

Draft Supplemental Environmental Assessment

Isabella Lake Dam Safety Modification Project

Phase III Real Estate Easement Acquisition of Borel Canal at
Isabella Lake Auxiliary Dam without Replacement



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of Engineers**®

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Auxiliary Dam without Replacement**

Supplemental Environmental Assessment

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List of Acronyms and Abbreviations

APE	Area of Potential Effect
ARPA	Archaeological Resources Protection Act of 1979
BLM	Bureau of Land Management
BO	Biological Opinion
BMP, BMPs	Best Management Practice(s)
Borel Project	Borel Hydroelectric Project No. 382. Includes the canal both upstream and downstream of the Lake Isabella Auxiliary Dam, siphons, aqueducts, headworks, and hydropower plant.
CEQ	Council on Environmental Quality
cfs	Cubic feet per second
CWA	Clean Water Act of 1972
DSAC	Dam Safety Action Classification
DSM	Dam Safety Modification
DSMP	Dam Safety Modification Project
DSMR	Dam Safety Modification Report
EA	Environmental Assessment
EIS	Environmental Impact Statement
EKAPCD	Eastern Kern Air Pollution Control District
EO	Executive Order
ER	Engineering Regulation
ESA	Endangered Species Act of 1973
FERC	Federal Energy Regulatory Commission
FONSI	Finding of No Significant Impact
ft	feet
HPTP	Historic Properties Treatment Plan
Isabella Dams	Isabella Lake Main Dam, Spillway, and Auxiliary Dam
Isabella Lake	The body of water
Lake Isabella	The town
MW	megawatt
MOA	Memorandum of Agreement
NAGPRA	Native American Graves Protection and Repatriation Act of 1990

NAVD 88	North American Vertical Datum 1988
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NRHP	National Register of Historic Places
O&M	Operations and Maintenance
PED	Preconstruction Engineering and Design
PG&E	Pacific Gas and Electric
ROD	Record of Decision
SCE	Southern California Edison
SEA	Supplemental Environmental Assessment
SHPO	State Historic Preservation Officer
USACE	United States Army Corps of Engineers
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WCM	Water Control Manual, a 1978 USACE document outlining water management at Isabella Lake Dams

1 PURPOSE AND NEED FOR THE ACTION

1.1 INTRODUCTION

Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, this Supplemental Environmental Assessment (SEA) has been prepared to update, discuss, and disclose potential effects, beneficial or adverse, that may result from the proposed easement acquisition, and decommissioning of the Borel Canal at the Isabella Lake Auxiliary Dam by the U.S. Army Corps of Engineers, Sacramento District (USACE). Closure of the canal at the dam is part of the ongoing Isabella Lake Dam Safety Modification Project (DSMP).

1.2 LOCATION

Isabella Lake is on the Kern River in the Sierra Nevada, in the southernmost part of the Sequoia National Forest, Kern County, California (Figure 1). It sits approximately 35 miles northeast of Bakersfield, along Highway 178, one mile upstream of the town of Lake Isabella¹. The Kern River drains an area of 2,100 square miles and is the most southerly of the major streams flowing into the San Joaquin Valley. The North Fork and South Fork of the Kern River comprise the headwaters, and each flows 90 miles from the High Sierra to their confluence, approximately 1¼ miles upstream of the Isabella Dams. Downstream of Isabella Dam, the Kern River flows through the Kern River Gorge, through the Kern Valley, and into the San Joaquin Valley. From the mouth of the canyon, the Kern River flows 85 miles to its terminus at Tulare Lakebed.

The Borel Canal at the Isabella Lake Auxiliary Dam is located within the U.S. Geological Survey (USGS) *Lake Isabella North* quadrant map in Township 26 South, Range 33 East, and Sections 29 and 30 within Kern County (Figure 2).

¹ Differentiation between Lake Isabella and Isabella Lake: the town is *Lake Isabella*, and the reservoir created by the dam is *Isabella Lake*.

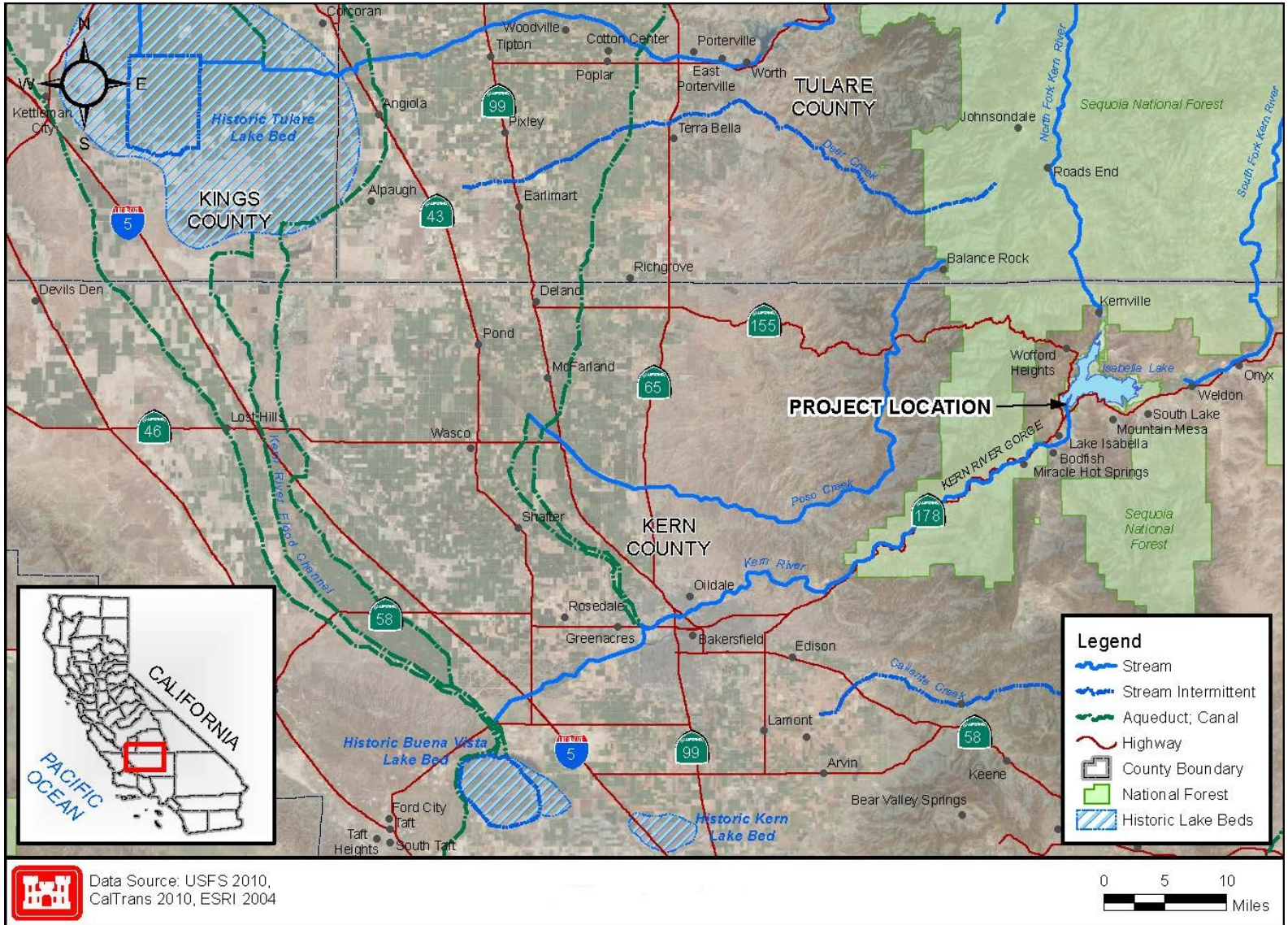


Figure 1. Lower Kern River Watershed and Vicinity Map.

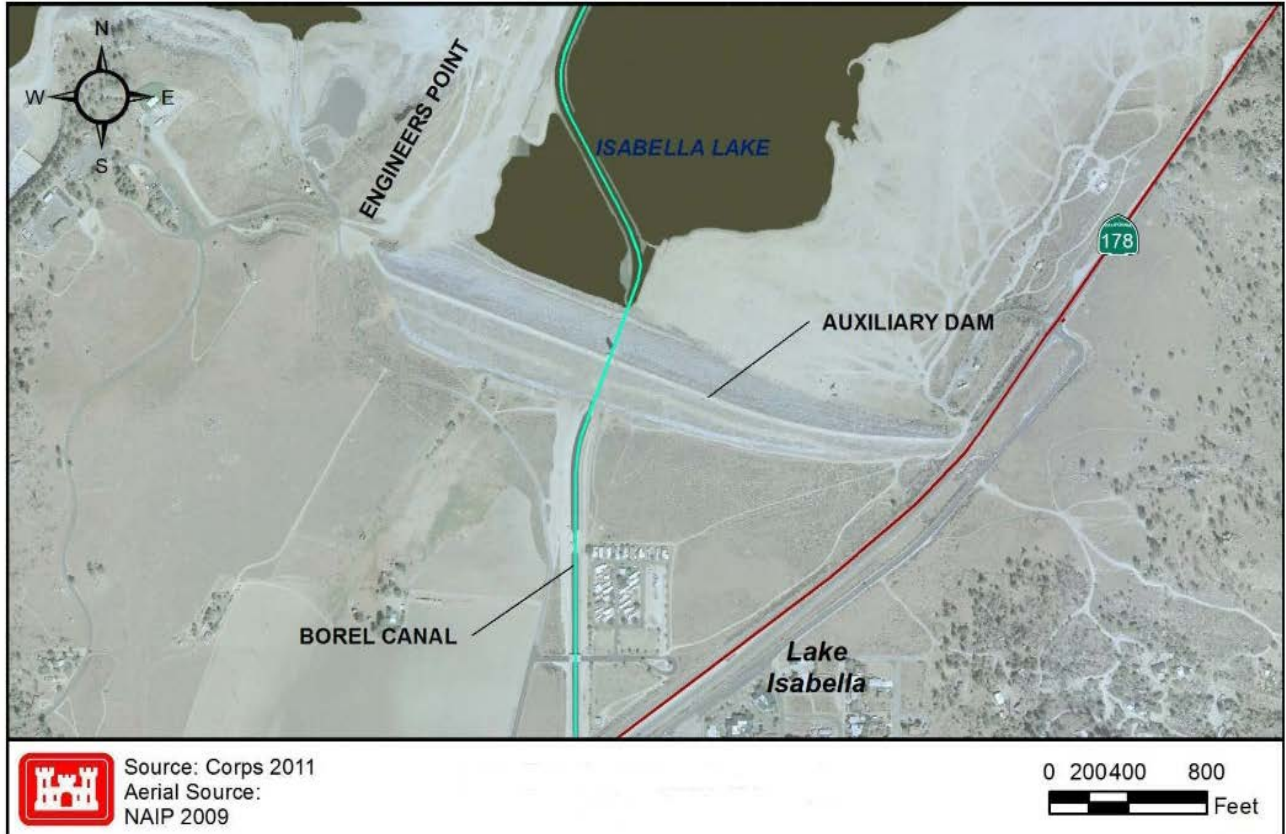


Figure 2. Existing Alignment of Borel Canal through the Auxiliary Dam.

1.3 PROJECT AUTHORITY

The initial examination and survey for flood control within the Sacramento and Joaquin River Valleys was authorized in the Flood Control Act of 1936, Pub. L. No. 74-738, § 6, 49 Stat. 1579 (1935). Construction of the Isabella Reservoir on the Kern River in the San Joaquin Valley, California was authorized in the Flood Control Act of 1944, Pub. L. No. 78-534, § 10, 58 Stat, 887, 901 (1944).

The Engineering Regulation (ER) 1110-2-1156 (USACE 2011) prescribes the guiding principles, policy, organization, responsibilities, and procedures for implementation of risk informed dam safety program activities, and a dam safety portfolio risk management process within USACE. The purposes of the dam safety program are to protect life, property, and the environment by ensuring that all dams are designed, constructed, operated, and maintained as safely and effectively as is reasonably practicable. When unusual circumstances threaten the integrity of a structure and the safety of the public, USACE has the authority to take expedient actions, require personnel to evaluate the threat, and design and construct a solution.

1.4 ISABELLA LAKE DAM SAFETY MODIFICATION PROJECT (DSMP) BACKGROUND

In 2005, USACE determined through a screening-level risk assessment process that the Isabella Lake Main Dam, Spillway, and Auxiliary Dam (Isabella Dams) posed unacceptable risk to life and public safety. Based on the risk assessment, the dams received a risk classification described as “*urgent and compelling (unsafe)*” and as “*critically near failure,*” or “*extremely high risk*”. However, failure is not believed to be imminent except in the case of a large seismic event. USACE commenced a dam safety study, and based on the risk assessment, classified the Isabella Dams as Dam Safety Action Classification (DSAC) I in 2008; elements of the Isabella Dams have been determined to be unsafe under extreme loadings and could result in significant and catastrophic consequences downstream.

USACE then began a Dam Safety Modification Report (DSMR) that was completed in October 2012. The DSMR recommends remediation measures to reduce public safety and property damage risks posed by floods, earthquakes, and seepage at the Isabella Dams (USACE 2012a). In October 2012, USACE published its Final Environmental Impact Statement (EIS) for the proposed remediation of the Isabella Dams. USACE issued its Record of Decision (ROD) for the EIS on December 18, 2012. The EIS described the anticipated direct and indirect impacts expected to occur because of the remediation, including impacts to existing Federal, State, local, and privately owned infrastructure in the Isabella Dams vicinity (USACE 2012b).

- Main dam full height filter and drain, with approximately 16-foot crest raise;
- Retrofit of main dam control tower for access with the raised dam;
- Improvements to the existing service spillway;
- Construction of a 900-foot wide emergency spillway;
- Auxiliary dam modification, with a 16-foot crest raise, an 80-foot wide downstream buttress, and shallow foundation treatment;
- Realignment of the Borel Canal conduit through the right abutment of the auxiliary dam;
- Relocation of the auxiliary dam control tower outside of the potentially liquefiable foundation zone; and,
- Relocation of State Routes 155 and 178 to accommodate the dam crest raises.

1.5 PROJECT REFINEMENTS SINCE THE ENVIRONMENTAL IMPACT STATEMENT (EIS)

Since release of the EIS, the approved plan has been refined to eliminate the need for realignment of State Route 155, State Route 178, and Lake Isabella Blvd (USACE 2015a). Removal of the highway realignment from the Isabella DSMP eliminates substantial, planned construction activity in advance of the main Dam Safety Modification (DSM) work. As a result,

project costs have been reduced and environmental, economic, and human consequences would be minimized further than originally assessed. The November 2015 SEA (USACE 2015b) evaluated the relocations of the U.S. Forest Service (USFS) administration and recreation facilities affected by the DSMP. This refinement would meet essential USACE guidelines in accordance with the Dam Safety policy document ER 1110-2-1156.

The Isabella Lake DSMP ROD for the 2012 EIS states that USACE would explore and identify mitigation measures to offset adverse effects on recreation resulting from construction of the Isabella Lake DSMP. The ROD also described USACE's lack of authority to mitigate for USFS office and recreation facilities adversely affected by the Project. Since the release of the 2012 EIS and ROD, USACE, in coordination with the Office of Management and Budget, has concluded that sufficient authority exists to allow USACE to use its appropriated funds to relocate all USFS facilities impacted by the Isabella Lake DSMP. Removal and replacement of affected USFS facilities was found to be consistent with a 1964 Memorandum of Agreement (MOA) (USACE 1964) and a 1991 *Memorandum Of Understanding Between And Pertaining To Interchange Of Lands And Management Of The Water And Land Resources At Isabella Lake Project, Sequoia National Forest, Kern County, California* (MOU) (USACE 1991). These written agreements state, in part, that if USACE's construction at Isabella affected existing USFS structures or facilities, USACE would replace the facilities with an equivalent level of service in a location determined by USFS. Mitigation for the DSMP to USFS administration and recreation facilities was the subject of the November 2015 SEA (USACE 2015b).

1.6 PURPOSE AND NEED

The purpose of the proposed action is to remediate deficiencies at the auxiliary dam associated with the Borel Canal conduit. The proposed action to acquire and abandon the Southern California Edison (SCE) Borel Canal easement that runs immediately upstream, through, and immediately downstream of the auxiliary dam, was first recommended in the 2012 DSMR. The EIS-ROD did not evaluate this alternative because SCE planned to continue operations of the Borel Canal and Hydroelectric Project. However, SCE approached USACE in August 2014 to re-evaluate this approach. The proposed action would meet DSMP's 2012 Final EIS objectives and further reduce construction effort, environmental impacts, and total project costs.

The need for the proposed action is to reduce the likelihood and associated consequences of dam failure. The Isabella Dams and reservoir are critical flood control features on the Kern River that also provide benefits for water supply, hydroelectric production, and recreation. USACE has determined that the Isabella Dam facilities require structural improvements to meet authorized project purposes and reduce risk to the public and property from dam safety issues posed by floods, earthquakes, and seepage. Given the large population downstream of Isabella Lake, as well as significant safety issues at the dam, urgent action is needed to address deficiencies and reduce risk.

The DSMR identified the existing Borel Canal conduit as a significant dam safety risk to the Auxiliary Dam:

- Borel Canal conduit seepage and piping – Concentrated seepage paths are suspected along the Borel Canal conduit under the Auxiliary Dam, possibly associated with seepage collars or construction practice. Erosion could progress along the conduit and lead to a breach of the dam.
- Seismicity – Recent investigations indicate that the Kern Canyon Fault, which was previously thought to be inactive, is now known to be active in the geologically recent past. The fault passes under the right abutment of the Auxiliary Dam. An offset of the fault at this location could lead to a crack that could serve as a path for concentrated seepage and erosion. Additionally, portions of the Auxiliary Dam foundation are assessed to be liquefiable in an earthquake, and strong shaking from an earthquake could lead to large deformations in the dam and/or Borel conduit (URS Corporation 2010).

1.7 PURPOSE OF THIS SUPPLEMENTAL EA (#4)

This SEA partially fulfills the commitment to continue the NEPA analysis of the potential effects of implementing the Isabella Lake DSMP. At the time of Project approval, certain unresolved issues were left for further analysis during the Preconstruction Engineering and Design (PED) phase of the Isabella Lake DSMP. As a result, it was determined that a series of supplemental NEPA analyses would be required after the ROD was signed; they would analyze the potential effects associated with these remaining issues. These supplemental NEPA analyses identified in Section 1.9 of the Draft EIS and Section 1.4 of the Final EIS included Real Estate Acquisitions and the USFS Lake Isabella Office Relocation and Recreation Mitigation.

This SEA will discuss a new alternative under the DSM, to acquire and abandon the SCE Borel Canal easement that runs immediately upstream, through, and immediately downstream of the Auxiliary Dam.

1.8 PREVIOUS ENVIRONMENTAL DOCUMENTS AND ORGANIZATION OF THIS SEA

1.8.1 Prior Environmental Documents

1.8.1.1 Isabella Lake DSMP Draft and Final EIS

The EIS was released for public review and comment in October 2012 (USACE 2012a), and the ROD was signed on December 18, 2012 (USACE 2012b). The Draft EIS is the primary source for detailed, affected environment and environmental impact information for the Isabella Lake DSMP, with the Final EIS focusing on the Preferred Alternative and subsequent changes to the Draft EIS analyses.

1.8.1.2 Phase I and Phase II Real Estate Acquisition and Relocation Supplemental EAs

Additional NEPA documents, the Supplemental Environmental Assessments for Phase I and Phase II Real Estate Acquisition and Relocation Kern County, California, were finalized with Findings of No Significant Impact (FONSI) in August 2014 and July 2015 respectively. These documents also partially fulfilled the commitment to continue the NEPA analysis of implementing the Isabella Lake DSMP.

- The Phase I Real Estate Acquisition and Relocation SEA #1(USACE 2014b) specifically evaluated the effects of acquiring affected, occupied lands and relocation of residents located at the privately owned Lakeside Village Mobile Home Park on 2959 Eva Avenue, Lake Isabella, California, and a privately owned single-family farmhouse residence located on 4547 Barlow Drive, Lake Isabella, California. A FONSI was determined for this action and signed August 2014. All residents with the potential to be significantly affected by the Isabella Lake DSMP construction-related activities have been relocated out of the area.
- This Phase II Real Estate Acquisition and Relocation SEA #2 (USACE 2015a) evaluates the effects of structure demolition/disposal associated with Phase I real estate actions proposed, as well as the effects of acquiring additional unoccupied or unimproved lands, and demolition/disposal of existing structures on all parcels affected by implementation of the Isabella Lake DSMP. This Phase II Real Estate SEA will also evaluate relocation of USACE's 1.4-acre O&M Facility.

1.8.1.3 SEA #3 for USDA Forest Service Administration and Recreation Facilities

At the public's request, a draft Recreation Report was released in February 2014. It articulated potential mitigation options to offset significant loss of recreation facilities incurred from implementation of the Isabella Lake DSMP (USACE 2014a). After the release of the draft Recreation Report, a SEA was written to discuss the proposed relocation of specific USDA Forest Service, Sequoia National Forest (USFS) recreation, and administrative office and fire station response facilities affected by construction of the Isabella Lake DSMP. The structures and facilities proposed for relocation are in the path of the new spillway for the Isabella Lake Dam. The Draft SEA #3 was posted for public review and comment on November 17, 2015 (USACE 2015b).

1.8.2 Decommissioning of Borel Canal at Isabella Lake Auxiliary Dam SEA #4

This SEA (#4) is tiered to the Draft and Final EIS, and will update the analysis provided in the previous environmental documents. It will also provide additional information specifically relating to the acquisition and abandonment of the SCE Borel Canal easement. Throughout this document, information and analyses that have not changed since the Final EIS will be referenced back to that document, available online at <http://www.spk.usace.army.mil/Missions/CivilWorks/IsabellaDam.aspx>. Copies of the Draft and

Final Isabella Lake DSMP EIS may also be obtained from the Sacramento District Public Affairs Office, 1325 J Street, Sacramento, CA 95814; Phone (916) 557-5101; email: isabella@usace.army.mil.

1.9 DECISION TO BE MADE

The District Engineer, Commander of the Sacramento District, must decide whether the proposed action qualifies for a FONSI under NEPA, or whether a Supplemental EIS must be prepared.

2 PROPOSED ACTION AND ALTERNATIVES

The following section describes the alternative development process, and the alternatives that were not considered and removed from further assessment. One Preferred Alternative (Preferred Action) is identified to meet the purpose and need for the proposed action. The Preferred Action is evaluated in detail in this SEA. A No Action Alternative sets the baseline to illustrate potential effects of not implementing the Preferred Action.

2.1 ALTERNATIVE 1: NO ACTION ALTERNATIVE

Under the No Action Alternative, dam safety improvements would not be constructed. As construction has not yet commenced, the No Action Alternative remains a possible, albeit not preferred, scenario. This alternative is discussed in the 2012 EIS and incorporated herein by reference. Specific details pertaining to the Borel Canal will be discussed in this SEA.

2.2 ALTERNATIVE 2: CONSTRUCTION OF A BYPASS TUNNEL AROUND THE AUXILIARY DAM

Under this alternative, the Borel Canal bypass tunnel (conduit) at the Auxiliary Dam would be constructed as discussed in the 2012 EIS. Since this alternative was analyzed in the 2012 EIS, it is incorporated herein by reference and the details will not be reiterated.

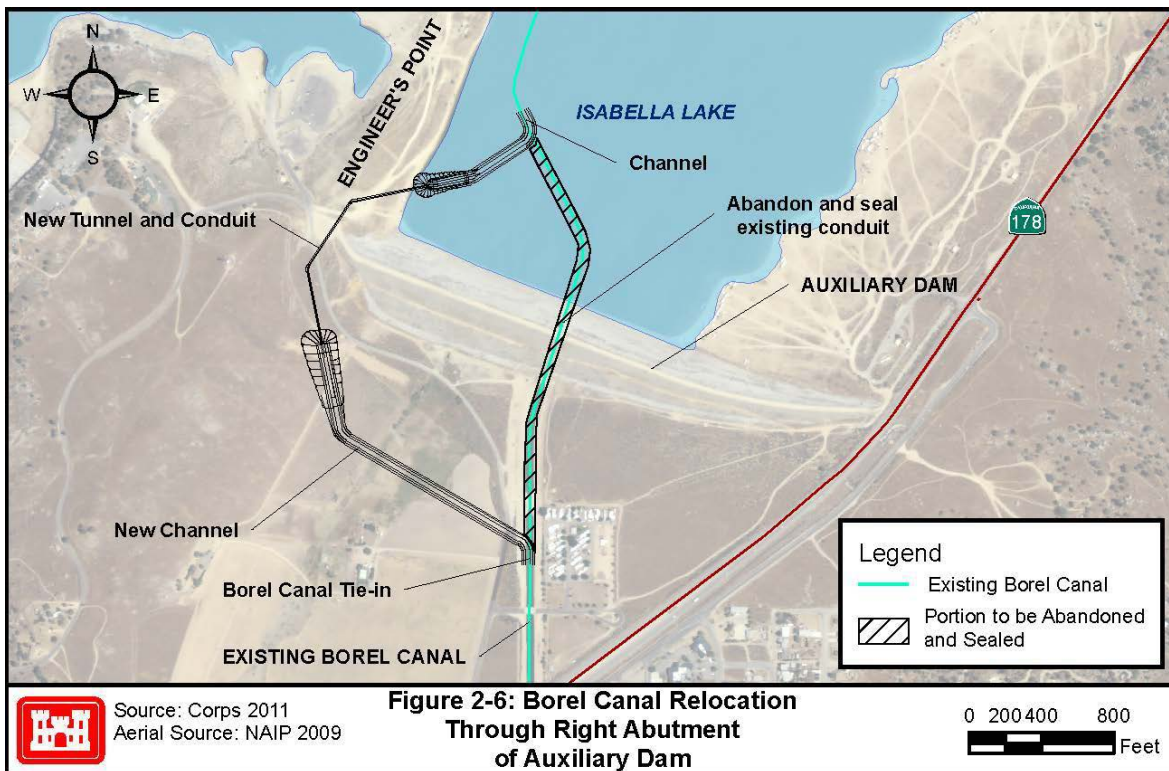


Figure 3. Proposed Bypass Conduit and New Channel, 2012 EIS Alternative.

2.3 ALTERNATIVE 3: PROPOSED ACTION ALTERNATIVE - EASEMENT ACQUISITION WITHOUT REPLACEMENT MEASURE

This alternative is the same as Alternative 2, as assessed in the DSMP's 2012 Final EIS. However, no realignment and construction of a new Borel Canal connection would occur, and USACE would compensate SCE for its ongoing Borel Hydroelectric Power Plant Project (Borel Project) operations. This alternative could have the indirect effect of ceasing the Borel Project operations. If operations cease, SCE may decommission the Borel Project through FERC and any other applicable regulatory agencies. The direct actions taken by USACE would be to:

- Acquire the existing easement that runs immediately upstream, through, and immediately downstream of the Auxiliary Dam from SCE (which was granted to SCE by the United States at the time of original dam construction) – Consistent with 2012 Approved Plan.
- Seal off the existing conduit through the Auxiliary Dam by filling it with concrete and abandoning the sealed conduit in place – Consistent with the 2012 Approved Plan and evaluated in the 2012 EIS.
- Compensate SCE for the acquisition of its easement interest and for the Isabella DSMP's impact on the ongoing operation of SCE's Borel Hydroelectric Project (FERC Project No. 382) – Not part of the 2012 Approved Plan or analyzed in the 2012 EIS.

Anticipated direct impacts that would be caused by the permanent easement acquisition and compensation could include:

- Loss of 12 megawatts (MW) of power production from the Borel Project.
- Increased flows on the Kern River between Isabella Dam and the Borel Powerhouse.

Impacts associated with Borel Project decommissioning and loss of power production would be in a NEPA document developed by SCE and FERC. The future NEPA document would include input from the public, and SCE would ultimately take on and be responsible for all actions associated with decommissioning.

3 AFFECTED ENVIRONMENT AND CONSEQUENCES

This section describes the environmental resources in the construction footprint, as well as effects of the Preferred Action and No Action Alternatives on area resources. Each section below presents the existing resource conditions, environmental effects, and when necessary, mitigation measures that are proposed to avoid, reduce, minimize, or compensate for any significant effects. Impacts are identified as direct or indirect, with cumulative impacts following in Chapter 4. Effects are assessed for significance based on significance criteria, which are established for each resource below.

3.1 ENVIRONMENTAL RESOURCES NOT EVALUATED IN DETAIL

Certain resources were eliminated from further analysis in this SEA because they were addressed adequately in the Isabella Lake DSMP Draft and Final EIS, or they would not result in any new or substantially more severe significant direct and indirect effects, including short and long term effects, than were initially evaluated in the Isabella Lake DSMP EIS. A brief discussion of these resources follows.

3.1.1 Land Use

The Land Use section of the Draft EIS (Section 3.11) and Final EIS (Section 3.9) sufficiently characterized the regulatory setting for this resource. An alternative would be considered to have a significant effect on land use if it would result in incompatible land uses with existing and planned land uses in the area; be inconsistent with land use designations or goals, policy or regulation; or produce a permanent conversion of prime and unique farmlands to other land uses. The proposed action will not contribute to changes in land uses, nor produce a permanent conversion of prime and unique farmlands to other land uses.

3.1.2 Geology, Soils, and Seismicity

The Geology, Soils and Seismicity section of the Isabella DSMP EIS (Draft EIS section 3.4 and Final EIS Section 3.2) sufficiently characterizes the regulatory setting and affected environment for this resource. There have been no additional revisions, studies, or new data relevant to the discussion of the affected environment. The proposed action is not expected to produce any adverse effect to geology, soils, and seismicity. Eliminating construction of a new, realigned tunnel would reduce the overall project and operation risk by not having a tunnel feature crossing the active Kern Canyon Fault. Mitigation measures specified in Section 3.4.4 of the EIS would reduce any potential geology, soil, and seismicity impacts to a level of less than significant.

3.1.3 Air Quality

The Air Quality Section of the Draft EIS (Section 3.5), Final EIS (Section 3.3.), and the Regulatory Setting Section in the detailed Air Quality analysis (Appendix F of the Final EIS) sufficiently characterized the general regulatory setting and the affected environment for this resource. Since the release of the Final EIS, the Eastern Kern Air Pollution Control District (EKAPCD) has adopted amendments to Rule 402 (Fugitive Dust) at the District's Regular Board of Directors Meeting held March 12, 2015. These amendment changes would be submitted through EKAPCD to the Environmental Protection Agency (EPA) for incorporation as part of the California State Implementation Plan, and would constitute a revision to the State Plan.

The proposed action would reduce the amount and duration of construction activities. This would result in fewer air quality environmental impacts due to dust, vehicle emissions, etc.

3.1.4 Vegetation and Wetlands

The Biological Resources section of the Isabella Lake DSMP EIS (Draft EIS Section 3.10 and Final EIS Section 3.8) sufficiently characterizes the regulatory setting and the affected environment for this vegetation and wetlands within the DSMP area. Additional information is found in the November 2015 Supplemental EA for USDA Forest Service Administration and Recreation Facilities Relocation. Construction activities associated with the proposed action would be within the confines of the Auxiliary Dam; no additional vegetation clearing would be completed with this alternative.

Potential project impacts to emergent wetlands near the proposed, new Borel Canal portal structure and the connection to the existing Borel Canal will no longer occur (D-EIS Section 3.10). The complete Clean Water Act (CWA) Section 404(b)(1) analysis is in progress and will be completed prior to construction commencing on the DSMP.

Incidental leakage along the Borel Canal downstream of the Auxiliary Dam could have created opportunities for wetland vegetation and wetland dependent species (such as amphibians). An indirect effect of the new alternative would be the loss of this canal-water dependent habitat, which would be assessed in the FERC-SCE NEPA process. Conditions for riparian vegetative communities along the Kern River could improve with an increase of water flow released through the Main Dam (i.e. SCE's 605 cfs Borel Project water supply²). The increase in flow through the Main Dam would be assessed in the FERC-SCE NEPA process.

3.1.5 Hazardous, Toxic, and Radioactive Materials

The Hazardous, Toxic, and Radiological Waste (HTRW) section of the Isabella Lake DSMP EIS (Draft EIS Section 3.9.1 and Final EIS (Section 3.7) sufficiently characterizes the regulatory setting for this resource. An alternative would be considered to have a significant effect if it would involve substances identified as potentially hazardous by the Comprehensive

² The water rights claimed by SCE are in connection to their operation of Borel Power and Kern River Power Plant No. 1. The Federal action will not affect these rights.

Environmental Response, Compensation, and Liability Act; the Resource, Conservation, and Recovery Act; and/or 40 CFR Parts 260 through 270. A significant effect would be: 1) exposure of workers to hazardous substances in excess of Occupational Safety and Health Administration (OSHA) standards, or 2) contamination of the physical environment, thereby posing a hazard to humans, animals, or plant populations by exceeding Federal exposure, threshold, or cleanup limits. No HTRW sites are known to exist within the soil of the Auxiliary Dam site.

The implementation of Best Management Practices (BMPs) during construction would reduce the risk of accidental leakage or spillage of contaminants into existing water bodies or on land. Indirect impacts may occur if/when the Borel Project is decommissioned as the Borel Powerhouse was constructed in the early 1900s and may contain hazardous materials, such as lead-based paint or asbestos. These potential issues would be evaluated by SCE in a future NEPA document led by FERC.

3.1.6 Noise

The Noise and Vibration Section of the Isabella Lake DSMP EIS (Draft EIS Section 3.8 and Final EIS (Section 3.6) sufficiently characterizes the regulatory setting and the affected environment for this resource. The Kern River Valley Specific Plan Noise Element establishes specific goals, policies, and implementation measures for noise within the Plan area, which includes Isabella Lake and vicinity. The Preferred Alternative is not expected to produce any adverse effect noise. The proposed action should slightly reduce construction noise, as the overall DSMP construction duration is expected to be shorter.

3.1.7 Traffic and Circulation

The Traffic and Circulation section of the Isabella Lake DSMP EIS (Draft EIS Section 3.7 and Final EIS Section 3.5) sufficiently characterizes the regulatory setting and the affected environment for this resource. The July 2015 Phase II SEA included a revised plan for realigning Highways 155 and 178. This proposed action should reduce construction duration and traffic effects due to construction. Mitigation measures specified in Section 3.7.4 of the EIS are expected to reduce any potential traffic and circulation impacts to a level of less than significant.

3.1.8 Socioeconomic and Environmental Justice

The Socioeconomics and Environmental Justice section of the Isabella Lake DSMP EIS (Draft EIS Section 3.15 and Final EIS Section 3.13) characterized the regulatory setting and affected environment for this resource. Criteria used to evaluate the intensity of impact on socioeconomic conditions and environmental justice were based on assessment of impacts on the demographic, economic, and social factors described within the section. A significant socioeconomic impact was defined as: long term increase in population that could not be accommodated by regional infrastructure; reduction in the availability of affordable housing; long term decreases in earnings or employment affecting the regional economy; long term

displacement of population or local business; or, loss in community facilities, events, population or major industry. Based on these criteria, the proposed action is not expected to cause significant effects on socioeconomics or environmental justice.

3.2 WATER RESOURCES AND WATER QUALITY

3.2.1 Regulatory Setting

The Water Resources Section of the Isabella Lake DSMP Draft EIS (Section 3.6.1) and the Final EIS (Section 3.4.1) sufficiently characterizes the regulatory setting for this resource.

3.2.2 Existing Conditions

The Water Resources Section of the Isabella Lake DSMP Draft EIS (Section 3.6.2) and the Final EIS (Section 3.4.2) sufficiently characterizes the affected environment and management for this resource. The Kern River water rights holders, who own the conservation storage rights in Isabella Lake, appoint the Kern River Watermaster to represent their interests (USACE 2006). The Watermaster is the administrating entity of the lower Kern River and waters of Isabella Lake. They represent all downstream water rights entities, and are responsible for identifying the amount of water to be released daily from Isabella Lake by USACE as long as the integrity of the dam is not jeopardized (Kern County 2011).

Lake pool levels have been to historic lows, approximately 2522.5 ft elevation (NAVD 88)³ during the months of September through November 2015, due to severe drought. The safety pool level until dam modifications are sufficiently completed is 2,589.26 ft (between March 20 to September 20 to allow for conservation storage). In conjunction with downstream water rights, the lake could rise an additional 66 ft from the current level if there is sufficient rain or snow in the upstream watershed. The 2,589.26 ft pool restriction is 20 feet below the gross (full) pool elevation, or would be approximately 63 percent of full lake capacity. Downstream of the Main Dam, the Kern River flows vary between 15 cfs to 1220 cfs depending on the availability of water based on the 1978 Water Control Manual (WCM). The current flow of 15 cfs is the minimum base flow from the dam.

³ All elevations in this document are based on North American Vertical Datum 1988 (NAVD 88) unless otherwise noted.

3.2.3 Effects

3.2.3.1 No Action

Under the No Action Alternative, there would not be Federal participation in remedial improvements to the Isabella Main Dams. The Operating Restriction at elevation 2589.26 ft (356,700 acre-feet) would become permanent. Initiated by USACE in 2006, the Operating Restriction was intended as an emergency deviation from the Water Control Plan in order to lower the lake level to a safe elevation and capacity. It is possible that without dam safety modifications to reduce the risk of dam failure and life safety concerns, the Operating Restriction would further reduce the lake level. However, despite risk reduction measures, the Isabella Dams would still possess an unacceptably high risk of failure under the No Action Alternative. The potential environmental, economic, and human consequences of dam failure could be extremely high. Based on USACE studies, one or both dams have unacceptably high risk. The timing and nature of a potential dam failure cannot be specified, but the loss of one or both dams would likely flood areas between Isabella Lake and Bakersfield, and beyond.

3.2.3.2 Proposed Action – Easement Acquisition without Replacement Measure

With the proposed action, some of the projected impacts described in the 2012 EIS would no longer occur, or would be reduced. The Coffey Dam required for safe construction of the bypass conduit is no longer required, so the reservoir would not need to be held to 2,543 feet for a four to six month construction period as described in the 2012 EIS. Lake levels would be allowed to rise to 2,589.26 ft during construction should there be sufficient precipitation in the upper water shed, except for a three to four month period where the lake level could be lowered to 2,543 feet to abandon the Borel Canal and conduit section adjacent to the Auxiliary Dam.

With the proposed action, water would no longer be delivered to the Borel Canal downstream of the Auxiliary Dam, although SCE would retain their water rights for the 605 cfs. Instead, this water would be added to the operational releases from the Main Dam directly into the Kern River, in coordination with the Kern River Watermaster. The Main Dam average release would range from 15 cfs (minimum) to 1,825 cfs (up from 1220 cfs) depending on precipitation in the watershed along with existing water rights as described in the 1978 Water Control Manual. The maximum flow of 4,600 cfs would not change (1978 Water Control Manual).

Water quality benefits to the proposed action include greater water flows to the Kern River between Isabella Dam and the Borel Powerhouse. Increased water flows may be beneficial for fisheries management, agricultural supply, and recreational activities. An indirect effect of the change in water release is that algal growth inhibitors (such as copper sulfate) periodically used in the canal by SCE would no longer be required. Although the use of copper sulfate is allowed by the California Water Board to control algae in canals, it has been shown to have detrimental effects to the aquatic community by reducing the macroinvertebrate density below the Borel Powerhouse (FERC 2005). Because water released into the Borel Canal (up to 605 cfs) would be released directly in the Kern River below the Main Dam, treating that water with algal growth

inhibitors would no longer be necessary. The FERC-SCE NEPA analysis would address increased Main Dam releases on Kern River water quality.

The Borel Canal would continue to receive and evacuate local stormwater between the dam and the Borel Power Plant until the canal is decommissioned downstream of the Auxiliary Dam. Final determination on stormwater management would be handled in a future FERC/SCE decommissioning environmental document.

3.3 FISH AND WILDLIFE

3.3.1 Regulatory Setting

The Biological Resources Section of the Isabella Lake DSMP Draft EIS (Section 3.10.1) sufficiently characterizes the regulatory setting for this resource.

3.3.2 Existing Conditions

The Biological Resources Section of the Isabella Lake DSMP Draft EIS (Section 3.10.2) and the Final EIS (Section 3.8.1) sufficiently characterizes the affected environment for this resource within the DSMP area. A final Fish and Wildlife Coordination Act Report (Appendix C of the Final EIS) provided by the U.S. Fish and Wildlife Service (USFWS) provides recommendations and vegetation compensation needs for wildlife habitat affected by construction of features associated with the Isabella Lake DSMP and the 4.1 acres off of Isabella Lake Blvd.

3.3.3 Effects

3.3.3.1 No Action

Under the No Action Alternative, there would be no Federal participation in remedial improvements under the DSMP. There would be no substantial loss, degradation, or fragmentation of natural vegetative communities or wildlife habitat within the project area, nor would the No Action Alternative interfere with the movement of resident or migratory wildlife species beyond impacts of those associated with normal operations. However, if dam failure occurred, resulting floodwaters would damage downstream habitats and cause direct and indirect impacts to fish and wildlife species and habitats.

3.3.3.2 Proposed Action – Easement Acquisition without Replacement Measure

The Kern River Power Plant No. 1 is owned and operated by SCE, and is located further downstream of the SCE owned Borel Power Plant. The Kern River Power Plant No. 1 has an

installed generation capacity of 16 MW at a gross head of 877 feet. The power plant diversion rights include the pre-project flow of Kern River (including South Fork) from October through May (up to 412 cfs), which includes the required fish flow. From June through September, the diversion rights include the first 74 cfs of river flow, the next 50 cfs to bypass the plant for recreation, and the next 338 cfs to be diverted for power (USACE 2006).

Construction effects on wildlife and fisheries as described in the 2012 EIS are expected to remain as described in the 2012 EIS. Increased flows due to rerouting the SCE water rights (up to 605 cfs) directly into the river should improve aquatic and riparian habitats directly downstream of the Main Dam, which would be assessed in the FERC-SCE NEPA process. These flows are contingent on water availability, as the overall Water Management Plan has not changed.

3.4 SPECIAL STATUS SPECIES

3.4.1 Regulatory Setting

The Biological Resources Section of the Draft EIS (Section 3.10) and the Final EIS (Section 3.8) sufficiently characterizes the general regulatory setting and existing conditions for this resource.

Special Status species include:

- Species considered endangered, threatened, or of special concern by the USFWS.
- Species considered sensitive by the USFS.
- Species considered threatened, endangered, or fully protected by CDFG.
- Species considered threatened by the California Native Plant Society.

The Isabella Lake DSMP was found in full compliance with the Endangered Species Act (ESA), and a USFWS Biological Opinion (BO) was included in Appendix C of the Final EIS.

3.4.2 Existing Conditions

Since release of the 2012 Final EIS, the affected environment has been updated with focus on the areas directly affected by the actions described in this document and relevant to the discussion of the affected environment. In conjunction with the Recreation SEA (USACE 2015b), several reconnaissance site visits were conducted by a USACE biologist from March through October 2014 on recreation and administrative site areas. Surveys were also conducted by a USFS biologist for special status species (Appendix D in USACE 2015b), and no Federally listed or other special status species were found during site investigation. An additional site visit

was conducted in November 2015 by a USACE biologist to look specifically at habitat conditions downstream of the Auxiliary Dam. Habitat was found to be primarily of non-native, ruderal in nature, and heavily affected by the long term drought. Riparian habitat is found along the Kern River below the Isabella Dam.

3.4.2.1 *Southwestern Willow Flycatcher*

The USFWS designated revised critical habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) under the ESA (USFWS 2013b) on January 3, 2013. The revised critical habitat designation for the Kern Management Unit includes a 14.6-mile portion of the South Fork Kern River (including the upper 0.6-mile portion of Isabella Lake), and a 1.0-mile segment of Canebrake Creek in Kern County, California. Along this segment of the South Fork Kern River, two pieces of private land were woven within this segment; the privately owned and operated Hafenfeld Ranch (0.2-mile of stream on the south side of the river) and Audubon California's Sprague Ranch (2.5-mile of stream on the north side of the river) are excluded from the final designation. Downstream reaches of the Kern River below the Isabella Dam have not been included in ESA designated critical habitat for this species.

3.4.2.2 *Western Yellow-Billed Cuckoo*

On October 3, 2013, USFWS formally proposed that the Western Distinct Population Segment of the yellow-billed cuckoo (*Coccyzus americanus*) be listed as a Federally threatened species and protected under the ESA (USFWS 2013a). On October 3, 2014, the proposed rule became effective and finalized the USFWS determination for listing the western yellow-billed cuckoo but not its critical habitat (USFWS 2014). Yellow-billed cuckoos are recognized as State endangered in California.

USFWS announced a proposal to designate critical habitat for the western distinct population segment of the yellow-billed cuckoo under the ESA on August 5, 2014. The proposed critical habitat proximity to Isabella Lake is similar to that designated for the southwestern willow flycatcher. The public comment period for this proposed rule was reopened on November 12, 2014, and closed on January 12, 2015. Comments and information received from concerned Federal and State agencies, the scientific community, and other interested parties regarding the proposed critical habitat designation are currently under consideration by USFWS.

3.4.2.3 *Valley Longhorn Elderberry Beetle*

The USFWS announced a proposal to remove the valley elderberry longhorn beetle (*Desmocerus californicus*) (VELB) from the Federal list of endangered and threatened wildlife under the ESA on October 2, 2012. The public comment period for this proposed rule was reopened on January 23, 2013, and closed on February 22, 2013.

On September 17, 2014, USFWS withdrew the proposed rule to remove the VELB from the Federal list under the ESA. This withdrawal was based on the determination that the proposed rule did not fully analyze the best available information. This information indicated that the threats to the species and its habitat has not been reduced to the point where the species no longer meets the statutory definition of an endangered or threatened species. However, the information also indicated that the range of the VELB is now considered smaller than what was described in the proposed delisting rule. As such, the counties of Kern, King, and Tulare are no longer considered within the range of the species, and projects proposed in those counties no longer need to consult with USFWS for VELB conservation.

3.4.3 Effects

3.4.3.1 Basis of Significance

Effects on special status species would be considered significant if the proposed action would result in harm or “take” of listed species or their habitat; or if it affected a population of a non-listed species to the point where it became listed or a candidate for listing, or resulted in loss of wetlands or other waters of the US that could not be mitigated.

3.4.3.2 No Action

Under the No Action Alternative, there would be no substantial loss, degradation, or fragmentation of natural vegetation communities or wildlife habitat, nor would the No Action Alternative interfere with the movement of resident or migratory wildlife species beyond impacts of those associated with normal operations in the project area. However, if dam failure occurred, resulting floodwaters would damage downstream habitats and remove sensitive status species.

3.4.3.3 Proposed Action – Easement Acquisition without Replacement Measure

The action area considered within this SEA is not within the immediate range of Federally listed, threatened or endangered species habitat. In addition, any potential effects associated with construction activities necessary to seal the conduit in the Auxiliary Dam were analyzed in Section 3.10 of the 2012 Draft EIS and Section 3.8 of the 2012 Final EIS. If any special status plant species were found during spring surveys, they would be avoided during construction. Effects are not expected to special status species from the proposed alternative due to the expected absence of species and habitats. This alternative would decrease the overall construction footprint of the DSMP, and would add additional water to the Kern River below the Main Dam. Potentially, the additional water in the river would improve riparian habitat creating better habitat conditions for special status species.

3.5 CULTURAL RESOURCES

3.5.1 Regulatory Setting

3.5.1.1 *Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended*

Federal agencies are required to take into account the effects of their undertakings on historic properties. Under the NHPA, historic properties are defined as cultural resources that are listed, or are eligible for listing, in the National Register of Historic Places (NRHP). Section 106 of this act, and the implementing regulations set forth under 36 CFR § 800, define a set of procedures Federal agencies must follow to meet their statutory responsibilities. In 2012, USACE, the Sequoia National Forest, the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation executed a Programmatic Agreement (PA) that implemented a process by which USACE would comply with Section 106.

Section 106 requires Federal agencies to consult with the SHPO, Native American Tribes, and the public to define an Area of Potential Effects (APE), identify historic properties within the APE, assess adverse effects to historic properties, and to resolve any potential adverse effects.

The APE is a geographic area, or areas, within which an undertaking may directly or indirectly alter those aspects of historic properties that qualify them for inclusion in the NRHP. The APE is a three dimensional area, and includes any historic properties that may exist underground.

Identification of historic properties entails both the identification of cultural resources and evaluation to ascertain their NRHP eligibility. Criteria for NRHP evaluation are provided under 36 CFR § 60.4:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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

Examples of adverse effects may include, but are not limited to: physical destruction or damage; alteration of a property; removal of a property from its historical location; change of the character of the property's use of its setting; introduction of atmospheric or audible elements that diminish integrity; neglect; or the transfer, lease, or sale of a property out of Federal ownership.

Under the PA, resolution of adverse effects will be achieved by the development and implementation of a Historic Properties Treatment Plan (HPTP), which would include the signatories to the PA, the public, and any interested Native American Tribes. Measures outlined in the Memorandum of Agreement (MOA) must be sufficient to mitigate for all adverse effects caused by the undertaking.

3.5.1.2 Archaeological Resources Protection Act (ARPA) of 1979, as amended.

The ARPA was enacted “*to secure, for the present and future benefit of the American people, the protection of archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals*” (Sec. 2(4)(b)). ARPA is implemented by regulations at 43 CFR, Part 7.

An “archaeological resource” is defined as material remains of past human life or activities, which are of archaeological interest as determined under the uniform regulations set forth in this Act. Regulations containing such determination shall include but not be limited to pottery, basketry, bottles, weapons, weapon projectiles, tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items. Non-fossilized and fossilized paleontological specimens, or any portion or piece thereof, shall not be considered archaeological resources under the regulations under this paragraph unless found in an archaeological context. No item shall be treated as an archaeological resource under regulations under this paragraph unless the item is at least 100 years of age.

Permits are required to excavate and remove cultural remains to insure that individuals working with Federal resources have the necessary professional qualifications and meet and follow Federal standards and guidelines for research and curation. A condition of the permit is that the permitting agency receives a report of the investigations and documentation of appropriate curation of materials.

The law specifies that no person may sell, purchase, exchange, transport, receive, or offer to sell, purchase, or exchange, in interstate or foreign commerce, any archaeological resources excavated, removed, sold, purchased, exchanged, transported, or received in violation of any provision, rule, regulation, ordinance, or permit in effect under State or local law. Any person who knowingly violates, counsels, procures, solicits, or employs any other person to violate any prohibition can be subject to fines and/or imprisoned.

3.5.1.3 Native American Graves Protection and Repatriation Act (NAGPRA) of 1990, as amended.

The NAGPRA is a Federal law passed in 1990. NAGPRA provides a process for museums and Federal agencies to return certain Native American cultural items -- human remains, funerary objects, sacred objects, or objects of cultural patrimony -- to lineal descendants, and culturally affiliated Native American tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and tribal lands, and penalties for noncompliance and illegal trafficking. The Secretary of the Interior's implementing regulations are at 43 CFR, Part 10. Permits for excavating or removing cultural items protected by the act require Native American consultation, as do discoveries of cultural items made during Federal land use activities.

3.5.1.4 American Indian Religious Freedom Act of 1978, as amended.

This law states that it is the policy of the United States to protect and preserve the inherent right of freedom of Native Americans to believe, express, and exercise their traditional religions, including access to religious sites, use and possession of sacred objects, and freedom to worship through ceremonial and traditional rites. The act is a specific expression of First Amendment guarantees of religious freedom and has no implementing regulations.

3.5.2 Existing Conditions

The Borel Project was built in 1904, fueled by water diverted from the Kern River into the Borel Canal. When USACE constructed Isabella Dam across the valley through which the Borel Canal flowed, the portion of the canal upstream of the Auxiliary Dam was rebuilt in concrete so that it would hold up better during periods of inundation. The canal was again rebuilt in the 1980s.

Numerous cultural resource inventories for the entirety of the Borel Project, including the canal, have been undertaken. Most recently, the canal portion downstream from the Auxiliary dam was inventoried by Pacific Legacy in 2009 (Kovack and Jackson 2011) and the portion of the canal upstream of the Auxiliary dam was surveyed by USACE's archaeologists in 2015 (report in preparation). These surveys resulted in the identification of fifteen archaeological sites in close proximity to the Borel Canal (Table 1). Two others are located on a bluff overlooking the canal, and three isolated artifacts have been observed in the vicinity of the canal. Additional consultation with Native American tribes may result in the identification of additional properties that are significant.

The most significant resource in the area is the site identified by local tribal members as the location of a massacre of Native People at the hands of U.S. Army Captain Moses McLaughlin in 1863. This depredation resulted in the near complete destruction of the male population of the

local Tübatulabal tribe and was a defining aspect of Tübatulabal identity in the following generations (Philips 1938, Voegelin 1938).

Table 1. Cultural Resources Located in the Borel System Vicinity.

<i>Site Name</i>	<i>Description</i>
Sites Adjacent to the Borel Canal: North of the Auxiliary Dam	
CA-KER-410	Bedrock milling features, adjacent to the 1863 massacre memorial site.
CA-KER-680	Bedrock milling features
CA-KER-681	Bedrock milling features, midden
CA-KER-1686	Bedrock milling features on a bluff above the canal
CA-KER-1687	Bedrock milling features on a bluff above the canal
Borel 1	Historic trash dump
Borel 2	Bedrock milling features, lithic scatter
Borel 3	Bedrock milling features, groundstone cache
Borel 4	Historic site with trash dump and building foundations
Borel 5	Historic trash dump
Borel 7	Mining adit
Borel 8	Old Isabella Road
Sites Adjacent to the Borel Canal: South of the Auxiliary Dam	
PL-B-11	Bedrock milling features, cut through by the canal
PL-A-A-5	Historic trash scatter
05-13-54-00428	Historic trash scatter
PL-A-6	Remains of residential area associated with the Borel power house
Isolated Finds	
ISO 1	Handstone
PL-A-ISO-1	Glass bottle base
PL-B-ISO-1	Fragment of an obsidian biface

3.5.3 Effects

3.5.3.1 Basis of Significance

Effects to cultural resources are considered significant if the project would; (1) result in the alteration of a resource that is determined eligible for listing in the National Register of Historic Places (NRHP) and (2) the alternation would diminish the ability of the resource to convey that significance (i.e. the integrity of the resource).

3.5.3.2 No Action

The No Action Alternative would result in no changes to the Borel Project or the surrounding resources.

3.5.3.3 Proposed Action – Easement Acquisition without Replacement Measure

The proposed undertaking would alter the integrity of the Borel Project, both by removing the conduit through the dam and by causing the operation of the system to stop. The Borel Project was evaluated in its entirety in 1996 by Stephen D. Mikesell (1996) for SCE. Mikesell concluded that though the system may have been significant, it lacked sufficient integrity to be considered eligible for the National Register of Historic Places. In correspondence between SCE, SHPO, and FERC regarding the replacement of several flumes, SHPO indicated that they did not have time to review the document, so FERC was able to proceed.

According to the most recently amended Section 106 implementing regulations at 36 CFR 800 (2004), a Federal agency may proceed with a finding of effect for a project if SHPO fails to object within 30 days of the initiation of consultation (36 CFR 800.4 [d][1][i]). However, the same does not apply for determinations of eligibility (36 CFR 800.3 [c][2]). This means that while FERC was justified in their actions in 1996, their determination of non-eligibility is not final (i.e. a consensus determination), and must be revisited by USACE.

USACE is initiating consultation with the SHPO, interested Native American tribes, and the interested public in a formal determination of non-eligibility for the Borel Project system and a finding of no historic properties affected (36 CFR 800.4[d][1]) for the proposed project. Assuming that SHPO concurs with these findings, the DSMP will result in less than significant effects.

3.6 AESTHETICS AND VISUAL RESOURCES

3.6.1 Regulatory Setting

The Aesthetics Resources section of the DSMP Draft EIS (Section 3.13) characterized the regulatory setting for this resource.

3.6.2 Existing Conditions

The Aesthetics Resource section of the DSMP Draft EIS (Section 3.13) characterizes the affected general environment for this resource. Due to the extreme drought conditions affecting the Isabella Lake reservoir, upstream sections of the Borel Project are currently visible (Figure 4). These canal sections and water works would normally be deep under the lake, so area residents and visitors are given a seldom-occurring opportunity to see them. There have been no

additional revisions, studies, or new data generated that are relevant to the discussion of the affected environment.



Figure 4. Upstream Portions of the Borel Canal Currently Visible due to Drought-Induced Low Water Conditions in Isabella Lake.

3.6.3 Effects

3.6.3.1 Basis of Significance

An alternative would be considered to have a significant effect on visual resources if changes in the landform, vegetation, or structural features substantially increased levels of visual contrast as compared to surrounding conditions.

3.6.3.2 No Action

Under the No Action Alternative, there would be no Federal participation in remedial improvements under the DSMP. The timing and nature of a potential dam failure cannot be specified, but the loss of one or both dams would likely flood areas between Isabella Lake and Bakersfield. The catastrophic loss of one or both dams would significantly cause a long term alteration of the visual landscape for the Isabella Lake basin, as well as the San Joaquin Valley, due to flooding of the areas between Isabella Lake and Bakersfield. This would be considered a significant adverse impact on visual resources.

3.6.3.3 Proposed Action – Easement Acquisition without Replacement Measure

As stated in the 2012 EIS, the long term face of the Auxiliary Dam would change slightly due to the DSMP in that the dam would be 16 feet higher in elevation. Otherwise, the overall appearance, or its location in the landscape, would not change. The color of the downstream buttress would resemble the color of the surrounding terrain because the rock for the buttress would come from excavation of the Emergency Spillway. The superstructure of the Borel Canal's control tower would no longer rise above Auxiliary Dam, as the structure will be demolished.

Construction-related visual impacts would be temporary and include the presence of construction equipment and vehicles, glare, worker activity, dust, and material storage and movement. Because implementation of the DSMP involves the modification of existing structures and the construction of new, permanent structures, some impacts on visual resources would last during the lifespan of the project. Because the visual contrast and associated visual impacts of the construction activities would be short term, and with the implementation of the mitigation measures and BMPs described in 2012 EIS (Section 3.13.4) and in Section 3.9 of this document, these impacts would be less than significant.

3.7 RECREATION

3.7.1 Regulatory Setting

The recreation section of the Draft EIS (Section 3.12.2) sufficiently characterizes the regulatory setting for this resource. Since the release of the EIS and draft Recreation Report (USACE 2014a), USACE coordinated with the Office of Management and Budget, and concluded that sufficient authority from a 1964 MOA exists to allow USACE to use appropriated funds to relocate in-kind services for USFS facilities impacted by the Isabella Lake DSMP (USACE 2015b) as mitigation actions. With these mitigations, permanent loss of recreational facilities, opportunities, or resources would not occur.

3.7.2 Existing Conditions

Overall existing conditions are as described in the 2012 EIS; however, due to the extreme drought, recreational opportunities on Isabella Lake have been severely affected. The current lake pool is down to 2522.5 ft, which is 66.76 ft lower than the safety pool level of 2589.26 ft. Should the upper Kern River watershed (both North Fork and South Fork) receive precipitation, and in conjunction with downstream water right holders, Isabella Lake water levels could rise up to the safety pool level which would increase recreational opportunities on the lake.

Recreational facilities and land management is predominately provided by the USFS Sequoia National Forest/Kern River Ranger District, and the Bureau of Land Management (BLM) Keyesville Special Recreation Management Area (Figure 5). Recreational facilities provided by

both agencies include picnic grounds, campgrounds, hiking/mountain biking/horse riding trails, and boating access. The river and its tributaries in the BLM Keyesville Special Recreation Area are available to recreationists for gold panning. Gold mining was and still is an historic use of this site. However, several unfenced mineshafts exist and present a significant hazard to recreationists.

The Kern River below Isabella Lake currently provides a self-sustaining fishery for smallmouth bass (*Micropterus dolomieu*). Rainbow trout (*Oncorhynchus mykiss*) are present, but the presence of this species is likely the result of the put-and-take fishery for this species in Isabella Lake. Due to the thermal heating of water within Isabella Lake, habitat conditions are not conducive to a self-sustaining rainbow trout fishery below the Main Dam. The Kern River below the Main Dam has a minimum instream flow requirement of 50 cfs between June 1 and September 30, and 15 cfs the remainder of the year.

3.7.2.1 Boat Launch 19 (Main Dam Boat Launch)

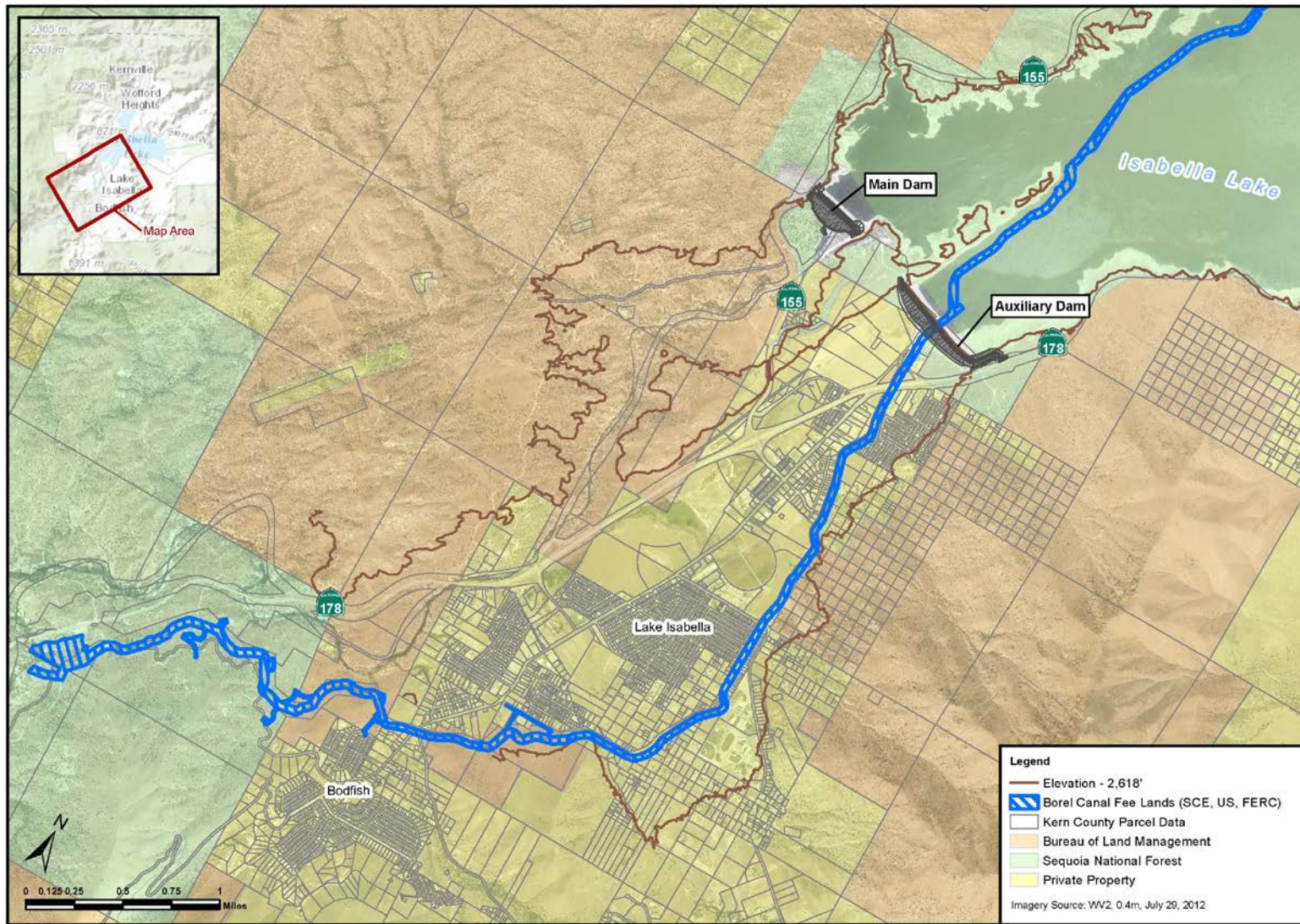
Boat Launch 19, also referred to as the Main Dam Boat Launch, is located east of the Main Dam and between the Main and Auxiliary dams on the western side of Engineers Point. Access from Highway 155 to the launch is via Ponderosa and Barlow Roads. The site is used primarily for launching small, non-motorized and motorized watercraft. It consists of a long, steep boat ramp leading into a relatively deep part of the lake, parking, and restroom facilities. In addition, a courtesy dock of 8 ft. by 80 ft. is located here, which is adjusted with fluctuating water levels. With recent low lake levels, Boat Launch 19 is periodically unusable due to low water levels and a sand bar located at the base of the launch after mid-July of 2013. The USFS has responded by working to facilitate continued, limited use of this ramp since July 2013. First responders in public safety emergencies also use this launch when sufficient water is present.

3.7.2.2 Kern River downstream of Main Dam

The Lower Kern River Gorge is a popular white-water rafting area, attracting approximately 12,000 commercial and non-commercial rafters annually (BLM 2015). Whitewater rafting downstream of the Isabella Dam depends highly on the releases from the dam; however, no releases are scheduled specifically for whitewater rafting. The releases that are sufficient to support whitewater rafting are governed by historic water rights, power diversion rights, agreements on project operation, and flood reduction operation of Isabella Dam and Lake. The Lower Kern River has five designated launch sites: Slippery Rock (BLM North) and BLM South near Isabella Lake Main Dam, Keyesville Bridge, Sandy Flat, and Miracle Hot Springs. The lowest (furthest downstream) designated take-out for rafting is at the Democrat Day-Use Area. The USFS and BLM require all private boaters on the Kern River to have permits (free to non-commercial rafters), and all boaters must complete a manifest log and leave it in designated boxes at the launches.

The Borel Project is permitted to divert up to 605 cfs of water. If this flow is not diverted and is available for release through the Main Dam, it would flow down an approximate 7-mile-

long section of the lower Kern River downstream of the Main Dam. The Borel Project diversion could be reducing flow in the 7-mile bypassed reach and could affect some recreational users, particularly boaters. At times, reduced flows also affect whether boaters can use the Slippery Rock and BLM South raft launches. The lower Kern River is boated commercially, and four outfitters currently hold permits to run commercial trips on the river. Ideally, these commercial boaters prefer to launch their trips from Slippery Rock. However, when flows drop below 1,000 cfs, the river downstream of Slippery Rock is not navigable in rafts.



US Army Corps of Engineers
Sacramento District

Isabella Lake - Borel Canal

Figure 5. Public-Private Lands in the Lower Kern River Area.

3.7.3 Effects

3.7.3.1 Basis of Significance

An action would be considered to have a significant effect on recreation if it would:

- Result in a permanent loss of recreational opportunities or resources;
- Severely restrict or eliminate access to recreational opportunities and facilities;
- Cause a substantial disruption in a recreational use or activity; or
- Substantially diminish the quality of the recreational experience.

3.7.3.2 No Action

Under the No Action Alternative, there would be no Federal participation in remedial improvements to the Isabella Main Dam, Spillway, or Auxiliary Dam. The lake level would not exceed the safety pool elevation of 2,589.21 feet. The likelihood and consequences of dam failure would continue.

In the event of a dam failure, nearly all existing water-based recreational opportunities, resources, facilities, and activities would be lost or severely disrupted during emergency operations and subsequent repairs to the dam. While land-based recreation would remain, such as hiking, camping, and urban recreation, the use and quality of these activities would substantially diminish due to inundation damage. Since repairs to the dam and restoration of associated recreation would take many years to complete, the loss, substantial disruption, and reduced quality in recreation would be considered to be high and adverse.

3.7.3.3 Proposed Action – Easement Acquisition without Replacement Measure

With the proposed action, the Launch 19 Boat Ramp would not be demolished. Launch 19 would be temporarily closed during construction related to dam safety modifications, then will reopen once construction is complete.

Potentially, river flows in the Kern River downstream of the main dam would increase because diversion of Borel Canal flows (up to 605 cfs) would occur through the main dam. This additional water, if available, is expected to improve recreational opportunities for boaters. River flows would vary between 15 cfs to 1825 cfs (See Section 3.2.3.2), with maximum flows of 4,600 cfs. It is unknown when conditions would improve to the higher than 1,000 cfs flows preferred by boaters to launch at Slippy Rock or BLM South. These flows are contingent on water availability, as the overall Water Management Plan has not changed.

Impacts on fishing conditions are not expected to change greatly from those experienced in recent years and summer lake levels historically. The additional water may indirectly improve downstream fishing as overall aquatic habitat is expected to improve with more water in the river. During DSMP construction, fishing access at Slippery Rock and BLM South recreation areas would not be disturbed, but the construction noise may negatively affect the recreation experience.

Depending on the amount of water in Isabella Lake and the needs of downstream agricultural users, it may be necessary to draw down the lake in late summer 2020 to prepare for construction. This drawdown may increase the flows in the river to higher-than seasonally normal, which would provide short term benefits for rafting and kayaking. USACE would work with local interest groups to provide notification regarding any changes to normal flow conditions. In addition, USACE would coordinate any necessary early releases with downstream users.

3.8 UTILITIES AND INFRASTRUCTURE

3.8.1 Regulatory Setting

The Regulatory Setting for Utilities and Infrastructure is described in the 2012 DSMP Draft EIS sections 3.11 (Land Use) and 3.15 (Socioeconomics and Environmental Justice), and in Section 3.13 of the 2012 Final EIS.

3.8.2 Existing Conditions

Five hydropower facilities along the Kern River downstream of Isabella Lake could be affected by the alternatives as presented in the 2012 EIS. The SCE Borel Canal Hydropower Facility and the Isabella Partners Hydroelectric Facility are directly associated with the Isabella Lake facilities. The other facilities along the Kern River are SCE Kern River No. 1, Pacific Gas and Electric (PG&E) Kern Canyon, and the Rio Bravo Power Project. Flows to these facilities and power generation vary, based on the time of year, the demand for power, and the natural water supply (USACE 2012a).

- Borel Project Powerhouse has a generation capacity of 12 MW at a gross head of 260 feet. The Borel Project water right is to divert up to the first 605 cfs of unimpaired Kern River North Fork flow. The Kern River Watermaster administers water releases from Isabella Lake. When water is available, diversion to the Borel Canal is possible. The Borel Project is required, as a condition of its FERC license, to maintain seasonal minimum flows through the Main Dam outlet for fish and wildlife preservation (USACE 2006). This powerhouse has been shut down due to the lack of water delivery related to low lake levels (drought) for the last three years.

- The Kern River Power Plant No. 1 is owned and operated by SCE. The power plant has an installed generation capacity of 16 MW at a gross head of 877 feet. The power plant diversion rights include the pre-project flow of Kern River (including South Fork) from October through May (up to 412 cfs), which includes the required fish flow. From June through September, the diversion rights include the first 74 cfs of river flow, the next 50 cfs to bypass the plant for recreation, and the next 338 cfs to be diverted for power (USACE 2006).
- The Kern Canyon Power Plant is owned and operated by PG&E. The power plant has an installed generation capacity of 8.5 MW. The power plant water rights are pre-project diversion rights of 550 cfs under State license and an additional 250 cfs under other rights. The 550 cfs right is subject to upstream storage by irrigation interests, if the equivalent amount of water, in excess of natural flow, is made available for power use later (USACE 2006).
- The Rio Bravo Power Plant is owned and operated by the Olcese Water District and has an installed generation capacity of 12 MW. The power plant has a right to divert up to 1,600 cfs of the Kern River flow as it occurs at the diversion works for the Kern Canyon Power Plant (USACE 2006).
- Releases through the Main Dam power generation facilities, operated by Isabella Partners, are maintained as long as the lake level is above 2,536.76 feet. Once the lake level drops to this elevation or lower, Isabella Partners takes their turbines off line (due to the low head available, which drops below the turbine design criteria) and pass all releases through the appropriate bypass valves (USACE 2006). The total rate of diversion under Permits 20047 and 21134 is 1,632 cfs. However, this facility does not possess water rights and is operated on a run-of-the-river basis (USACE 2006).

3.8.3 Effects

3.8.3.1 No Action

This alternative does not represent a change in hydropower production capacity; however, the likelihood and consequences of dam failure would continue and, with it, the risk of disruption of flows to these facilities and the potential for lost power generation and its associated costs. Water would continue to be supplied, when available, and/or per the Watermaster, to the Borel Project and Kern River No. 1 hydropower facilities from the Kern River North Fork and Kern River, respectively, in accordance with the rights afforded to them. The Isabella Partners, PG&E Kern Canyon, and Rio Bravo facilities would continue to generate power, based on the availability of water, once these and any other upstream rights have been satisfied and water levels required for fish habitat have been achieved.

3.8.3.2 Proposed Action – Easement Acquisition without Replacement Measure

A direct effect of ceasing water diversions into the Borel Canal would mean the loss of 12 MW of power production by the Borel Project. However, since January 1, 2013, extreme drought conditions have resulted in the Borel Project operating for a single, brief period in late spring, early summer 2013. No power production has occurred in 2014, 2015 or 2016. Power generation data is available from the State of California online starting in 2001. Since 2001, the Borel Project has operated at an average annual capacity of 43 percent of its maximum potential capacity⁴. Kern County has permitted 9,723 MW of renewable energy projects, of which 4,362 MW of generating capacity are online (California Energy Commission 2015). The Borel Project represents 0.0028 percent of this online capacity and 0.0012% of the total permitted capacity to date. This is not a significant loss of renewable power production capacity. FERC and SCE will assess the project specific details of power production loss, license surrender, decommissioning, or other scenario in a separate NEPA analysis.

3.9 BEST MANAGEMENT PRACTICES AND MITIGATION

The proposed action decreases the construction footprint and construction duration of the Isabella DSMP, and therefore would not require additional mitigation for overall project effects to the environment.

Effects to vegetation, habitat and wildlife would be avoided or minimized by the following BMPs.

- Limit equipment and vehicles to the project construction site. Delineate boundaries for vehicles and construction activities with flagging, fencing, or other suitable markers.
- Construction equipment shall be regularly checked for drips or leaks.
- Construction equipment would include dust suppression methods to minimize airborne particulate matter that would be created during any ground disturbing activities. Additionally, all equipment and vehicles are required to be kept in good operating condition to minimize exhaust emissions. Standard practices such as applying water or organic soil stabilizer to form a visible crust on the soil, grading during lower wind intensities, lowering off-road vehicle speed, and the application of water or organic soil stabilizer to unpaved surface roadways and material piles would be used to control fugitive dust during the construction phase and during daily operations and maintenance of the proposed project.
- Delineate vegetation areas and trees to be protected from construction activities with flagging, fencing, or other suitable markers.

⁴ From www.energyalmanac.ca.gov/renewables/hydro/index.php (accessed January 20, 2016). 2014 data showed negative power production. For this analysis: (1) 2014 was zeroed out; (2) an assumption was made that 2015 production capacity was also zero because no water deliveries went down the Borel Canal; (3) max capacity was based on 12 MW production x 365 days x 24 hours = 105,120 MWH. Median production capacity was 50%.

- To avoid any potential effects to migratory birds, conduct the following actions:
 - A qualified biologist would survey within one-half mile of the project area prior to initiation of construction. If the survey finds a pair of nesting raptors present, USACE would coordinate with CDFG and USFWS for proper avoidance and minimization measures. Monitoring may be required for raptor nests.
 - A qualified biologist would survey the project area for nests one week prior to construction to determine the presence of any nests that are occupied with eggs or chicks. Surveys must be conducted throughout the nesting season to identify new nests. Occupied nests are protected by the MBTA and must be protected in place, or relocated/removed under USFWS permit.
 - Trees that are identified for removal due to conflict with project actions must be removed outside of the avian nesting season, March to September. Under guidance of a qualified biologist and USFWS, passerine nests without any chicks/eggs, would be removed if they cannot be protected without causing project delay.
- Implement Best Management Practices that would inhibit the establishment of weed species (USFS 2001, 2005).
- Where construction activities result in the removal or disturbance of vegetation or disturbance of soils and are not replaced with landscaping, seed with native grass seed, wood fiber mulch, and tackifier in accordance to USFS specified application rates.

4 CUMULATIVE EFFECTS

The Council on Environmental Quality's (CEQ) regulations (40 CFR 1500-1508) implementing the procedural provisions of the NEPA, as amended (42 U.S.C. 4321 *et seq.*), define cumulative effects as “*the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative Impacts can result from individually minor but collectively significant actions taking place over a period of time*” (40 CFR 1508.7).

This section briefly considers other major local, State, and Federal projects near the project area for which evaluation is required. In addition, mitigation or compensation measures must be developed to avoid or reduce any adverse effects to less than significant based on Federal and local agency criteria. Those effects that cannot be avoided or reduced to less than significant are more likely to contribute to cumulative effects in the area. The exact construction timing and sequencing of these projects are not yet determined or may depend on uncertain funding sources.

Additional information on cumulative effects is included in the Isabella Lake DSMP EIS (USACE 2012a, USACE 2012b). Mitigation of significant cumulative effects could be accomplished by rescheduling actions of proposed projects and adopting different technologies to meet compliance. Significance of cumulative effects is determined based upon compliance with Federal mandates and specified criteria identified in this document for affected resources.

4.1 LOCAL PROJECTS

4.1.1 Isabella Lake DSMP

The Isabella Lake DSMP is a Federal action approved to remediate significant seismic, seepage, and hydrologic dam safety concerns at the Isabella Lake Main and Auxiliary Dams. The revised features⁵ of the Isabella Lake DSMP are:

- Phase I Relocations. Summer 2014 to Summer 2017. Preparation for the Phase II dams and spillways. Major work includes acquisition of affected private lands, relocation of affected residents, relocation of the USFS Lake Isabella Office, fire station, and USACE's O&M Facility, replacing affected recreation facilities, and vegetation mitigation activities.
- Phase II Dams and Spillways. Spring 2017 to Summer 2022. Major work includes staging area setup, haul route construction, emergency spillway preparation, auxiliary dam foundation preparation, auxiliary dam embankment and buttress construction, Borel Canal control tower removal, existing spillway wall extension, emergency spillway labyrinth construction, emergency spillway apron and excavation, main dam excavation,

⁵ Subject to this SEA resulting with a FONSI, and an agreement is reached with the SCE.

auxiliary dam buttress construction, and main dam foundation and buttress construction, and material disposal on Engineers Point.

- Phase III Borel Canal at Auxiliary Dam. Fall 2019 to Fall 2022. Major work includes the Borel Canal control tower removal, concrete canal lining installation, Borel Canal access roads construction, and material disposal on Engineers Point.
- Demobilization and Site Restoration. Spring 2022 to Fall 2022.
- Return to Routine and Long Term Operations at Isabella Dams. Spring 2023.

4.1.2 Additional Projected Cumulative Actions

The actions on the following list were assessed as to their relevance for inclusion in this cumulative impact analysis based on their geographic area of influence, proximity to Isabella Lake, and time period as a viable action and/or planning period involved. Detailed descriptions of these projects can be found in Section 4.3 of the 2012 Isabella Lake DSMP Draft EIS.

- USFS Motorized Travel Management EIS (USFS October 2009);
- USFS Giant Sequoia Monument Management Plan EIS (USFS August 2010);
- BLM Bakersfield Resource Management Plan for the Keyesville Special Recreation Management Area (ongoing)
- Kern River Valley Specific Plan (Kern County July 2011);
- Kern River Preserve (ongoing);
- Isabella Partners Hydroelectric Project (ongoing).

4.1.3 Decommissioning the Borel Hydroelectric Project

Any action taken by SCE, such as decommissioning the entire Borel Project, would be further analyzed through a follow-on NEPA document developed by SCE and FERC. The future NEPA document would be developed with input from the public, and SCE would ultimately take on and be responsible for all actions associated with decommissioning.

Decommissioning could increase dust in proximity to the Borel Canal during demolition. Activities involved could potentially disturb adjacent vegetation and wetlands as well as disturb wildlife and special status species in the vicinity. Noise levels would most likely increase during decommissioning; however, they would be temporary then return to ambient after the work is completed. Additional potential effects are discussed in following section, which addresses specific resources that were detailed in this SEA.

4.2 SUMMARY OF CUMULATIVE EFFECTS BY RESOURCE AREA

4.2.1 Water Resources and Water Quality

California has been in a severe drought for the last four years, reducing the State's key reservoirs to about a third of their capacity or less. Despite National Oceanic and Atmospheric Administration's preliminary predictions of a strong El Niño, which brings the subtropical jet stream northwards, pulling wet storms over Southern California and across the southern United States, it will take more than one wet fall and winter to overcome the effects of the severe drought (Western Region Climate Center and California Department of Water Resources 2015). The "*new normal*" may be cycles of drought and floods due to climate change (Association of California Water Agencies 2015).

Should SCE go forward with decommissioning the Borel Project, water quality could be affected both upstream and downstream of the Auxiliary Dam with the demolition and/or filling of the Borel Canal. It is anticipated that the upstream stretches would be filled with lake sediments, and downstream reaches would be demolished outright. Stream flow previously directed into the Borel Canal (such as stormwater drainage) would flow to the Kern River, carrying sediment with it. Thus, it potentially increases sediment load input from those drainages to the river and to other areas depending on how the water is conveyed. It is anticipated that SCE would maintain their water right for the 605 cfs. The potential decommissioning of the Borel Project would be analyzed in a future FERC sponsored NEPA document.

Construction of the Isabella DSMP would cause surface disturbances by removing vegetation cover, displacing and compacting soils, and altering soil structure and chemistry. The assumption is that the cumulative actions would not violate water quality standards and that USACE would obtain the necessary permits and licenses, and would prepare and implement the necessary plans, BMPs, and stipulations intended to minimize adverse construction impacts on water resources. Consequently, adverse impacts on water resources are anticipated to be limited to the construction periods.

4.2.2 Cultural Resources

Actions during the construction and operation of the dams over the last 60 years have affected cultural resources. Since the passage of NHPA and other requirements, USACE has taken into account the effects of its undertakings on historic properties and will continue to do so into the future. Under Section 106, any alternation of a historic property has to be considered, including stopping an ongoing operation. Consultation is ongoing and USACE will continue to engage tribal representatives, other Federal agencies and relevant stakeholders in the identification, evaluation, and effect analysis of the DSMP on cultural resources. Compliance

with cultural resource laws and regulations would reduce the level of impact associated with the proposed DSMP and not contribute to cumulative impacts.

The direct and indirect effects of decommissioning the Borel Project including taking the power plant off line, as well as removal of the canal/flumes/siphons. Removal of buildings would be analyzed in a future coordination with SHPO.

4.2.3 Recreation

The Draft EIS (Section 3.12.3) details the potential impacts of the Isabella Lake DSMP on recreation (USACE 2012a). These recreation impacts were further analyzed in the November 2015 USDA Forest Service Administration and Recreation Facilities Relocation Draft Supplemental EA (USACE 2015b). Short term, direct and indirect recreation impacts could occur when both the DSMP and the relocation projects are in simultaneous construction mode producing detracting noise and visuals to those visitors seeking recreational solitude. However, the relocation construction actions are short term and other recreational areas can be utilized within the immediate area. Cumulative impacts upon recreation would not be significant as the mitigation measures within the SEA sufficiently compensate to provide additional in-kind recreation experiences and facilities.

4.2.4 Utilities and Infrastructure

The potential decommissioning of the SCE Borel Project would be a cumulative loss of 12 MW of hydropower production. However, Kern County has a number of renewable energy projects that will provide additional options for energy from other sources such as wind, solar, geothermal heat, and biomass. The County's Planning and Community Development web page⁶ lists multiple projects that are in various stages of development from plan approval to under construction. As of September 2015, the county has permitted 9,723 MW of renewable energy; of that, 4,362 MW are on-line (California Energy Commission 2015).

Southern California Edison Service Center – Lake Isabella. The proposed project comprises the construction of a new service center. It will include an administration building, a garage, crew building, hazardous materials canopy, and a truck canopy on a site that is currently zoned for Industrial/Warehouse/Storage. This project is scheduled for completion in December 2015.

4.3 GROWTH INDUCING EFFECTS

The proposed action would not directly induce growth in or near the project area. New development must be consistent with existing Kern County general plan policies and zoning ordinances regarding land use, open space, conservation, flood protection, and public health and safety. Local population growth and development would be consistent with the Land Use

⁶ <http://pcd.kemdsa.com/planning/renewable-energy> (Accessed December 14, 2015)

Element of the Kern River Valley Specific Plan. Construction activities associated with the proposed action would not result in a substantial increase in the number of permanent workers or employees, or a need for additional permanent housing and local services.

4.4 SUMMARY

The proposed activities would likely have no adverse cumulative effects on geology, soils, seismicity, fish and wildlife, special status species, aesthetics, socioeconomics, or cultural resources. There would be short term cumulative effects on traffic and air quality. The amounts of traffic and emissions would temporarily increase due to the operation of construction equipment; mitigation measures would be implemented to reduce the effects. However, with the decrease in construction scope, effects to traffic and air quality would be reduced below what was expected in the Final EIS.

5 ENVIRONMENTAL COMPLIANCE

5.1 FEDERAL LAWS AND REGULATION

5.1.1 Migratory Bird Treaty Act of 1918 and Executive Order 13186, Migratory Bird Habitat Protection

Compliance. The Migratory Bird Treaty Act (16 U.S.C. §703-712), as amended, protects over 800 bird species and their habitat, and commits the U.S. to taking measures to protect identified ecosystems of special importance to migratory birds against pollution, detrimental alterations, and other environmental degradations. Executive Order (EO) 13186 directs Federal agencies to evaluate the effects of their actions on migratory birds, with emphasis on species of concern, and inform USFWS of potential negative effects to migratory birds. The construction could temporarily disturb existing habitat in the project area for migratory birds; however, mitigation measures would minimize or negate these effects. The implementation of the proposed action would have no significant effect on this habitat.

5.1.2 Fish and Wildlife Coordination Act of 1934

Compliance. The Fish and Wildlife Coordination Act (FWCA) of 1934 as amended (16 U.S.C. §661-667e) provides authority for the USFWS involvement in evaluating effects to fish and wildlife from proposed water resource development projects. Consultation was not required for the proposed action, as no modification to surface waters would occur. However, USACE did complete coordination with USFWS on the DSMP and USFWS issued a Coordination Act Report, which was included as Appendix C to the 2012 Final EIS.

5.1.3 National Historic Preservation Act of 1966

Partial Compliance. Section 106 of the NHPA (16 U.S.C. §470) requires that Federal agencies consider the effects of Federal undertakings on historical, archeological, and cultural resources that are eligible for inclusion in the National Register of Historic Properties. USACE, along with the Sequoia National Forest, the California SHPO, and the Advisory Council on Historic Preservation entered into a Programmatic Agreement (PA) for the Isabella DSMP in 2012. USACE is initiating consultation with the signatory parties to the PA, interested Native American Tribes, and the interested public, on a finding of *no historic properties affected* (36 CFR 800.4[d][1]) for the proposed project. Once USACE has taken into account any comments or suggestions received during the consultation process, and SHPO concurs with the findings, the project will be in full compliance with Section 106. Documentation of this consultation will be included in the Final SEA.

5.1.4 Wild and Scenic River Act of 1968

Compliance. The Wild and Scenic Rivers Act of 1968 (16 U.S.C. §4321), as amended, was created to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The North Fork of the Kern River, from its headwaters in Sequoia National Park to the Tulare-Kern County line, and the South Fork of the Kern River, from its headwaters in the Inyo National Forest to the southern boundary of the Domelands Wilderness in the Sequoia National Forest, are designated as a Wild and Scenic River. The proposed action is downstream of these areas and therefore the proposed action will have *no effect* on protected segments.

5.1.5 National Environmental Policy Act of 1969

Partial Compliance. The National Environmental Policy Act (NEPA) (42 U.S.C. §4321 *et seq.*) commits Federal agencies to considering, documenting, and publicly disclosing the environmental effects of their actions. This Draft SEA is intended to achieve NEPA compliance for the proposed project. As required by NEPA, this Draft SEA describes existing environmental conditions at the project site, the proposed action and alternatives, potential environmental impacts of the proposed project, and measures to minimize environmental impacts. The document determines if the project would create any significant environmental impacts that would warrant preparing an EIS, or whether it is appropriate to prepare a FONSI. Public comments received during the public review period will be included and incorporated into the Final SEA. The submittal of the Final SEA and the signed FONSI would complete the NEPA process and fully comply with this Act.

5.1.6 Clean Water Act of 1972

Compliance. The object of the Federal Water Pollution Control Act (33 U.S.C § 1252 *et seq.*), commonly referred to as Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. Though construction would not be conducted in water, a Section 404(b)(1) assessment or a Section 401 water quality certification application is required because the Isabella DSMP would involve the placement of fill below the high water line in jurisdictional waters of the United States. Because the project would result in more than one acre of construction-related land disturbance, the Contractor would be required to pursue a General Permit for Discharges of Stormwater Associated with Construction Activity(Construction General Permit, 99-08-DWQ).

5.1.7 Clean Air Act of 1972

Compliance. The Clean Air Act (CAA), as amended (42 U.S.C. §7401, *et seq.*), prohibits Federal agencies from approving any action that does not conform to an approved State or

Federal implementation plan. This project is not expected to exceed or contribute towards the exceedance of any Federal or State thresholds for emissions. As a result, the project would remain in compliance with Federal air quality standards and would not hinder the attainment of air quality objectives in the local air basin.

5.1.8 Endangered Species Act of 1973

Compliance. In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, Federally funded, constructed, permitted, or licensed projects must take into consideration impacts to Federally listed or proposed, threatened or endangered species and their critical habitats. There are known special status species that incidentally occur in or near the proposed action area. No Federal endangered or threatened species are currently known in the area, and project actions are not expected to affect these species. No proposed or designated critical habitat exists in or near the proposed action area. No protected or candidate species are expected to be affected by the implementation of the proposed action. However, USACE did consult with the USFWS and a BO was issued October 10, 2012.

5.1.9 Executive Order 12898, Environmental Justice in Minority Populations and Low-Income Populations

Compliance. Executive Order 12898 directs Federal agencies to take the appropriate steps to identify and address any disproportionately high and adverse human health or environmental effects of Federal programs, policies, and activities on minority and low-income populations. Minority populations are those persons who identify themselves as Black, Hispanic, Asian American, American Indian/Alaskan Native, and Pacific Islander. A minority population exists where the percentage of minorities in an affected area either exceeds 50 percent or is meaningfully greater than in the general population.

The proposed action would not disproportionately affect minority or low-income populations, nor have any adverse human health impacts. No interaction with other projects would result in any such disproportionate impacts. No cumulative impacts to Environmental Justice would be expected from interaction of the proposed action with other past, present, and reasonably foreseeable future projects.

5.1.10 Executive Order 11990 Protection of Wetlands

Compliance. The purpose of Executive Order 11990 is to "*minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands*". To meet these objectives, the order requires Federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. Implementation of the proposed easement acquisition without a replacement alternative lessens the overall Isabella DSMP footprint and would not adversely affect any wetlands in the reservoir area, or downstream of the Auxiliary Dam.

5.1.11 Executive Order 11988 Floodplain Management

Compliance. This EO requires USACE to provide leadership and to take action to (1) avoid development in the existing 100-year floodplain, unless such development is the only practicable alternative; (2) reduce the hazards and risks associated with floods; (3) minimize the impact of floods on human health, safety, and welfare; and (4) restore and preserve the natural and beneficial values of the current floodplain. The proposed action alternative will upgrade the seismic stability of the Auxiliary Dam as part of the overall Isabella Lake DSMP. The project addresses the potential flood risks associated with dam failure risk as required under the EO.

The proposed Isabella DSMP, once implemented, would maintain the level of flood protection provided by the Isabella Dam Project existing prior to the present Interim Risk Reduction Measure restriction. Therefore, the proposed new alternative as part of the Isabella DSMP complies with this EO.

5.2 COORDINATION AND REVIEW OF THE SEA

The Draft SEA will be circulated for 30 calendar days to interested Federal, State, and local agencies, organizations, and the public. All comments received in the 30-day period will be considered and incorporated into the Final SEA, as appropriate.

5.3 FINDINGS

Based on information in this Draft SEA, this proposed action is not expected to result in significant adverse effects on the environmental resources in or near the action area. Following the public review period, a determination will be made whether a FONSI is warranted, or whether preparation of an EIS is necessary.

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8 APPENDICES