setting (see Section 3.7.1 [Regulatory Setting]). These standards and codes are appropriate for the generally high seismic probability within the Silverwood Lake SRA. Per code, design plans would be required to be stamped by a licensed civil and/or structural engineer. Their professional licensures would certify the implementation of structural standards that account for seismic hazards and limit the potential for placing people or infrastructure at risk of structural failure from earthquakes. Therefore, the planned improvements to existing recreation facilities would result in a less-than-significant impact related to the risk of loss, injury, or death involving seismic activity and landslides.

The remaining PM&Es entail protective measures to, for example, enhance and codify existing cultural resource protections and vegetation management activities. They do not include significant structural improvements or substantially alter protective measures beyond those currently in practice. Therefore, the proposed Project PM&Es will have a less-than-significant impact on the risk of loss, injury, or death relative to baseline conditions.

Additionally, no specific PM&E in the proposed Project (see Section 2.4 [Proposed Project]) was designed to, or needed for, reducing the potential seismic, ground failure, or landslide risk of loss, injury, or death. Those risks are considered less than significant.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have a less-than-significant impact to the various seismic-related risks of loss, injury, or death. Therefore, no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Finding: Less-than-Significant Impact

Soil types and slopes within the proposed Project boundary are described in Section 3.7.2 (Environmental Setting) above, and include types that range from dense bedrock-derived soils to alluvial soils, both with low to moderate erosion potential, unless saturated and thus highly erodible. Currently, DWR implements erosion and sediment control BMPs as a standard practice for ongoing operation and maintenance activities controlling for erosion or topsoil loss as described in Section 2.3.4.1 (Current Erosion Control Protections). Under existing conditions, erosion is contained and minimal.

The proposed Project does not include changes to the existing conditions that would accelerate or intensify the existing sedimentation and erosion processes.

The proposed administrative changes (i.e., boundary adjustment, Primary Project Road designations, and lake level gage addition) do not entail ground disturbance and therefore no impact will occur related to soil erosion or topsoil.

There are no proposed Project changes to lake level operations. Ongoing monitoring and maintenance activities described in Section 2.3.4.1 (Current Erosion Control Protections, regularly address erosion on lake shore margins, and because this erosion is contained), and minimal, potential impacts related to lake shore erosion from ongoing operations are less than significant.

The proposed recreation facility improvements associated with Measure RR1 (RMP) are generally minor and pertain to parking pavement, replacement of barbeque grills, shade ramada upgrades, and the addition of ADA improvements such as handrails, among other similar upgrades (Table 2.4-1). They may include localized ground disturbing activities within approximately 61 acres of existing DCPD facilities (Figure 2.4.2) that, as with any ground disturbance, would be subject to DWR's currently practiced standard erosion control. In addition, State and federal laws pertaining to stormwater discharges and water quality such as the CWA Sections 401 and 402 as described in Section 3.7.1.1 (Regulatory Setting) would require implementation of BMPs, control measures, and post-construction site stabilization to prevent substantial soil erosion or loss of topsoil. As such, the potential impacts to soil erosion and topsoil associated with recreation facility improvements are considered less-than-significant.

The remaining PM&Es with ground disturbing activities, as described in Sections 2.4 (Proposed Project) and 3.1.1.2 (PM&E Impact Assessment Approach and Groupings), would not result in a substantial erosion or loss of topsoil because they are generally temporary, localized, and subject to DWR's current erosion control BMPs and, when applicable, SWPPP compliance. Therefore, the potential for substantial erosion or topsoil loss would be considered less than significant. Therefore, no mitigation is required.

Additionally, under current conditions the erosion and topsoil losses are not significant. The proposed Project does not entail substantial changes and includes the continued application of existing BMPs (see Section 2.3.4 [Currently Implemented Environmental Protective Measures]). Therefore, Measures VR1 (Visual Resources Management Plan) and GS1 (Erosion and Sediment Control Plan), among other PM&Es (see Section 2.4.4 [Proposed New Environmental Protection, Mitigation, and Enhancement Measures]) with provisions for erosion and topsoil controls are not needed to reduce impacts to a less-than-significant level.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have a less-than-significant impact to erosion and topsoil loss. Therefore, no mitigation is required.

c) Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

and

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?

Finding: Less-than-Significant Impact

Soil types in the proposed Project area are described in Section 3.7.2 (Environmental Setting) and include types that range from dense bedrock-derived soils to alluvial soils – both with low to moderate erosion potential, unless saturated and thus highly erodible. When saturated and subjected to concentrated flows of water, they can become unstable, resulting in lateral spreading, liquefaction, and collapse.

The original design of the DCPD facilities mitigated for hazards posed by the strata on which the facilities were built, and included compliance with California Standard Building Code requirements to ensure the stabilization of soils underlying foundations.

The proposed Project does not include subsequent design or structural changes to the DCPD facilities that would be subject to additional risk of impacts from instability of strata or soil, landslide, lateral spreading, subsidence, liquefaction, or collapse.

The administrative changes do not include structural changes and thus no risk of impact from soil instability.

The proposed recreation facility improvements associated with Measure RR1 (RMP) are generally minor and pertain to parking pavement, the replacement of barbeque grills, shade ramada upgrades, and the addition of ADA improvements such as handrails, among other similar upgrades (Table 2.4-1). Moreover, all design specifications would be required to comply with State and federal standards relative to soil and foundational stability, including compliance with the California Standards Building Code and the UBC requirements described in Section 3.7.1 (Regulatory Setting). These standards require the use of appropriate construction materials and installation methods, including the stabilization of underlying soils. Furthermore, to meet these design standards site-specific geotechnical investigations would be performed, where necessary, prior to the start of any construction activities associated to identify any possible unstable soils. Design modifications would be required to address unstable soils (i.e., soil stabilization for pipelines or reinforced concrete foundations for buildings).

The remaining PM&Es entail protective measures to enhance and codify existing cultural resource protections, vegetation management activities, erosion and sediment controls, fire prevention and protection, among others described in Section 2.4 (Proposed Project). They do not include significant structural improvements. Therefore, the proposed Project PM&Es would have a less-than-significant risk to, and risk from, unstable strata and soils.

In conclusion, (1) the majority of the soils in the region are relatively stable; (2) DWR proposes only minor recreation facilities upgrades associated with Measure RR1 (RMP); (3) the remaining PM&Es do not entail substantial new structures, rather they are management activities, some with ground disturbance and only minor facilities adjustments (i.e., painting or sign installation); and (4) DWR complies with State and federal building codes and design requirements. As such, the proposed Project risk of facilities located on strata or soil that is unstable, or that would become unstable as a result of the proposed Project causing on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse would be less than significant and the potential risks to life or property from expansive soil would also be less than significant.

Additionally, no specific PM&E in the proposed Project (see Section 2.4 [Proposed Project]) was designed to, or needed for, reducing the potential risk to life or property from facility failures. Furthermore, the existing FERC-required EAP addresses emergency procedures in the event of a collapse or other movement of large amounts of materials which could affect DCPD facilities. Therefore, risks are considered to be less than significant. As such, a parallel analysis with and without related PM&Es is not applicable.

The proposed Project would have a less-than-significant impact. Therefore, no mitigation is required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Finding: No Impact

The DCPD does not include septic tanks or alternative wastewater disposal systems, and DWR does not propose to construct septic tanks or alternative wastewater disposal systems under the proposed Project. As discussed in Section 3.19 (Utilities and Service Systems), wastewater within the SRA is collected and treated through existing utility connections and no new wastewater utility connections are proposed as part of the proposed Project. Therefore, the proposed Project, whether considered with or without the PM&Es, would result in no impacts regarding septic tanks or alternative wastewater disposal systems.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Finding: Less-than-Significant Impact

As discussed above in Section 3.7.1 (Regulatory Setting) and Section 3.7.2 (Environmental Setting), the geologic units within the majority of the proposed Project boundary are intrusive, igneous, and metamorphic in nature and, therefore, according to SVP guidance, possess no paleontological materials. However, in the areas surrounding Cedar Springs Dam and the Silverwood Lake SRA, there is potential for paleontological resources based on known resources associated with the Crowder

Formation which contains paleontological resources such as fossilized insects, rodents, birds and larger mammals representing 29 taxa (Reynolds 1984)[107]; however, no unique paleontological resources have been identified over the decades of operating the DCDP.

Additionally, while there may be unique geologic features in the County, primarily associated with serpentine rocks and faults, such features have not been identified within the proposed Project boundary (USGS 2006).

The proposed administrative changes do not entail ground disturbance and thus would not impact paleontological resources or unique geologic features.

The proposed recreation facility improvements associated with the Recreation Management Plan (i.e., Measure RR1 [RMP]) would require ground disturbance in the Silverwood Lake SRA which could result in potential impacts to paleontological resources, if present. In addition, the remaining proposed PM&Es that include ground disturbing activities when applied in the Silverwood Lake SRA, include a potential for paleontological resource impacts. However, those areas have been previously disturbed from past construction, ongoing maintenance activities, public recreation use, and contain imported fill material such as that at the dam and at existing developed recreation facilities. Additionally, no unique or significant paleontological resources were incidentally observed during relicensing studies. Current cultural resources protection activities (i.e., see Section 2.3.4.8 [Current Cultural Resources Protection Activities]) include archival research and surveys of any areas that would require ground disturbance prior to construction activities. These existing practices would cover any potential impacts related to inadvertent discovery of paleontological resources within the proposed Project boundary through identification, protection, and documentation of the resource(s). Therefore, the proposed Project would result in a less-than-significant impact related to paleontological resources.

Additionally, no proposed Project activities, administrative changes, recreation upgrades, or the application of ground disturbing PM&Es would impact unique geologic features because no such features are known to occur within the existing DCPD boundary (USGS 2006).

The proposed Project, when evaluated with and without the related PM&E measures, would result in a less-than-significant impact related to paleontological resources. Therefore, no mitigation is required.

3.7.4 Mitigation Measures

Based on the impact analysis (see Section 3.7.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Geology and Soils, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

[107] Ibid

3.8 GREENHOUSE GASES AND ENERGY RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐
c) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☒	☐
d) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

3.8.1 Regulatory Setting

The questions listed in the table above include references to applicable plans, policies, or regulations regarding Green House Gas (GHG) reduction and State and local plans for renewable energy or energy efficiency. In addition, GHGs and climate change are cumulative global issues. The CARB and EPA regulate GHG emissions within the State of California and the U.S., respectively. While the CARB has the primary regulatory responsibility within the State for GHG emissions, local agencies can also adopt policies for GHG emission reduction. As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.8.1.1 State

In the absence of federal regulations, control of GHGs is generally regulated at the State level and is typically approached by setting emission reduction targets for existing sources of GHGs, setting policies to promote renewable energy and increase energy efficiency, and developing Statewide action plans.

California has adopted Statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this legislation establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. Several Executive Orders (EO) related to the State's evolving climate change policy have been issued by the California Governors. Of particular importance are the following:

Assembly Bill 1493 – Clean Car Standards (2002)

AB 1493 was passed in 2002 and requires the CARB to develop and implement regulations to reduce automobile and light truck GHG emissions through mandating gradual reductions in global warming pollutants from cars and light trucks sold in California from 2009 through 2016. The average gram-per-mile reduction of GHG emissions from new California cars and light trucks is required to be about 30 percent in 2016, compared to model year 2004 vehicles.

CARB adopted the Area Control Center program in 2012, in coordination with the EPA and National Highway Traffic Safety Administration. The Area Control Center program combined the control of criteria pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. CARB adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also included efforts to support and accelerate the number of plug-in hybrids and zero-emission vehicles in California. The new standard drops GHG emissions to 166 grams per mile, a reduction of 34 percent compared to 2016 levels, through 2025.

Executive Order S-03-05 (2005)

EO S-03-05 directed the State to reduce GHG emissions to 80 percent below 1990 levels by 2050.

Assembly Bill 32 (2006)

AB 32, also known as the Global Warming Solutions Act of 2006 (codified in Health and Safety Code, Division 25.5), requires CARB to establish a Statewide GHG emissions cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations that identify and require select sectors or categories of emitters of GHGs to report and verify their Statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB was also required to adopt a Statewide GHG emissions limit equivalent to the Statewide GHG emissions levels set in 1990, which must be achieved by 2020. The 2020 GHG emissions limit is 431 million metric tons of carbon dioxide equivalent ($MMTCO_2e$); California reached this goal in 2016.

AB 32 permits the use of market-based compliance mechanisms and requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts to achieve the maximum technologically feasible and cost-effective GHG emission

reductions. CARB has adopted nine Early Action Measures for implementation, including:

- Ship electrification at ports
- Reduction of high global-warming-potential gases in consumer products
- Heavy-duty vehicle GHG emission reduction (aerodynamic efficiency)
- Reduction of perfluorocarbons from semiconductor manufacturing
- Improved landfill gas capture, reduction of hydroflourocarbon-134a from do-it-yourself motor vehicle servicing
- Sulfur hexafluoride reductions from the non-electric sector
- Aa tire inflation program
- A low-carbon fuel standard

Senate Bill 97 (2007)

Senate Bill (SB) 97 acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. The California Natural Resources Agency adopted amendments to the CEQA Guidelines to address GHG emissions, consistent with the legislature's directive in PRC § 21083.05.

Senate Bill 375 (2008)

SB 375, also known as the Sustainable Communities Act, was signed into law in September 2008 and requires CARB to set regional targets for reducing passenger vehicle GHG emissions in accordance with the Scoping Plan discussed below. The purpose of SB 375 is to align regional transportation planning efforts, regional GHG reduction targets, and fair-share housing allocations under State housing law. SB 375 requires Metropolitan Planning Organizations to adopt a Sustainable Communities Strategy or Alternative Planning Strategy to address GHG reduction targets from cars and light-duty trucks in the context of that Metropolitan Planning Organization's RTP.

Executive Order B-30-15 (2015)

EO B-30-15 provides an interim 2030 goal to reduce GHG emissions to 40 percent below 1990 levels by 2030 with the ultimate goal of reducing emissions by 80 percent below 1990 levels by 2050.

Senate Bill 32 (2016)

Former California Governor Edmund Gerald Brown, Jr. signed SB 32 on September 8, 2016. This bill codified into statute the GHG emissions reduction target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's EO B-30-15.

Senate Bill 100 (2018)

SB 100, known as The 100% Clean Energy Act of 2018, established, as a policy of the State, that eligible renewable energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all State agencies by December 31, 2045.

Executive Order B-55-18 (2018)

EO B-55-18 directs California to achieve carbon neutrality as soon as possible, but not later than 2045, and announces a goal of achieving and maintaining net negative emissions thereafter.

Executive Order N-79-20 (2020)

EO N-79-20 directs California to achieve a goal of 100 percent of sales of new passenger cars and trucks will be net zero-emissions by 2035. Additionally, all medium and heavy-duty vehicles will be zero-emission by 2045 for all operations where feasible.

Executive Order N-82-20 (2020)

EO N-82-20 directs State agencies, tribes and others to establish the California Biodiversity Collaborative to protect and restore the State's biodiversity and among other things, analyze and project impacts from climate change and other stressors to California's biodiversity.

Climate Change Scoping Plan

In December 2008, CARB approved the AB 32 Scoping Plan outlining the State's strategy to achieve the 2020 GHG emissions limit. The Scoping Plan estimates a reduction of 174 $MMTCO_2e$ (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high climate-change-potential sectors. It proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify California's energy sources, save energy, create new jobs, and enhance public health. The Scoping Plan must be updated every five years to evaluate the implementation of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal. The First Update to the Climate Change Scoping Plan was approved by CARB on May 22, 2014. In 2016, the legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. With SB 32, the legislature passed companion legislation AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017, CARB approved the Second Update to the Climate Change

Scoping Plan, the 2017 Climate Change Scoping Plan, The Strategy for Achieving California's 2030 Greenhouse Gas Target (CARB 2017).[108]

Renewable Portfolio Standard

The Renewable Portfolio Standard (RPS) promotes diversification of the State's electricity supply and decreased reliance on fossil fuel energy sources. Originally adopted in 2002 with a goal to achieve a 20 percent renewable energy mix by 2020 (referred to as the "initial RPS"), the goals have been accelerated and increased by EOs S-14-08 and S-21-09 to a goal of 33 percent by 2020. In April 2011, the Governor signed SB 2 (1X) codifying California's 33 percent RPS goal; § 399.19 requires the California Public Utilities Commission, in consultation with the California Energy Commission, to report to the legislature on the progress and status of RPS procurement and other benchmarks. The purpose of the RPS upon full implementation is to provide 33 percent of the State's electricity needs through renewable energy sources. Renewable energy includes, but is not limited to, wind, solar, geothermal, hydroelectric, biomass, anaerobic digestion, and landfill gas. DWR is not a retail seller of electricity and is not subject to the requirements of the California Renewable Portfolio Standard (Cal. Public Utilities Code § 399.12[j][4][B]).

Department of Water Resources Climate Action Plan

In 2012, DWR developed the Greenhouse Gas Emissions Reduction Plan (GGERP) as the first phase of its Climate Action Plan to guide decision-making related to DWR's energy use and GHG emissions, consistent with State climate change laws, policies, and goals at the time, such as AB 32 and EO S-3-05. Pursuant to CEQA and CEQA Guidelines, DWR prepared an Initial Study and Negative Declaration for the GGERP, determining that it would not result in significant impacts on the environment. In 2020, DWR adopted Update 2020 to its GGERP to revise DWR's mid-term and long-term GHG emissions reduction goals and to review its GHG emissions reduction strategies, in the context of recent legislative, regulatory, policy, and market changes. DWR has prepared an Addendum to the 2012 Initial Study/Negative Declaration pursuant to CEQA Guidelines §§ 15162 and 15164 and determined that Update 2020 would not create any new significant environmental impact or a significant increase in the severity of impacts identified in the 2012 Initial Study/Negative Declaration.

Update 2020 to DWR's GGERP establishes the following GHG emissions reduction goals for DWR: (1) Mid-term Goal – By 2030, reduce GHG emission to at least 60 percent below 1990 levels; and (2) Long-term Goal – By 2045, supply 100 percent of electricity load with zero-carbon resources and achieve carbon neutrality. It also lays out

[108] CARB. 2017. California's 2017 Climate Change Scoping Plan. Available online: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2017-scoping-plan-documents. Accessed September 14, 2020

strategies and guidelines to reduce DWR's GHG emissions from operations, maintenance, and construction (DWR 2020).[109]

In addition to establishing DWR GHG emissions reduction goals and describing strategies for the achievement of these goals, the GGERP is also used to streamline DWR's CEQA analysis for most DWR projects' potential to contribute to the cumulative impact of increased GHG emissions in the atmosphere, pursuant to CEQA Guidelines §§ 15064(h)(3), 15064.4(b)(3), 15130(d) and 15183.5. The GGERP covers GHG emissions associated with the following DWR activities: (1) operation of the SWP, which involves GHG emissions associated with the electricity that is used to operate the SWP, regardless of the location of that electricity source; (2) typical construction; (3) maintenance on DWR-owned or operated facilities; and (4) business practices. Later project-specific environmental documents for DWR projects that are covered by the GGERP may rely on the analysis and conclusions in the GGERP for the purposes of cumulative analysis of a project's GHG emissions. However, the GGERP does not cover certain large construction projects, called Extraordinary Construction Projects, and the GHG impacts from such construction activities are not eligible to rely on the GGERP for streamlined CEQA review. A construction project will be considered an Extraordinary Construction Project and the GHG impacts from the construction activities will not be eligible to rely on the GGERP for streamlined CEQA review if either of these apply:

- The project emits more than 25,000 $MTCO_2e$ in total during the construction phase of the project
- The project emits more than 12,500 $MTCO_2e$ in any single year of construction

These screening thresholds are not, however, intended to be used as thresholds of significance for CEQA purposes. If a project's GHG emissions are below the GGERP screening thresholds, then the project can tier the CEQA GHG analysis from the GGERP to streamline project-level CEQA review. As part of the GGERP, DWR also developed construction specific BMPs to reduce GHG emissions, as well as an Assessment Form for Consistency with the GHG Emission Reduction Plan.

3.8.1.2 Local

Although, as discussed above, DWR's GGERP is used as the governing document for this CEQA assessment, it is recognized that both the SCAQMD and San Bernardino County have also adopted guidelines and plans to reduce GHG emissions in the region.

On December 5, 2008, the SCAQMD Governing Board adopted an interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans) of 10,000 $MTCO_2e$ per

[109] DWR. 2020. Greenhouse Gas Emissions Reduction Plan. Available online: https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan. Accessed: September 14, 2020

year. In September 2010, the SCAQMD Working Group released revisions that recommended a threshold of 3,000 $MTCO_2e$ for all land use types.

For the purposes of determining whether or not GHG emissions from affected projects are adverse, SCAQMD specifies that project emissions must include direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Based on this direction, construction emissions were amortized over the life of the project (defined as 30 years) added to the operational emissions, and compared with the applicable GHG significance thresholds.

The proposed Project does not fit into the industrial, commercial, or residential project categories. SCAQMD has not proposed or adopted a threshold level for utility projects. Therefore, for purposes of this analysis, both direct and indirect GHG emissions from the proposed Project are discussed in the context of the 3,000 $MTCO_2e$ threshold levels.

San Bernardino County

San Bernardino County adopted the Regional Greenhouse Gas Reduction Plan in March 2014. Although the policies adopted in the San Bernardino County Regional Greenhouse Gas Reduction Plan are specific to local city and county actions and would not be applicable to the proposed Project, they provide regulatory context for local GHG reduction strategies.

3.8.2 Environmental Setting

3.8.2.1 Greenhouse Gases

Many chemical compounds in the earth's atmosphere act as GHGs, as they absorb and emit radiation within the thermal infrared range. When radiation from the sun reaches the earth's surface, some of it is reflected back into the atmosphere as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy from the sun to the earth's surface should be approximately equal to the amount of energy radiated back into space, leaving the temperature of the earth's surface roughly constant. Many gases exhibit these "greenhouse" properties. Some of them occur in nature (e.g., water vapor, carbon dioxide, methane, and nitrous oxide), while others are exclusively human-made (e.g., gases used for aerosols).

The principal climate change gases resulting from human activity that enter and accumulate in the atmosphere are listed below:

Carbon Dioxide

Carbon dioxide enters the atmosphere primarily through the burning of fossil fuels (oil, petroleum, natural gas, and coal), solid waste, trees and wood products, and to a lesser degree by industrial chemical reactions (e.g., the manufacture of cement). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane

Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and agricultural practices and the decay of organic waste in municipal solid waste landfills.

Nitrous Oxide

Nitrous oxide is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

Fluorinated Gases

Hydrofluorocarbons, perfluorinated chemicals, and sulfur hexafluoride are synthetic, powerful climate-change gases that are emitted from a variety of industrial processes. Fluorinated gases are often used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, hydrochlorofluorocarbons, and halons). These gases are typically emitted in smaller quantities, but because they are potent climate-change gases, they are sometimes referred to as high global warming potential gases.

3.8.2.2 Emissions Inventories and Trends

California's annual Statewide GHG emission inventory is an important tool for establishing historical emission trends and tracking California's progress in reducing GHGs. In concert with data collected through various California Global Warming Solutions Act (AB 32) programs, the GHG inventory is a critical piece in demonstrating the State's progress in achieving the Statewide GHG target. The inventory provides estimates of anthropogenic GHG emissions within California, as well as emissions associated with imported electricity; natural sources are not included in the inventory. The inventory for 2017 shows that California's GHG emissions continue to decrease. In 2017, emissions from GHG emitting activities Statewide were 424 million metric tons of carbon dioxide equivalent ($MMTCO_2e$), 5 $MMTCO_2e$ lower than 2016 levels, and 7 $MMTCO_2e$ below the 2020 GHG Limit of 431 $MMTCO_2e$. Consistent with recent years, these reductions have occurred while California's economy has continued to grow and generate jobs. Compared to 2016, California's Gross Domestic Product grew 3.6 percent while the carbon intensity of its economy declined by 4.5 percent. The most notable highlights in the inventory include:

- For the first time since California started to track GHG emissions, in-State and total electricity generation from zero-GHG sources (for purposes of the GHG inventory, these include solar, hydro, wind, and nuclear) exceeded generation from GHG-emitting sources

- The transportation sector remains the largest source of GHG emissions in the State but saw a 1 percent increase in emissions in 2017 – the lowest growth rate over the past four years

- Emissions from all other sectors have remained relatively constant in recent years, although emissions from high global warming potential gases have continued to increase as they replace Ozone Depleting Substances banned under the 1987 Montreal Protocol

3.8.2.3 Potential Environmental Impacts

For California, climate change in the form of warming has the potential to cause or exacerbate environmental impacts, including but not limited to changes to precipitation and runoff patterns, increased agricultural demand for water, inundation of low-lying coastal areas by sea-level rise, and increases in wildfire events in terms of frequency and severity. Cooling of the climate may have the opposite effect. Although certain environmental effects are widely accepted to be potential hazards to certain locations, such as rising sea level for low-lying coastal areas, it is currently infeasible to predict all environmental effects of climate change on any one location.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on earth. A project's GHG emissions are at a micro-scale relative to global emissions but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

3.8.3 Environmental Impact Analysis

Would the proposed Project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Finding: Less-than-Significant Impact

The proposed Project does not include the development of any new permanent sources of GHGs. However, short-term, proposed Project-related construction, such as recreation facility upgrades or non-native invasive species controls may result in emissions of GHG. CalEEMod (Version 2016.3.2) was used to estimate potential construction related GHG emissions. The detailed model output is included in Appendix B. Construction GHG emissions would be generated from the on-site operation of construction equipment, contractor and hauling truck trips, and worker trips. Although construction-related GHG emissions would be generated over the lifetime of the proposed Project as specific upgrades are implemented, for the purposes of this CEQA analysis, it is assumed all proposed improvements and new PM&E activities would be implemented at the same time, which represents a worst-case scenario.

GHG emissions associated with construction for the proposed Project would be approximately 437 $MTCO_2e$. Amortized over a 30-year period the yearly contribution to GHG from the construction elements of the proposed Project would be 15 $MTCO_2e$.

Therefore, the estimated GHG emissions from the construction elements of the proposed Project are well below GGERP's 25,000 $MTCO_2e$ significance threshold. The GHGs generated from activities conducted for the proposed Project would result in a less-than-significant impact.

The proposed Project, when evaluated with and without relevant PM&E measures, would have a less-than-significant impact to GHGs emissions Therefore, no mitigation is required.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Finding: Less-than-Significant Impact

In July 2020, DWR adopted Update 2020 it is GGERP. The GGERP lays out the framework for GHG emission reductions across DWRs operations, maintenance, and construction activities. As discussed in question 'a' above, the proposed Project would be consistent with the GGERP. As discussed in Section 3.7.1.2 (Local Regulatory Setting), the San Bernardino County Regional Greenhouse Gas Reduction Plan and the SCAQMD interim GHG thresholds would not be applicable to the proposed Project. Therefore, impacts would be considered less than significant.

The proposed Project, when evaluated with and without relevant PM&E measures, would have a less-than-significant impact to policy consistency and GHGs emissions. Therefore, no mitigation is required.

c) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?

Finding: Less-than-Significant Impact

Construction of the recreation facility upgrades, and non-native invasive species controls among other PM&Es that entail equipment usage, would result in fuel consumption from off-road construction equipment and fuel consumption for on-road vehicles for construction worker communities, contractors, and haulers. Table 3.8-1 summarizes the estimated construction fuel consumption from off-road construction equipment associated with the proposed Project.

Table 3.8-1. Estimated Construction Off-Road Fuel Consumption

Construction Phase	Equipment	Total Fuel (Gallons)
Site Preparation	Rubber Tired Dozers	1,268
	Tractors/Loaders/Backhoes	614
Grading	Excavators	5,649
	Graders	3,607
	Rubber Tired Dozers	4,648
	Scrapers	16,576
	Tractors/Loaders/Backhoes	3,377
Paving	Pavers	934
	Paving Equipment	813
	Rollers	520
Total Estimated Diesel Consumption		**38,006**

As shown in Table 3.8-1, construction activities associated with the proposed Project would be estimated to consume 38,006 gallons of diesel fuel.

On-road vehicles for construction workers, contractors, and haulers would require fuel for travel to and from the site during construction. Table 3.8-2 provides an estimate of the total on-road vehicle fuel usage during construction.

Table 3.8-2. Estimated Construction On-Road Fuel Consumption

Project Phase	Total Annual Fuel Consumption (gallons)
Site Preparation	755
Grading	8,707
Paving	1,392
Total	**10,854**

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State. It is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than at other construction sites in the region. Further, due to the high cost of fuel and with standard federal, State, and local policies and regulations pertaining to construction equipment and energy use, impacts related to wasteful, inefficient, and unnecessary use of energy resources would be further reduced because construction workers would purchase fuel from local suppliers and would conserve the use of their supplies to minimize costs. Construction workers would be required to

comply with all applicable laws and regulations (see Section 3.7.1 [Regulatory Setting]) and therefore, would not result in a substantial waste of energy resources. Therefore, impacts would be less than significant.

Regarding operations of the proposed Project, there would be no change over existing conditions and, therefore, impacts associated with energy consumption would be negligible and, thus, would be less than significant.

The proposed Project, when evaluated with and without relevant PM&E measures, would have a less-than-significant impact from energy consumption Therefore, no mitigation is required.

d) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Finding: No Impact

The GGERP includes energy goals and policies to reduce energy consumption and increase renewable energy procurements. The proposed Project would be consistent with the GGERP and would implement any energy focused BMPs, specifically BMP 11, which includes provisions to reduce electricity use in temporary construction offices. Energy use for proposed Project operations would not change from existing conditions and, therefore, was not analyzed further. Impacts would be considered less than significant.

The proposed Project, when evaluated with and without relevant PM&E measures, would have no impact; it will not obstruct a State or local plan for renewable energy or energy efficiency Therefore, no mitigation is required.

3.8.4 Mitigation Measures

Based on the impact analysis (See section 3.8.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Greenhouse Gases and Energy Resources, when analyzed with and without the related PM&Es, are considered less than significant Therefore, no mitigation is required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely-hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code Section 65962.5* and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project footprint?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.9.1 Regulatory Setting

The questions listed in the table above include references to hazardous materials sites compiled pursuant to California Government Code § 65962.5, worker safety and emergency response, among other things. In addition, there are multiple regulations that cover the handling of hazardous materials. As such, the following regulations, plans, and/or policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.9.1.1 Federal

Hazardous Material Management

Resources Conservation and Recovery Act

The Resources Conservation and Recovery Act (RCRA) established the federal regulatory program for hazardous substances and gives EPA the authority to regulate the generation, transport, treatment, and disposal of hazardous substances in a “cradle to grave” system. Under RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. This regulatory system includes tracking all generators of hazardous waste.

RCRA was amended by the 1984 Hazardous and Solid Waste Amendment Act, which prohibited the use of certain techniques for the disposal of certain hazardous wastes. The Emergency Planning and Community Right-to-Know Act of 1986 imposes safety requirements to protect local communities in the event of accidental release of hazardous substances. The requirements provide measures to mitigate or prevent the risks from interaction with hazardous materials, such as handling, storage, and disposal. This law protects human health and the environment by minimizing the present threat and if the unintended release of hazardous materials were to occur. The EPA has delegated fulfillment of many of RCRA’s requirements to the California Department of Toxic Substances Control (DTSC).

Hazardous Materials Transportation

Hazardous Materials Transportation Act

The transport of hazardous materials is regulated by the U.S. Department of Transportation under the Hazardous Materials Transportation Act. To accomplish this, the Federal Aviation Administration, Federal Motor Carrier Safety Administration, Federal Railway Administration, Pipeline and Hazardous Materials Safety Administration, and U.S. Coast Guard have been given authority to enforce hazardous material transport regulations.

Worker Safety

Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 created the Occupational Safety and Health Administration, which is responsible for protecting the health of workers (e.g., the storage and handling of hazardous materials). The Occupational Safety and Health Administration has created regulations to set federal standards of workplace safety including exposure limits, mandatory workplace training, accident and injury reporting, and safety procedures. These regulations are recorded in CFR Title 29.

3.9.1.2 State

Hazardous Material Management

Hazardous Waste Control Act

The Hazardous Waste Control Act created the State's hazardous waste management program. It is similar to but more stringent than the RCRA. The act is implemented by regulations contained in CCR Title 26, which describe the following required aspects for the proper management of hazardous waste: identification and classification; generation and transportation; design and permitting of recycling treatment, storage and disposal facilities; operation of facilities and staff training; and closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and CCR Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter and to the ultimate disposal location. Copies of the manifest must be filed with the DTSC.

California Environmental Protection Agency and California Department of Toxic Substances Control

The California Environmental Protection Agency is responsible for creating and enforcing environmental regulations within California. Within the California Environmental Protection Agency is the DTSC, which was formed under the Hazardous Waste Control Act. DTSC is responsible for regulating hazardous waste, remediating existing contamination, and identifying ways to reduce production of hazardous wastes. DTSC can delegate enforcement responsibilities to local jurisdictions.

Cortese List

The Cortese List was created through Government Code § 65962, which was enacted in 1985 and was amended in 1992. It is used as a planning tool to comply with CEQA and includes information about locations of hazardous materials release sites. It states that, through the combined efforts of the DTSC, the California Department of Health Services, the SWRCB, and local enforcement agencies, a list of potentially hazardous

areas and sites will be compiled and updated. The list is consolidated by the Secretary for Environmental Protection and is distributed to each city and county in which sites on the list are located. The list can be found on the DTSC's data management system known as EnviroStor, which includes information from the SWRCB GeoTracker database.

California Department of Transportation

Caltrans manages interregional transportation, including the management and construction of the California highway system. In addition, Caltrans is responsible for the permitting and regulation of State roadways and requires that permits be obtained for transportation of oversized loads – including hazardous materials – and construction-related traffic disturbance.

Worker Safety

Division of Occupational Safety and Health

The Division of Occupational Safety and Health under the California Department of Industrial Relations is responsible for enforcing workplace safety regulations and requirements in California, including hazardous materials requirements recorded in Title 8 of the CCR. These regulations include requirements for safety training, availability of safety equipment, accident and illness prevention programs, warnings about hazardous substance exposure (such as asbestos), and preparation of emergency action and fire prevention plans.

The Division of Occupational Safety and Health also enforces hazard-communication program regulations that contain training and information requirements. Such requirements include procedures for identifying and labeling hazardous substances, communicating information about hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. Under the hazard-communication program, employers must make Safety Data Sheets available to employees and document employee information and training programs.

Emergency Response

California Emergency Services Act

The California Emergency Services Act provides the basic authority for conducting emergency operations following a proclamation of emergency by the governor or appropriate local authorities. Local government and district emergency plans are considered to be extensions of the California Emergency Plan, established in accordance with the Emergency Services Act.

The Governor's Office of Emergency Services is the State agency responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. It regulates businesses by requiring specific businesses to prepare

an inventory of hazardous materials (CCR Title 19 of the CCR). Governor's Office of Emergency Services is also the lead State agency for emergency management and is responsible for coordinating the State-level response to emergencies and disasters.

Fire Protection

California State fire safety regulations apply to State Responsibility Areas during the time of year designated as having hazardous fire conditions. CAL FIRE has developed a fire hazard severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazard in all State Responsibility Areas. A State Responsibility Area is defined as the part of the State where CAL FIRE is primarily responsible for providing basic wildland fire protection assistance. Areas under the jurisdiction of local fire protection services are considered to be Local Responsibility Areas, and areas on federal lands are considered Federal Responsibility Areas.

During the fire hazard season, these regulations include the following: (a) restrict the use of equipment that may produce a spark, flame, or fire; (b) require the use of spark arrestors on any equipment that has an internal combustion engine; (c) specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and (d) specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas. CAL FIRE has primary responsibility for fire protection within State Responsibility Areas.

Spill Response

CDFW's Office of Spill Prevention and Response has the public trustee and custodial responsibilities for protecting, managing and restoring the State's fish, wildlife, and plants. It is one of the few State agencies in the nation that has both major pollution response authority and public trustee authority for wildlife and habitat. This office ensures that prevention, preparedness, restoration, and response will provide the best protection for California's natural resources.

3.9.1.3 Local

There are no local regulations that are applicable to the impact analysis.

3.9.2 Environmental Setting

DWR uses hazardous materials during routine O&M and transports hazardous materials to sites located within the proposed Project boundary when those materials are to be used for periodic maintenance work. DWR and DPR have Hazardous Materials Business Plans and Spill Prevention, Control, and Countermeasure plans for the hazardous materials stored at Devil Canyon Powerplant and Silverwood Lake SRA. Devil Canyon Powerplant is the only DCPD facility where DWR stores hazardous materials. Hazardous materials used by DPR are stored at Silverwood Lake SRA and other DPR facilities. In addition, limited quantities of gasoline and other materials are kept by DPR at the marina. Neither DWR's Devil Canyon Powerplant nor DPR's maintenance facility are located on NFS lands.

The nearest school to the proposed Project boundary is Palm Elementary School, which is 0.3 miles from the Devil Canyon Powerplant. The nearest private airport, Andy Jackson Airpark (hang gliding), is 0.75 miles from the Devil Canyon Powerplant. The nearest airport, San Bernardino International Airport, is 8.75 miles from the Devil Canyon Powerplant. In addition, a helipad for the Mountains Community Hospital is 7 miles from Silverwood Lake.

3.9.3 Environmental Impact Analysis

Would the proposed Project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Finding: Less-than-Significant Impact

DWR does not propose any new facilities or substantive changes in existing operations under the new license relative to hazardous materials and does not propose to dispose of any hazardous substance within the proposed Project boundary.

DWR and DPR have Hazardous Materials Business Plans and Spill Prevention, Control, and Countermeasure plans for the hazardous materials stored at the Devil Canyon Powerplant and Silverwood Lake SRA. Measures included in these plans are designed to eliminate, nullify, or prevent hazards that may be encountered during task implementation, including the potential hazards associated with hazardous substance handling. Additionally, Section 2.0 (Project Description) describes existing practices that DWR employs to manage hazardous materials during O&M of the existing DCPD; these would not change under the proposed Project.

The administrative changes have no relation to hazardous materials controls, and therefore, would have no impact.

The recreation facilities upgrades may entail the use of hazardous materials. However, where hazardous materials are used, such as oil and gas, paint, or other wood treatments, existing practices described in Section 2.0, and compliance with current regulations and SWPPP provisions regarding materials handling would apply. Potential hazardous materials impacts from the recreation upgrades, therefore, would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Hazardous materials handling during the implementation of the PM&Es that include equipment use with diesel, gasoline, or oil, and/or other hazardous materials would continue to be managed as they are currently managed, in accordance with currently practiced BMPs, regulations, and applicable SWPPP provisions. As such PM&E implementation would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, no mitigation is required.

Thus, potential impacts relating to the routine transport, use, or disposal of hazardous materials, as well as potential impacts from the release of hazardous materials into the environment with implementation of the proposed Project, would be less than significant. Therefore, no mitigation is required.

Under current conditions, the hazard to the public or environment from routine transport and handling of hazardous materials is not considered significant. The proposed Project does not entail substantial changes and will continue to comply with hazardous materials handling regulations (see Section 3.9.1). Therefore, Measure WR2 (Hazardous Materials Management Plan) and PM&Es (see Section 2.4.5) with provisions for materials handling and spill prevention are not needed to reduce impacts to less than significant.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have less-than-significant potential impacts related to hazardous materials handling. Therefore, no mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Finding: Less-than-Significant Impact

As noted in Section 2.0, Project Description, and the impact discussion for question “a” above, DWR does not propose any substantive changes in existing operations under the new license relative to the use, transport, storage, or disposal of hazardous materials. Therefore, the proposed Project would not create significant hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. As a result, impacts would be less than significant. Therefore, no mitigation is required.

c) Emit hazardous emissions or handle hazardous or acutely-hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Finding: No Impact

There are no existing schools within 0.25 miles of the proposed Project; therefore, no impacts would occur. Therefore, no mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to *Government Code Section 65962.5* and, as a result, would it create a significant hazard to the public or the environment?

Finding: No Impact

The proposed Project area is not located on a site that is included on the listing of hazardous materials sites compiled pursuant to Government Code § 65962.5 (SWRCB

2020)[110] (DTSC 2020)[111]. As such, no impact would occur. Therefore no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project footprint?

Finding: Less-than-Significant Impact

The San Bernardino International Airport is located 8.75 miles from the Devil Canyon Powerplant, and a helipad for the Mountains Community Hospital is located 7 miles from Silverwood Lake. Andy Jackson Airpark (leased by Crestline Soaring Society) is located 0.75 miles from the Devil Canyon Powerplant outside the proposed Project boundary. It was constructed in the early 1990s as a replacement facility following construction of the Devil Canyon Second Afterbay. The Andy Jackson Airpark is used by hang gliding and paragliding users as a landing site. Therefore, the Andy Jackson Airpark is located within 2 miles of the proposed Project area. However, the DCPD facilities that are within the 2 mile buffer, specifically Devil Canyon Powerplant, would be operated and maintained in the same manner under the proposed Project as it is currently occurring under the existing license. Furthermore, DWR does not propose any new PM&E activities that could affect airports or airport safety. New construction associated with the proposed Project would only occur at existing recreation facilities that are not located within the 2-mile buffer of the Andy Jackson Airpark or the Devil Canyon Powerplant. Therefore, the proposed Project would not result in safety hazards or excessive noise for people residing or working in the proposed Project footprint from a public airport. As a result, impacts would be less than significant. Therefore, no mitigation is required.

Additionally, no specific PM&E in the proposed Project boundary (see Section 2.4) was designed to, or needed for, reducing residential or other people's risks of exposure to excess noise or safety relative to their proximity to airports. Those risks are considered less than significant. As such, a parallel analysis with and without related PM&Es is not applicable. The proposed Project impacts would be less than significant. Therefore, no mitigation is required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Finding: Less-than-Significant Impact

DWR staff who handle hazardous materials are trained (e.g., HAZWOPER) to implement emergency response and evacuation protocols, and proper notification and

[110] State Water Resources Control Board (SWRCB). 2020. GeoTracker. Available online: https://geotracker.waterboards.ca.gov/. Accessed October 28, 2020.
[111] California Department of Toxic Substances Control (DTSC). 2020. EnviroStor. Available online: https://www.envirostor.dtsc.ca.gov/public/. Accessed October 28, 2020.

reporting procedures in case of a hazardous materials release or incident during routine O&M activities. Under current conditions, DWR Emergency Response Plans are developed in coordination with the USFS, other State agencies, and the County of San Bernardino. Under current conditions, the DCPD does not interfere with adopted plans, and the proposed Project does not entail any changes that would create such conflicts. If, for example, a hazardous materials release were to occur, reporting requirements may include informing the California Governor's Office of Emergency Services, as well as federal, State, and county agencies. If the release occurs on or affects resources on NFS lands, DWR will contact the SBNF to report the spill and discuss corrective actions, which may potentially initiate the SBNF's Emergency Response Plan. Depending on the type and magnitude of release, DWR may also contact CDFW's Office of Spill Prevention and Response. As such, the proposed Project fosters the continued coordination between agencies for emergency response and evacuation.

The proposed Project does not entail new operation or new routine maintenance activities. Furthermore, implementation of the proposed Project will continue existing O&M activities, so would not include activities that could interfere with an adopted response plan or emergency evacuation plan.

Construction at the existing recreation facilities would not require heavy machinery to be transported on-site. Working crews would be expected to be approximately 30 workers at a time. Therefore, there would be no interference with existing emergency response and evacuation plans.

As such, the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; rather, DWR coordinates and would continue coordination with applicable agencies to implement appropriate emergency response procedures. Therefore, impacts would be less than significant. Therefore, no mitigation is required.

The addition of Measure WR2 (Hazardous Materials Management Plan) and other PM&Es with emergency provisions would also result in a less-than-significant impact to local emergency response plans because they codify and enhance DWRs current protocols of coordination with other agencies. Therefore, Measure WR2, and other related PM&Es (see Section 2.4.4) are not needed to reduce impacts to less than significant.

The proposed Project thus, when evaluated with and without the related PM&E measures, would have a less-than-significant impact related to interference with emergency response and evacuation plans, therefore no mitigation is required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Finding: Less-than-Significant Impact

The risk and potential harm from wildfires are largely addressed in Section 3.20 (Wildfire). The proposed Project does not involve activities that would increase the risk

of loss, injury, or death involving wildland fires. As discussed in Section 3.20, the proposed Project continues operations of existing facilities and provides for implementation of PM&Es. The risk of exposing people and structures to wildfire is typically limited to recreation camping activities and the operation of equipment in dry grass areas. Under current baseline conditions, campfire use is specifically restricted for the protection against wildfires (see Section 2.3.4). The proposed Project does not entail any changes to current practices. In addition, current DWR fire safety practices (see Section 2.3.4) include fire prevention standards including provisions against idling vehicles in high fire risk areas. The proposed Project does not include changes to these standard operation activities, and the potential exposure to people and structures to significant risk of loss, injury, or death involving wildfires is considered less than significant.

The Measure LU2 (Fire Prevention and Response Plan) continues existing BMPs for controlling fire and protecting people or structures from exposure to wildfires. Therefore, the potential impacts related to fire exposure risk are considered less than significant when evaluated with and without the related PM&Es. Therefore, no mitigation is required.

3.9.4 Mitigation Measures

Based on the impact analysis (see Section 3.9.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Hazards and Hazardous Materials, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.10 HYDROLOGY AND WATER QUALITY

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i) Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site	☐	☐	☒	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) Impede or redirect flood flows.	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

3.10.1 Regulatory Setting

The questions listed in the table above include water quality standards, waste discharge requirements, ground water management basins, stormwater runoff, water quality control plans, and sustainable groundwater management plans, much of which is governed by the CWA and State statutes and regulations, among others. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.10.1.1 Federal

Clean Water Act

The CWA pertains to various resource-specific impact analyses (i.e., biological resources, geology and soils among others). As such, the CWA is described at the beginning of Section 3.1. Specific to hydrology and water quality, the CWA focuses on pollutant discharge control for waters of the United States. Section 401 regulates activities requiring a federal permit that discharge into navigable waters and requiring WQCs. Section 402 regulates point and non-point source discharges requiring a general or individual permit based on discharge type and size through the NPDES program. In California, stormwater discharges associated with construction activities are covered by a Statewide General Permit. Section 404 regulates the discharge of dredged or fill material into waters of the Unites States, including wetlands.

3.10.1.2 State

NPDES Permit Requirements

The CWA has nationally regulated the discharge of pollutants to waters of the United States from any point source and non-point source since 1972 as described under the federal requirements. In 1987, amendments to the CWA added Section 402(p), which established a framework for regulating non-point source stormwater discharges under the NPDES. This is administered through State agencies, such as the SWRCB and the nine RWQCBs. The DCPD operations are subject to two NPDES permit requirements: (1) residual aquatic pesticide discharges to Waters of the United States from algae and aquatic weed control applications, and (2) general construction permit requirements.

The NPDES permit for residual aquatic pesticide discharges to waters of the United States from algae and aquatic weed control applications applies to the application of aquatic herbicides to SWP facilities to protect drinking water quality from elevated tastes and odors, production of algal toxins, reduce hazards to recreational users, and to avoid aquatic plant buildup that can clog SWP filters and reduce water flows. This aquatic herbicide application was evaluated to comply with CEQA and certified as a Mitigated Negative Declaration[112], and includes mitigation measures for nesting birds, focused

[112] California Department of Water Resources. 2014. Final Mitigated Negative Declaration, Application of Copper to the State Water Project to Control Aquatic Weeds and Algal Blooms. Environmental Assessment Branch. Sacramento, California. May 2014.

biological surveys, special-status plant surveys, and hydrology and water quality measures for monitoring and minimization of the amount of aquatic pesticides used (DWR 2014).

The NPDES General Construction Permit Requirements apply to clearing, grading, and disturbances to the ground such as excavation. Project applicants are required to submit a NOI with the SWRCB's Division of Water Quality. The NOI includes general information on the types of construction activities that would occur on the site. Applicants are also required to submit a site-specific SWPPP for construction activities. The SWPPP would include a description of BMPs to minimize the discharge of pollutants from the site during construction as well as appropriate monitoring, sampling, and reporting.

Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Act is applicable to several resource sections and therefore introduced under Section 3.1. Relative to this water quality and hydrology analysis, the following provides additional context.

Through the Porter-Cologne Act, the SWRCB and nine RWQCBs have been entrusted with broad duties and powers to preserve and enhance all beneficial uses of waters in California. The Division of Water Quality under the SWRCB develops Statewide water protection plans, including the Inland Surface Waters, Enclosed Bays, and Estuaries Plan, among others. This plan includes Statewide WQO for sediment, toxicity, mercury, trash provisions, bacteria, as well as definitions of State wetlands and procedures for discharge of dredged or fill material to waters of the State. The RWQCBs develop basin plans for their natural geographic characteristics that affect the overland flow of water in their area, govern requirements for and issue waste discharge permits, take enforcement action against dischargers who violate permits or otherwise harm water quality in surface waters, and monitor water quality.

The proposed Project is located within the jurisdiction of two RWQCBs, the Lahontan RWQCB and the Santa Ana RWQCB. Table 3.9-1 presents the Lahontan RWQCB Basin Plan[113] and Mojave River Basin Plan Amendment[114,115] definitions of beneficial uses and summarizes the designated beneficial uses of Silverwood Lake, the West Fork Mojave River, and the East Fork of the West Fork Mojave River (California RWQCB 2016; California RWQCB 2019; SWRCB 2019). The Devil Canyon Afterbay and Devil

[113] California Regional Water Quality Control Board (RWQCB) Lahontan Region. 2016. Water Quality Control Plan for the Lahontan Region, North and South Basins. Plan effective March 31, 1995, amended through January 14, 2016.
[114] California Regional Water Quality Control Board (RWQCB) Lahontan Region. June 2019. Final Staff Report/Environmental Document for Amendments to the Water Quality Control Plan for Lahontan Region. Beneficial Use Changes for the Mojave River Watershed and Other Minor Revisions. Available online: https://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/docs/mojave_river/mojave_sed.pdf. Accessed: January 2020.
[115] California State Water Resources Control Board. October 2019. Resolution No. 2019-0053 Approving an Amendment to the Water Quality Control Plan for the Lahontan Region to Modify the Beneficial Uses for the Mojave River and its Tributaries and to Make Other Minor Revisions. October 3, 2019.

Canyon Second Afterbay are located in the Santa Ana RWQCB region; however, no beneficial uses are identified (California RWQCB Santa Ana Region 2016).

Table 3.9-1. Lahontan RWQCB Basin Plan Beneficial Uses

Beneficial Use	Description	Surface Waters		
		Silverwood Lake	West Fork Mojave River	East Fork of West Fork of Mojave River
		UPPER MOJAVE HYDROLOGIC AREA (HU 628.20)		
Municipal and Domestic Supply (MUN)	Beneficial uses of waters used for community, military, or individual water supply systems, including but not limited to, drinking water supply.	X	X	X
Agricultural Supply (AGR)	Beneficial uses of waters used for farming, horticulture, or ranching, including but not limited to, irrigation, stock watering, and support of vegetation for range grazing.	X	X	X
Ground Water Recharge (GWR)	Beneficial uses of waters used for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.	X	X	N/A
Water Contact Recreation (REC- 1)	Beneficial uses of waters used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, waterskiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs.	X	X	X
Noncontact Water Recreation (REC-2)	Beneficial uses of waters used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.	X	X	X

Table 3.9-1. Lahontan RWQCB Basin Plan Beneficial Uses (continued)

Beneficial Use	Description	Surface Waters		
		Silverwood Lake	West Fork Mojave River	East Fork of West Fork of Mojave River
		UPPER MOJAVE HYDROLOGIC AREA (HU 628.20)		
Commercial and Sportfishing (COMM)	Beneficial uses of waters used for commercial or recreational collection of fish or other organisms, including but not limited to, uses involving organisms intended for human consumption.	X	X	X
Warm Freshwater Habitat (WARM)	Beneficial uses of waters that support warm water ecosystems, including but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.	N/A	X	N/A
Cold Freshwater Habitat (COLD)	Beneficial uses of waters that support cold water ecosystems, including but not limited to, preservation and enhancement of aquatic habitats, vegetation, fish, and wildlife, including invertebrates.	X	X	X
Wildlife Habitat (WILD)	Beneficial uses of waters that support wildlife habitats, including but not limited to, the preservation and enhancement of vegetation and prey species used by wildlife, such as waterfowl.	X	X	X
Preservation of Biological Habitats of Special Significance (BIOL)	Beneficial uses of waters that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, and Areas of Special Biological Significance (ASBS), where the preservation and enhancement of natural resources requires special protection.	N/A	X	N/A

Table 3.9-1. Lahontan RWQCB Basin Plan Beneficial Uses (continued)

Beneficial Use	Description	Surface Waters		
		Silverwood Lake	West Fork Mojave River	East Fork of West Fork of Mojave River
		UPPER MOJAVE HYDROLOGIC AREA (HU 628.20)		
Rare, Threatened, or Endangered Species	Beneficial uses of waters that support habitat necessary for the survival and successful maintenance of plant or animal species established under State and/or federal law as rare, threatened or endangered.	N/A	X	N/A
Spawning, Reproduction, and Development	Beneficial uses of waters that support high quality aquatic habitat necessary for reproduction and early development of fish and wildlife.	N/A	N/A	X

Source: California RWQCB Lahontan Region 2016 and California RWQCB Lahontan Region 2019
HU = Hydrologic Unit
N/A = beneficial use not designated for this waterbody

The Lahontan RWQCB Basin Plan presents 20 WQOs designed to protect designated beneficial uses of inland surface waters. Nine of the WQOs are qualitative (i.e., no numerical limits established). These include: (1) non-degradation objective, (2) biostimulatory substances, (3) color, (4) floating material, (5) oil and grease, (6) non-degradation of aquatic communities and populations, (7) sediment, (8) taste and odor, and (9) toxicity. An additional five WQOs set numerical limits in relation to changes in "ambient conditions," or raising levels as compared to an undefined baseline. These are (1) pH, (2) settleable materials, (3) suspended materials, and (4) temperature and (5) turbidity. The remaining six WQOs are numerical and include unionized ammonia, coliform bacteria, chemical constituents, total residual chlorine, dissolved oxygen, and radioactivity.

In addition to the general WQOs, the Lahontan RWQCB Basin Plan establishes three numerical waterbody-specific objectives for Silverwood Lake including total dissolved solids, chloride, and sulfate; four numerical objectives for the West Fork Mojave River downstream of Cedar Springs Dam including chloride, sulfate, fluoride, and boron; and five numerical objectives for both the West Fork Mojave River above Silverwood Lake and the East Fork of the West Fork Mojave River including total dissolved solids, chloride, sulfate, fluoride, and boron. The Devil Canyon Afterbay and Devil Canyon Second Afterbay are located in the Santa Ana RWQCB region; however, no beneficial uses are identified.[116]

[116] California Regional Water Quality Control Board (RWQCB) Santa Ana Region. 2016. Water quality control plan for the Santa Ana River Basin. Plan effective 1995, amended through February 2016.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), signed into law on September 16, 2014, established a new structure for managing California's groundwater resources at the local level by local agencies. SGMA assigns different roles to DWR, SWRCB, local agencies, and counties. Recognizing the important land-use and water-management role local agencies and governments have, a legislative intent of SGMA is to recognize and preserve the authority of local agencies and counties to manage groundwater according to their existing powers with the formation of Groundwater Sustainability Agencies (GSA).

SGMA required GSAs to form in the State's critically overdrafted and/or high- and medium-priority basins and subbasins by June 30, 2017, but allows for flexibility in the formation and continued organizational modification of GSAs as the priorities and boundaries of some basins change. For basins that received a new high- or medium-priority designation in 2019, local agencies overlying those basins had two years from the date of reprioritization to either establish a GSA or submit an Alternative plan. The Water Code states that a GSA shall have five years from the date of reprioritization to be managed under a Groundwater Sustainability Plan (GSP). Critically overdrafted basins were required to submit a GSP by January 31, 2020 while all other high- and medium-priority basins are required to submit a GSP by January 31, 2022. All GSA formation notifications are managed on DWR's SGMA Portal[117] which includes a comprehensive GSP Map Viewer. It has been determined through the SGMA Portal and GSP Map Viewer that groundwater basins within the vicinity of the proposed Project have been adjudicated, and there are no GSAs or GSPs that may affect the proposed Project.[118]

3.10.1.3 Local

The California State Legislature passed AB 3030 during the 1992 legislative session declaring that groundwater is a valuable resource that should be carefully managed to ensure its safe production and quality. The legislation was intended to provide local public agencies with increased management authority, including development of groundwater management plans for their jurisdictions. The legislation also encouraged local agencies to work cooperatively to manage groundwater resources.

There are two integrated regional water management plans in the vicinity of the proposed Project that also serve as the groundwater management plans for their respective areas. To the north is the MWA Integrated Regional Water Management Plan (MWA 2018).[119] To the south is the Upper Santa Ana River Watershed Integrated Regional Water Management Plan developed by a collaborative of 15 different water

[117] California Department of Water Resources Sustainable Groundwater Management Act Portal (DWR SGMAP). https://sgma.water.ca.gov/portal/#gsa. Accessed October 28, 2015.
[118] California Department of Water Resources Adjudicated Basin Map Viewer. https://sgma.water.ca.gov/webgis/index.jsp?appid=adjbasin. Accessed October 30, 2020.
[119] Mojave Water Agency (MWA). 2018. Mojave Region Integrated Regional Water Management Plan. Plan adopted June, 2014, amended May 2018. https://www.mywaterplan.com/irwm-plan-documents.html

management agencies (USARWA 2015).[120] Each plan identifies a set of goals for groundwater storage, reduction of subsidence, and addressing unique characteristics or issues in each basin or subbasin.

3.10.2 Environmental Setting

The DCPD is an energy recovery project that generates power using SWP water as it is delivered to water customers in southern California. SWP water enters the uppermost DCPD facility, Silverwood Lake from a series of upstream canals and structures that are not part of the DCPD facilities. In Silverwood Lake, the SWP water mixes with the ephemeral, natural flow in the West Fork Mojave River and the East Fork of the West Fork Mojave River, as well as local runoff. The SWP water then passes through the San Bernardino Tunnel and Devil Canyon Powerplant, where it is used to generate power. The SWP water flows into the Devil Canyon Afterbay and Devil Canyon Second Afterbay; neither afterbay intercepts local surface water. The afterbays are upland engineered reservoirs not built on a natural stream bed. The SWP water is then released from the afterbays through one of the following five non-Project pipelines, each of which provides SWP water to downstream consumptive water users: (1) San Bernardino Pipeline; (2) Santa Ana Pipeline; (3) Azusa Pipeline; (4) Rialto Pipeline; and (5) Inland Feeder Pipeline. The valves, turnouts, meters, and connections for these pipelines are not part of the proposed Project facilities. Releases into the non-Project pipelines at the Devil Canyon Afterbay and at the Devil Canyon Second Afterbay are made based on downstream water supply contracts.

The DCPD does not use any local surface water, including natural flow into Silverwood Lake, for power generation; power is generated using only SWP water. The DCPD has no rights to the natural inflow to Silverwood Lake and releases such inflow into the West Fork Mojave River in accordance with existing water rights and water delivery agreements that are not related to power generation.

Cedar Springs Dam, which forms Silverwood Lake, discharges into the West Fork Mojave River, which joins with Deep Creek to form the Mojave River further downstream, ultimately terminating in the Mojave Desert.

Silverwood Lake, the West Fork Mojave River, and the East Fork of the West Fork Mojave River overlie the Upper Mojave River Valley groundwater basin. In addition to direct precipitation, natural recharge of the groundwater basin is from ephemeral stream flow, infrequent surface flow of the Mojave River, and underflow of the Mojave River into

[120] Upper Santa Ana Water Resources Association (USAWRA). 2015. Upper Santa Ana River Watershed Integrated Regional Water Management Plan. January, 2015. https://www.sbvwcd.org/docman-projects/upper-santa-ana-integrated-regional-water-management-plan/3802-usarw-irwmp-2015-ch1-9-final/file

the basin from the southwest (Eccles 1981; Stamos and Predmore 1995; Lines 1996).[121,122,123]

DWR proposes no changes to existing DCPD operations or new work that would affect water quantity. The proposed Project would continue to generate power using SWP water as it is delivered to DWR's water customers in southern California. No local surface water would be used for power generation. The fully appropriated natural flow entering Silverwood Lake would continue to be delivered per DWR's agreements with MWA and LFR, which assist the Mojave River Decree Watermaster with Decree management. DWR has not proposed minimum flow measures from Silverwood Lake into the West Fork Mojave River because the proposed Project has no water for such releases. The SWP water is fully allocated for delivery to southern California water users and the natural flow entering Silverwood Lake is fully appropriated. The magnitude and timing of the local surface water's delivery is managed by the basin's Watermaster. The proposed Project has no rights to natural inflow to Silverwood Lake and releases such natural flow in accordance with existing water rights and water delivery agreements that are not related to electricity power generation. The Watermaster notes it is critical that the current management of natural inflow and releases from Silverwood Lake by DWR remains unchanged in order to meet the needs of downstream water right holders identified in the Decree. DWR has not proposed minimum flow measures from the Devil Canyon Afterbay and Devil Canyon Second Afterbay because the afterbays are off-stream, engineered impoundments that do not intercept any surface waters.

3.10.3 Environmental Impact Analysis

Would the proposed Project:

a) Violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Finding: Less-than-Significant Impact

DWR proposes to operate the proposed Project as it has historically, with the addition of several features to protect or enhance resources, including water quality.

The proposed Project includes changes to the existing DCPD boundary, the addition of Project Primary Roads, and the inclusion of a lake level gage. Water quality objectives, specifically turbidity, would not be impacted by these modifications. The proposed Project would only augment, and largely reduce the existing DCPD boundary to represent the proposed Project area more appropriately. Additional roads under the

[121] Eccles, L.A. 1981. Ground-water quality along the Mojave River near Barstow, California, 1974-79. U.S. Geological Survey Water-Resources Investigations Report 80-109. 63 p.
[122] Stamos, C.L. and S.K. Predmore. 1995. Data and water-table Map of the Mojave River ground-water basin, San Bernardino County, California, November 1992. U.S. Geological Survey Water-Resources Investigations Report 95-4148.
[123] Lines, G.C. 1996. Ground-water and surface-water relations along the Mojave River, Southern California. U.S. Geological Survey Water-Resources Investigations Report 95-4189. 43 p.

proposed Project are all preexisting and do not require any ground disturbance for their incorporation into the license. The lake level gage under the proposed Project already exists, and the modification is solely to incorporate DCPD lake level monitoring.

The proposed Project includes some improvements to existing recreation infrastructure. These facility improvements generally pertain to minor upgrades with minimal ground disturbance (Table 2.4-1). As with any ground disturbance, under current operations DWR implements standard erosion, sediment, and hazardous material containment BMPs (Section 2.3.4.1). Since baseline operations entail water quality protections, it is anticipated that a violation of water quality standards would not occur during proposed facilities improvements. Surface water quality impacts are anticipated to be zero or negligible and, thus, less than significant. Groundwater quality is not anticipated to be impacted given the proposed upgrades do not entail significant excavation or involve discharges to groundwater.

PM&E Measure AR2 (Aquatic Invasive Species Management Plan) includes consideration of the ongoing use of aquatic pesticides in accordance with existing standards and practices consistent with an existing NPDES permit. However, the Aquatic Invasive Species Management Plan is largely a monitoring program; control measures would be targeted at specific locations only when necessary. Control measures include consideration for current aquatic pesticide applications approved by the Lahontan RWQCB and the SWRCB and outlined in the Aquatic Pesticide Application Plan for the SWP (DWR 2014b). Their use is to support RWQCB WQOs and to prevent a public safety hazard. As such, implementation of Measure AR2 is not anticipated to significantly impact surface water or groundwater quality or violate standards.

The implementation of the Measure TR1 (IVMP) includes the application of herbicides and possible ground disturbance. However, herbicide application would be used primarily to keep areas free of vegetation as required for protection and inspection of hydroelectric and related facilities. As with current operation practices, herbicide products would be limited to those registered with the EPA and the California Department of Pesticide Regulation. Non-toxic herbicides would be used where applicable and where feasible. To further protect surface water and groundwater quality during vegetation management activities, which could cause ground disturbance, DWR currently implements and would continue to implement the erosion control BMPs during vegetation management activities listed in Section 2.3.4.1. As such, implementation of Measure TR1 is not anticipated to violate water quality standards or substantially degrade surface water or groundwater quality.

The proposed Project would have no effect on water quality in the West Fork Mojave River downstream of Cedar Springs Dam because, even though water releases downstream of Cedar Springs Dam is a mix of SWP water and local inflow, the historic and current timing and magnitude of releases do not create impacts on water quality (i.e., violate water quality standards) in the West Fork Mojave River. Since DWR proposes to operate the proposed Project as it has historically, there should continue to be no impact on water quality in the West Fork Mojave River and East Fork of the West

Fork Mojave River upstream of Silverwood Lake. The Devil Canyon Afterbay and Devil Canyon Second Afterbay are off-stream engineered impoundments that do not intercept any surface waters. Although the existing DCPD and the proposed Project could release minor amounts of water from the Devil Canyon Second Afterbay (for periodic low-level outlet gate testing) that can enter Lytle Creek and other downstream washes, these flows are considered de minimis by the Santa Ana RWQCB and would have negligible impacts. Furthermore, the existing DCPD does not and proposed Project would not release any flows into waters of the United States.

Since the proposed administrative changes, recreation facility upgrades and relevant PM&Es are not anticipated to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality, this potential impact is considered to be less than significant. Therefore, no mitigation is required.

The proposed Project, with and without the related PM&Es (i.e., Measures GS1 [Erosion and Sediment Control Plan and WR2 [Hazardous Material Management Plan]), would have a less-than-significant impact related to compliance with water quality standards or waste discharge requirements and would not substantially degrade surface or groundwater quality. Therefore, no mitigation is required.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Finding: No Impact

DWR proposes to operate the proposed Project as it has historically; releases from Cedar Springs Dam to the West Fork Mojave River would continue to be released for use by downstream water users identified in the Mojave River Decree. The majority of these releases assist with recharge of the downstream groundwater basin where most users identified in the Decree get their water. As Watermaster, MWA would continue to provide the oversight and management of the natural inflow into Silverwood Lake. Furthermore, it is likely that the DCPD has resulted in a net benefit to local groundwater aquifers due to pressurization of the San Bernardino Tunnel as described in Section 4.1.1 of the FLA for the proposed Project, the import of water into the area from the SWP, and the presence of Silverwood Lake.[124]

Given there are no proposed changes to operations that would affect groundwater supplies and groundwater recharge, the proposed Project would have no impact on sustainable groundwater management of the basin.

[124] California Department of Water Resources (DWR). 2019. Devil Canyon Project Relicensing, FERC Project Number 14797, Final License Application. November 2019.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i) Result in substantial erosion or siltation on- or off-site;

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv) Impede or redirect flood flows.

Finding: Less-than-Significant Impact

The operation of the DCPD under the proposed Project would not include significant increases in impervious surfaces or the alteration of a stream or river in a manner that would result in a substantial increase of erosion or siltation off site, or increase the rate or amount of surface runoff.

More specifically, the proposed administrative change to designate Primary Project Roads pertains only to preexisting roadways and does not require construction of additional impervious surfaces.

Improvements to recreation facilities under the proposed Project include upgrades only and no significant additions of impervious surfaces relative to the substantial acreage of vegetated open space and lake surfaces in the proposed Project Area.

PM&E measures, beyond the recreation facilities improvements described above, are largely management activities including closure of dispersed use (user made) trails and areas, improvement of dedicated trails, vegetation management, some excavation, and biological and cultural resource protections, among others. They do not entail the addition or the alteration of a stream or river or the addition of impervious surfaces. Closure of dispersed use trails and areas, and improvement of dedicated trails would likely result in a small benefit to water quality, with reduction of erosion and turbidity from potential runoff.

Therefore, the proposed Project would not create or contribute significant additional runoff above baseline, and there are no new components that would impede or redirect flood flows. Potential impacts to drainage patterns, including runoff, would be less than significant. Therefore, no mitigation is required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Finding: No Impact

DWR does not propose any changes to operations, including flood-related operations, under the proposed Project. In addition, under baseline conditions for continued operation, existing hazardous materials spill prevention measures would continue (Section 2.4.4.2). Therefore, there would be no change in proposed Project inundation or associated release of pollutants, and there would be no impact relative to risk associated with release of pollutants due to proposed Project inundation.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Finding: No Impact

The proposed Project is located within portions of the Lahontan RWQCB and Santa Ana RWQCB jurisdictions. Under existing conditions, in some infrequent occasions some Lahontan RWQCB Basin Plan WQOs are not met in Silverwood Lake, and may not be met in in the West Fork Mojave River downstream of Silverwood Lake. These deviations from the Lahontan RWQCB Basin Plan WQOs do not affect designated beneficial uses and are considered minor. Low DO concentrations in Silverwood Lake were observed at deeper depths where DO values are expected to be lower due to reservoir stratification. This deviation does not impact recreational use and Silverwood Lake fish population data indicate a healthy fishery. Occasional blooms of algae and cyanobacteria that can result in a degradation of drinking water and create potential health risks are already managed by DWR through a SWRCB-approved and permitted program. Deviations from the Lahontan RWQCB Basin Plan WQOs in the West Fork Mojave River downstream of Silverwood Lake are considered minor because it is often dry and not a result of DCPD operations.

The proposed Project would maintain the same level of compliance with applicable policies and standards, including the Basin Plan for each basin, and the State's Groundwater Ambient Monitoring and Assessment Program.

The proposed Project does not include changes to existing operations or new work (e.g., such as dredging that would disturb bottom sediments) that would incrementally affect, or lead to further degradation of existing water quality in Silverwood Lake or in the West Fork Mojave River downstream of Silverwood Lake. In both water bodies, existing water quality conditions are generally consistent with WQOs of the Lahontan RWQCB Basin Plan and the proposed Project does not include any changes that would negatively affect surface water quality.

The proposed Project does not entail changes to current sporadic flows to the West Fork Mojave River. Those flows would continue to be determined by the Watermaster for the Mojave River Basin. As such, the proposed Project would comply with the

existing Basin Plan (and groundwater management plan), and does not propose changes that would impact WQOs and beneficial uses.

The proposed Project would have no effect on water quality in the West Fork Mojave River and East Fork of the West Fork Mojave River upstream of Silverwood Lake because the proposed Project is downstream of these tributaries.

The Devil Canyon Afterbay and Devil Canyon Second Afterbay are off-stream engineered impoundments that do not intercept any surface waters, nor does the proposed Project release water from the Devil Canyon Afterbay to local surface waters. Although the Devil Canyon Second Afterbay could release minor amounts of water (for periodic low-level outlet gate testing) that can enter Lytle Creek and other downstream washes, these flows are considered de minimis by the Santa Ana RWQCB and would have negligible impacts. DWR's proposed Project does not include any mechanism that would reasonably change or degrade the water quality in these off-stream engineered impoundments.

The proposed Project does not include changes that will affect water deliveries to groundwater management authorities in the vicinity of the proposed Project, or changes that would conflict or obstruct implementation of sustainable groundwater management plans. The MWA will maintain the same Watermaster authority over release flows to manage Mojave River surface waters and the Mojave Groundwater Basin. Similarly, to the south the DCPD has no discretion over releases into non-project pipelines which are based on downstream water supply contracts for consumptive use. Cooperative member agencies managing the Upper Santa Ana Groundwater Basin will maintain the same management authority for water delivery and groundwater management.

Since there are no proposed changes to operations in the proposed Project that would incrementally affect, or lead to further degradation of existing water quality, or that would obstruct any groundwater management plan, and that the proposed Project would continue to maintain the same level of compliance with applicable Basin Plans, including minor WQO inconsistencies, there would be no impact from the proposed Project.

3.10.4 Mitigation Measures

Based on the impact analysis in Section 3.10.3 Environmental Impact Analysis, the proposed Project's potential impacts to hydrology and water quality, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.11 LAND USE AND PLANNING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

3.11.1 Regulatory Setting

The questions listed in the table above are used as the basis for determining whether the proposed Project would conflict or be consistent "with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project." As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

The DCPD is located on USFS (221 acres), State of California (3,501 acres), and privately owned lands (21.7 acres) within the northern portions of the City and County of San Bernardino (Figure 2.2-1 and Table 2.2-1). Given this variation in land ownership and management, there are certain regulations, plans, and policies that apply only to specific areas of the DCPD. Where such delineations are clear, the applicability of the regulation is defined. For example, an analysis determining consistency with USFS plans applies only to USFS-managed lands.

3.11.1.1 Federal

San Bernardino National Forest Land Management Plan

A review of the Southern California National Forests Vision LMP indicated that there are no goals in the LMP that are directly relevant to land use for the proposed Project (USFS 2005).[125]

3.11.1.2 State

There are no State requirements related to land use and planning that are applicable to the proposed Project. However, the DCPD is located on State of California-owned lands, which are managed and operated by DWR and DPR. The existing management and operation of these lands would continue under a new license, and would not change as a result of the proposed Project.

3.11.1.3 Local

An overview of the City and County of San Bernardino General Plans is included in Section 3.1. The DCPD overlaps with the northern portions of these two municipal jurisdictions. Respective land use plans and policies adopted for the purpose of "avoiding and mitigating an environmental effect" (impact analysis question 'b' below) are included in various General Plan Elements and are incorporated by reference in Section 3.1.

3.11.2 Environmental Setting

The DCPD is located on NFS and State of California-owned lands within San Bernardino County and the northern limits of the City of San Bernardino (Figure 2.2-1). The majority of land within the existing DCPD and proposed Project boundaries is owned by the State of California, with DWR managing and operating DCPD's hydropower-associated facilities and DPR managing and operating the recreational facilities at Silverwood Lake SRA. In addition, DCPD facilities, such as the San Bernardino Tunnel, run subsurface on NFS and privately owned lands within San Bernardino County. Land uses associated with the proposed Project can be classified into three general categories: hydropower facilities, associated conveyance infrastructure, and recreational uses.

No communities exist within the proposed Project area. Residential areas that surround the proposed Project area include the City of Hesperia to the north and the residential areas of the City of San Bernardino to the south. Crestline is located on lands north of and above the San Bernardino tunnel.

[125] U.S. Department of Agriculture, Forest Service (USFS). 2005. Land Management Plan. Part 1 – Southern California National Forests Vision. Website: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev7_007721.pdf. Accessed: August 2020.

3.11.3 Environmental Impact Analysis

Would the proposed Project:

a) Physically divide an established community?

Finding: No Impact

The DCPD is located primarily on State and federally owned lands that do not contain any established communities or residential areas. The nearest communities are located to the north and south of the proposed Project site in the Cities of Hesperia and San Bernardino, respectively; and Crestline is located on lands north of and above the San Bernardino tunnel. Additionally, there are several private properties adjacent to the San Bernardino tunnel.

Administrative changes include a boundary adjustment from 3,744 acres to 2,079.2 acres (Figure 2.2-2, Table 2.2-2) for the proposed Project area. However, land ownership and facilities operations would not change from existing conditions and the adjustment in the proposed Project boundary does not entail a physical change that could divide an established community.

The proposed recreation facilities improvements and PM&Es do not entail the construction of roads or buildings or other features that would create a new physical barrier between any existing communities or restrict access to any nearby communities.

Therefore, the proposed Project would not physically divide an established community and no impact would occur.

Given the findings of this impact analysis, the Land Use PM&Es (which pertain to traffic, fire prevention, and safety) are not required to reduce a potential community division to a less-than-significant level. Therefore, no mitigation is required.

b) Cause a significant environmental impact due to a conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Finding: Less-than-Significant Impact

The proposed Project would consist of the continued operation of the DCPD and associated recreation facilities. DWR proposes no conversion of existing land uses.

The proposed administrative boundary change reduces the area to be managed under the terms of the new FERC License to be only what is necessary for operation of the DCPD and associated recreation facilities. It will not change the land ownership or land management because the area eliminated from the boundary was not and is not needed for the proposed Project purposes or necessary for operation. Additionally, the

disposition of land that would be excluded from the proposed Project boundary would continue to be management by the relevant agency (i.e., if it is NFS land, the USFS would continue to manage the lands, and if it is DWR land then DWR would continue to manage it).

The overall proposed Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect at the State or federal level. The proposed Project changes, including upgrades to existing recreation facilities and the PM&Es were analyzed for consistency with the relevant SBNF, DPR, DWR, and City and County of San Bernardino plans policies, and regulations. These consistency determinations are disclosed in the applicable resource-specific sections of this document. In those sections, the proposed Project was found to either be consistent with, or not subject to, these plans, policies, and regulations. Therefore, this potential land use impact is considered to be less than significant.

PM&Es with land use codes do not include stipulations that would conflict with local general plans. Rather, their intent is to manage traffic, continue coordinated fire preparedness and response, and continue existing emergency preparedness and response activities. These provisions do not conflict with Land Use plans or policies. As such, the proposed Project impacts to land use, with and without the PM&Es, is considered to be less than significant.

3.11.4 Mitigation Measures

Based on the impact analysis (see Section 3.11.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to land use and land use planning, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.12 MINERAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource classified MRZ-2 by the State Geologist that would be of value to the region and the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

3.12.1 Regulatory Setting

The questions listed in the table above include references to mineral resources classified MRZ-2 by the State Geologist and locally important mineral resources delineated in local plans. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.12.1.1 Federal

There are no federal regulations related to mineral resources that are relevant to the proposed Project.

3.12.1.2 State

Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act of 1975 (PRC § 2710 *et seq*.; subsequently amended) was enacted in response to land use conflicts between urban growth and essential mineral production. It is the primary law for onshore surface mining in the State. The California Surface Mining and Reclamation Act mandates that aggregate resources throughout the State be identified, mapped, and classified by the State Geologist so that local governments could make land use decisions in light of the presence of aggregate resources and the need to preserve access to those resources. Local jurisdictions are required to enact specific plan procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their General Plans. The California Geological Survey, Division of Mine Reclamation, under the DOC oversees the Mineral Resources Program which produces Mineral Land Classification studies and provides data including the

preparation of Mineral Land Classification Maps for aggregate resources. The Mineral Land Classification Maps designate four different types of mineral resource zone (MRZ) sensitivities:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood for their presence exists.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists.
- **MRZ-3:** Areas containing mineral deposits the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment of any other mineral resource zone.

3.12.1.3 Local

The City and County of San Bernardino General Plans do not identify any locally important mineral resources in the vicinity of the DCPD; none of the General Plans state any goals or policies applicable to the proposed Project (City of San Bernardino 2005[126]; San Bernardino County 2007[127]).

3.12.2 Environmental Setting

There are several mining claims adjacent to the DCPD that were identified using the U.S. Geological Survey Mineral Resources On-Line Spatial Data website (USGS 2020).[128] However, none of the mining claims are within the proposed Project boundary.

3.12.3 Environmental Impact Analysis

Would the proposed Project:

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

Finding: No Impact

Although there were several historical mineral claims and extraction operations that previously existed within the DCPD area, there are currently no active mineral extraction

[126] City of San Bernardino. 2005. City of San Bernardino General Plan. November 1, 2005. Available online: http://www.sbcity.org/civicax/filebank/blobdload.aspx?blobid=26199. Accessed: August 2020.

[127] San Bernardino County. 2007. San Bernardino County 2007 General Plan. Available online: http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf. Accessed: August 2020.

[128] U.S. Geological Survey (USGS). 2020. Mineral Resources Data. Available online: https://mrdata.usgs.gov/mrds/map-graded.html#home. Accessed: August 2020.

activities or claims. Implementing the proposed Project would not necessarily forego the potential future extraction or use of such sites. Additionally, the proposed Project is the continued operation of the DCPD and associated recreation facilities under the terms and conditions of a new license. The only anticipated new infrastructure construction would be comprised of upgrades to existing recreation facilities. These areas are at existing developed sites with no known mineral resources. Operations and the addition of anticipated license-required PM&Es do not entail significant changes over baseline conditions. Rather, the PM&Es add protections for biological, water quality, recreation, and cultural resources. PM&E-associated activities would not be located in known mineral resources areas and, thus, would not result in the loss of any future mineral operations or claims at the DCPD and the surrounding area. Therefore, the proposed Project would result in no impact to regional- and State-valued mineral resource availability.

There is no PM&E specific to mineral resources. As such, the potential impacts related to mineral resources are considered to be less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Finding: No Impact

There are no locally important mineral resources mapped by the City or County of San Bernardino at the DCPD and surrounding area, nor does the proposed Project include alterations that would impact the existing minor claims in the region (City of San Bernardino 2005[129]; San Bernardino County 2007[130]). Therefore, there would be no impact relative to the loss of availability of locally important mineral resources.

There is no PM&E specific to mineral resources. As such, the potential impacts related to mineral resources are considered less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

3.12.4 Mitigation Measures

Based on the impact analysis (see Section 3.12.3 [Environmental Impact Analysis]), there are no proposed Project impacts to Mineral Resource, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

[129] City of San Bernardino. 2005. City of San Bernardino General Plan. November 1, 2005. Available online: http://www.sbcity.org/civicax/filebank/blobdload.aspx?blobid=26199. Accessed: August 2020.

[130] San Bernardino County. 2007. San Bernardino County 2007 General Plan. Available online: http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf. Accessed: August 2020.

3.13 NOISE

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards or other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	☐	☐	☐	☒

3.13.1 Regulatory Setting

The questions listed in the table above include references to standards established by local general plans or noise ordinances, or applicable standards. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.13.1.1 Federal

The Noise Control Act of 1972 (42 U.S.C. § 4901 *et seq.*) establishes a national policy to control the noise environment and protect the health and welfare of Americans from excessive noise. The federal government sets standards for transportation-related noise and vibration sources closely linked to interstate commerce. These include aircraft, locomotives, and trucks, but are not generally applicable to non-transportation-related projects.

3.13.1.2 State

The California Noise Control Act of 1973 (CHSC § 46000 *et seq.*) recognizes excessive noise as a health and welfare hazard. The act declares that the State of California has a responsibility to provide an environment free from excessive noise for its citizens.

3.13.1.3 Local

The San Bernardino County 2007 General Plan Noise Element aims to limit the exposure of the community to excessive traffic, rail, industrial, and aircraft noise levels through the implementation of noise goals and policies (San Bernardino County 2007a).[131] The San Bernardino County 2007 Development Code (§ 83.01.080) sets interior and exterior noise thresholds for specific land uses by type of noise source (San Bernardino County 2007b).[132] The County's Development Code exempts construction noise, provided that construction is limited to the hours between 7 a.m. and 7 p.m., and not on Sundays or federal holidays.

The San Bernardino County 2007 Development Code (§ 83.01.090) also sets standards for acceptable vibration levels. The section states that no ground vibration is allowed that can be felt without the aid of instruments at or beyond the lot line, nor is any vibration allowed which produces a particle velocity greater than or equal to 0.20 inches per second measured at or beyond the lot line. Temporary construction, maintenance, repair, or demolition activities between 7 a.m. and 7 p.m. are exempt from this vibration limit, except on Sundays and federal holidays, when construction is prohibited.

County policies do not directly pertain to DWR or national forest management, as the proposed Project is located on State and federal lands, and the county land planning policies are directed at private and county/municipal lands.

3.13.2 Environmental Setting

The existing DCPD facilities and San Bernardino Tunnel Outlet and penstocks are located near a residential community within the City of San Bernardino. The proposed Project does not include new construction or sources of operational noise at these locations above baseline conditions. Construction work areas associated with the proposed Project's recreational facilities improvements would be located within rural, uninhabited lands outside of San Bernardino city limits. Scattered residences are located along the main public roadways that are outside the proposed Project's recreational construction work areas, with the nearest individual residence located approximately 3,800 feet northeast of the e Live Oak Landing Day Use Area. The closest sensitive land uses to the proposed Project boundary are the existing homes located approximately 400 feet from the Devil Canyon Second Afterbay.

[131] San Bernardino County. 2007. San Bernardino County 2007 General Plan Noise Element. Available online: http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf. Accessed: August 20, 2020.
[132] San Bernardino County. 2007. San Bernardino County 2007 Development Code. Available online: http://www.sbcounty.gov/Uploads/lus/DevelopmentCode/DCWebsite.pdf. Accessed: August 20, 2020.

3.13.3 Environmental Impact Analysis

Would the proposed Project:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards or other agencies?

Finding: Less-than-Significant Impact

Administrative changes and non-ground disturbing PM&Es associated with the proposed Project would not introduce new noise sources or result in a change in baseline noise levels and, therefore, would not generate substantial temporary or permanent increases in ambient noise levels in the vicinity of the DCPD. This is because the administrative changes, such as the proposed Project boundary adjustment or the addition of an existing lake gage and Primary Project Road designations to the license, do not entail new construction.

In addition, the PM&Es that include the use of construction equipment, such as Measure GS1 (Erosion and Sediment Control Plan) and Measure LU2 (Fire Prevention and Response Plan), are codifying existing practices and, as such, do not propose a change or addition of equipment that would increase ambient noise.

Noise from construction equipment used during recreational facility improvements would occur during a short period of time (Table 2.4-1) and would be temporary in nature. As noted in the Environmental Setting section above, scattered residences are located around the proposed Project's recreational construction work areas with the nearest individual residential receptor to proposed Project construction work areas for recreational facility improvements located 3,800 feet northeast of the Live Oak Landing Day Use Area. The closest sensitive land uses to the proposed Project boundary are the existing homes located approximately 400 feet from the Devil Canyon Second Afterbay. There are no hospitals or schools in the vicinity of the proposed recreational construction work areas. Construction equipment for the recreation site improvements, including at the Live Oak Landing Day Use Area, would include hand tools and light equipment and vehicles. The maximum noise level associated with typical construction equipment, such as a roller or concrete mixer, is 85 A-weighted decibels (Federal Transit Administration 2018).[133] Doubling of distance from a point source reduces a noise level by 6 A-weighted decibels. Therefore, at 3,800 feet, the maximum construction noise would be 47 A-weighted decibels of the maximum noise level. A noise level this low would be below ambient in a residential area.

Campers and recreationists would be in the vicinity of the proposed Project's recreational facilities on a short-term and temporary basis. Construction equipment for

[133] Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. Available online: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed: October 28, 2020.

the recreation site improvements, would have a low to moderate potential to generate noise exceeding ambient levels. DWR currently does and would continue to adhere to San Bernardino City and County noise standards for operational and construction-based activities, as applicable. Therefore, impacts relative to the generation of substantial temporary noise or permanent increases in ambient noise levels in excess of appliable noise standards are considered to be less than significant.

Given the less-than-significant impact finding, PM&Es with noise control elements are not needed to mitigate a potential significant impact.

The potential impacts related to noise disturbances are considered to be less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Finding: Less-than-Significant Impact

Similar to the discussion above, administrative changes and non-ground disturbing PM&Es associated with the proposed Project would not introduce new noise sources or result in any changes over baseline groundborne vibration or noise levels.

Groundborne noise and vibration from construction equipment used during recreational facility improvements would occur during a short period of time (Table 2.4-1) and would be temporary in nature. As noted in the Environmental Setting section above, the individual residential receptor nearest to proposed Project construction work areas for recreational facility improvements is located 3,800 feet northeast of the Live Oak Landing Day Use Area. There are no hospitals or schools in the vicinity of the proposed recreational construction work areas. Heavy equipment operating close to a vibration-sensitive building (within approximately 100 feet from the property line) may impact vibration-sensitive activities. At 3,800 feet the groundborne noise and vibration from the on-site construction activities would be imperceptible. Furthermore, construction would be short-term and temporary. Temporary construction work is exempt from vibration limits set by the San Bernardino County 2007 Development Code. Additionally, DWR currently does and would continue to adhere to San Bernardino County noise and vibration standards for operational activities, as applicable. Therefore, impacts relative to the generation of substantial temporary or permanent excessive groundborne vibration or groundborne noise levels would not result in a significant impact. As such, the impact would be less than significant. Therefore, no mitigation is required.

Given the less-than-significant impact finding, PM&Es with groundborne vibration control elements are not needed to mitigate a potential significant impact.

The potential impacts related to groundborne noise and vibration disturbances are considered to be less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

c) For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

Finding: No Impact

The nearest private airport, Andy Jackson Airpark (hang gliding), is 0.75 miles from the Devil Canyon Powerplant. Under the proposed Project, no construction or operational changes over baseline would occur at the Devil Canyon Powerplant and DWR does not propose PM&Es that would impact airports or airport safety. Therefore, the proposed Project would not include activities that would expose people residing or working in the vicinity of the DCPD to excessive noise levels from airports. As a result, no impact would occur. Therefore, no mitigation is required.

Given the no impact finding, PM&Es with groundborne vibration control elements are not needed to mitigate a potential significant impact.

The potential impacts related to noise exposure disturbances are considered less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

3.13.4 Mitigation Measures

Based on the impact analysis (see Section 3.13.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to ambient noise, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.14 POPULATION AND HOUSING

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.14.1 Regulatory Setting

The questions listed in the table above include references to unplanned population growth. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.14.1.1 Federal, State, and Local

There are no federal or State plans, policies, regulations, or laws that are applicable to the provision of population and housing for the proposed Project. The DCPD is partially located in the City and County of San Bernardino and, therefore, the Housing Elements of the respective jurisdictions' General Plans would apply to the proposed Project. However, because the proposed Project does not include any increases in population, residential units, or employees in the area, the goals and policies from these General Plans would not be applicable to the proposed Project.

The City and County of San Bernardino growth projections in their General Plans are 30 percent and 50 percent, respectively; the year 2020 represented a 16 percent change.[134]

[134] San Bernardino County. 2007. San Bernardino County 2007 General Plan Housing Element. Available online: http://www.sbcounty.gov/uploads/lus/GeneralPlan/Adopted_5th_Cycle_Housing_Element_County_of_San_Bernardino2013-2021.pdf. Accessed: August 20, 2020.

3.14.2 Environmental Setting

The DCPD lies within the SBNF and the Silverwood Lake SRA, which does not include residences or other housing uses besides temporary recreational activities, such as camping within the Silverwood Lake SRA. A proposed low density residential development on former LFR property, the Tapestry Development, is located to the north of the proposed Project boundary, and scattered residences are found on highways outside the existing DCPD boundary. No residences exist withing the existing DCPD boundary. Visitors to Silverwood Lake SRA and the SBNF include (but are not limited to) temporary recreationists, State Park Rangers, and recreation operations staff.

3.14.3 Environmental Impact Analysis

Would the proposed Project:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Finding: No Impact

DWR's proposed administrative changes (i.e., the modification of the FERC boundary and the addition of an existing lake level gage and designation of Primary Project Roads to the new license) would not have an impact on population growth because there would be no changes in land ownership, no addition of housing or businesses, and no added infrastructure that would remove a barrier to growth. The upgrades to the existing recreation facilities do not entail capacity increases or augment utilities infrastructure and, thus, do not remove a barrier to growth.

DWR does not propose operation and routine maintenance changes; however, it is anticipated that 12 PM&Es will be required under the new license. These PM&Es pertain to plant and wildlife protections, cultural resource protections, erosion controls, invasive aquatic species controls, and road and recreation facility maintenance. They do not include the extension of roads or the addition of utility infrastructure that could induce growth.

Therefore, the proposed Project would result in no impacts relating to inducing substantial direct or indirect unplanned growth.

Given the less-than-significant impact finding relative to unplanned growth, PM&Es to limit growth inducing elements are not needed to mitigate a potential significant impact.

The potential impacts related to population and housing are considered to be less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Finding: No Impact

There are no existing residences within the proposed Project boundary. There are a few residences along the highway north of the proposed Project boundary and the proposed LFR residential developments that would be less than a mile away from short-term construction activities likely taking place at and near the Live Oak Landing Day Use Area, which is the nearest DCPD facility to LFR. However, no housing would be destroyed, constructed, or replaced. The public use of the DCPD-associated recreation facilities would be for recreation only. Inclusion of the PM&Es that would likely be required under the new license would not result in any change to the local or regional population or to housing needs.

Given the no impact finding relative to displaced populations, PM&Es for housing disturbances are not needed to mitigate a potential significant impact.

Therefore, the potential impacts related to population and housing are considered to be less than significant with and without the related PM&E measures. Therefore, no mitigation is required.

3.14.4 Mitigation Measures

Based on the impact analysis (see Section 3.14.3 [Environmental Impact Analysis]), there are no proposed Project impacts to Population and Housing, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.15 PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
➢ Fire protection?	☐	☐	☒	☐
➢ Police protection?	☐	☐	☒	☐
➢ Schools?	☐	☐	☐	☒
➢ Parks?	☐	☐	☒	☐
➢ Other public facilities?	☐	☐	☐	☒

3.15.1 Regulatory Setting

The questions listed in the table above include various public services. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.15.1.1 Federal

The proposed Project is located partially on NFS lands; these portions would, therefore, be subject to law enforcement regulations pertaining to this jurisdiction. However, because the proposed Project does not include any increases in population or residential units, any increases in USFS employees would be negligible. There would be no changes to either the existing uses within NFS lands or the existing federal regulations that are applicable to NFS lands or other federal lands.

3.15.1.2 State

Fire Protection

California State fire safety regulations apply to State Responsibility Areas during the time of year designated as having hazardous fire conditions. CAL FIRE has developed a fire hazard severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazard in all State Responsibility Areas. A State Responsibility Area is defined as the part of the State where CAL FIRE is primarily responsible for providing basic wildland fire protection assistance. Areas under the jurisdiction of other fire protection services are considered to be Local Responsibility Areas or Federal Responsibility Areas if on federal lands.

During the fire hazard season, these regulations include: (a) restrict the use of equipment that may produce a spark, flame, or fire; (b) require the use of spark arrestors on any equipment that has an internal combustion engine; (c) specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and (d) specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas. CAL FIRE has primary responsibility for fire protection within State Responsibility Areas (California Building Code Chapter 7A, CCR, Title 14, Division 1.5).

3.15.1.3 Local

The City and County of San Bernardino general plans include police and fire service standards and requirements for payment of fees on new developments. However, because the proposed Project does not include any increases in population, residential units, or employees in the area, these service standards and fees would not be applicable to the proposed Project.

3.15.2 Environmental Setting

3.15.2.1 Fire Protection

Since the proposed Project area includes overlapping jurisdictions, fire suppression within the proposed Project boundary is the responsibility of three agencies depending on the location within the proposed Project area:

- Fire suppression in the Silverwood Lake SRA is managed by the CAL FIRE
- Fire suppression on NFS lands (i.e., SBNF) is the responsibility of USFS
- The Devil Canyon Powerplant and associated facilities are within the jurisdiction of the City of San Bernardino’s Fire Department

3.15.2.2 Police Protection

The DCPD facilities at Silverwood Lake are managed by DPR as part of the Silverwood Lake SRA. State Park Peace Officer Rangers provide public safety law enforcement at the lake and within the Silverwood Lake SRA. State Park Communications Operators are a vital link in public safety. They operate multi-frequency/channel radio systems giving support to State Park Peace Officers and provide dispatch services for CDFW Wardens, along with other enforcement and emergency service agencies (DPR 2020).[135]

Within NFS lands, including the SBNF, law enforcement and public safety is enforced by the Uniformed Law Enforcement Officers (LEO). The LEOs are responsible for enforcing regulations governing NFS lands and resources and are authorized to carry firearms and other defensive equipment, issue citations, make arrests, execute search warrants, complete reports, and testify in court (USFS 2020a).[136]

Within the City of San Bernardino, police protection services are provided by the City of San Bernardino Police Department.

3.15.2.3 Schools

There are no schools within the proposed Project boundary nor are there any school districts or residences within the proposed Project boundary.

3.15.2.4 Parks

The proposed Project boundary includes the Silverwood Lake SRA. The Silverwood Lake SRA is approximately 2,000 acres and includes recreational facilities for activities such as camping, picnicking, boating, hiking/bicycling, and fishing. Additionally, a portion (about 125.7 acres) of the proposed Project area has overlapping boundaries with the SBNF which is owned and operate by the USFS. The SBNF includes 811,571 total acres which offer a range of recreational opportunities such as hiking, camping, backpacking, picnic areas, and a variety of other activities spread across its boundaries (USFS 2020b).[137]

3.15.2.5 Other Public Facilities

There are no other public facilities such as libraries or cemeteries within the proposed Project area.

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[135] California Department of Parks and Recreation (DPR). 2020. "Public Safety and Resource Protection, State Park Peace Officers and Superintendents. Available online: http://www.parks.ca.gov/?page_id=24134. Accessed: August 2020.
[136] United States Forest Service (USFS). 2020a. Enforcement. Available online: https://www.fs.fed.us/lei/enforcement.php. Accessed: August 2020.
[137] United States Forest Service (USFS). 2020b. About the Forest. Available online: https://www.fs.usda.gov/main/sbnf/about-forest. Accessed: August 2020.

3.15.3 Environmental Impact Analysis

Would the proposed Project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire Protection

Finding: Less-than-Significant Impact

No new facilities are proposed to be constructed that could impact acceptable service ratios, response times, or other performance objectives relative to fire protection. Improvements to recreation facilities and other regular maintenance activities would not result in additional strain or adverse physical impacts to fire protection services. Rather, under the proposed Project, DCPD operators would, as they currently do, adhere to codes, regulations, requirements, measures, and activities for the applicable jurisdictions (i.e., the USFS, City and County of San Bernardino, and DPR) when repair and maintenance of facilities would occur. There would be no increase in people, activities, or facilities that would necessitate the need for new or physically altered fire protection services from CAL FIRE, USFS, or San Bernardino Fire Department. Therefore, there would be a less-than-significant impact related to fire protection services.

As a result of the less-than-significant impact finding, the PM&E measures LU1 (Transportation System Management Plan), LU2 (Fire Prevention and Response Plan), and LU3 (Project Safety Plan) among other PM&Es with emergency response measures, are not needed to mitigate a potential significant impact. These PM&E measures codify and enhance existing practices for fire prevention, reporting, and investigation. These PM&Es would further reduce potential fire-related incidents from occurring within the proposed Project area (see Section 3.19). These measures would also continue ongoing coordination efforts with the USFS, CAL FIRE, and the San Bernardino County Fire Department related to fire protection within the proposed Project boundary.

Therefore, the potential impacts related to emergency response preparedness and response for fire protection are considered to be less than significant with and without the related PM&E measures; therefore, no mitigation is required.

Police Protection

Finding: Less-than-Significant Impact

No new facilities are proposed to be constructed that could impact acceptable service ratios, response times, or other performance objectives relative to police protection.

Under the proposed Project, State Park Peace Officer Rangers would continue to provide public safety law enforcement at Silverwood Lake or the Silverwood Lake SRA. State Park Communications Operators would continue to support the State Park Peace Officers and provide dispatch services for CDFW Wardens and other emergency services agencies. Additionally, the LEOs would continue to be responsible for enforcing regulations governing NFS lands within the proposed Project area and the San Bernardino Police Department would continue to be responsible for police protection services within the City of San Bernardino. There would be no increase in people, activities, or facilities that would necessitate new or physically altered police protection services for State Park Peace Officers, LEOs, or the San Bernardino Police Department. Therefore, there would be a less-than-significant impact related to police protection services.

As a result of the less-than-significant impact finding, Measure LU3 (Project Safety Plan) among other PM&Es with emergency response measures, are not needed to mitigate a potential significant impact. This PM&E codifies and enhance existing safety practices and includes enhancement measures for installing and maintaining signs, lights, sirens, and other devices related to safety within the proposed Project area, which would provide safety features that would reduce the potential for safety-related incidents to occur, thus reducing potential police and law enforcement-related calls to the area.

The potential impacts related to emergency response preparedness and police protection are considered to be less than significant with and without the related PM&E measures; therefore, no mitigation is required.

Schools

Finding: No Impact

No schools exist within the proposed Project boundary, and none are proposed to be constructed as part of the proposed Project. Additionally, no facilities such as residences would occur, and any increases in employees would be negligible, thus negating the need for additional school facilities through direct and indirect population growth. No impact to schools would occur with and without consideration of the proposed PM&Es; therefore, no mitigation is required.

Parks

Finding: Less-than-Significant Impact

Although no new facilities would be constructed under the proposed Project, there would be upgrades to the existing recreation facilities within the proposed Project area, that would occur over the first 10 years of the new license. The recreation improvements would largely include accessibility improvements as well as the maintenance and repair of existing parking areas, lawns, restrooms, lights, water, power, sewer, shelters, trails, and picnic and campground equipment. No expansion to these existing recreation facilities is proposed. However, the improvements would

involve some rehabilitation of the existing infrastructure in the park to harden surfaces, provide more ADA-accessible amenities, and improve circulation and offerings to meet the changing needs of recreationists. Furthermore, the improvements to these existing recreation facilities are being analyzed as part of this IS/ND and any potential impacts related to the implementation of these improvements have been found to have a less-than-significant impact in each respective resource section. Therefore, there would be a less-than-significant impact related to parks and recreation facilities.

Additionally, Measure RR1 (RMP) would be implemented under the anticipated license requirements and would include measures to better address recreation use and crowd management within the Silverwood Lake SRA through the development and implementation of an RMP. The RMP would further reduce strain on the existing recreational facilities within the proposed Project area through the regulation of crowd levels during the busy summer months and during peak weekend and holiday periods. Although this would be a new measure under the new license, it would not result in new recreational facilities or unplanned growth. Therefore, it would not result in the need for provision of new or physically altered parks or recreational facilities not being analyzed already under this CEQA document. Impacts related to parks and recreational facilities would be less than significant; therefore, no mitigation is required.

Other Public Facilities

Finding: No Impact

There are no public facilities, such as libraries or cemeteries within the proposed Project area. Additionally, no residences would be required and any increases in employees would be negligible; therefore, there would be no need for additional public facilities as a result of the proposed Project. As such, there would be no impact related to other public facilities; therefore, no mitigation is required.

3.15.4 Mitigation Measures

Based on the impact analysis (see Section 3.15.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Public Services, when analyzed with and without the related PM&Es, are considered less than significant; therefore, no mitigation is required.

3.16 RECREATION

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

3.16.1 Regulatory Setting

The questions listed in the table above include various recreation facilities. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.16.1.1 Federal

Federal Power Act

The FPA is described generally in Section 3.0 of this document; and the aspects relevant to recreation are further detailed herein. FERC requires licensees to provide access to waters and recreational opportunities in the project area. Sections 4(e) and 10(a) of the FPA require FERC to give equal consideration to the power development purposes and to the purposes of energy conservation; the protection, mitigation of damage to, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality.

Licensees are expected to develop suitable recreation facilities upon project lands and waters and make provisions for adequate public access (18 CFR § 2.7). FERC further expects licensees to consider the needs of persons with disabilities when designing and constructing project-related recreational facilities or public access routes.

3.16.1.2 State

The DPR's mission is "to provide for the health, inspiration and education of the people of California by helping to preserve the State's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation" (DPR 2018).[138]

3.16.1.3 Local

The San Bernardino County General Plan's (2007) vision for the future, which is useful to help evaluate potential proposed Project recreation needs, includes:

- Extension, enhancement, and increased connectivity of trail systems throughout the County (Goals CI-6 and OS-2)
- Local parks and recreational amenities throughout the County (Goal OS-1)
- Expansion of cultural and entertainment opportunities countywide (Goals OS-4, CO-3)
- Recovery and maintenance of multi-use access to public lands, including regional parks, national parks, national forests, State parks, and BLM areas (Goal OS-4) (San Bernardino County 2007).[139]

3.16.2 Environmental Setting

As described in the San Bernardino County General Plan Environmental Impact Report, San Bernardino County has an abundance of outdoor recreational opportunities, including: water sports; hiking, bicycling, and equestrian activities; off-road vehicle recreation; fishing, camping and hunting; passive recreation and enjoyment of the natural setting; and developed parks (San Bernardino County 2007).[140] The major providers of outdoor recreation are: USFS, DPR, the County Regional Parks Department, and local city parks departments. Parks in the vicinity of the proposed Project are shown in Figure 3.16-1.

[138] *DPR. 2018. California State Parks. Home Page. Available online: https://www.parks.ca.gov/?page_id=91. Accessed: September 2020.*
[139] *San Bernardino County. 2007. San Bernardino County 2007 General Plan. Available online: http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf. Accessed: August 20, 2020.*
[140] *Ibid.*

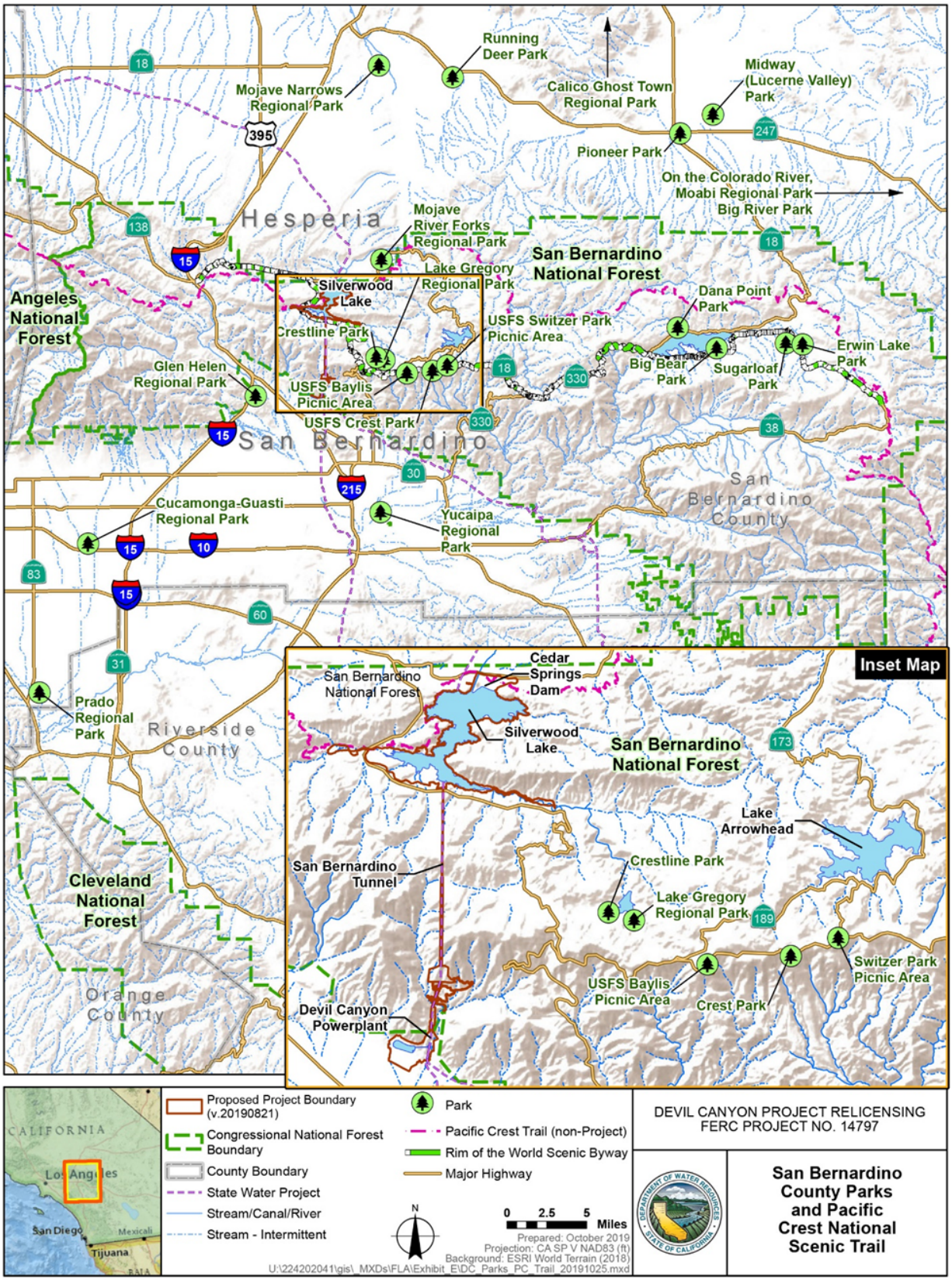

Figure 3.16-1. San Bernardino County Parks and Pacific Crest National Scenic Trail

Recreation at DCPD is centered almost exclusively on Silverwood Lake and its State-owned shoreline. As a 980.0-acre lake with 13 miles of shoreline and many developed overnight and day use recreation facilities, Silverwood Lake serves as a well-established recreational destination for residents of San Bernardino, Los Angeles, and Riverside Counties, where many users are less than 60 miles from Silverwood Lake SRA facilities. The 980.0 acre reservoir is popular with boaters and anglers, particularly due to the fairly constant reservoir level throughout the year and even during drought periods. The reservoir and recreation facilities are easily accessible for visitors coming from the high desert communities or the greater Los Angeles area. The SRA is just 11 miles east of Interstate 15. Silverwood Lake and its surrounding shoreline, which make up the Silverwood Lake SRA, are popular with swimmers, campers, hikers, and picnickers, particularly during the summer months.

Silverwood Lake SRA offers boating and dispersed shoreline uses and developed recreation facilities. The developed sites that are part of the existing FERC-licensed DCPD are listed in Table 3.16-1.

Table 3.16-1. Devil Canyon Project Recreation Facilities and Capacities

Recreational Facility	Total # Parking Spaces	Total # Campsites	Total # Picnic Sites
Rio Group Camp	33	Designed to serve 100 persons, including equestrians camping with horses	14
Barranca Group Camp	39	Designed to serve 100 persons	13
Valle Group Camp	37	Designed to serve 100 persons	13
Cleghorn Day Use Area	239 (SRA Parking Lots 4 & 5)	0	91
Cleghorn Boat Launch	39 (SRA Parking Lot 6) (8 of the parking spots accommodate vehicles and boat trailers)	0	0
Garces Overlook	0	0	0
New Mesa Campground	84 in campsites (2 vehicles per site), plus 6 others	42	0
Entrance Station	2	0	0
Nature Center	30	0	8

Table 3.16-1. Devil Canyon Project Recreation Facilities and Capacities (continued)

Recreational Facility	Total # Parking Spaces	Total # Campsites	Total # Picnic Sites
Mesa Campground	190 in 95 designated car campsites (2 vehicles per site), plus 16 other spaces	107	0
Campfire Center	1	0	0
Sawpit Canyon Picnic Area 3	75 (SRA Parking Lot 3)	0	57
Sawpit Canyon Picnic Area 2	71 (SRA Parking Lot 2)	0	45
Sawpit Canyon Picnic Area 1	206 (SRA Parking Lot 1)	0	10
Sawpit Canyon Day Use Area	0	0	33
Black Oak Picnic Area	122	0	84
Sawpit Canyon Marina	68	0	0
Sawpit Canyon Boat Launch	172 (151 of the sites accommodate vehicles and boat trailers)	0	0
Jamajab Point Overlook	0	0	0
Serrano Landing Day Use Area	0	0	6
Miller Canyon Picnic Area	0	0	12
Lynx Point Overlook	0	0	0
Devil's Pit Overlook	0	0	0
Miller Canyon Group Camp	56	3 camps designed to serve 40 persons each	42
Miller Canyon Trailhead	50	0	0
Sycamore Landing Day Use Area	0	0	13
Live Oak Landing Day Use Area	0	0	8
Chamise Day Use Area	0	0	7
East Fork Trail	0	0	0
Miller Canyon Trail	0	0	0
Silverwood Hike and Bike Path	0	0	0

Source: DWR 2019[141]
Key:
SRA = State Recreation Area

[141] California Department of Water Resources (DWR). 2019. Devil Canyon Project Relicensing, FERC Project Number 14797. Final License Application, Exhibit E- Environmental Report. November 2019. Available Online: http://devil-canyon-project-relicensing.com/license/. Accessed: September 2020.

Visitation trends indicate that park use has declined slightly over the last 20 years, and this trend has been noticeable in the annual visits. Over the last 10 years the Silverwood SRA has seen less than 400,000 annual visitors per year while the number of annual visitors was more than 700,000 per year during the late 1980s (DWR 2019). Based on the last 10 years of records, about 83 percent of all SRA use is day use and 17 percent is overnight (camping) use. Similarly, overnight camping use is also declining at a slightly greater rate than total use (combined day and overnight use). Records for boating indicated by number of boat launches show a fairly steady pattern of use for the period of 2011-2018 (DWR 2019).[142]

The SRA historically fills to capacity soon after opening on some summer weekends and holidays. During these periods, the park will close to further visitor entrants. SRA managers have indicated that closures are fairly predictable and generally occur in the same pattern every year, including the three summer holiday weekends – Memorial Day, Fourth of July, and Labor Day. These weekends involve the SRA closing for vehicular entry every day of the holiday weekend during the early morning hours, except for the holiday day itself (typically, the Monday of the weekend). Additionally, the SRA closes for vehicular entry on many weekend days during the summer recreation season. Park staff closely manages visitation levels on busy weekends, and after the main parking areas are full – which is estimated to be about 1,500 parking spaces – park staff close the SRA to additional vehicles. Boaters are stopped from entering the park after 150 boats have entered, and additional boats can be accommodated in a one-out, one-in arrangement as users depart. However, for day use, about 40 parking spaces need to become available for Park staff to re-open the SRA on a limited entry basis.

The developable areas at Silverwood Lake SRA for recreation facilities are mostly built out. The facilities that have been built are generally meeting the needs of the recreating public. However, not all facilities are utilized evenly, which results in overuse or crowding at some facilities in the SRA, but not at others. The quality and locations of the current facility parking, camping, picnic site spacing, and amenities influences use patterns and thus, affect percent utilization, making some facilities more favored by some users than others. When the facilities are at or near capacity on certain holiday weekends, the overflow areas for camping are used, and all picnic areas are opened and used (DWR 2019).[143] DCPD roads exclusively used for DCPD recreation use have been identified as part of the relicensing efforts and the ongoing short- and long-term maintenance procedures are outlined in a comprehensive RMP, which is part of the proposed Project as PM&E.

Measure RR1 (RMP) addresses recreation use and management as well as recreation facility improvements that are proposed over the term of the new license. The RMP also addresses management considerations for public safety and recreation use on public lands in and around public roads and other trails within and adjacent to the proposed Project boundary. These measures will improve the condition of existing facilities and

[142] *California Department of Water Resources (DWR). 2019. Devil Canyon Project Relicensing, FERC Project Number 14797. Final License Application, Exhibit E- Environmental Report. November 2019. Available Online: http://devil-canyon-project-relicensing.com/license/. Accessed: September 2020.*
[143] Ibid.

will limit dispersed use to specific areas, thereby reducing resource impacts. In addition, these modifications will: (1) allow DWR to focus O&M efforts on the more heavily used facilities; and (2) provide appropriately scaled facilities and upgrades intended to help meet user needs.

3.16.3 Environmental Impact Analysis

Would the proposed Project:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Finding: Less-than-Significant Impact

At times, public demand for the Silverwood Lake SRA recreational facilities exceeds the available capacity and they are closed to prevent potential safety issues (such as overcrowding) and likely a diminished quality of experiences for recreationists at Silverwood Lake. At those times and other popular summer weekends, some users are walking on unauthorized trails to access the shoreline areas and trampling vegetation, causing erosion, and scattering litter while crossing adjoining public lands. Some recreationists are displaced by closure or crowding and during these times. On peak weekends some recreationists travel to other nearby parks and campgrounds in the region if the SRA is at or near full capacity. These include San Bernardino County parks and some nearby USFS recreation facilities such as the PCT.

There are nine regional parks in San Bernardino County. These regional parks offer a variety of recreational and entertainment opportunities. The only regional park close to the Silverwood Lake SRA is the Mojave River Forks Regional Park located on Highway 173, about 9 miles from the Silverwood Lake SRA. When Silverwood Lake SRA is full, the Mojave River Forks Regional Park serves as an alternate camping area. It offers camping, equestrian camping, hiking, and equestrian trails with direct access to the PCT (DWR 2019).[144]

The PCT is a Congressionally-designated National Scenic Trail that is approximately 2,650 miles long; a segment of it traverses the proposed Project adjacent to Silverwood Lake. USFS manages the PCT in partnership with NPS, BLM, DPR, and the PCTA. The PCT is used by hikers and equestrians. While some use is by long distance hikers, most use of the PCT is from local people who use the trail for recreational hiking (DWR 2019).[145]

The SBNF also provides facilities for day use, including roadside picnic areas, but the most prevalent use adjacent to the SRA is related to Off Highway Vehicle (OHV) use. East of Silverwood Lake, the Miller Canyon/Pilot Rock area is a popular OHV area. Miller Canyon (approximately 0.5 miles outside the proposed Project boundary), serves

[144] Ibid.
[145] Ibid.

as a strategic north portal for OHV use onto the SBNF from private and BLM lands. In 2016, the SBNF developed a new day use site, Miller Canyon Trailhead, for OHV users. A new parking area was constructed with a combination of back-in parking and pull through parking for vehicles with trailers, separated by islands of vegetation and barriers. Two access points provide ingress and egress to the staging area, and gates have been installed to close the site as needed. A vault toilet, trash receptacles, and picnic tables have been installed as well. The OHV site can receive up to 50 vehicles with trailers per day during the summer. The site connects into approximately 21 miles of OHV trails.

While some overflow or spillover use from the DCPD leads to more use at these nearby recreation facilities, the proposed Project would not change this pattern or accelerate its occurrence. Additionally, there is no indication the regional parks or OHV use areas are overcrowded or deteriorating because of SRA closures or crowding. The Silverwood Lake SRA does not offer OHV activities, rather the adjoining OHV areas generally attract a fundamentally different type of user than those coming to the SRA for their recreation experiences which tend to be oriented around water recreation. There is evidence that ongoing uses of the PCT in and around Silverwood Lake is damaging the trail and trail experience by introducing litter with some vegetation trampling leading to erosion problems in segments used to access the lake (DWR 2019).[146] However, the proposed Project RMP provides measures to help reduce these existing problems, and the proposed Project is not expected to increase or accelerate the use of the PCT or other regional park facilities as it is not adding new recreation facilities or increasing capacity.

Future population growth in the region will likely lead to increases in recreation demand and use of Silverwood Lake SRA as well as other regional facilities including the PCT, but the proposed Project, with implementation of the RMP, would help offset the potential for deteriorating conditions at the SRA and in nearby areas by better managing recreation use patterns and educating users about importance of low impact use and staying on trails which is designed to help reduce the level or rate of adverse effects on recreation resources in and around the SRA.

The RMP provides measures to address recreation use and management, as well as recreation facility improvements that are proposed over the term of the new license. The RMP also addresses considerations for public safety and recreation use on public lands in and around public roads and other trails within and adjacent to the proposed Project boundary. These measures will improve the condition of the DCPD and will limit dispersed recreational use to specific areas.

Other multiple use access roads and lands are managed by the USFS and other agencies such as Caltrans. DWR is committed to working cooperatively to assist agencies in multiple use resource management needs in the area, thus helping reduce

[146] Ibid.

the effects of the DCPD and its continued operation under the proposed Project related to attracting users who access other adjoining areas for some recreation uses.

Traffic that occurs while recreationists enter the Silverwood Lake SRA occasionally backs up beyond the 0.4-mile-long entrance road, causing a waiting line to back up onto State Highway 138 during busy weekends and park closures. This back up can lead to unmanaged use of adjoining public lands. Implementing the litter control program described in the RMP is designed to help reduce the potential for litter accumulating along the roadside from vehicles that back up onto the highway. Other visitor services measures such as additional directional and informational signage and dissemination of real-time information on park capacity and access will help inform visitors of closures. That additional information will help to reduce highway backups and the potential vegetation trampling or other damage outside the paved shoulder areas of State Highway 138.

The RMP includes a plan for further monitoring and additional cleanup of shorelines in this area that will help reduce the adverse effect of these users. Additional options to help reduce unauthorized use will be evaluated including closing or implementing user restrictions in these areas. Other options include developing designated trails and closing unauthorized trails to direct use to more hardened surfaces, thereby reducing adverse effects on vegetation communities and reducing potential soil erosion in these areas.

Additionally, the implementation of the proposed Project Recreation Management Plan (i.e., Measure RR1 [RMP]) would continue to alleviate the potential for last minute displacement to neighborhood and regional parks or other recreation facilities. Therefore, measures RR1 would not introduce new or additional significant impact with or without the proposed Project.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Finding: Less-than-Significant Impact

The proposed Project will continue the O&M of the recreation facilities at Silverwood SRA over the term of the new license. The RMP proposed further modifications and improvements to the existing facilities, including implementation of visitor services, a safety and signage program, a litter control program and facilities improvement measures. Additionally, incorporating PM&E measures TR1 (Integrated Vegetation Management Program) and GS1 (Erosion and Sediment Control Plan) will help reduce the potential for adverse physical effects on the environment. However, these plans largely codify existing practices and no significant impacts would be expected under continued O&M practices as they have been accomplished in the past.

The RMP provides a plan to continue to rehabilitate the existing infrastructure in the park to harden surfaces, provide more ADA-accessible amenities, and improve

circulation and offerings at the facilities to meet the changing demands and needs of recreationists. Published recreation demand studies show Californians want more amenities, including outdoor settings for large groups, a wider range of overnight camping facility choices, and an increase of shorter trails. The studies show visitors prefer clean restrooms, picnic areas, tables free of garbage and graffiti, adequate lighting in campgrounds to feel safe, and bilingual signs. Also, the studies show the growing Hispanic populations tend to prefer forested sites with water features and amenities to support day-long, extended-family social outings with extensive onsite meal preparation (DPR 2014).[147] Needs and opportunities for improvements based on these studies are part of the RMP for planning and designing upgrades to existing facilities.

The current facilities at Silverwood Lake SRA, with some improvements, will provide for these changing demands and uses without expansion of overall capacities. The RMP includes improvements for the three group camps (Rio, Barranca, and Valle) and entail rehabilitation of the existing facilities including installation of a new concrete pad, new metal roof and ramada, new picnic tables, barbeque grills, hot coal bins, fire pits, and improvements to the equestrian facilities. Facility replacements will involve use of ADA-compliant amenities.

Several improvements will be made to day use facilities such as the Sawpit picnic area to renew both the function and desirability of those facilities. The improvements will include clearing vegetation along access routes, replacing picnic tables, replacing and updating public use water spigots and drinking fountains, replacing trash receptacles with bear-proof cans, and resurfacing road and parking pavement.

At the Live Oak Landing boat-in site, several updates are proposed to improve and harden surfaces to reduce erosion, vegetation trampling, and provide more trash receptacles to help reduce littering.

As outlined in Table 2.4-1 in Section 2.0, Project Description, construction activities to implement these improvements could involve localized ground disturbance which could lead to erosion and airborne dust emissions. Also, some vegetation could be removed or trampled in the immediate areas around the developed recreation sites. Construction would bring additional noise into an area that currently does not experience more than some highway noise. Erosion control efforts would be managed under the provisions of PM&E Measure GS1 (Erosion and Sediment Control Plan). If revegetation or invasive species are found to need controls associated with the recreation improvement projects, the provisions of the IVMP will help reduce those effects and potentially improve vegetation conditions in the adjoining areas.

Continued recreation use at the DCPD facilities under the proposed Project without rehabilitation and the improvements outlined in the RMP has the potential to further degrade the condition of the infrastructure, cause further erosion or ecological damage,

[147] *California Department of Parks and Recreation (DPR). 2014. Survey on Public Opinions and Attitudes on Outdoor Recreation in California 2012. Available Online: https://www.parks.ca.gov/SPOA. Accessed: September 2020.*

increase public health and safety concerns, and not meet visitor needs. However, these effects are varied and not at a level of being significant impacts; rather they represent trends related to the overall quality of the recreation experience to which the RMP is attempting to change or improve. The concept of “hardening” recreation facilities to reduce damage to natural resources and providing for more intensive use, while maintaining quality recreation facilities, can improve the recreation experience for users and reduce maintenance costs and environmental effects. The intent would be to concentrate use in and around existing DCPD facilities so that the most suitable, least erosive, and least environmentally damaging areas and adjoining trails would be used by recreationists. Therefore, by upgrading the existing DCPD facilities there would be some construction related impacts including ground disturbance, vegetation removal around current facilities, dust, and noise; however, recreation use impacts could be lessened by guiding use to hardened surfaces. When the actions in the RMP are combined with the current recreation management practices, the SRA management and site improvements result in a net less-than-significant impact. As a result, the proposed Project would have a less-than-significant impact.

3.16.4 Mitigation Measures

Based on the impact analysis (see Section 3.16.3 [Environmental Impact Analysis]), the proposed Project’s potential impacts to Recreation, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.17 TRANSPORTATION

Would the Project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance, or policy addressing the circulation systems, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection(s) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.17.1 Regulatory Setting

The questions listed in the table above include references to consistency with applicable circulation system plans, ordinances, or policies governing scenic quality, CEQA Guidelines § 15064.4, among other items. As such, this regulatory setting is intended to provide a general context for the impact assessment that follows.

3.17.1.1 Federal

There are no federal regulations related to transportation that are applicable to the proposed Project.

3.17.1.2 State

Updated CEQA Guidelines and Transportation Impact Evaluations

In December 2018, the California Natural Resources Agency adopted the CEQA Guidelines update package, including the Guidelines section implementing SB 743. CEQA Guidelines § 15064.3 states, “This section describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, vehicle miles traveled (VMT) refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the

project on transit and non-motorized travel. Except as provided in subdivision (b)(2) (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact." § 15064.3(b) sets forth the following criteria for determining the significance of transportation impacts:

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in § 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in § 15151 applies to the analysis described in this section.

From these updated CEQA Guidelines, the Governor's Office of Planning and Research developed a Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains the Governor's Office of Planning and Research technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures (OPR 2018).[148]

[148] Governor's Office of Planning and Research (OPR). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Available online: https://www.opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed: August 2020.

California Department of Transportation

Caltrans manages interregional transportation, including the management and construction of the California highway system. In addition, Caltrans is responsible for the permitting and regulation of State roadways. Caltrans requires that permits be obtained for transportation of oversized loads and transportation of certain materials, and for construction-related traffic disturbance.

California Streets and Highways Code, Section 117

Unless otherwise specified, the acquisition of any right-of-way over any real property for State highway purposes includes the right of Caltrans to issue, under Chapter 3 (Division 1, Chapter 3, The Care and Protection of State Highways, commencing with § 660), permits for any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures located in the public rights-of-way. The administering agency for this statute is Caltrans.

California Manual on Uniform Traffic Control Devices, Part 6

This regulation requires a temporary traffic control plan be provided for “continuity of function (movement of traffic, pedestrians, bicyclists, transit operations) and access to property/utilities” during any time the normal function of a roadway is suspended (California Manual on Uniform Traffic Control Devices, Federal Highway Administration 2009 Edition, Revisions 1 and 2 as amended for use in California. Title 23 U.S.C, §§ 109[d], 114[a], 217, 315, and 402[a], 23 CFR 655, and 49 CFR 1.48[b][8], 1.48[b][33], and 1.48[c][2]).

3.17.1.3 Local

The proposed Project area includes roadways that are in both the City and County of San Bernardino and, therefore, the respective General Plan goals and policies would apply. The Primary Project Roads within the proposed Project area are maintained by DWR and, therefore, the goals and policies in the General Plans would not apply to these roadways. Additional public roadways within the proposed Project area would continue to be managed under existing conditions by the applicable agencies.

Emergency Evacuation Plans

DPR has an Emergency Evacuation Plan for the Silverwood Lake SRA, and DWR has an EAP that is routinely tested with key agencies, including DPR and USFS. These evacuation plans are updated regularly and include coordination with partnering agencies, such as the City and County of San Bernardino, CAL FIRE, and other local, State, and federal agencies during an event that would trigger an emergency in the area.

3.17.2 Environmental Setting

Regional access to the proposed Project area is provided via State Highway 138, which runs in a north-south direction though the DCPD. In the southern portion of the DCPD, State Highway 138 intersects with State Highway 18, which connects with State Highway 210, then ultimately Interstate 215 outside of the proposed Project area. State Highway 138 in the northern portion of the proposed Project area ultimately intersects with Interstate 15 outside of the proposed Project area.

Under existing DCPD conditions, DWR operates and maintains 10 existing Primary Project Roads (see Table 2.4-3 in the Project Description), for a total distance of approximately 7.6 miles, to provide vehicular access for the O&M of proposed Project facilities. In addition, existing developed recreation facilities include roads used almost exclusively to access recreation facilities within the proposed Project boundary and are managed by the State and USFS.

Primary Project Roads within the proposed Project area are located on a combination of lands owned by the City of San Bernardino, State of California, and USFS. All of the Primary Project Road segments are behind locked gates and are currently maintained in good condition, consistent with the road segment's designated use level. DWR uses the roads as needed (i.e., almost on a daily basis) to access the DCPD.

In addition to Primary Project Roads, developed recreation facilities roads identified for inclusion in the new license include roads used almost exclusively to access the recreation facilities within the proposed Project boundary. Of these roads, nine are located entirely on lands owned by the State. However, all of these recreation roads are open to the public. Other roads in the area not managed by DWR, often connecting to the DCPD-associated recreation roads, also provide access for the recreating public. However, these roads have other uses, including access to NFS lands.

There are three developed trails that each have been improved, typically have paved surfaces, and connect to and between all developed facilities within the Silverwood Lake SRA. The developed trail facilities include one natural-surfaced trail, one asphalt-surfaced trail, and a bike path. DWR does not maintain any trails for foot or off-highway vehicle access to DPCD facilities, other than those related to recreation.

3.17.3 Environmental Impact Analysis

Would the proposed Project:

a) Conflict with a program plan, ordinance, or policy addressing the circulation systems, including transit, roadway, bicycle, and pedestrian facilities?

Finding: Less-than-Significant Impact

DWR does not propose any changes to existing Primary Project Roads as a result of the proposed Project. No transit system exists within the proposed Project boundary, and no such system is proposed for construction. Some minor upgrades are proposed

to existing bike paths and trails as part of the recreation improvements; however, these improvements would be similar to existing operations and would occur over the term of the license.

As part of ongoing activities, DWR annually reviews SBNF activities related to Primary Project Roads and Trails on NFS lands completed in the previous calendar year, as well as any activities planned for Primary Project Roads and Trails on NFS lands for the current calendar year. In addition, DWR would continue to consult with the SBNF, as needed, regarding Primary Project Roads and Primary Project Trails on SBNF lands if any Primary Project Roads or Trails are added to or removed from the proposed Project in the future. As such, the potential to conflict with a program, plan, ordinance, or policy addressing circulation systems is considered to be less than significant.

Furthermore, PM&E Measures LU1(Transportation System Management Plan) and RR1 (RMP) are anticipated to be required under the new license. Measure LU1 codifies O&M on recreation roads and Primary Project Roads. Implementation of that PM&E includes maintenance activities and procedures for the Primary Project Roads which would be in compliance with the applicable roadway standards as identified in Measure LU1. Additionally, Measure RR1 includes management of crowds through regulation of park peak uses in the summer weekend and holiday periods which would control and minimize congestion in recreation areas and back up of vehicles. Therefore, with or without the PM&E measures, the proposed Project would not conflict with existing programs, plans, and ordinances applicable to the transportation system in the area.

b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Finding: Less-than-Significant Impact

The proposed Project would not result in a substantial increase in VMT, such that there would be a conflict or inconsistency with CEQA Guidelines § 15064.3(b). The proposed Project does not propose any change in use or construction of any new facilities. The proposed Project does not propose new housing, businesses, or other land use changes that would induce population growth in the area or result in a permanent increase of VMT. The proposed Project also would not add capacity to an existing or proposed new roadway.

Currently, vehicle trips within the existing DCPD boundary are predominately generated from recreational users. Additionally, operational and maintenance staff contribute to VMT within the existing DCPD boundary. As described in Section 5.5 of the Final FLA, use of the proposed Project boundary informs existing VMT estimates which range from approximately 140 to 1,800 roundtrips by recreational users, with the highest number of VMT in the summer months, weekends, and holidays. Additional ongoing operational maintenance trips within the existing DCPD boundary range from 10 to 50 trips per day.

Construction activities associated with ongoing O&M and recreation improvements for the proposed Project would include temporary increases in construction traffic within the

proposed Project area. Potential increases in VMT as a result of any construction activities within the proposed Project area would vary based on the activity, location, equipment and material needs, and staffing. Similar to the assumptions for the air quality analysis (see Section 3.3), it is anticipated that these improvements would include an approximate maximum of 10 trips per day for import and export of materials and supplies with an assumed conservative distance of 50 miles round trip. Additionally, worker trips (18 trips at 50 miles roundtrip) and contractor trips (20 trips at 50 miles roundtrip) for supplies associated with these construction activities would also occur. These construction activities are anticipated to occur for the proposed Project features described in Section 2.4 of the Project Description. These assumptions would specifically pertain to the recreation improvements listed in Table 2.4-1 of Section 2.4.4. Based on these assumptions, the estimated VMT associated with operation of the DCPD under the proposed Project would be a total of 5,400 miles traveled. These VMT estimates are consistent with current operations under the existing license, which include minor and temporary VMT increases associated with recreation improvements.

The main intent of evaluating VMT is to assess significant increases in VMT generated by individual projects. The temporary and short-term nature of the construction activities introduce negligible increases in VMT scattered throughout the 10-year duration of the recreation improvements under the new license. However, once construction is completed on those recreation facility improvements under the RMP, construction-related traffic would cease, and VMT levels would return to baseline conditions. The proposed Project would not conflict or be inconsistent with CEQA Guidelines § 15064.3(b). Therefore, the impacts would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersection(s) or incompatible uses (e.g., farm equipment)?

Finding: Less-than-Significant Impact

There would be no changes to the alignment or geometric design of roadways or trails as a result of the proposed Project. Measure LU3 (Project Safety Plan) includes installation of lights, sirens, signs, and other safety features which would improve safety overall within the proposed Project area, including to the existing roadways and trails within the area. Implementation of the PM&E would not result in a change from existing conditions, since DWR currently implements these safety precautions under the existing license. Therefore, the proposed Project would result in a less-than-significant impact related to increases in hazards due to a geometric design feature.

d) Result in inadequate emergency access?

Finding: Less-than-Significant Impact

Emergency access within and adjacent to the proposed Project boundary is provided by DWR's Primary Project Roads as well as federal, State, City of San Bernardino, and USFS-maintained roadways. These roads provide access for emergencies, such as fire suppression and emergency response within the existing DCPD boundary. DPR has an

Emergency Evacuation Plan for the Silverwood Lake SRA and DWR has an EAP for the related dam infrastructure, which would provide provisions for maintaining adequate emergency access to the corresponding facilities within the proposed Project boundary. DWR does not propose any modifications, realignments, or relocations to these roads and, therefore, emergency access routes would not change or become inadequate as a result of proposed Project actions.

Upgrades to recreation facilities would require construction equipment, similar to the current construction of new recreation facilities under the current license. However, Measure LU1 (Transportation System Management Plan) sets forth safety controls, such as training crews on emergency response and preparedness and plans for restoring temporarily blocked access in the event of an emergency that avoid potential conflicts with emergency access. Similar to the current license, the PM&E would be codified under the new license as a part of the proposed Project, limiting potential interference with emergency access in the event of an emergency within the area. As a result, the proposed Project's potential to result in inadequate emergency access would be less than significant.

Additionally, the PM&E includes provisions for emergency response and preparedness within the proposed Project area that are currently exercised, as necessary, to reduce the potential for interference with emergency access in the event of an emergency within the area. Therefore, the proposed Project would result in a less-than-significant impact related to inadequate emergency access.

3.17.4 Mitigation Measures

Based on the impact analysis (see Section 3.17.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Transportation, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.18 TRIBAL CULTURAL RESOURCES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21047 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☒	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

3.18.1 Regulatory Setting

The questions listed in the table above include terminology defined in PRC §§ 21047 and 5020.1(k), and subdivision (c) within PRC § 5024.1. Those questions also include criteria set forth in subdivision (c) of PRC § 5024.1. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.18.1.1 Federal

National Historic Preservation Act

The NHPA requires federal undertakings to consider the effects of an action on historic properties. Historic properties include resources of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the National Register criteria (36 CFR Part 800.16[l]). Additional information regarding how an undertaking could impact an NRHP eligible property, including a resource of traditional and cultural importance to an Indian Tribe is included in Section 3.5, Cultural Resources.[149]

Traditional Cultural Properties (TCP)

TCPs are locations associated with cultural practices or beliefs of a living community that are: (1) rooted in that community's history, and (2) important in maintaining the continuing cultural identity of a community. National Register Bulletin 38 provides examples of TCPs that fit the definition in the guidelines (Parker and King 1998[150]):

- A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world
- A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents
- An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices
- A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice
- A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity

TCPs are eligible for inclusion on the NRHP if they meet the criteria set forth in 36 CFR Part 60, National Register Criteria for Evaluation. The steps in the identification and evaluation of TCPs are the following (abbreviated from Parker and King 1998):[151]

[149] The terminology for NHPA is relative to federally recognized tribes. CEQA terminology, however, is inclusive of Native American tribes regardless of federal recognition.
[150] Parker, Patricia L., and Thomas F. King. 1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Register Bulletin 38. Revised. Originally published 1990. U.S. Department of the Interior, National Park Service, Washington, D.C.
[151] Parker, Patricia L., and Thomas F. King. 1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Register Bulletin 38. Revised. Originally published 1990. U.S. Department of the Interior, National Park Service, Washington, D.C.

- Potential TCPs must be identified through consultation with the affected community or Tribe
- The investigation must consider the beliefs and practices associated with a potential TCP from the perspective of the community or Tribe
- The potential TCP must be a property, that is, a tangible place on the landscape, rather than an intangible belief or practice
- The property must retain integrity of relationship with the beliefs and practices that give it meaning to the community or Tribe
- The property must retain integrity of condition, such that the elements of the property associated with the beliefs and practices that give it significance are present

The property must meet one or more of the four criteria for inclusion on the National Register (see Section 3.5.1.1).

Certain kinds of cultural resources are usually not considered for listing in the NRHP: religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. These resources, however, can be evaluated as eligible if they meet one or more of the NRHP eligibility criteria for evaluation, retain integrity, and meet special criteria requirements called *Criteria Considerations*. The most notable of the seven considerations is Criteria Consideration G, which specifies that a property that has achieved significance within the last 50 years can qualify for the NRHP only if it is of exceptional importance. As noted by Parker and King: “A significance ascribed to a property only in the past 50 years cannot be considered traditional” (1998).[152] However, they also note: “The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the [National] Register” (1998).

If a property is determined to be a TCP, it becomes the responsibility of the lead agency to assess whether the proposed Project will have an effect on the property and if the effect will be adverse; that is, will it alter or destroy the elements that make the property significant and eligible. If the project is determined to have an adverse effect, the lead agency is responsible for seeking measures that will mitigate the adverse effects to the TCP.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for Native American Tribes or individuals. Examples of potential ITAs are lands, minerals,

[152] Parker, Patricia L., and Thomas F. King. 1998 Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Register Bulletin 38. Revised. Originally published 1990. U.S. Department of the Interior, National Park Service, Washington, DC.

fishing rights, and water rights. Management of ITAs is based on the following orders, agreements, and regulations:

- Executive Order 13175, Consultation and Coordination with Indian Tribal Governments 65 FR 67249
- Memorandum on Government-to-Government Relations With Native American Tribal Governments (Federal Register Volume 59, Number 85, signed April 29, 1994)
- Secretarial Order No. 3175 – Departmental Responsibilities for Indian Trust Resources
- Secretarial Order No. 3206 – American Indian Tribal Rights, Federal -Tribal Trust Responsibilities, and the Endangered Species Act
- Secretarial Order No. 3215 – Principles for the Discharge of the Secretary's Trust Responsibility
- Secretarial Order No. 3342 – Identifying Opportunities for Cooperative and Collaborative Partnerships with Federally Recognized Indian Tribes in the Management of Federal Lands and Resources
- Secretarial Order No. 3335 – Reaffirmation of the Federal Trust Responsibility to Federally Recognized Tribes and Individual Indian Beneficiaries

Native American Graves Protection and Repatriation Act

NAGPRA is found in Public Law 101-601; 25 U.S.C. § 3001 *et seq*. NAGPRA sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. NAGPRA clarifies ownership of human remains and established a process for the repatriation of human remains, associated funerary objects, and sacred religious objects to the Native American groups that are identified as lineal descendants or are culturally affiliated with the remains or objects. NAGPRA requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

Additional Regulations

Other laws specific to cultural resources and/or historic properties include the following:

- American Indian Religious Freedom Act of 1978 (Public Law 95-341; 42 U.S.C. 1996)
- Antiquities Act of 1906 (54 U.S.C. 320301–320303 & 18 U.S.C. 1866, formerly 16 U.S.C. 431–433)

- Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-mm)
- CEQA of 1970, as amended (PRC § 21000 et seq.) and State CEQA Guidelines (14 CCR § 15000 et seq.)
- CHSC (§ 7050.5)
- CPRC (§§ 5024, 5024.5, 5097.97, and 5097.98)
- Executive Order 11593 of 1971, Protection and Enhancement of the Cultural Environment
- Executive Order 13007 of 1996, Indian Sacred Sites
- Historic Sites Act of 1935 (54 U.S.C. 320101–320106, formerly 16 U.S.C. 461–467)
- National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*)

3.18.1.2 State

<u>California Register of Historical Resources (PRC Section 5024) and Tribal Cultural Resources (PRC Section 21074)</u>

As defined in PRC § 21074, a Tribal Cultural Resource (TCR) is a site, feature, place, cultural landscape, sacred place or object that is of cultural value to a California Native American tribe, and is either (1) on or eligible for the CRHR or a local historic register, or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR. TCRs are similar to TCPs in terms of their characteristics, identification, and treatment, and may include a cultural landscape to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Additionally, as defined at PRC § 21074(c), “a historical resource described in § PRC 21084.1, a unique archaeological resource as defined in subdivision (g) of § 21083.2, or a ‘nonunique archaeological resource’ as defined in subdivision (h) of § 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a). CEQA mandates that lead agencies determine whether a project will have a significant impact on TCRs that are eligible for listing on the CRHR (i.e., a historical resource) or determined to be significant by the lead agency and to appropriately mitigate any such impacts.

In accordance with CEQA guidelines, cultural resources investigations are necessary to identify TCRs that may have significant impacts as a result of a project (14 CCR § 15064.5). The following steps are routinely implemented in a cultural resources investigation for CEQA compliance:

1. Identify cultural resources in the proposed project area
2. Evaluate against the CEQA criteria of significance as listed below

3. Evaluate the impacts of the proposed project on *all* resources

4. Develop and implement measures to mitigate proposed project impacts on historical resources or resources deemed significant by the lead agency

Assembly Bill 52 and Consultation

Additionally, the lead agency for CEQA is responsible for consultation pursuant to AB 52 and amendments to CEQA under PRC §§ 5097.94(m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 regarding the potential for a project to impact TCRs, which can be identified only through tribal consultation. Accordingly, consultation with local Native American tribes and other interested parties is part of all four of the steps described above. As described above, a TCR necessarily has value to a California Native American tribe. As such, consultation with local Native American tribes to determine what tribal cultural resources may have value to them is a necessary component of TCR identification efforts, as well as potential mitigation efforts. AB 52 recognizes that "tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated" (and requires consultation between a lead agency and Native American tribes for covered projects.

In addition, DWR is committed to open, inclusive, and regular communication with tribal governments and communities to recognize and understand their needs and interests. As such, DWR follows its Tribal Engagement Policy as well as the California Natural Resources Agency's Tribal Consultation Policy and Executive Order B-10-11 to provide meaningful and proactive consultation with tribes and tribal communities. Consultation efforts with California Native American tribes, pursuant to TCR identification efforts, are described below.

CEQA Guidelines/PRC Section 15064.5(a)

Under the CEQA Guidelines, even if a resource is not included on any local, State, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource for the purposes of CEQA, if there is substantial evidence supporting such a determination (CEQA Guidelines § 15064.5[a]). A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the CRHR. The methods used to determine if resources are TCRs are presented below.

A resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage (Criterion 1)

- Is associated with the lives of persons important in our past (Criterion 2)

- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values (Criterion 3)

- Has yielded, or may be likely to yield, information important in prehistory or history (Criterion 4)

PRC Sections 21084.2-21084.3

A project that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment (PRC § 21084.2). A lead agency will establish measures to avoid impacts that would alter significant characteristics of a TCR, when feasible (PRC §21084.3).

Discovery of Human Remains

State and federal law require that all human remains and potential human remains be treated with respect and dignity. In the event that suspected human remains are discovered during proposed Project activity on NFS lands, all activities in the immediate area will cease, and appropriate precautions will be taken to protect the remains and any associated cultural items from further disturbance, according to the requirements of NAGPRA as discussed in Section 3.6.1.2. The USFS is responsible for the protection of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on lands under the jurisdiction of the San Bernardino National Forest and will follow the procedures outlined in 43 CFR § 10.4 Inadvertent Discoveries should there be any discovery. Discovery of human remains and associated cultural items on non-federal lands is discussed above in Section 3.6.1.2. It is governed by CHSC §§ 7050.5, 8010, and 8011; PRC §§ 5097.98, 5097.99, and 5097.991; and 25 USC Sec 3001 et seq. – which include precautions to protect remains and associated cultural items from further disturbance, notification of most likely descendants, facilitation of the provisions of CalNAGPRA, and punitive measures.

3.18.1.3 Local

Local general plans discussed in Section 3.6.1.3 also generally pertain to TCRs.

3.18.2 Environmental Setting

Knowledge of current environmental conditions is critical to the assessment of potential environmental impacts to TCRs because TCRs may include components of the environment that comprise sites, features, places, cultural landscapes, or sacred places with cultural value to Native American tribes.

3.18.2.1 Methodology

The environmental setting was characterized using information from literature reviews and field studies associated with the relicensing effort.

Literature Review Methods

The baseline assessment for tribal resources included: archival research; literature reviews of cultural and tribal resources; overviews and regional studies; ethnohistories; linguistic studies; unpublished field notes of various ethnographers who had worked in the APE and surrounding areas; and various documents from the ethnographers' libraries and public libraries.

Relicensing Study Methods

Field data collection included consultation with tribes, meetings, ethnobotanical research, site visits, and an interview.[153] Site visits consisted of a general tour of the proposed Project area with stops at several camping and recreation areas where participants exited their vans and walked. Although general resources of the proposed Project area, such as plants and animals, were discussed, no specific cultural resource sites were visited. The proposed Project area visit also included a brief stop at the Devil Canyon Powerplant.

As such, consultation has been conducted for all cultural resources investigation efforts for the proposed Project and is further detailed below.

3.18.2.2 Local Setting[154]

The proposed Project spans an area from the southerly edge of the Mojave Desert through the western part of the San Bernardino mountain range within the traditional territory of the Serrano, descendants of whom currently include members of the Morongo and San Manuel tribes. The primary component of the proposed Project, Silverwood Lake, was formed in 1972 by construction of Cedar Springs Dam, which inundated the community of Cedar Springs, the West Fork Mojave River (near Cleghorn Canyon), the East Fork of the West Fork Mojave River (near Miller Canyon), and several archaeological sites. Nearly half of the proposed Project area (about 964 acres) is covered by waters of Silverwood Lake. The West Fork Mojave River drains into Summit Valley, where it joins Deep Creek at the Mojave River Forks Reservoir (Altschul et al. 1985).[155] The Mojave River flows northward toward Barstow and then eastward to its sink at Soda Lake and Silver Lake playas near Baker, California, in San Bernardino County.

The topography around the proposed Project area consists of steep mountainous terrain covered with arid chaparral scrub vegetation dominated by junipers, Joshua

[153] The process to identify interviewees was extensive and exhaustive, and resulted in only one interview as no other tribal participants had information to share about the Project area.
[154] Lerch, Michael K. and Karen K. Swope. 2020 Tribal Resources Study for the Devil Canyon Project (FERC Project No. 14797), San Bernardino County, California. Prepared by Statistical Research, Inc., Woodland, CA. Prepared for HDR Engineering, Inc., Sacramento. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, California.
[155] Altschul, Jeffrey H., Martin R. Rose, and Michael K. Lerch. 1985 Cultural Resources Investigations in the Mojave River Forks Reservoir, San Bernardino County, California. Technical Series No. 2. Statistical Research, Inc. Tucson, Arizona.

trees, and sagebrush, with elevations ranging from approximately 2,000 to 3,500 feet. Approximately 20 percent of the proposed Project area vegetation consists of Mixed Chaparral, with smaller amounts of Montane Hardwood, Valley Foothill Riparian, Coastal Scrub, Chamise-Redshank Chaparral, and Desert Wash. Within these vegetation communities are numerous plant resources used for food, medicine, and utility by the native inhabitants of the region, the Serrano (Lerch 2002).[156] A more detailed discussion of these plants and their importance to the tribes is included in the confidential/privileged Tribal Resources Study technical report (Lerch and Swope 2020).[157]

Among the animal species known in the proposed Project area with potential TCR value are large mammals, such as California mule deer (*Odocoileus hemionus californicus*) and black bear (*Ursus americanus*), small mammals such as woodrats, rabbits, and squirrels, a variety of birds including waterfowl, upland game birds, and both bald and golden eagles, along with reptiles and amphibians. Many of the mammal, bird, and reptile species located in the proposed Project area were used as food sources by the Serrano, and some, such as eagles, deer and bears, had important ceremonial roles in Serrano culture (Benedict 1924:373–379, 391[158]; Bean and Smith 1978:571, 573[159]).

3.18.2.3 Known Tribal Cultural Resources

According to the PAD and *Tribal Resources Study Approach*, there are no known ITAs, TCPs, or agreements identified from existing, relevant, and reasonably available information within the existing proposed Project boundary and a 0.25-mile-wide buffer around the existing DCPD boundary that encompasses the proposed Project APE. The Tribal Resources Study technical report came to a similar conclusion (Lerch and Swope 2020).[160] However, the San Manuel has expressed the cultural importance to the tribe of four sites defined in Table 3.6-1, including Sites P-36-000174; P36-000501, P-36-008913, and P-36-003033.

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[156] Lerch, Michael K.
2002 Ethnobotanical Resources in the Arrowhead East/West Study Area, San Bernardino National Forest, San Bernardino County, California. Draft final report submitted to San Bernardino National Forest by Statistical Research, Inc. Redlands, California.
[157] Lerch, Michael K. and Karen K. Swope. 2020 Tribal Resources Study for the Devil Canyon Project (FERC Project No. 14797), San Bernardino County, California. Prepared by Statistical Research, Inc., Woodland, CA. Prepared for HDR Engineering, Inc., Sacramento. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento.
[158] Benedict, Ruth F.
1924 A Brief Sketch of Serrano Culture. American Anthropologist 26(3):366–392.
[159] Bean, Lowell J., and Charles R. Smith
1978 Serrano. In California, edited by Robert F. Heizer, pp. 570–574. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
[160] Lerch, Michael K. and Karen K. Swope. 2020.Tribal Resources Study for the Devil Canyon Project (FERC Project No. 14797), San Bernardino County, California. Prepared by Statistical Research, Inc., Woodland, CA. Prepared for HDR Engineering, Inc., Sacramento, California. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, California.

In addition, the San Manuel have indicated that some plants identified in the *Botanical Resources Study* are culturally important, although no specific collecting areas for any of these plants have been identified within the proposed Project APE. Although traditional plant gathering activities by Native Americans historically occurred in the area, tribal members are currently not collecting plant materials in the proposed Project area. Based on the list of plants provided by the San Manuel, it is possible that future collecting areas may be identified.

The archaeological sites were evaluated in the Tribal Resources Study Report as not eligible for listing on the NRHP as TCPs and the SHPO concurred with this finding in a letter dated May 1, 2020. While formal TCP status has not been conferred upon these resources by the San Manuel as of 2019, the San Manuel have indicated that ongoing deliberations by the Tribal community about these spaces has the potential to result in that designation in the future. The San Manuel considers these four resources as potentially NRHP-eligible, as long as they retain their integrity and are not removed from the APE. A description of these four sites follows:

- **Site P-36-000174** was subject to archaeological excavation in the 1970s; however, no documentation was found during the Cultural Resources Study research to indicate whether the site was formally evaluated or not for listing on the NRHP (Lloyd et al. 2020).[161] This site is, therefore, unevaluated and will continue to be managed through avoidance and will be treated as if it is eligible until such time it is reevaluated.

- **Sites P-36-000501 and P-36-008913** are submerged under Silverwood Lake and could not be reassessed for the NRHP. Therefore, both sites are unevaluated resources and continue to be managed through avoidance and treated as if they are eligible until such time they are reevaluated.

- **Site P-36-003033** was not relocated but was previously mapped as submerged, passing through the reservoir.

Table 3.18-1 below lists each of the four unevaluated archaeological sites and notes any observed existing conditions impacts at each site. It also identifies site-specific management actions that occur under current operations.

[161] Lloyd, John “Jay”, Sandra S. Flint, Daniel Leonard, Leesa Gratreak, Michael Connolly, and Beniamino Volta
2020 Devil Canyon Project Relicensing, FERC Project No. 14797, Archaeological and Historical Built Environment Resources Survey, National Register of Historic Places Evaluation, and Finding of Effects, San Bernardino County, California. Prepared by HDR Engineering Inc. Sacramento, CA. Submitted to California Department of Water Resources, Hydropower License Planning and Compliance Office, Sacramento, CA

Table 3.18-1. Sites of Cultural Importance to Tribes in the Proposed Project Area

Primary No.	Trinomial	Description	Timing of Potential Impacts (Baseline conditions or proposed Project)	Ongoing Site-Specific Management Measures
P-36-000174	CA-SBR-174	Prehistoric BRM, lithic scatter (manos, metates)	During initial dam construction. Under current management protocols (avoidance), undetermined ongoing impacts.	Manage site as if NRHP and CRHP-eligible by avoidance of O&M activities and conduct routine monitoring for continued avoidance.
P-36-000501	CA-SBR-501/H	Prehistoric BRMs, manos, mortars, projectile points, pestle, historical refuse[1]	During inundation after initial dam construction. Under current management protocols (avoidance), undetermined ongoing impacts.	Manage site as if NRHP and CRHP--eligible by avoidance of O&M activities. Visit the site during any planned scheduled reservoir drawdown/low water levels that exposes the site to update the site record, assess site condition and integrity, and consider NRHP and CRHR eligibility.
P-36-003033	CA-SBR-3033/H	Prehistoric/ Historical Mojave Trail, CHL No. 963[1]	Unknown. Resource location could not be verified. The trail is plotted on the research maps as following the West Fork Mojave River through Silverwood Lake and may be inundated by the lake, may be destroyed by initial Project construction outside of the lake, or may be mis-plotted. Under current management protocols (avoidance), undetermined ongoing impacts.	Visit the trail's plotted location on research maps when planned Silverwood Lake drawdowns expose the SCCIC[1] plotted location to confirm the site's presence/location, update the site record if present, assess the site condition and integrity, and consider NRHP and CRHP eligibility.
P-36-008913	CA-SBR-8913	Prehistoric flaked stone scatter with milling and other tools[1]	During inundation after initial dam construction. Under current management protocols (avoidance), undetermined ongoing impacts.	Manage the site as if NRHP and CRHP-eligible by avoidance of O&M activities. Visit the site during any planned reservoir drawdown/ low water levels that exposes the site; update the site record, assess site condition and integrity, and consider NRHP and CRHR eligibility.

[1]SCCIC: South Central Coastal Information Center
Key: BRM = Bedrock Mortar, CHL = California Historical Landmark, O&M = Operations & Maintenance, NRHP = National Register of Historic Places, CRHR = California Register of Historical Resources

Sites P-36-000501 and P-36-008913 are completely submerged by Silverwood Lake, and P-36-003033 was not relocated during relicensing study efforts but was previously mapped as passing through the reservoir. Under current conditions, these sites may be affected by inundation – via erosion, deposition, and relocation of associated artifacts that can occur as a result of wave action potentially caused by boats and high winds or other factors. However, it is unknown whether they are being damaged or if being inundated is helping preserve the sites. Analysis of the effects of inundation would require that these sites be assessed if they become exposed. Under current conditions, the existing documentation for each site would be updated including CRHR and NRHP evaluations, if necessary, to assess operational impacts under current conditions. Additionally, in accordance with current DWR practices, archaeological monitoring protocols for activities during scheduled outages may be implemented in these areas due to the proximity of unevaluated cultural resources sites. Under the proposed Project, such protective measures would not change but they would be codified and enhanced in the license in the form of an HPMP.

Ongoing Tribal Consultations/AB 52 Compliance Status

Pursuant to PRC § 21080.3.1 and in support of AB 52, consultation efforts with Native American tribal contacts have been incorporated in the cultural resources investigation of the proposed Project APE, as “California Native American tribes traditionally and culturally affiliated with a geographic area may have expertise concerning their tribal cultural resources” (PRC § 21080.3.1[a]). Pursuant to PRC § 21080.3.1(b), lead agencies are required to send notifications of proposed projects to California Native American tribes that have requested in writing to be informed of proposed projects for consultation; to date, the San Manuel and the Morongo have requested to be notified of opportunities for consultation with DWR on proposed projects under the PRC.

In order to compile a thorough list of potentially interested tribal contacts for current consultation efforts, DWR contacted the NAHC on August 17, 2020 to request a list of California Native American tribes and organizations that may have an interest in the proposed Project pursuant to PRC § 21080.3.1(c), as well as to request a search of the Sacred Lands Files. The NAHC responded on August 18, 2020 providing a list of tribes that have cultural and traditional affiliation to the proposed Project area. The list of potentially interested tribal contacts compiled from these efforts is provided below in Table 3.18-2. The NAHC also reported that their search of the Sacred Lands Files yielded positive results and requested that the tribes be contacted for more information.

Table 3.18-2. Tribal Contacts Identified Through Relicensing Efforts and Coordination with the NAHC

Tribal Organization	Contact Name and Position
Agua Caliente Band of Cahuilla Indians	Patricia Garcia-Plotkin, Director
Agua Caliente Band of Cahuilla Indians	Jeff Grubbe, Chairperson
Chemehuevi Indian Tribe	Charles Wood, Chairperson
Gabrieleño Band of Mission Indians – Kizh Nation	Andrew Salas, Chairperson
Gabrieliño Tongva Indians of California Tribal Council	Robert Dorame, Chairperson
Gabrieliño/Tongva Nation	Sandonne Goad, Chairperson
Gabrieleño/Tongva San Gabriel Band of Mission Indians	Anthony Morales, Chairperson
Gabrieliño-Tongva Tribe	Charles Alvarez
Morongo Band of Mission Indians	Robert Martin, Chairperson
Quechan Tribe of the Fort Yuma Reservation	Jill McCormick, Tribal Historic Preservation Officer
San Manuel Band of Mission Indians	Jessica Mauck, Director of Cultural Resources
San Manuel Band of Mission Indians	Lee Clauss, Vice president of Tribal Affairs, Tribal Historic Preservation Officer
Santa Rosa Band of Cahuilla Indians	Lovina Redner, Tribal Chair
Serrano Nation of Mission Indians	Mark Cochrane, Co-Chairperson
Serrano Nation of Mission Indians	Wayne Walker, Co-Chairperson
Soboba Band of Luiseno Indians	Scott Cozart, Chairperson
Twenty-Nine Palms Band of Mission Indians	Darrel Mike, Chairperson

DWR subsequently mailed courtesy letters on September 11, 2020, to potentially interested tribes identified in Table 3.18-2 that had not yet submitted requests for notification in order to provide an opportunity for them to do so from DWR pursuant to PRC § 21080.3.1(b)(1) and consistent with DWR's Tribal Engagement Policy and the California Natural Resources Agency's Tribal Consultation Policy. DWR also followed up with phone calls on October 1, 2020 to verify that the letters were received. As a result of these courtesy correspondence efforts, the following tribes indicated they did not wish to request consultation for this project: Agua Caliente Band of Cahuilla Indians, Quechan Tribe of the Fort Yuma Reservation, and the Santa Rosa Band of Cahuilla Indians. The tribes, tribal chairpersons, and designated tribal representatives that requested consultation in writing pursuant to PRC § 21080.3.1(b)(1) following courtesy correspondence efforts are provided below in Table 3.18-3. The remaining tribal contacts have not provided a response to the courtesy correspondence efforts nor requested notification of projects pursuant to PRC § 21080.3.1(b)(1).

Table 3.18-3. Tribal Contacts for Consultation Regarding the Proposed Project

Tribal Organization	Contact Name and Position
Gabrieleño/Tongva San Gabriel Band of Mission Indians	Anthony Morales, Chairperson
Morongo Band of Mission Indians[1]	Robert Martin, Chairperson
San Manuel Band of Mission Indians[1]	Jessica Mauck, Director of Cultural Resources
San Manuel Band of Mission Indians[1]	Lee Clauss, Vice president of Tribal Affairs, Tribal Historic Preservation Officer
Serrano Nation of Mission Indians	Mark Cochrane, Co-Chairperson
Serrano Nation of Mission Indians	Wayne Walker, Co-Chairperson

[1]This tribe has requested notification of DWR's projects pursuant to PRC § 21080.3.1(b)(1). All other contacts have requested consultation for the proposed Project, but not specifically pursuant to PRC § 21080.3.1(b)(1).

In addition, DWR sent formal notification letters on October 22, 2020 with an invitation to consult on the proposed Project to all contacts identified in Table 3.18-3, pursuant to PRC § 21080.3.1(d). The formal letters included a brief project description and maps of the proposed Project vicinity and facilities. The Morongo Band of Mission Indians' Tribal Historic Preservation Officer, Ms. Ann Brierty, responded to the notification letter via email to DWR on November 10, 2020 requesting continued consultation under AB 52. Ms. Brierty also confirmed the Tribe's interest in consultation under AB 52 via phone call with DWR on November 23, 2020. The Serrano Nation of Mission Indians' Co-Chairman, Mr. Mark Cochrane, indicated via phone call with DWR on November 23, 2020 that the Tribe has no concerns with the proposed Project and will not be requesting consultation under AB 52. However, the Tribe did request to be apprised if anything culturally sensitive is discovered. DWR followed up via telephone and email with the Gabrieleño/Tongva San Gabriel Band of Mission Indians' Chairman, Mr. Anthony Morales, on November 23, 2020 during which Chairman Morales indicated that the phone call was sufficient and the Tribe will not be requesting further consultation under AB 52. DWR contacted San Manuel via email on October 26, 2020 and November 17, 2020. The San Manuel Director of Cultural Resources Management, Ms. Jessica Mauck, responded on November 21, 2020 and indicated that San Manuel will not be requesting AB 52 consultation. However, Director Mauck did request to review the cultural and tribal resources sections of the draft CEQA document. DWR confirmed that the San Manuel will remain on the distribution list for the CEQA document.

It has been made clear by Native American tribal contacts that the general vicinity of the proposed Project, along with the proposed Project area itself, have been used and occupied by Native Americans over a long period and the area is important to Native American groups today. As shown in Table 3.18-1, there are sites of cultural importance to the San Manuel that may be considered TCRs. In accordance with existing cultural resource practices, when they become exposed by water levels of 50 vertical feet or more below the surveyed elevation of 3,345 feet, these sites will be visited, and the status of their condition will be documented.

3.18.3 Environmental Impact Analysis

Would the proposed Project:

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21047 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

> **i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or**
>
> **ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Finding: Less-than-Significant Impact

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a TCR is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a TCR would be materially impaired. The significance of a TCR would be substantially impaired when a project demolishes or materially alters – in an adverse manner – those physical characteristics of a TCR that convey its significance and that justify its eligibility for inclusion in the NRHP, the CRHR, a local register of historical resources pursuant to PRC § 5020.1(k), or historical resources surveys meeting the requirements of PRC § 5024.1(g).

The proposed administrative changes, including the proposed boundary adjustment will not impact a known TCR because none exist in the area being eliminated from the proposed Project area and the protections afforded by DWR under the existing Cultural Resources Management Plan (DWR 1997). The four archaeological sites considered as potentially NRHP-eligible to the San Manuel are not located in the area being eliminated from the proposed Project area, and no specific plant collecting areas have been identified for the plants identified as culturally important to the San Manuel.

Similarly, implementation of the recreation facilities improvements and the proposed PM&Es would not impact any known TCR as no TCR have been identified in the recreation facility improvement areas, no specific plant collecting areas for any of the culturally important plants identified by the San Manuel have been identified within the proposed Project APE, and the four archaeological sites considered as potentially NRHP-eligible to the San Manuel are currently being managed through avoidance.

Based on the list of plants provided by the San Manuel, it is possible that future collecting areas may be identified.

However, previously unidentified TCRs may be inadvertently uncovered during proposed ground-disturbing activities associated with the proposed recreation facilities upgrades or implementation of the PM&Es (e.g., Measures GS1 [Erosion and Sediment Control Plan], WR2 [Hazardous Materials Management Plan], TR1 [IVMP], RR1 [RMP], LU1 [Transportation System and Management Plan], LU2 [Fire Prevention and Response Plan], VR1 [Visual Resources Management Plan], and CR1 [HPMP]). If these resources were to represent a TCR as defined by CEQA, a significant impact could occur if avoiding such impacts was not feasible. The current general assessment and avoidance measures outlined in Section 2.3.4.7 include provisions for addressing inadvertent discoveries. These minimum measures would not change under the proposed Project, and therefore the potential impact to inadvertently discovered TCRs is considered less than significant.

Given the findings of this impact analysis, the addition of the HPMP PM&E is not required to reduce a potential historic resource impact to less than significant because, as a standard practice, DWR already implements general assessment and avoidance measures for ground disturbing activities and, thus, additional mitigation is not necessary.

Although not necessary as mitigation given existing cultural resource protection practices, the HPMP further codifies comprehensive site protections and a mitigation strategy program that will be in place throughout the life of the license, as well as incorporates consultation with Native American tribes and agencies. Specifically, the HPMP contains specific measures regarding (among others): (1) avoidance procedures, (2) ongoing review and analysis of the O&M activities under the proposed Project, (3) the NRHP and CRHR evaluation of archaeological sites including TCP/TCRs, (4) the thresholds for when an activity becomes a new project (i.e. a new undertaking), and (5) procedures to be followed in the case of an inadvertent discovery of an archaeological resource including TCP/TCRs, or exposure of human remains.

Therefore, the proposed Project would result in a less-than-significant impact related to Tribal Cultural Resources.

3.18.4 Mitigation Measures

Based on the impact analysis (see Section 3.18.3 Environmental Impact Analysis), the proposed Project's potential impacts to TCRs, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.19 UTILITIES AND SERVICE SYSTEMS

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater, or stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supply available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that is has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.19.1 Regulatory Setting

The questions listed in the table above include references to utilities and service systems. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.19.1.1 Federal

Clean Water Act

The CWA (33 U.S.C 1251 et seq.) sets forth national goals that waters must be "fishable, swimmable" waters (CWA §101 [a][2]). To enforce the goals of the CWA, the EPA established the NPDES program – a national program for regulating and administering permits for discharges to receiving waters, including non-point sources. Under CWA § 1251 (b), Congress and EPA must recognize and preserve the primary responsibilities and rights of states concerning the reduction of pollution in water resources.

3.19.1.2 State

Porter-Cologne Water Quality Control Act of 1969

The State of California established the SWRCB and the nine RWQCBs to "preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations". Through the enforcement of the Porter-Cologne Act, the nine RWQCBs and SWRCB determine the beneficial uses of the waters (surface water and groundwater) of the State, establishes narrative and numerical water quality standards, and initiates policies relating to water quality. The SWRCB and RWQCBs, are authorized to prescribe waste discharge requirements for the discharge of waste, which may impact the waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by the Porter-Cologne Act to protect water quality. The SWRCB issues both general construction permits and individual permits under the auspices of the federal NPDES program.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation (i.e., recycling) and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated within the respective county plan. They must promote – in order of priority – source reduction, recycling and composting, and environmentally safe transformation and land disposal. Cities and counties that do not meet this mandate are subject to fines of $10,000 per day.

3.19.1.3 Local

The City and County of San Bernardino General Plans have several goals and polices that are related to utilities and services systems; however, none of these goals and policies are directly relevant to the proposed Project.

3.19.2 Environmental Setting

The proposed Project consists mostly of undeveloped areas with service utility facilities (including associated infrastructure for water, wastewater, and solid waste) located within the Silverwood Lake SRA and the developed areas associated with the Cedar Springs Dam, and the Devil Canyon Powerplant. Water, wastewater, and solid waste services are provided and maintained by the DPR in the Silverwood Lake SRA including in day uses areas, campgrounds, and associated administrative structures within the Silverwood Lake SRA. Water, wastewater, and solid waste facilities are limited to uses in restrooms, campgrounds, and within the limited structures that are within the Silverwood Lake SRA. Additionally, Southern California Edison provides electrical services within San Bernardino County and Southern California Gas Company provides natural gas services within San Bernardino County (Southern California Edison 2020[162]; Southern California Gas Company 2016[163]). Electricity and natural gas needs are limited in recreation areas where there are existing lights and structures. The proposed Project consists of the continued operation of a power recovery facility which provides clean and reliable power that offsets the costs of transporting and delivering water to the southern California area.

3.19.3 Environmental Impact Analysis

Would the proposed Project:

a) Require or result in the relocation or construction of new or expanded water, wastewater, or stormwater drainage, electrical power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Finding: Less-Than-Significant Impact

The proposed Project is the continued operation of a power recovery project, and DWR does not propose to construct any new or relocate any existing water, wastewater, stormwater drainage, electrical, natural gas, or telecommunications facilities beyond that which currently exist at the proposed Project area. The reduction in the overall boundary of the existing DCPD would not result in any changes to utilities since there are no utilities in these areas. Any scheduled physical alteration of a facility within the proposed Project area would be aesthetic in nature (e.g., painting or recoating). Additionally, all proposed Project recreational facilities are publicly owned and managed by DPR. As such, DPR is responsible for maintaining and repairing, as needed, all facilities and equipment associated with: (1) potable and non-potable (irrigation) water systems; (2) wastewater collection and treatment in compliance with California RWCQB NPDES permits; (3) Silverwood Lake SRA's electrical distribution system; and (4) waste

[162] Southern California Edison. 2020. Our Service Territory. Available online: https://www.sce.com/about-us/who-we-are/leadership/our-service-territory. Accessed: August 2020.
[163] Southern California Gas Company. 2016. Maps Showing Local Service Zones. Available online: https://www2.socalgas.com/regulatory/tariffs/tm2/pdf/Local_Svc_Zones.pdf. Accessed: August 2020.

disposal services. Therefore, as no additional demand for utilities would occur under the proposed Project, a less-than-significant impact would occur.

DWR does not propose to change operation and routine maintenance activities. The only material adjustment to operation and routine maintenance is the addition of the PM&Es anticipated to be required by the new license. PM&E measure LU3 (Project Safety Plan) would incorporate additional features that may result in slight increases to energy demand. Specifically, this PM&E measure would include installation of lights and sirens which would require additional energy to operate. However, these additional energy-consuming features would be extremely small, relative to the existing operations within the proposed Project area. No additional construction or relocation of new or expanded electrical power facilities would be required to implement these features, as the energy needed to operate these features would be provided through the existing power grid facilities in the area. Additionally, these new features that would require power, as well as any other utility improvements would likely use more energy efficient systems than what currently exists on the site, and therefore may result in a reduction in energy consumption. Therefore, the proposed Project would result in a less-than-significant impact related to relocation and construction of new or expanded water, wastewater, solid waste, electrical power, natural gas, and telecommunications facilities.

b) Have sufficient water supply available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Finding: Less-than-Significant Impact

As discussed under question ”a” above, DWR proposes no changes to existing DCPD operations that would affect water quantity. The proposed Project would continue to generate power using SWP water as it is delivered to DWR’s water contractors in southern California. No local surface water would be used for power generation. The proposed Project’s SWP water is fully allocated for delivery to southern California water users; the natural flow entering Silverwood Lake is fully appropriated per SWRCB Decision 1619 and adjudicated per the Mojave River Court Decree. The magnitude and timing of the local surface water deliveries are managed by the basin’s Watermaster and would continue to be delivered per the agreements with MWA and LFR, which assist the Mojave River Decree Watermaster with Decree management. Continuation of water surface elevation limitations described in the 1968 USFS MOU, as amended, and 2003 CDFW MOU, would assure recent reservoir operations will continue.

Additionally, the proposed recreation facility upgrades do not include expansions and thus will not trigger the need for additional water supply. Water for these sites will continue to be supplied by existing sources.

The other PM&Es in the proposed Project do not entail increases in water demand above baseline conditions. For example, Measure LU2 (Fire Prevention and Response Plan) codifies existing practices but does not trigger increased water uses. Rather, emergency response under those plans will continue as it has under current operations,

and water supply needs for fire response will continue to be based on the fire conditions. Similarly, the other PM&Es are protective measures that do not trigger increased use or water supply needs. The PM&Es, therefore, would not result in any substantial changes to water supplies. Given the above, impacts relating to water supply available to serve the proposed Project would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that is has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Finding: Less-than-Significant Impact

The proposed Project does not include the construction of additional facilities that would affect wastewater treatment. Improvements to the recreation facilities as part of the proposed Project would not include increases in flows or capacity of wastewater treatment (i.e., at restrooms or structures), and increases in flows or capacity would not occur at any of the other facilities within the proposed Project area. Additionally, the proposed PM&Es for the proposed Project would not result in any substantial changes to wastewater capacity or increases in wastewater flows. Therefore, since no additional demand for wastewater treatment would occur beyond current conditions, impacts to wastewater treatment capacity would be less than significant.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Finding: Less-than-Significant Impact

The proposed Project would not result in substantial new sources of solid waste generation (i.e., increased capacities at campsites or large new construction activities); therefore, it would not result in any increases in solid waste that could be in excess of State or local standards or in excess of the capacity of local infrastructure. Waste generated within the proposed Project area would be managed similar to how it is managed under existing conditions through current management practices, which utilize trash receptacles and bins within day use areas, campsites, and the few structures that occur within the proposed Project area. Several of the PM&Es would require waste management activities. Specifically, Measure GS1(Erosion and Sediment Control Plan) includes waste management measures for the ongoing erosion and sediment control activities within the proposed Project area. These erosion and sediment control activities would not result in a change from existing conditions related to the creation of additional solid waste that could be in excess of standards and local infrastructure. The waste created from these erosion and sediment control activities would not result in additional waste beyond what currently occurs as part of DWR's existing maintenance activities within the proposed Project area. In addition, Measure RR1(RMP) includes the addition of waste receptacles, increased waste collection frequency, and signage to help reduce littering and litter accumulation around Silverwood Lake. The proposed Project will not result in increased waste generation beyond existing conditions.

Therefore, impacts related to the generation of solid waste in excess of State or local standards or in excess of local infrastructure would be less than significant.

e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Finding: Less-than-Significant Impact

The DCPD facility operations comply with all federal, State, and local management and reduction statues and regulations related to solid waste, including AB 939 which includes solid waste diversion requirements. Under the proposed Project, DWR would continue to operate the proposed Project as it has been historically. The proposed upgrades at the recreation sites, if waste is generated, will comply with AB 939. Therefore, the potential impact is considered to be less than significant.

3.19.4 Mitigation Measures

Based on the impact analysis (see Section 3.19.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to Utilities and Service Systems, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.20 WILDFIRE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

3.20.1 Regulatory Setting

The questions listed in the table above include references to adopted emergency plans, State responsibility areas or lands classified as very high fire hazard severity zones, downslope flooding, and post-fire slope instability. As such, the following regulations, plans, and policies provide relevant definitions and regulatory context for the impact discussion that follows.

3.20.1.1 Federal

CFR Title 36, Chapter II, Part 261 discusses actions that are prohibited on non-NFS lands and NFS lands that could result in fire damages to the NFS. These include (a) carelessly or negligently throwing or placing any ignited substance or other substance that may cause a fire, (b) firing any tracer bullet or incendiary ammunition; (c) causing timber, trees, slash, brush, or grass to burn except as authorized by permit; (d) leaving fire without completely extinguishing it; (e) causing and failing to maintain control of a fire that is not a prescribed fire that damages the NFS; (f) building, attending, maintaining, or using a campfire without removing all flammable material from around the campfire adequate to prevent its escape; and (g) Negligently failing to maintain control of a prescribed fire on non-NFS lands that damages the NFS.

Executive Oder 13855 (December 21, 2018)

EO 13855 promotes active management of America's forests, rangelands, and other federal lands to improve conditions and reduce wildfire risk. The EO emphasizes that federal agencies must collaborate with State and local institutions and incorporate active management principles into all land management planning efforts in order to address the challenges of wildland fire.

Secretary Order 3374 – Implementation of the John D. Dingell, Jr. Conservation, Management, and Recreation Act (March 27, 2019)

Secretarial Order 3374 established a Department of the Interior task force for the Implementation of the Dingell Act, which was established on March 12, 2019. The Dingell Act lays out provisions for various programs and activities affecting the management and conservation of natural resources on federal lands, including wildland fire operations.

3.20.1.2 State

California Fire Safety Regulations (14 CCR, Division 1.5, Chapter 7, Subchapter 2) apply to State Responsibility Areas during the time of year designated as having hazardous fire conditions. CAL FIRE has developed a fire hazard severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazard in all State Responsibility Areas. A State Responsibility Area is defined as the part of the State where CAL FIRE is primarily responsible for providing basic wildland fire protection assistance. Areas under the jurisdiction of local fire protection services are considered to be Local Responsibility Areas, or if on federal lands, are considered Federal Responsibility Areas.

During the fire hazard season, these regulations include the following: (1) restrict the use of equipment that may produce a spark, flame, or fire; (2) require the use of spark arrestors on any equipment that has an internal combustion engine; (3) specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and (4) specify fire suppression equipment that must be provided on-site for various types of

work in fire-prone areas. CAL FIRE has primary responsibility for fire protection within State Responsibility Areas.

3.20.1.3 Local

Fire protection in San Bernardino County is provided by the San Bernardino County Fire Department. Fire protection in San Bernardino County is guided by policies and principles in the San Bernardino County General Plan (San Bernardino County 2007).[164]

3.20.2 Environmental Setting

The DCPD is located in a vegetated area in northern San Bernardino County. Vegetation in the Silverwood Lake SRA and surrounding NFS lands ranges from sparse creosote, chamise, and California buckwheat at lower elevations, to oak and pinyon woodland and scattered mixed conifer, including important bigcone Douglas-fir stands, at higher elevations. Vegetation in the Devil Canyon Powerplant vicinity includes coastal sage scrub, mixed chaparral, stands of bigcone Douglas-fir, canyon live oak, and Coulter pine at lower elevations. Jeffrey, ponderosa, sugar and knobcone pine, white fir, and black and canyon live oak are present at higher elevations. Frequent fires have converted coastal sage scrub and chaparral to non-native grasslands along the lower slopes. Non-native invasive weeds are present.

Because the DCPD includes overlapping jurisdictions, fire suppression within the proposed Project boundary is the responsibility of three agencies, depending on the location within the DCPD:

1. Fire suppression in the Silverwood Lake SRA is managed by CAL FIRE. This area has three separate designations: Moderate, High, and Very High Fire Hazard State Responsibility Areas

2. Fire suppression on National Forest lands (i.e., the SBNF) is the responsibility of USFS as a Federal Responsibility Area (CAL FIRE 2007)[165]

3. The Devil Canyon Powerplant and associated facilities are within the jurisdiction of the City of San Bernardino's Fire Department. This area is designated as a Very High Fire Hazard Severity Zone Local Responsibility Area (CAL FIRE 2008)[166]

[164] San Bernardino County. 2007. San Bernardino County 2007 General Plan. Available online: http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf. Accessed: August 20, 2020.
[165] CAL FIRE. 2007. Fire Hazard Severity Zones in SRA. Available online: https://osfm.fire.ca.gov/media/6781/fhszs_map62.pdf. Accessed: August 20, 2020.
[166] CAL FIRE. 2008. Very High Fire Hazard Severity Zones in LRA. Available online: https://osfm.fire.ca.gov/media/6783/fhszl_map62.pdf. Accessed: August 20, 2020.

Fire restrictions currently exist at Silverwood Lake SRA during peak fire season, and include restrictions or bans on campfires and stoves, fireworks, and smoking. DWR currently implements public safety warning devices and EAPs at DCPD facilities.

3.20.3 Environmental Impact Analysis

If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the proposed Project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Finding: No Impact

The DCPD is located within a State Responsibility Area and is classified, in part, as having a very high fire severity rating, where a potential impact could occur if the proposed Project were to substantially impair emergency response or emergency evacuation. Administrative changes associated with the proposed Project include FERC boundary adjustments, administrative designation of Primary Project Roads, and the addition of the existing lake level gage DWR proposes to include as a DCPD facility under the new license; however, these administrative changes do not include any property ownership changes. Therefore, existing adopted emergency response or evacuation plans for each property type – federal, State, and local – would remain the same. The proposed administrative changes would not impair an adopted emergency response or emergency evacuation plan.

Construction of recreational facility upgrades would be short-term and temporary, and would not impede access or emergency evacuation routes. The proposed Project does not include new operation or routine maintenance activities, with the exception of the addition of 12 PM&E measures. The implementation of these PM&Es will be license-required and, thus, a part of the proposed Project. The PM&Es are primarily associated with erosion control, aquatic invasive species controls, and wildlife, vegetation, and historic properties protections. They do not entail removal of fire or evacuation access, or elimination of existing fire prevention or protection measures. The PM&Es would, therefore, not impair federal, State, or local emergency response and evacuation plans.

The proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. As a result, no impact would occur. Therefore no mitigation is required. PM&E Measures LU1 (Transportation System Management Plan), LU2 (Fire Prevention and Response Plan), and LU3 (Project Safety Plan) would codify and enhance the existing measures for fire control, fire prevention and response, and emergency evacuation and are expected to further reduce the level of this potential impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Finding: Less-than-Significant Impact

The assessment included herein applies to all DWR staff and recreationists who use the DCPD-associated facilities for work, camping, or day use recreation.

Administrative changes associated with the proposed Project, including the FERC boundary adjustment, administrative designation of Primary Project Roads, and the addition of the existing lake level gage DWR proposes to include as a DCPD facility under the new license, would not exacerbate wildfire risks or exposure of DCPD staff or recreationists to pollutant concentrations from wildfires or from controlling the spread of wildfire. These administrative changes are reconfiguring areas regulated by FERC rather than changing any DCPD use that could result in human exposure to fire risk. Recreation sites within the proposed Project area are not located on steep topography; however, they currently are and will continue to be exposed to Santa Ana winds when such conditions prevail in southern California.

The proposed Project does not include expansion of recreation facilities that could result in any increased exposure of recreationists or DWR staff to fire-related pollutant or uncontrolled fire risks. The proposed recreation facility upgrades are not intended to increase capacity. The anticipated license-required PM&E measures do not entail activities that would put people at increased risk of wildfire pollution exposure or controlled wildfire. Rather, the PM&Es are proposed to protect wildlife, vegetation, and cultural resources, and to reduce erosion. As such, the potential impacts from administrative changes, recreation site upgrades, and PM&Es are considered to be less than significant. Therefore, no mitigation is required. PM&E Measures LU1 (Transportation System Management Plan), LU2 (Fire Prevention and Response Plan), and LU3 (Project Safety Plan) would codify and enhance the existing measures for fire control, fire prevention and response, and emergency evacuation and are expected to further reduce the level of this potential impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Finding: Less-than-Significant Impact

DWR and fire protection agencies currently maintain existing powerlines, roads, and fuel breaks. No new powerlines, roads, or fuel breaks would be installed under the proposed Project. The FERC boundary adjustment, the addition of Primary Roads to the license, and the addition of the existing gage DWR proposes to include as a DCPD facility under the new license are administrative changes that do not include additional infrastructure or any changes to fire protection responsibilities. Therefore, these

administrative changes would not exacerbate fire risk or cause potential fire-related impacts to the environment.

Other routine maintenance and associated construction activities under the proposed Project, such as recreation facility upgrades to existing infrastructure, may require temporary increases in contractor traffic and equipment use above baseline conditions. In addition, the installation of barriers to reduce dispersed recreation use would limit public access to vegetated areas, but also may require operation of equipment to place the barriers in these vegetated areas where fire risk is higher. However, PM&E Measures LU1 (Transportation System Management Plan), LU2 (Fire Prevention and Response Plan), and LU3 (Project Safety Plan) would codify and enhance the existing measures for fire control, fire prevention and response, and emergency evacuation and are expected to reduce potential impacts to a less-than-significant level.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Finding: Less-than-Significant Impact

Administrative changes include the adjustment of the FERC boundary to encompass only areas where there are hydropower and recreation activities, administrative designation of Primary Project Roads, and the addition of the existing lake level gage DWR proposes to include as a DCPD facility under the new license. Adjustments in the size of the area regulated by FERC will not expose people to post-wildfire risks because there are no occupants in the areas excluded from the FERC boundary. Additionally, the proposed modification does not change the land ownership and, thus, wildfire and post-wildfire management responsibilities remain unchanged.

The recreation facility upgrades do not include capacity expansions, and operation of these facilities will continue to comply with relevant fire codes. The proposed Project could include a minor increase in the number of impervious surfaces resulting from the addition of concrete pads associated with recreational facility upgrades, thereby potentially contributing to post-wildfire runoff. However, this increase would be negligible over the entire DCPD area. As such, the recreation facility upgrades would not expose people or structures to significant wildfire or post-wildfire risks beyond existing conditions.

Operation and routine maintenance activities are not proposed to change, with the exception of the anticipated inclusion of required PM&Es in the license. Some of these PM&Es include ground disturbance and hazard tree removal. Measure GS1(Erosion and Sediment Control Plan) codifies existing erosion and sediment control BMPs post-disturbance and, thus, would continue current slope stability and erosion control practices, rather than exacerbate instability or run-off issues. Since, as described above, the administrative changes, recreation upgrades, and PM&Es do not increase the exposure of people or structures to significant risks – including downslope or downstream flooding or landslides as a result of runoff, post-wildfire slope instability, or

drainage changes – this potential impact is considered to be less than significant. Therefore, no mitigation is required. PM&E Measures LU2 (Fire Prevention and Response Plan), and LU3 (Project Safety Plan) would codify and enhance the existing measures and are expected to further reduce the level of any wildfire-related flooding or landslide impact.

3.20.4 Mitigation Measures

Based on the impact analysis (see Section 3.20.3 [Environmental Impact Analysis]), the proposed Project's potential impacts to the risk of Wildfires, when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the impacts of past projects, the impacts of other current projects, and the effects of probable future Projects)?	☐	☐	☒	☐
c) Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?	☐	☐	☐	☒

3.21.1 Environmental Impact Analysis

Would the proposed Project:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Finding: Less-than-Significant Impact

The proposed Project's potential to degrade the quality of the environment was assessed throughout Section 3.0 of this IS/ND. Potential environmental degradation in all sections, including biological resources and cultural resources, was determined to be less than significant given the proposed Project would generally entail a continuation of current O&M and associated protective measures. For example, the hydropower generation will remain consistent with current conditions under the proposed Project. The water levels and releases will also be managed as they are under current conditions. The recreation improvements do not entail increases in capacity. In addition, recreational use has declined since the 1980s.

The potential impacts of the proposed Project were assessed with and without the PM&E measures included in the proposed Project design. PM&Es were also separately evaluated for their potential to degrade the environment (including biological and cultural resources) and were not found to result in a potentially significant impact. Therefore, no mitigation is required.

The above analysis determined that the proposed PM&Es would not be required as mitigation measures under CEQA to offset the proposed Project's potentially significant impact because the relevant impacts were determined to be less than significant. This includes the following possibilities: degradation of the environment, reduction of fish or wildlife habitat, fish or wildlife population reduction to below self-sustaining levels, plant or animal community extirpation, endangered plant or animal range reduction, or loss of California history or prehistory data. Rather, the PM&Es would codify and enhance existing practices. The PM&Es include measures and operational plans designed to further protect environmental resources beyond the simple continuation of current practices, even if the relevant impacts are determined to be less than significant under CEQA. Specifically, these PM&Es include the protection of species, habitats, cultural resources, historical resources, and other environmental resources as described in Section 2.0, Project Description. The following PM&E's, while not required to reduce any potential impacts to a less-than-significant level, include proposed Project actions that protect or enhance the quality of the environment within the proposed Project boundary:

- WR1: Silverwood Lake Minimum Pool and Water Surface Elevations, includes restrictions to surface elevation fluctuations which limit lake level operations that could result in impacts to fisheries or recreation.

- WR2: Hazardous Materials Management Plan, requires proper handling of hazardous materials in a way to limit accidental runoff or releases that could negatively impact water quality.

- AR1: Silverwood Lake Fish Stocking Measure, continues trout fish stocking in Silverwood Lake which provides ongoing recreation.

- AR2: Aquatic Invasive Species Management Plan, which prevents the introduction or spread of AIS in proposed Project-controlled waters through early detection measures that identify and monitor for AIS.

- GS1: Erosion and Sediment Control Plan, limits erosion and sedimentation from entering waterways through continued implementation of stormwater and bank stabilization controls which in turn prevents the loss or degradation of aquatic and terrestrial habitat.

- TR1: IVMP, controls the spread of non-native invasive plant species through surveying, documentation, avoidance and long-term management which limits the potential for extinctions of native plants and animals, promotes biodiversity, and prevents competition with native organisms for limited resources and alteration of habitats.

- LU1: Transportation System Management Plan, restricts uses and maintenance to existing roads which keeps vehicle traffic on the roadways and limits the potential for off-road use or habitat degradation.

- LU2: Fire Prevention and Response Plan, protects habitats, species and other resources from the start or exacerbation of wildfires.

- CR1: HPMP and TR1: IVMP, provide barriers and other minor modifications and protections that prevent impacts to cultural and historical resources from proposed Project management activities.

As compared to existing baseline conditions, the proposed Project includes no mechanisms that would reasonably degrade the quality of the existing environment, substantially reduce existing habitat for fish or wildlife species, cause an existing fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate an existing plant or animal community. As discussed in Section 3.4, Biological Resources, the proposed Project would not reduce the number or restrict the range of existing rare or endangered plant or animal species or eliminate important examples of the major periods of California history or prehistory. No removal or encroachment of existing habitats beyond what currently exists on the site is anticipated as a result of implementation of the new license. Additionally, as discussed in Section 3.5, Cultural Resources, the proposed Project boundary has anticipated important historic and archaeological resources, which would be avoided, so the proposed Project would not eliminate important examples of the major periods of California history or prehistory. Construction and ground disturbance as a result of the proposed Project would be limited in nature, occurring within previously disturbed areas.

As a result, the proposed Project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or

endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, the impact would be less than significant.

b) Does the project have impacts that are individually limited, but cumulative considerable? ("Cumulative considerable" means that the incremental impacts of a project are considerable when viewed in connection with the impacts of past projects, the impacts of other current projects, and the effects of probable future Projects)?

Finding: Less-than-Significant Impact

A cumulative impact could occur if the proposed Project would result in an incrementally considerable contribution to a significant cumulative impact when factoring in past, present, and reasonably foreseeable future projects for each resource area.

Past, present, and reasonably foreseeable projects in the geographic scope of the proposed Project include future restoration, grazing, and wireless communication projects within the SBNF as well as development projects within the City of San Bernardino and the existing and other hydroelectric facilities upgrades or licensing projects in the surrounding region (USFS 2020[167]; City of San Bernardino 2019[168]). These projects would be localized in nature and would be required to comply with all federal, State, and local laws, as they pertain to their relative jurisdictions.

The proposed Project would not contribute to significant cumulative impacts. There would be no impact on agriculture and forestry resources, mineral resources, population and housing, and less-than-significant impacts on aesthetics, biological resources, cultural resources, greenhouse gas emissions, energy resources, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, tribal cultural resources, utilities and service systems, and wildfire. When considered with past, present, and reasonably foreseeable future projects, the overlapping geographic scope of these resources is limited, and the proposed Project would not have a considerable contribution to a cumulative impact. As a result, cumulative impacts related to these resources would not occur.

Geology and soils impacts that are generated by construction activities would be short-term and limited by minimal construction workers traveling to the site and construction occurring in short durations needed to perform recreation improvements. These impacts could be compounded if construction were to occur at the same time or in a similar general area as the past, present, and reasonably foreseeable projects; however, the limited nature of construction activities for the proposed Project would not considerably contribute to any potential cumulative impacts. Additionally, operational impacts would

[167] USFS. 2020. San Bernardino National Forest Current and Recent Projects. Available online: https://www.fs.usda.gov/projects/sbnf/landmanagement/projects. Accessed: September 2020.
[168] City of San Bernardino. 2019. Community and Economic Development Department Major Projects List. Available online: http://www.sbcity.org/civicax/filebank/blobdload.aspx?blobid=23617. Accessed: September 2020.

be consistent with the existing operation under the license and would not have the potential to result in substantial impacts.

Potential impacts resulting from the proposed Project, when combined with these cumulative projects, would not result in cumulatively considerable impacts. Therefore, cumulative impacts would be considered less than significant.

The proposed Project would have a less-than-significant cumulative impact, when considered with and without the application of PM&Es. Therefore, no mitigation is required.

c) Does the project have environmental impacts which will cause substantial adverse impacts on human beings, either directly or indirectly?

Finding: Less-than-Significant Impact

The potential impacts of the proposed Project would not cause substantial adverse impacts on human beings, either directly or indirectly for the following reasons.

The potential impacts of the proposed administrative changes on the environment were assessed throughout Section 3.0. These changes were found not to have any significant adverse environmental impacts in general, and thus would not entail resultant substantial changes to human beings.

The proposed Project O&M activities would remain relatively consistent with existing practices. The risk of upset or facility failure was addressed in the geology and soils, hydrology and water quality, hazards and hazardous materials, and the wildfire sections of this document. These potential risks of failure were determined to be low probability and considered not to be a substantial adverse risk of impact to human beings. The dams must meet FERC and California Division of Safety of Dams safety requirements and the hydropower facilities including Cedar Springs Dam are required to meet FERC safety requirements.

The proposed Project improvements to existing DCPD facilities, including the recreation facility upgrades, were also analyzed in Section 3.0 of this document and were found to have less-than-significant impacts on the environment including temporary disturbance, traffic, noise and other temporary construction impacts. These impacts were found to be limited in size, magnitude and duration. As a result, they would not cause substantial adverse impacts on human beings. This potential impact is considered to be less than significant.

3.21.2 Mitigation Measures

Based on the impact analysis (see Section 3.21.1 [Environmental Impact Analysis]), the proposed Project's potential impacts relative to the Mandatory Findings of Significance (i.e. biological resources, cultural resources, cumulative impacts, and impacts to human beings), when analyzed with and without the related PM&Es, are considered less than significant. Therefore, no mitigation is required.

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5.0 REFERENCES CITED

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None

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None

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Appendix A

Assembly Bill 52 Consultation Correspondence

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APPENDIX A

Assembly Bill 52 Consultation Correspondence

This consultation correspondence appendix is reserved for containing any sensitive, confidential, and privileged information obtained through consultation with participating Native American tribes under Assembly Bill 52 (AB 52). As such, the appendix will be filed separately from the public administrative record for the Devil Canyon Project California Environmental Quality Act (CEQA) document and will be managed accordingly pursuant to Public Resources Code (PRC) Section (§) 21082.3(a), California Government Code § 6254(r), and 14 California Code of Regulations § 15120(d). The confidential information contained in this appendix will not be made available to the public without first obtaining the written consent of the contributing tribe(s) consistent with PRC § 21082.3.

As of the date of this IS/ND filing, DWR's AB 52 consultation with tribes and agencies is ongoing. Should there be any identified impacts to tribal cultural resources or agreed to mitigation measures identified as part of the AB 52 consultation process, then the final CEQA document will be updated accordingly.

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Appendix B

Devil Canyon Project – South Coast AQMD, Winter

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Devil Canyon Project

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	61.00	Acre	61.00	2,657,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - non-asphalt surfaces used to represent all of the camp sites, picnic areas, and day use areas to be rehabilitated/improved.

Construction Phase - Construction is assumed to occur concurrently at all sites with site prep overlapping with site grading.

Grading - Haul trucks added to Trips and VMT tab. Up to a total of 61 acres would be disturbed.

Trips and VMT - up to six trips per day over a 10 day period. Trip length of 50 miles used due to remote nature of the project sites.

Vehicle Trips - No trips associated with the proposed changes.

Consumer Products - no change in operational emissions

Landscape Equipment - no change in operational emissions

Construction Off-road Equipment Mitigation -

Area Coating - no change in operational emissions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	40.00	10.00
tblConstructionPhase	PhaseEndDate	7/30/2021	6/4/2021
tblConstructionPhase	PhaseEndDate	11/12/2021	7/2/2021
tblConstructionPhase	PhaseEndDate	2/26/2021	1/15/2021
tblConstructionPhase	PhaseStartDate	2/27/2021	1/4/2021
tblConstructionPhase	PhaseStartDate	7/31/2021	6/7/2021
tblGrading	AcresOfGrading	275.00	61.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	60.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2833	3.0288	2.1306	4.8700e-003	0.5211	0.1271	0.6481	0.2534	0.1169	0.3703	0.0000	434.5593	434.5593	0.1121	0.0000	437.3626
Maximum	**0.2833**	**3.0288**	**2.1306**	**4.8700e-003**	**0.5211**	**0.1271**	**0.6481**	**0.2534**	**0.1169**	**0.3703**	**0.0000**	**434.5593**	**434.5593**	**0.1121**	**0.0000**	**437.3626**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2833	3.0288	2.1306	4.8700e-003	0.2714	0.1271	0.3985	0.1241	0.1169	0.2410	0.0000	434.5589	434.5589	0.1121	0.0000	437.3622
Maximum	**0.2833**	**3.0288**	**2.1306**	**4.8700e-003**	**0.2714**	**0.1271**	**0.3985**	**0.1241**	**0.1169**	**0.2410**	**0.0000**	**434.5589**	**434.5589**	**0.1121**	**0.0000**	**437.3622**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.91**	**0.00**	**38.52**	**51.05**	**0.00**	**34.93**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-4-2021**	**4-3-2021**	1.9081	1.9081
2	**4-4-2021**	**7-3-2021**	1.3158	1.3158
		Highest	1.9081	1.9081

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1718	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1718**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.5100e-003**	**1.5100e-003**	**0.0000**	**0.0000**	**1.6100e-003**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1718	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1718**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.5100e-003**	**1.5100e-003**	**0.0000**	**0.0000**	**1.6100e-003**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/4/2021	6/4/2021	5	110	
3	Paving	Paving	6/7/2021	7/2/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 61

Acres of Paving: 61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	5.00	60.00	50.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	5.00	0.00	50.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	5.00	0.00	50.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0903**	**0.0102**	**0.1006**	**0.0497**	**9.4000e-003**	**0.0591**	**0.0000**	**16.7179**	**16.7179**	**5.4100e-003**	**0.0000**	**16.8530**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7000e-004	0.0154	3.5800e-003	5.0000e-005	1.2900e-003	6.0000e-005	1.3500e-003	3.5000e-004	5.0000e-005	4.1000e-004	0.0000	5.1394	5.1394	3.1000e-004	0.0000	5.1471
Vendor	3.0000e-004	8.3300e-003	2.1900e-003	4.0000e-005	1.1400e-003	3.0000e-005	1.1700e-003	3.3000e-004	3.0000e-005	3.6000e-004	0.0000	3.5742	3.5742	1.4000e-004	0.0000	3.5776
Worker	1.0800e-003	8.8000e-004	9.7900e-003	3.0000e-005	3.3600e-003	2.0000e-005	3.3800e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	2.8825	2.8825	7.0000e-005	0.0000	2.8844
Total	**1.8500e-003**	**0.0246**	**0.0156**	**1.2000e-004**	**5.7900e-003**	**1.1000e-004**	**5.9000e-003**	**1.5700e-003**	**1.0000e-004**	**1.6800e-003**	**0.0000**	**11.5961**	**11.5961**	**5.2000e-004**	**0.0000**	**11.6090**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	**0.0194**	**0.2025**	**0.1058**	**1.9000e-004**	**0.0407**	**0.0102**	**0.0509**	**0.0223**	**9.4000e-003**	**0.0317**	**0.0000**	**16.7178**	**16.7178**	**5.4100e-003**	**0.0000**	**16.8530**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.7000e-004	0.0154	3.5800e-003	5.0000e-005	1.2900e-003	6.0000e-005	1.3500e-003	3.5000e-004	5.0000e-005	4.1000e-004	0.0000	5.1394	5.1394	3.1000e-004	0.0000	5.1471
Vendor	3.0000e-004	8.3300e-003	2.1900e-003	4.0000e-005	1.1400e-003	3.0000e-005	1.1700e-003	3.3000e-004	3.0000e-005	3.6000e-004	0.0000	3.5742	3.5742	1.4000e-004	0.0000	3.5776
Worker	1.0800e-003	8.8000e-004	9.7900e-003	3.0000e-005	3.3600e-003	2.0000e-005	3.3800e-003	8.9000e-004	2.0000e-005	9.1000e-004	0.0000	2.8825	2.8825	7.0000e-005	0.0000	2.8844
Total	**1.8500e-003**	**0.0246**	**0.0156**	**1.2000e-004**	**5.7900e-003**	**1.1000e-004**	**5.9000e-003**	**1.5700e-003**	**1.0000e-004**	**1.6800e-003**	**0.0000**	**11.5961**	**11.5961**	**5.2000e-004**	**0.0000**	**11.6090**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3636	0.0000	0.3636	0.1856	0.0000	0.1856	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2305	2.5520	1.6983	3.4100e-003		0.1092	0.1092		0.1005	0.1005	0.0000	299.7224	299.7224	0.0969	0.0000	302.1458
Total	**0.2305**	**2.5520**	**1.6983**	**3.4100e-003**	**0.3636**	**0.1092**	**0.4728**	**0.1856**	**0.1005**	**0.2860**	**0.0000**	**299.7224**	**299.7224**	**0.0969**	**0.0000**	**302.1458**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0916	0.0241	4.1000e-004	0.0125	3.5000e-004	0.0129	3.6100e-003	3.4000e-004	3.9400e-003	0.0000	39.3164	39.3164	1.4900e-003	0.0000	39.3537
Worker	0.0132	0.0108	0.1196	3.9000e-004	0.0410	2.9000e-004	0.0413	0.0109	2.7000e-004	0.0112	0.0000	35.2305	35.2305	9.1000e-004	0.0000	35.2532
Total	**0.0165**	**0.1024**	**0.1437**	**8.0000e-004**	**0.0535**	**6.4000e-004**	**0.0542**	**0.0145**	**6.1000e-004**	**0.0151**	**0.0000**	**74.5469**	**74.5469**	**2.4000e-003**	**0.0000**	**74.6069**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1636	0.0000	0.1636	0.0835	0.0000	0.0835	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2305	2.5520	1.6983	3.4100e-003		0.1092	0.1092		0.1005	0.1005	0.0000	299.7220	299.7220	0.0969	0.0000	302.1455
Total	**0.2305**	**2.5520**	**1.6983**	**3.4100e-003**	**0.1636**	**0.1092**	**0.2728**	**0.0835**	**0.1005**	**0.1840**	**0.0000**	**299.7220**	**299.7220**	**0.0969**	**0.0000**	**302.1455**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0916	0.0241	4.1000e-004	0.0125	3.5000e-004	0.0129	3.6100e-003	3.4000e-004	3.9400e-003	0.0000	39.3164	39.3164	1.4900e-003	0.0000	39.3537
Worker	0.0132	0.0108	0.1196	3.9000e-004	0.0410	2.9000e-004	0.0413	0.0109	2.7000e-004	0.0112	0.0000	35.2305	35.2305	9.1000e-004	0.0000	35.2532
Total	**0.0165**	**0.1024**	**0.1437**	**8.0000e-004**	**0.0535**	**6.4000e-004**	**0.0542**	**0.0145**	**6.1000e-004**	**0.0151**	**0.0000**	**74.5469**	**74.5469**	**2.4000e-003**	**0.0000**	**74.6069**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-004	0.0167	4.3800e-003	7.0000e-005	2.2800e-003	6.0000e-005	2.3400e-003	6.6000e-004	6.0000e-005	7.2000e-004	0.0000	7.1484	7.1484	2.7000e-004	0.0000	7.1552
Worker	1.8000e-003	1.4700e-003	0.0163	5.0000e-005	5.5900e-003	4.0000e-005	5.6300e-003	1.4900e-003	4.0000e-005	1.5200e-003	0.0000	4.8042	4.8042	1.2000e-004	0.0000	4.8073
Total	**2.4000e-003**	**0.0181**	**0.0207**	**1.2000e-004**	**7.8700e-003**	**1.0000e-004**	**7.9700e-003**	**2.1500e-003**	**1.0000e-004**	**2.2400e-003**	**0.0000**	**11.9526**	**11.9526**	**3.9000e-004**	**0.0000**	**11.9625**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0126**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.0000e-004	0.0167	4.3800e-003	7.0000e-005	2.2800e-003	6.0000e-005	2.3400e-003	6.6000e-004	6.0000e-005	7.2000e-004	0.0000	7.1484	7.1484	2.7000e-004	0.0000	7.1552
Worker	1.8000e-003	1.4700e-003	0.0163	5.0000e-005	5.5900e-003	4.0000e-005	5.6300e-003	1.4900e-003	4.0000e-005	1.5200e-003	0.0000	4.8042	4.8042	1.2000e-004	0.0000	4.8073
Total	**2.4000e-003**	**0.0181**	**0.0207**	**1.2000e-004**	**7.8700e-003**	**1.0000e-004**	**7.9700e-003**	**2.1500e-003**	**1.0000e-004**	**2.2400e-003**	**0.0000**	**11.9526**	**11.9526**	**3.9000e-004**	**0.0000**	**11.9625**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1718	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Unmitigated	0.1718	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1718					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Total	**0.1718**	**1.0000e-005**	**7.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5100e-003**	**1.5100e-003**	**0.0000**	**0.0000**	**1.6100e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1718					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5100e-003	1.5100e-003	0.0000	0.0000	1.6100e-003
Total	**0.1718**	**1.0000e-005**	**7.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.5100e-003**	**1.5100e-003**	**0.0000**	**0.0000**	**1.6100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Devil Canyon Project

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	61.00	Acre	61.00	2,657,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - non-asphalt surfaces used to represent all of the camp sites, picnic areas, and day use areas to be rehabilitated/improved.

Construction Phase - Construction is assumed to occur concurrently at all sites with site prep overlapping with site grading.

Grading - Haul trucks added to Trips and VMT tab. Up to a total of 61 acres would be disturbed.

Trips and VMT - up to six trips per day over a 10 day period. Trip length of 50 miles used due to remote nature of the project sites.

Vehicle Trips - No trips associated with the proposed changes.

Consumer Products - no change in operational emissions

Landscape Equipment - no change in operational emissions

Construction Off-road Equipment Mitigation -

Area Coating - no change in operational emissions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	40.00	10.00
tblConstructionPhase	PhaseEndDate	7/30/2021	6/4/2021
tblConstructionPhase	PhaseEndDate	11/12/2021	7/2/2021
tblConstructionPhase	PhaseEndDate	2/26/2021	1/15/2021
tblConstructionPhase	PhaseStartDate	2/27/2021	1/4/2021
tblConstructionPhase	PhaseStartDate	7/31/2021	6/7/2021
tblGrading	AcresOfGrading	275.00	61.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	60.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.7421	93.3567	58.1534	0.1395	26.8443	4.0640	30.9083	13.8918	3.7398	17.6316	0.0000	13,819.8770	13,819.8770	3.2980	0.0000	13,902.3262
Maximum	**8.7421**	**93.3567**	**58.1534**	**0.1395**	**26.8443**	**4.0640**	**30.9083**	**13.8918**	**3.7398**	**17.6316**	**0.0000**	**13,819.8770**	**13,819.8770**	**3.2980**	**0.0000**	**13,902.3262**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.7421	93.3567	58.1534	0.1395	13.2723	4.0640	17.3363	6.5744	3.7398	10.3142	0.0000	13,819.8770	13,819.8770	3.2980	0.0000	13,902.3262
Maximum	**8.7421**	**93.3567**	**58.1534**	**0.1395**	**13.2723**	**4.0640**	**17.3363**	**6.5744**	**3.7398**	**10.3142**	**0.0000**	**13,819.8770**	**13,819.8770**	**3.2980**	**0.0000**	**13,902.3262**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.56**	**0.00**	**43.91**	**52.67**	**0.00**	**41.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**	**0.0000**	**0.0142**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**	**0.0000**	**0.0142**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/4/2021	6/4/2021	5	110	
3	Paving	Paving	6/7/2021	7/2/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 61

Acres of Paving: 61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	5.00	60.00	50.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	5.00	0.00	50.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	5.00	0.00	50.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0944	2.9417	0.7079	0.0105	0.2619	0.0115	0.2734	0.0718	0.0110	0.0827		1,136.9107	1,136.9107	0.0670		1,138.5868
Vendor	0.0598	1.5936	0.4332	7.4100e-003	0.2311	6.3600e-003	0.2374	0.0664	6.0800e-003	0.0725		789.6357	789.6357	0.0297		790.3775
Worker	0.2126	0.1567	2.1536	6.7100e-003	0.6839	4.7700e-003	0.6887	0.1813	4.3900e-003	0.1857		668.3658	668.3658	0.0174		668.8013
Total	**0.3668**	**4.6920**	**3.2947**	**0.0246**	**1.1769**	**0.0226**	**1.1995**	**0.3195**	**0.0214**	**0.3409**		**2,594.9122**	**2,594.9122**	**0.1141**		**2,597.7655**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**8.1298**	**2.0445**	**10.1743**	**4.4688**	**1.8809**	**6.3497**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0944	2.9417	0.7079	0.0105	0.2619	0.0115	0.2734	0.0718	0.0110	0.0827		1,136.9107	1,136.9107	0.0670		1,138.5868
Vendor	0.0598	1.5936	0.4332	7.4100e-003	0.2311	6.3600e-003	0.2374	0.0664	6.0800e-003	0.0725		789.6357	789.6357	0.0297		790.3775
Worker	0.2126	0.1567	2.1536	6.7100e-003	0.6839	4.7700e-003	0.6887	0.1813	4.3900e-003	0.1857		668.3658	668.3658	0.0174		668.8013
Total	**0.3668**	**4.6920**	**3.2947**	**0.0246**	**1.1769**	**0.0226**	**1.1995**	**0.3195**	**0.0214**	**0.3409**		**2,594.9122**	**2,594.9122**	**0.1141**		**2,597.7655**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6102	0.0000	6.6102	3.3737	0.0000	3.3737			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.6102**	**1.9853**	**8.5955**	**3.3737**	**1.8265**	**5.2002**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0598	1.5936	0.4332	7.4100e-003	0.2311	6.3600e-003	0.2374	0.0664	6.0800e-003	0.0725		789.6357	789.6357	0.0297		790.3775
Worker	0.2363	0.1742	2.3929	7.4500e-003	0.7599	5.3000e-003	0.7652	0.2015	4.8800e-003	0.2064		742.6287	742.6287	0.0194		743.1125
Total	**0.2960**	**1.7678**	**2.8261**	**0.0149**	**0.9910**	**0.0117**	**1.0026**	**0.2679**	**0.0110**	**0.2789**		**1,532.2644**	**1,532.2644**	**0.0490**		**1,533.4900**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9746	0.0000	2.9746	1.5182	0.0000	1.5182			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**2.9746**	**1.9853**	**4.9599**	**1.5182**	**1.8265**	**3.3447**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0598	1.5936	0.4332	7.4100e-003	0.2311	6.3600e-003	0.2374	0.0664	6.0800e-003	0.0725		789.6357	789.6357	0.0297		790.3775
Worker	0.2363	0.1742	2.3929	7.4500e-003	0.7599	5.3000e-003	0.7652	0.2015	4.8800e-003	0.2064		742.6287	742.6287	0.0194		743.1125
Total	**0.2960**	**1.7678**	**2.8261**	**0.0149**	**0.9910**	**0.0117**	**1.0026**	**0.2679**	**0.0110**	**0.2789**		**1,532.2644**	**1,532.2644**	**0.0490**		**1,533.4900**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0598	1.5936	0.4332	7.4100e-003	0.2311	6.3600e-003	0.2374	0.0664	6.0800e-003	0.0725		789.6357	789.6357	0.0297		790.3775
Worker	0.1772	0.1306	1.7947	5.5900e-003	0.5699	3.9700e-003	0.5739	0.1511	3.6600e-003	0.1548		556.9715	556.9715	0.0145		557.3344
Total	**0.2369**	**1.7242**	**2.2278**	**0.0130**	**0.8010**	**0.0103**	**0.8113**	**0.2175**	**9.7400e-003**	**0.2273**		**1,346.6072**	**1,346.6072**	**0.0442**		**1,347.7119**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0598	1.5936	0.4332	7.4100e-003	0.2311	6.3600e-003	0.2374	0.0664	6.0800e-003	0.0725		789.6357	789.6357	0.0297		790.3775
Worker	0.1772	0.1306	1.7947	5.5900e-003	0.5699	3.9700e-003	0.5739	0.1511	3.6600e-003	0.1548		556.9715	556.9715	0.0145		557.3344
Total	**0.2369**	**1.7242**	**2.2278**	**0.0130**	**0.8010**	**0.0103**	**0.8113**	**0.2175**	**9.7400e-003**	**0.2273**		**1,346.6072**	**1,346.6072**	**0.0442**		**1,347.7119**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Unmitigated	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9412					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9412					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Devil Canyon Project

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	61.00	Acre	61.00	2,657,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - non-asphalt surfaces used to represent all of the camp sites, picnic areas, and day use areas to be rehabilitated/improved.

Construction Phase - Construction is assumed to occur concurrently at all sites with site prep overlapping with site grading.

Grading - Haul trucks added to Trips and VMT tab. Up to a total of 61 acres would be disturbed.

Trips and VMT - up to six trips per day over a 10 day period. Trip length of 50 miles used due to remote nature of the project sites.

Vehicle Trips - No trips associated with the proposed changes.

Consumer Products - no change in operational emissions

Landscape Equipment - no change in operational emissions

Construction Off-road Equipment Mitigation -

Area Coating - no change in operational emissions

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	75.00	20.00
tblConstructionPhase	NumDays	40.00	10.00
tblConstructionPhase	PhaseEndDate	7/30/2021	6/4/2021
tblConstructionPhase	PhaseEndDate	11/12/2021	7/2/2021
tblConstructionPhase	PhaseEndDate	2/26/2021	1/15/2021
tblConstructionPhase	PhaseStartDate	2/27/2021	1/4/2021
tblConstructionPhase	PhaseStartDate	7/31/2021	6/7/2021
tblGrading	AcresOfGrading	275.00	61.00
tblTripsAndVMT	HaulingTripLength	20.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	60.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripLength	6.90	50.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00
tblTripsAndVMT	WorkerTripLength	14.70	50.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.8076	93.5580	57.6444	0.1384	26.8443	4.0642	30.9085	13.8918	3.7399	17.6317	0.0000	13,710.5052	13,710.5052	3.2977	0.0000	13,792.9469
Maximum	**8.8076**	**93.5580**	**57.6444**	**0.1384**	**26.8443**	**4.0642**	**30.9085**	**13.8918**	**3.7399**	**17.6317**	**0.0000**	**13,710.5052**	**13,710.5052**	**3.2977**	**0.0000**	**13,792.9469**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	8.8076	93.5580	57.6444	0.1384	13.2723	4.0642	17.3365	6.5744	3.7399	10.3143	0.0000	13,710.5052	13,710.5052	3.2977	0.0000	13,792.9469
Maximum	**8.8076**	**93.5580**	**57.6444**	**0.1384**	**13.2723**	**4.0642**	**17.3365**	**6.5744**	**3.7399**	**10.3143**	**0.0000**	**13,710.5052**	**13,710.5052**	**3.2977**	**0.0000**	**13,792.9469**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.56**	**0.00**	**43.91**	**52.67**	**0.00**	**41.50**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**	**0.0000**	**0.0142**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**	**0.0000**	**0.0142**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/15/2021	5	10	
2	Grading	Grading	1/4/2021	6/4/2021	5	110	
3	Paving	Paving	6/7/2021	7/2/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 61

Acres of Paving: 61

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	5.00	60.00	50.00	50.00	50.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	5.00	0.00	50.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	5.00	0.00	50.00	50.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0956	3.0198	0.7291	0.0104	0.2619	0.0115	0.2734	0.0718	0.0110	0.0828		1,127.7042	1,127.7042	0.0684		1,129.4149
Vendor	0.0610	1.6395	0.4438	7.3700e-003	0.2311	6.3900e-003	0.2375	0.0664	6.1100e-003	0.0725		785.6916	785.6916	0.0303		786.4478
Worker	0.2419	0.1717	1.8924	6.2700e-003	0.6839	4.7700e-003	0.6887	0.1813	4.3900e-003	0.1857		624.6557	624.6557	0.0161		625.0574
Total	**0.3985**	**4.8309**	**3.0652**	**0.0241**	**1.1769**	**0.0227**	**1.1996**	**0.3195**	**0.0215**	**0.3410**		**2,538.0514**	**2,538.0514**	**0.1148**		**2,540.9202**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**8.1298**	**2.0445**	**10.1743**	**4.4688**	**1.8809**	**6.3497**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0956	3.0198	0.7291	0.0104	0.2619	0.0115	0.2734	0.0718	0.0110	0.0828		1,127.7042	1,127.7042	0.0684		1,129.4149
Vendor	0.0610	1.6395	0.4438	7.3700e-003	0.2311	6.3900e-003	0.2375	0.0664	6.1100e-003	0.0725		785.6916	785.6916	0.0303		786.4478
Worker	0.2419	0.1717	1.8924	6.2700e-003	0.6839	4.7700e-003	0.6887	0.1813	4.3900e-003	0.1857		624.6557	624.6557	0.0161		625.0574
Total	**0.3985**	**4.8309**	**3.0652**	**0.0241**	**1.1769**	**0.0227**	**1.1996**	**0.3195**	**0.0215**	**0.3410**		**2,538.0514**	**2,538.0514**	**0.1148**		**2,540.9202**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.6102	0.0000	6.6102	3.3737	0.0000	3.3737			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**6.6102**	**1.9853**	**8.5955**	**3.3737**	**1.8265**	**5.2002**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0610	1.6395	0.4438	7.3700e-003	0.2311	6.3900e-003	0.2375	0.0664	6.1100e-003	0.0725		785.6916	785.6916	0.0303		786.4478
Worker	0.2688	0.1907	2.1026	6.9600e-003	0.7599	5.3000e-003	0.7652	0.2015	4.8800e-003	0.2064		694.0619	694.0619	0.0179		694.5083
Total	**0.3298**	**1.8302**	**2.5464**	**0.0143**	**0.9910**	**0.0117**	**1.0027**	**0.2679**	**0.0110**	**0.2789**		**1,479.7534**	**1,479.7534**	**0.0481**		**1,480.9561**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9746	0.0000	2.9746	1.5182	0.0000	1.5182			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**2.9746**	**1.9853**	**4.9599**	**1.5182**	**1.8265**	**3.3447**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0610	1.6395	0.4438	7.3700e-003	0.2311	6.3900e-003	0.2375	0.0664	6.1100e-003	0.0725		785.6916	785.6916	0.0303		786.4478
Worker	0.2688	0.1907	2.1026	6.9600e-003	0.7599	5.3000e-003	0.7652	0.2015	4.8800e-003	0.2064		694.0619	694.0619	0.0179		694.5083
Total	**0.3298**	**1.8302**	**2.5464**	**0.0143**	**0.9910**	**0.0117**	**1.0027**	**0.2679**	**0.0110**	**0.2789**		**1,479.7534**	**1,479.7534**	**0.0481**		**1,480.9561**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0610	1.6395	0.4438	7.3700e-003	0.2311	6.3900e-003	0.2375	0.0664	6.1100e-003	0.0725		785.6916	785.6916	0.0303		786.4478
Worker	0.2016	0.1431	1.5770	5.2200e-003	0.5699	3.9700e-003	0.5739	0.1511	3.6600e-003	0.1548		520.5464	520.5464	0.0134		520.8812
Total	**0.2626**	**1.7825**	**2.0208**	**0.0126**	**0.8010**	**0.0104**	**0.8114**	**0.2175**	**9.7700e-003**	**0.2273**		**1,306.2380**	**1,306.2380**	**0.0436**		**1,307.3290**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2556**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0610	1.6395	0.4438	7.3700e-003	0.2311	6.3900e-003	0.2375	0.0664	6.1100e-003	0.0725		785.6916	785.6916	0.0303		786.4478
Worker	0.2016	0.1431	1.5770	5.2200e-003	0.5699	3.9700e-003	0.5739	0.1511	3.6600e-003	0.1548		520.5464	520.5464	0.0134		520.8812
Total	**0.2626**	**1.7825**	**2.0208**	**0.0126**	**0.8010**	**0.0104**	**0.8114**	**0.2175**	**9.7700e-003**	**0.2273**		**1,306.2380**	**1,306.2380**	**0.0436**		**1,307.3290**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.549559	0.042893	0.201564	0.118533	0.015569	0.005846	0.021394	0.034255	0.002099	0.001828	0.004855	0.000709	0.000896

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Unmitigated	0.9418	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9412					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9412					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8000e-004	6.0000e-005	6.2400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0134	0.0134	4.0000e-005		0.0142
Total	**0.9418**	**6.0000e-005**	**6.2400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0134**	**0.0134**	**4.0000e-005**		**0.0142**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ONROAD EQUIPMENT LIST

Project Phase	Construction Phase	Category	Vehicle Type	Start Date	End Date	Total Working Days	Trip Length	Total trips per Day	Total Trips per Phase	Mileage per Day	Total Mileage per Phase	Fuel Economy	Total Fuel Consumption
Phase 1 & 2	Site Preparation	Worker	Light-Duty/Passenger Vehicles	2021/01/04	2021/02/12	10	50	18		900	9,000	26.2	344
		Trucks	Heavy-Duty Diesel	2021/01/04	2021/02/12	10	50	5	60	251	2,512	6.1	412
	Grading	Worker	Light-Duty/Passenger Vehicles	2021/02/13	2021/03/26	110	50	20		1,000	110,000	26.2	4,198
		Trucks	Heavy-Duty Diesel	2021/02/13	2021/03/26	110	50	5		250	27,500	6.1	4,508
	Paving	Worker	Light-Duty/Passenger Vehicles	2021/03/27	2022/05/20	20	50	15		750	15,000	26.2	573
		Trucks	Heavy-Duty Diesel	2021/03/27	2022/05/20	20	50	5		250	5,000	6.1	820
	Total Gas Consumption												**5,115**
	Total Diesel Consumption												**5,740**

Appendix C

Special-status Wildlife with the Potential to Occur Within the Proposed Project Boundary

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APPENDIX C

Special-status Wildlife with the Potential to Occur Within the Proposed Project Boundary

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Invertebrates							
Bombus crotchii	Crotch's bumble bee	None	SCE	None	Inhabits open grassland and scrub habitats. Nesting occurs underground. This species is classified as a short-tongued species, whose food plants include those in the following genera: *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia*, and *Salvia* (Williams et al. 2014).	Yes	Potential suitable habitat present
Euphydryas editha quino	Quino checkerspot	FE	None	None	Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego Counties. Prefers patchy shrub or small tree landscapes with openings of several feet between large plants, or a landscape of open swales alternating with dense patches of shrubs. Host plants include California plantain (*Plantago erecta*), Patagonia plantain (*Plantago patagonica*), and Coulter snapdragon (*Antirrhinum coulterianum*) (USFWS 2009a).	No	Outside of known range of species.
Fish							
Catostomus santaanae	Santa Ana sucker	FT	None	None	Occurs in watersheds draining the San Gabriel and San Bernardino Mountains. Can survive in diverse habitats, from clear mountain streams to rivers in alluvial plains with high sediment loads. Currently distributed in 3 watersheds: Santa Ana River system, San Gabriel River system, and the Los Angeles River. The species also occurs in the Santa Clara watershed, but that population is not considered part of the listed entity (USFWS 2017).	No	Outside of known range of species.
Gila orcuttii	arroyo chub	None	SSC	FSS	Native to Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers, as well as Malibu and San Juan Creeks. Has been extirpated from much of its native range, but introduced to streams along the coast and the Mojave River system, where they have eliminated the Mohave tui chub (*Siphateles bicolor mohavensis*). Southern coastal streams in habitats characterized by slow-moving water, mud or sand substrate, and depths greater than 15 inches. Have also been found in pool habitats with gravel, cobble, and boulder substrates. Adapted to survive in low oxygen waters and wide temperature fluctuations (Moyle et al. 2015).	No	Outside of known native range of species.
Rhinichthys osculus (ssp. 3)	Santa Ana speckled dace	None	SSC	None	Requires permanent flowing streams with summer temperatures of 62 to 68°F that are often maintained by outflows of cool springs. Inhabits shallow cobble and gravel riffles (Moyle et al. 1995).	No	Outside of known range of species. Potential habitat unlikely to occur in proposed Project boundary.
Siphateles [Gila] bicolor mohavensis	Mohave tui chub	FE	SE	None	Only found in highly modified refuge sites in San Bernardino County in the Mojave River (USFWS 2009b).	No	Only known to occur historically, but considered extirpated from sites within the proposed Project boundary and throughout most of its natural range by 1970.

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Amphibians							
Anaxyrus californicus	arroyo toad	FE	SSC	None	Breeds in slow moving streams with shallow pools, nearby sandbars, and adjacent stream terraces. Often breeds in shallow, sandy pools bordered by sand or gravel flood terraces. Inhabits upland habitats when not breeding, such as sycamore-cottonwood woodlands, oak woodlands, coastal sage scrub, chaparral, and grasslands (USFWS 2009c).	Yes	Potential suitable habitat for individuals potentially present within proposed Project boundary upstream of Silverwood Lake, but insufficient to support a population.
Ensatina eschscholtzii klauberi	large-blotched ensatina	None	None	FSS	Oak woodland, pine woodland, coniferous forests, and shrublands from 1,700 to 5,400 feet in elevation. Woody debris is a key habitat component (Jennings and Hayes 1994).	Yes	Potential suitable habitat present
Rana draytonii	California red-legged frog	FT	SSC	None	Ponds and streams in humid forests, woodlands, grasslands, coastal scrub, and stream sides with plant cover in lowlands or foothills. Breeding habitat includes permanent or ephemeral water sources; lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps. Ephemeral wetland habitats require animal burrows or other moist refuges for estivation when the wetlands are dry. Occurs from sea level to 5,000 feet in elevation. Occurs along the Coast Ranges from Mendocino County south to northern Baja California, and inland across the northernmost reaches of the Sacramento Valley and locally south through portions of the Sierra Nevada foothills as far south as northern Tulare County (Nafis 2020).	Yes	Potential suitable habitat present
Rana muscosa	southern mountain yellow-legged frog	FE	SE	None	Lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the southern Sierra Nevada Mountains. Rocky streams in narrow canyons and in the chaparral belt in the mountains of southern California. Found from 984 feet to above 12,000 feet in elevation (Nafis 2020).	Yes	Potential suitable habitat present
Spea hammondii	western spadefoot	None	SSC	None	Generally found in grasslands, oak woodlands, coastal sage scrub, and chaparral in washes, floodplains, alluvial fans, playas, and alkali flats. Natural and artificial water bodies are used for breeding. Specifically, vernal pools used by this species have an average ponding duration of 81 days, and successful recruitment occurs in ponds that last on average 21 days longer than larval development time. Pool temperature requirements are from 48 to 90ºF. Pools with invasive species, such as crayfish (*Pacifasticus* spp.), or bullfrogs (*Lithobates catesbeianus*) often, but not always, exclude this species. (Thomson et al. 2016).	Yes	Potential suitable habitat present
Reptiles							
Actinemys [Emys] pallida	southern western pond turtle	None	SSC	FSS	Ranges throughout California except for Inyo and Mono Counties. Generally occurs in various water bodies including permanent and ephemeral systems either natural or artificial. Upland habitat that is at least moderately undisturbed is required for nesting and overwintering, in soils that are loose enough for excavation (Thomson et al. 2016).	Yes	One incidental observation during relicensing field work at Silverwood Lake (on south-facing shore at Jamajab Point in 2017).

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Anniella pulchra	Northern California legless lizard	None	SSC	None	Generally found in habitats with a relatively sparse amount of vegetation including coastal sand dunes, chaparral, pine-oak woodland, desert scrub, grassland, and riparian zones. Specifically, requires sandy to loose loamy substrates potentially suitable for burrowing, and avoids areas with gravel or larger sized substrates and those with greater than 10% clay content. Also tends to avoid non-native grasslands, iceplant fields, and other non-native dominated herbaceous communities (Thomson et al. 2016). Occurs from the southern edge of the San Joaquin River in northern Contra Costa County south to Ventura County, south of which there is a wide area where the species of Anniella is or are unknown. Occurs in scattered locations in the San Joaquin Valley, along the southern Sierra Nevada Mountains, on the desert side of the Tehachapi Mountains, and part of the San Gabriel Mountains. Two melanistic or dusky populations occur. One is in coastal dunes from Morro Bay south to the mouth of the Santa Maria River in San Luis Obispo County. The other, recognized as *Anniella pulchra nigra*, occurs in beach dunes on the Monterey Peninsula and on the southern coast of Monterey Bay south of the Salinas River in Monterey County (Nafis 2020).	No	Outside of known range.
Anniella stebbinsi	southern California legless lizard	SSC	None	None	Grassland, chaparral, pine-oak woodland, conifer woodland, desert scrub, sandy washes, riparian terraces (Nafis 2020)	Yes	Potential suitable habitat present.
Arizona elegans occidentalis	California glossy snake	None	SSC	None	Ranges in the cismontane portion of southern California, the southern portion of the Central Coast Ranges, and in isolated pockets up to the Alameda and San Joaquin County border. Generally found in open desert, grasslands, shrublands, chaparral, and woodlands. Some evidence of open and sandy habitat preference exists, but specific habitat requirements for this species aren't known (Thomson et al. 2016).	Yes	Potential suitable habitat present
Aspidoscelis hyperythra beldingi	Belding's orange-throated whiptail	None	None	FSS	Found from sea level to about 2,000 feet in elevation in semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral (Nafis 2020).	No	Only on NFS lands in proposed Project boundary that are well above known elevation range at 3,200 feet.
Aspidoscelis tigris stejnegeri	coastal whiptail	None	SSC	None	Ranges in cismontane southern California. Generally found in a wide range of habitats including coastal sage scrub, chaparral, riparian areas, woodlands, and rocky areas. Specifically this species prefers sand or gravel bottomed habitats with decent shrub cover and is not often found near development (Thomson et al. 2016).	Yes	Potential suitable habitat present
Charina umbratica	southern rubber boa	None	ST	FSS	Inhabits oak-conifer and mixed-conifer forests from about 5,000 to 8,200 feet in elevation. Requires logs, rocks, or other debris for shelter. Known only from San Bernardino and Riverside Counties, though rubber boas in the southern Sierra Nevada Mountains in Kern County are thought by CDFW to potentially be this species (Nafis 2020).	No	Proposed Project well below known elevation range, at 3,300 feet and below.

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Crotalus ruber	red-diamond rattlesnake	None	SSC	FSS	Ranges in San Diego and Orange Counties and western Riverside and southwestern San Bernardino Counties. Generally found in dense chaparral and rocky outcrops. Specifically inhabits coastal sage scrub, chamise (*Adenostoma fasciculatum*) and red shanks (*Adenostoma. sparsifolium*) chaparral, desert slope scrub and washes, grassy fields, orchards, cactus scrub, and rocky areas. Tends to avoid developed areas (Thomson et al. 2016).	Yes	Potential suitable habitat present
Diadophis punctatus modestus	San Bernardino ring-necked snake	None	None	FSS	Found along the southern California coast from the Santa Barbara area south along the coast to San Diego County, and inland into the San Bernardino mountains in moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands (Nafis 2020).	Yes	Potential suitable habitat present
Gopherus agassizii	Mohave desert tortoise	FT	ST	None	Occupies flats and slopes dominated by creosote bush scrub at lower elevations, and rocky slopes in blackbrush (*Coleogyne ramosissima*) and juniper (*Juniperus* spp.) woodland at higher elevations. Likes sandy-gravel friable soil and sparse cover of low-growing shrubs (USFWS 2011).	No	No potential suitable habitat throughout proposed Project.
Lampropeltis zonata parvirubra	California mountain kingsnake	None	None	FSS	Found in diverse habitats including coniferous forest, oak-pine woodlands, riparian woodland, chaparral, and coastal sage scrub. Prefers wooded areas near streams with rock outcrops and rotting logs exposed to the sun. Ranges from southern Oregon south through the Cascade and Sierra Nevada Mountains and the Coast Range as far south as Santa Cruz County (Nafis 2020).	Yes	Potential suitable habitat present and one seen at Silverwood Lake during relicensing studies.
Salvadora hexalepis virgultea	coast patch-nosed snake	None	SSC	None	Ranges in cismontane southern California and southern San Luis Obispo County. Generally found in relatively dense chaparral but also known in a wide variety of habitats with dense shrub cover. Some evidence shows a preference for chamise or red shanks chaparral, but that has not been fully determined (Thomson et al. 2016).	Yes	Potential suitable habitat present
Thamnophis hammondii	two-striped gartersnake	None	SSC	FSS	Ranges in cismontane southern California with some occurrences in Monterey and San Luis Obispo Counties and southern San Benito County. Generally found in or near permanent and intermittent freshwater streams, creeks, and pools, as well as stock ponds and other artificial aquatic habitats bordered by dense vegetation. Associated habitat includes willow, oak woodlands, chaparral, brushland and coniferous forest from sea level to 8,000 feet elevation (Thomson et al. 2016).	Yes	Potential suitable habitat present

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Birds							
Accipiter gentilis	northern goshawk	None	SSC	FSS	Nests in mature and old-growth coniferous forests at high elevations in the Sierra Nevada, Cascade, North Coast, and Transverse Ranges. Prefers stands with Pacific Ponderosa pine (*Pinus ponderosa var. pacifica*), Jeffrey pine (*Pinus jeffreyi*), Lodgepole pine (*Pinus contorta*), Douglas-fir (*Pseudotsuga menziesii*), and rarely pinyon-juniper (*Pinus monophylla*) or quaking aspen (*Populus tremuloides*). Prefers stands with larger trees, denser canopies, and relatively open understories (Shuford and Gardali 2008).	No	May be occasional visitor during winter, but not part of breeding habitat. Protected as general migrating bird, but not as special-status species.
Agelaius tricolor	tricolored blackbird	None	CT, SSC	None	Mostly a year-round resident in California. Common locally throughout Central Valley and in coastal districts from Sonoma County south. Breeds locally in northeastern California. In winter, becomes more widespread along the central coast and San Francisco Bay area, and can be found in portions of the Colorado Desert (Hamilton 2004). Preferred nesting habitat includes cattails (*Typha* spp.), bulrushes (*Schoenoplectus* spp.), Himalayan blackberry (*Rubus armeniacus*), and agricultural silage. Dense vegetation is preferred but heavily lodged cattails not burned in recent years may preclude settlement. Need access to open water. Strips of emergent vegetation along canals are avoided as nest sites unless they are about 30 feet or more wide but in some ponds, especially where associated with Himalayan blackberries and deep water, settlement may be in narrower fetches of cattails. (CDFW 2020).	Yes	Potential suitable habitat present
Ammodramus savannarum	grasshopper sparrow	None	SSC	None	Nests in a variety of grassland habitats throughout much of the Central Valley, Coast Range Mountains, and the Inland Empire region. Prefers short to middle-height, moderately open grasslands with scattered shrubs. Avoids areas with high shrub cover (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Aquila chrysaetos	golden eagle	BGEPA	FP	None	Uncommon resident in hills and mountains throughout California, and an uncommon migrant and winter resident in the Central Valley and Mojave Desert. Prefers rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, cliffs, and rock outcrops. (CDFW 2020).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Asio flammeus	short-eared owl	None	SSC	None	Found in open, treeless areas with elevated sites for perches, and dense vegetation for roosting and nesting. Associated with perennial grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands. Breeds in coastal areas in Del Norte and Humboldt Counties, San Francisco Bay Delta, northeastern Modoc plateau, east Sierras from Lake Tahoe to Inyo County and San Joaquin Valley. Winters in the Central Valley, western Sierra Nevada foothills and along the coastline (CDFW 2020).	Yes	Potential suitable habitat present

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Asio otus	long-eared owl	None	SSC	None	Widespread but uncommon and local across California year-round, except in the Central Valley where it is a rarely encountered migrant and winter resident. Nests and roosts in dense stands of live oak (Quercus spp.) in riparian thickets with dense canopies near meadow edges. Also nests in dense stands of conifers at higher elevations (CDFW 2020).	Yes	Potential suitable habitat present
Athene cunicularia	burrowing owl	None	SSC	None	Resident in much of the state in open, dry grasslands and various desert habitats. Requires open areas with mammal burrows; especially those of California ground squirrel (*Otospermophilus beecheyi*) Inhabits rolling hills, grasslands, fallow fields, sparsely vegetated desert scrub, vacant lots and other open human disturbed lands such as airports and golf courses. Absent from northwest coast and elevations above 5,500 feet (CDFW 2020).	Yes	Potential suitable habitat present
Aythya americana	redhead	None	SSC	None	Nests in freshwater emergent wetlands where dense stands of cattails and bulrushes are interspersed with areas of deep, open water. Also observed nesting in somewhat alkaline marshes and potholes (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Charadrius montanus	mountain plover	None	SSC	None	Does not nest in California. Present in the state November through March in open grasslands and plowed fields with no or very short vegetation. Found in flocks mostly on the west side of the Central Valley from Colusa County south to Kern County, Carrizo Plain, Antelope Valley, Imperial Valley, and western Riverside County. Single individuals are rarely found on beaches or offshore islands (CDFW 2020).	Yes	Potential suitable habitat present
Circus hudsonius	northern harrier	None	SSC	None	Nests on the ground in patches of dense, tall vegetation in undisturbed areas. Breed and forage in a variety of open habitats such as marshes, wet meadows, weedy borders of lakes, rivers and streams, grasslands, pastures, croplands, sagebrush flats, and desert sinks (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT	SE	FSS	Has declined drastically in California due primarily to loss of habitat. Requires riparian woodland with dense cover; primarily old-growth cottonwood (*Populus* spp.) forests with willow (*Salix* spp.) understory, but will also nest in overgrown orchards adjacent to streams and dense thickets alongside marshes. Persists in small numbers along the Sacramento River between Red Bluff and Colusa, the Feather River between Yuba City and the Bear River, Owens Valley, the Kern River Valley, the Colorado River Valley, the Santa Ana River near Prado Basin, and the San Luis Rey River in northern San Diego County (USFWS 2019).	No	No Potential suitable habitat throughout proposed project area.
Contopus cooperi	olive-sided flycatcher	None	SSC	None	Nests in a wide variety of forest and woodland habitats below 9,000 feet in elevation in the coastal and mountainous portions of California. Occurs only as a migrant elsewhere in the state. Prefers forests and woodlands with adjacent meadows, lakes, or open terrain for foraging. (CDFW 2020).	Yes	Potential suitable habitat present

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Elanus leucurus	white-tailed kite	None	FP	None	Fairly common resident of the Central Valley, coast, and Coast Range Mountains. Nests in oak savanna, oak and willow riparian, and other open areas with scattered trees near foraging habitat. Forages in open grasslands, meadows, farmlands, and emergent wetlands. Often seen hover foraging over roadsides or grassy highway medians (CDFW 2020).	Yes	Potential suitable habitat present
Empidonax traillii extimus	southwestern willow flycatcher	FE	SE	FSS	Uncommon to rare summer resident in the southern Sierra Nevada Range, the Lower Kern River Valley, along the Santa Margarita River, and the upper San Luis Rey River. Prefers dense riparian forests with willow component and scrub habitats associated with arroyos, washes, rivers, lakes, and reservoirs. Has declined drastically as much of its preferred willow habitat has been taken over by invasive tamarisk (*Tamarix* spp.), though does now sometimes use tamarisk for nesting and foraging in the absence of native vegetation (USFWS 2002).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Falco peregrinus anatum	American peregrine falcon	None	FP	None	Breeds near wetlands, lakes, rivers, or other waters on cliffs, banks, dunes or mounds, mostly in woodland, forest, and coastal habitats. Nest is a scrape on a depression or ledge in an open site. May use man-made structures (such as bridges, skyscrapers, or electrical towers), large snags, or trees for nesting (CDFW 2020).	Yes	Potential suitable habitat present
Gavia immer	common loon	None	SSC	None	Very rare as a breeder in the state on large mountain lakes in the Cascade and Sierra Nevada Ranges. Common September through May in estuarine and subtidal marine habitats along the entire coast. A very few non-breeding individuals over-summer on the north coast. Also, less commonly winters on large, deep lakes in valleys and foothills throughout the state (CDFW 2020).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Gymnogyps californianus	California condor	FE	SE, FP	None	Formerly ranged across much of North America, but over the course of the 20th Century, disappeared over nearly its entire range. Dwindled to such small numbers that by the 1980's, all remaining birds were removed from the wild to a captive rearing program. In the 1990's, began being re-released, and now the species has re-established in the foothills of the southern Sierra Nevada Range, across the Tehachapi Range and through the Transverse Ranges from Los Angeles County to Santa Barbara County, and up the Coast Range Mountains to Big Sur and Pinnacles National Park. Nests in cavities located on steep rock formations or in the burned out hollows of old-growth coast redwoods (*Sequoia sempervirens*) or giant sequoias (*Sequoiadendron giganteum*). Less commonly uses cliff ledges or large old nests of other bird species. Forages in open terrain of foothill grassland and oak savanna habitats, and at coastal sites in central California (USFWS 2013).	Yes	Potential suitable habitat present

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Haliaeetus leucocephalus	bald eagle	BGEPA	SE, FP	FSS	Permanent resident in the highest Coast Range mountains, across the Cascade Range, and down the Sierra Nevada to the eastern Transverse Ranges of San Bernardino and Riverside Counties. Uncommon migrant and winter visitor to lowland rivers, lakes, and reservoirs. Nests in large, old-growth, or dominant live trees with open branchwork, especially ponderosa pine. Requires large bodies of water or rivers with abundant fish, and adjacent snags (CDFW 2020).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Icteria virens	yellow-breasted chat	None	SSC	None	Nests in early-successional riparian habitats with a well-developed shrub layer and an open canopy. Restricted to narrow borders of streams, creeks, sloughs, and rivers. Often nest in dense thickets of blackberry and willow (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Ixobrychus exilis	least bittern	None	SSC	None	Fairly common summer resident at Salton Sea and in Colorado River Valley. Uncommon to rare and sporadic breeder elsewhere in the state; recorded nesting in Siskiyou, Modoc, and Lassen Counties, the Central Valley from the Butte Sink to the Yolo Bypass, along the Merced River, in the Tulare Lake Basin, Owens Valley, and spottily along the southern coast from Morro Bay to Baja California and inland to San Jacinto Valley in Riverside County. Nests in dense emergent vegetation in fresh and brackish marshes; rarely in tamarisk in desert riparian scrub (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Lanius ludovicianus	loggerhead shrike	None	SSC	None	Shrublands and open woodlands with a fair amount of grass cover and areas of bare ground. Requires tall shrubs or trees, fences, or power lines for hunting perches and territorial advertisement. Also requires open areas of short grasses, forbs, or bare ground for hunting, large shrubs or trees for nest placement, and thorny vegetation or barbed wire fences for impaling prey. Ranges across most of the state, but absent from the highest mountains and the northwest forests and coast (Shuford and Gardali 2008).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Oreothlypis luciae	Lucy's warbler	None	SSC	None	Breeds along the Colorado River, locally in a few other desert areas as far north as Inyo County, and rarely near Salton Sea in the Coachella and Imperial Valleys. Occurs in desert wash and desert riparian habitats, especially those dominated by mesquite (*Prosopis* spp.); also ranges into tamarisk and other thickets (CDFW 2020).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Pelecanus erythrorhynchos	American white pelican	None	SSC	None	In California, nests almost exclusively in large lakes in the Klamath Basin region. On migration and over winter, occurs across much of the state in open wetlands and sheltered bays and lagoons. Nests on ground on earthen, sandy, and rocky islands or rarely on peninsulas or floating tule mat islands. Nests may be in the open in the sand or interspersed with or adjacent to tall weeds and open, low-stature shrubs. Roosts along water edges, beaches, sandbars, or old drift wood (Shuford and Gardali 2008).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Piranga rubra	summer tanager	None	SSC	None	Breeds primarily in mature riparian woodland with extensive Fremont cottonwood (*Populus fremontii*) canopy. In California, present from mid-April into October along the Colorado River and at scattered riparian sites and desert oases from Inyo County south. Rare elsewhere in the state and at other seasons (Shuford and Gardali 2008).	No	Outside of known range.
Polioptila californica californica	coastal California gnatcatcher	FT	SSC	None	Strongly associated with coastal scrub, sage scrub, and coastal succulent scrub communities. Ranges from southern Ventura County east across the coastal side of the Transverse Ranges to just west of Palm Springs, and south through Orange and San Diego Counties into Baja California (USFWS 2010).	Yes	Potential suitable habitat present
Pooecetes gramineus affinis	Oregon vesper sparrow	None	SSC	None	Does not nest in California (the vesper sparrows that nest in the northeastern part of the state are *Poocetes gramineus confinus*, the Great Basin vesper sparrow, which are not considered special status). Oregon vesper sparrows are known to winter in the low foothills of the Sierra Nevada Range, the leeward side of the Coast Range from Yolo County south through the Carrizo Plain, and the South Coast and Inland Empire regions. Obligate grassland species. Open ground with little vegetation or short grass and low annuals, including stubble fields, meadows and road edges (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Progne subis	purple martin	None	SSC	None	Present in California from mid-March through late September. Requires concentrations of nesting cavities, relatively open air space above accessible nest sites, and relatively abundant aerial insect prey. In the coastal mountains, Cascade Range, and Sierra Nevada foothills, inhabits open forests, woodlands, and riparian areas. Extirpated as a breeder from most of the Central Valley except the Sacramento area where it has taken to nesting in hollow-box bridges. In southern California, now only a rare and local breeder on the coast and in interior mountain ranges, with few breeding localities. Absent from higher desert regions except as a rare migrant (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Pyrocephalus rubinus	vermilion flycatcher	None	SSC	None	In California, most numerous along the Colorado River and in the Imperial Valley, but resident at scattered locations across Southern California. Prefers cottonwood, willow, mesquite, and other vegetation in desert riparian habitat adjacent to irrigated fields. Also inhabits golf courses, residential areas, and parks (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Setophaga petechia	yellow warbler	None	SSC	None	Usually found in riparian deciduous habitats in summer: cottonwoods, willows, alders (*Alnus* ssp.), and other small trees and shrubs typical of low, open-canopy riparian woodland. Also breeds in montane shrubbery in open coniferous forests (CDFW 2020).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Strix occidentalis occidentalis	California spotted owl	None	SSC	FSS	Older forests in areas of high canopy cover, with a multi-layered canopy, old decadent trees, a high number of large trees, and coarse downed woody debris. In California, ranges throughout the west slopes of the Sierra Nevada Mountains, and down the Coast Range Mountains from Carmel south through the Transverse Ranges nearly to Baja California (Shuford and Gardali 2008).	Yes	Potential suitable habitat present and PAC present along 1.5 miles of the southern edge of Silverwood Lake.
Toxostoma lecontei	Le Conte's thrasher (San Joaquin Valley population)	None	SSC	None	Species is more widespread and numerous across the Mohave Desert, but the San Joaquin Valley population (residing from the Coalinga area in Fresno County south to the Tulare Lake Basin and Carrizo Plain) has declined precipitously with conversion of the land to agricultural use. Prefers gentle to rolling, well-drained slopes bisected with dry washes; conditions found most often on bajadas or alluvial fans. Occupied habitats are moderately to sparsely vegetated with saltbush (*Atriplex* spp.) with bare ground or patchy, sparse, low-growing grass (Shuford and Gardali 2008).	Yes	Potential suitable habitat present and observed at Silverwood Lake during relicensing studies.
Vireo bellii pusillus	least Bell's vireo	FE	SE	None	Once occupied much of the Central Valley, but has disappeared from most its former range, and is now restricted to southern California from southern Inyo and Monterey Counties south through the South Coast and Inland Empire regions. Obligate riparian breeder, favoring cottonwood, willow, and oak (*Quercus* spp.) woodlands, and mule fat (*Baccharis salicifolia*) scrub along watercourses (USFWS 2006).	Yes	Potential suitable habitat present
Vireo vicinior	gray vireo	None	SSC	FSS	Uncommon and very local in southern California, where it occurs from 2,000 to 6,500 feet in elevation across the leeward sides of the Transverse and Peninsular Ranges, and in the higher mountain ranges of the Mojave Desert. Breeds in desert scrub, mature arid chaparral, or open pinyon-juniper woodland mixed with chaparral (Shuford and Gardali 2008).	No	Closest CNDDB records from 8 miles to the south from 1949. Remaining known occurrences much further south (CDFW 2020).
Xanthocephalus xanthocephalus	yellow-headed blackbird	None	SSC	None	Nests in fresh marshes with tall, emergent vegetation such as bulrushes and cattails adjacent to deep water (Shuford and Gardali 2008).	Yes	Potential suitable habitat present
Mammals							
Antrozous pallidus	pallid bat	None	SSC	FSS	Ranges across nearly all of California except for high elevation portions of the Sierra Nevada Mountains and Del Norte, western Siskiyou, Humboldt, and northern Mendocino Counties. Generally found in a wide variety of habitats but with some preference for drier areas. Day roosts are in caves, crevices, mines, and occasionally in hollow trees and buildings (CDFW 2020).	Yes	Potential suitable habitat present

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Bassaricus astutus	ring-tailed cat	None	FP	None	Occurs in various riparian habitats, and in brush stands of most forest and shrub habitats, at low to middle elevations. Potential suitable habitat consists of a mixture of forest and shrubland in close association with rocky areas or riparian habitats. Usually not found more than 0.6 mile from permanent water. Hollow trees, logs, snags, cavities in talus slopes and other rocky areas, and other recesses are used for cover. Nests in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests (CDFW 2020).	Yes	Potential suitable habitat present and has been observed by California Department of Parks and Recreation staff at Silverwood Lake (DPR 2016).
Chaetodipus californicus femoralis	Dulzura pocket mouse	None	SSC	None	Occurs in brushy areas, but probably is attracted to grass-chaparral edge. Grazing of grassland by domestic stock eliminates cover necessary for predator avoidance. (CDFW 2020).	No	Outside of known species range
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None	SSC	None	Generally found in sandy areas with herbaceous cover and rocks or coarse gravel in a wide mixture of vegetation communities. Specifically, prefers rocky and gravelly areas with a yucca (*Yucca* spp.) overstory and desert scrub communities near or in pine-juniper woodland. Found in San Diego County and portions of Riverside and San Bernardino Counties (SDMMP 2016).	Yes	Potential suitable habitat present
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None	SSC	None	Found on eastern, desert facing slopes of the San Gabriel Mountains, including pinyon-juniper woodlands from 3,900 - 5,900 feet in elevation (Lackey 1996).	No	Outside known range
Corynorhinus townsendii	Townsend's big-eared bat	None	SSC	FSS	Ranges throughout California except for high elevation portions of the Sierra Nevada Mountains. Generally prefers mesic habitats but known to occur in all non-alpine habitats of California. Roosting occurs in caves, tunnels, mines, buildings, or other structures and this species may use different roosting sites for day and night (CDFW 2020).	Yes	Potential suitable habitat present
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE	SCE	None	Typically found in Riversidean alluvial fan sage scrub on alluvial flood plains and adjacent upland habitat (USFWS 2009d).	Yes	Potential suitable habitat present
Eumops perotis californicus	western mastiff bat	None	SSC	None	Ranges throughout all of Southern California, the central coast, and the Sierra Nevada Mountains. Generally occurs in open, arid, or semi-arid habitats. Roosts in rock crevices and buildings. (CDFW 2020).	Yes	Potential suitable habitat present
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None	SSC	FSS	Variety of coniferous and deciduous forests, including riparian forest. Found between 3,960 and 8,250 feet in elevation. Consists of three isolated populations in the San Gabriel, San Bernardino, and San Jacinto mountains. Distribution fragmented by natural variation in vegetative cover, a preference for high elevation habitats, and barriers such as forest cover loss (Bolster 1998).	Yes	Potential suitable habitat present and observed along south side of Silverwood Lake (CDFW 2020).

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Lasiurus blossevillii	western red bat	None	SSC	None	Ranges across the Central Valley, as well as the coast and Coast Range mountains from Mendocino County south, and east across the Los Angeles area into the Inland Empire region. Occurs in most habitats except desert and alpine areas. Roosts in trees, sometimes shrubs, and typically at the margins of habitats (CDFW 2020).	Yes	Potential suitable habitat present
Lasiurus xanthinus	western yellow bat	None	SSC	None	Ranges in most of Southern California south of San Bernardino. Occurs in riparian, palm oasis, and desert wash habitats (CDFW 2020).	Yes	Some small areas of habitat present
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None	SSC	None	Ranges from the south end of the Los Padres National Forest in Ventura County, southward and west of the Peninsular Ranges into northwestern Baja California. Occurs primarily in arid regions with short grass. Preferred habitats include open grasslands, agricultural fields, and sparse coastal scrub. Not typically found in high grass or dense brush (SDMMP 2017).	Yes	Potential suitable habitat present
Microtus californicus mohavensis	Mohave river vole	None	SSC	None	Known from only two localities along the Mojave River: at Victorville and at Oro Grande from about 2,600 to 2,950 feet in elevation. Restricted to the grassy or riparian habitats within the Mojave River corridor. In areas impacted by agricultural and suburban development, it may be confined to the narrower riparian belt (Bolster 1998).	No	Outside of known range
Neotoma lepida intermedia	San Diego desert woodrat	None	SSC	None	This species prefers Joshua tree (*Yucca brevifolia*), pinyon-juniper, mixed and chamise or red shanks chaparral, sagebrush (*Artemisia* spp.), and most desert habitats, but is also found in a variety of other habitats. Moderate to dense canopies are preferred. Particularly abundant in rock outcrops and rocky cliffs and slopes, especially those with Joshua trees. Elevational range from sea level to 8,500 feet (CDFW 2020).	Yes	Potential suitable habitat present
Nyctinomops femorosaccus	pocketed free-tailed bat	None	SSC	None	Located in southern California. Associated with creosote scrub or chaparral, and large rock features such as boulder jumbles or rocky canyons (Bolster 1998). Colonial and roosts primarily in crevices of rugged cliffs, high rocky outcrops and slopes. Has been found in a variety of plant associations, including desert shrub and pine-oak forests. May also roost in buildings, caves, and under roof tiles (WBWG 2016).	No	Outside of known range
Onychomys torridus ramona	southern grasshopper mouse	None	SSC	None	Historically, inhabited mesas and valleys along the Pacific slope of the Peninsular and Transverse Ranges and extreme northwestern Baja California. Currently ranges southward from Los Angeles County to the Mexican border, generally west of the desert. Inhabits a variety of low, open and semi-open flat, sandy, valley floor scrub habitats including coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs (Bolster 1998).	Yes	Potential suitable habitat present

Scientific Name	Common Name	Federal Status	State Status	Forest Service Status	Habitat Characteristics	Impacts Analyzed	Rationale
Perognathus alticola alticola	white-eared pocket mouse	None	SSC	FSS	Found in isolated montane areas from 3,500 to 5,900 feet in elevation in the Tehachapi Mountains and in the San Bernardino Mountains in the vicinity of Strawberry Peak. A scarce resident in ponderosa and Jeffrey pine (*Pinus jeffreyi*) habitats, and uncommon in mixed chaparral and sagebrush habitats (CDFW 2020).	No	Outside of known range
Perognathus alticola inexpectatus	Tehachapi pocket mouse	None	SSC	FSS	Historically occurred from the vicinity of Tehachapi Pass, west to Mount Pinos, and south to Elizabeth and Quail Lakes, at elevations from 3,350 to 6,000 feet in elevation. There are no recent records of the species, despite intensive survey efforts. The habitat at Mount Pinos (the type locality) was grassy flats among scattered Ponderosa pine. At lower elevations, it has been reported in chaparral and sage scrub, and rangelands dominated by non-native annual grasses. In the western Tehachapi Mountains, it has been reported from Joshua tree and pinyon-juniper woodland (Bolster 1998).	Yes	Potential suitable habitat present
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None	SSC	None	Historically occurred in the coastal basins of southern California, from San Fernando and Burbank in the San Fernando Valley east to Cabazon, south through the San Jacinto and Temecula Valleys to Aguanga, Warner Pass, Vail, and Temecula. Is now apparently absent from the San Fernando Valley, and occurs sparingly in, or is absent from, many historic localities in the San Bernardino, San Jacinto, and Temecula Valleys. Low elevation grasslands, alluvial sage scrub, and coastal sage scrub (Bolster 1998).	Yes	Potential suitable habitat present
Perognathus longimembris pacificus	Pacific pocket mouse	FE	SSC	None	Historically occurred on fine, sandy soil within about 12 miles of the Pacific coast of southern California from Los Angeles County south to Mexico. Associates with open coastal scrub and grassland communities (Bolster 1998).	No	Outside of known range of species
Taxidea taxus	American badger	None	SSC	None	Ranges across nearly all of California except northernmost Humboldt and Del Norte Counties. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils (CDFW 2020).	Yes	Potential suitable habitat present
Xerospermophilus mohavensis	Mohave ground squirrel	None	ST	None	Ranges in the western half of the Mojave Desert but does not occur in the Victorville-Hesperia metropolitan area. Generally occurs in most desert scrub communities and Joshua tree woodland (CDFW 2019). Specifically, this species strongly prefers spiny hopsage (*Grayia spinosa*) and winter fat (*Krascheninnikovia lanata*) (Leitner 2017).	No	No Potential suitable habitat present in the proposed Project area.

Key:
Federal:
BGEPA = Bald and Golden Eagle Protection Act
FC = Federal Candidate
FE = Federally Endangered
FT = Federally Threatened
FD = Federally Delisted
FSS = Forest Service Sensitive
FP = Fully Protected

State:
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SE = State Endangered
SSC = State Species of Special Concern
ST = State Threatened

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