



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

FINDING OF NO SIGNIFICANT IMPACT

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

The U.S. Army Corps of Engineers (Corps), Sacramento District, has conducted environmental analysis in accordance with the National Environmental Policy Act of 1969, as amended. This Supplemental Environmental Assessment (SEA) is tied to the Isabella Lake Dam Safety Modification Project Environmental Impact Statement (EIS). The SEA focuses on the effects of acquiring an easement from Southern California Edison. This easement is solely within property owned and managed by the Corps.

The proposed action as described in the Final SEA includes (1) acquisition of an easement of the Borel Canal Hydroelectric system that is immediately upstream, downstream, and passes through the Auxiliary Dam; (2) seal off the canal conduit through the dam with concrete and abandon in place; (3) demolish and/or fill in the portions of canal within the easement; and (4) do not realign and construct a new bypass canal to continue water deliveries to the Borel Hydroelectric plant. The possible consequences of the work described in this SEA have been studied with consideration given to environmental, cultural, social, and engineering feasibility. The views of other interested agencies, organizations, and individuals have also been considered.

In evaluating the effects of the proposed project, specific attention has been given to any environmental conditions that could potentially be affected. All construction would be implemented in compliance with applicable Federal laws, regulations and executive orders. Best management practices, avoidance protocols, and minimization and mitigation measures as summarized within this SEA, Draft EIS, and Final EIS-Record of Decision, would be implemented. Cultural resource issues would follow the Programmatic Agreement and Historic Property Treatment Plan processes.

Based upon my review of the SEA, incorporated herein by reference, it is my determination that the proposed project would have no significant effects on environmental, social, or cultural resources. Based on these considerations, it is my determination that the proposed project does not constitute a major federal action that would significantly affect the human environment. Therefore, preparation of an Environmental Impact Statement is not required.

22 Apr 16
DATE


Michael J. Farrell
Colonel, U.S. Army
District Commander

Final 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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Auxiliary Dam without Replacement**

Supplemental Environmental Assessment

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Appendix A – Response to Public Comments

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 to 40 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*.

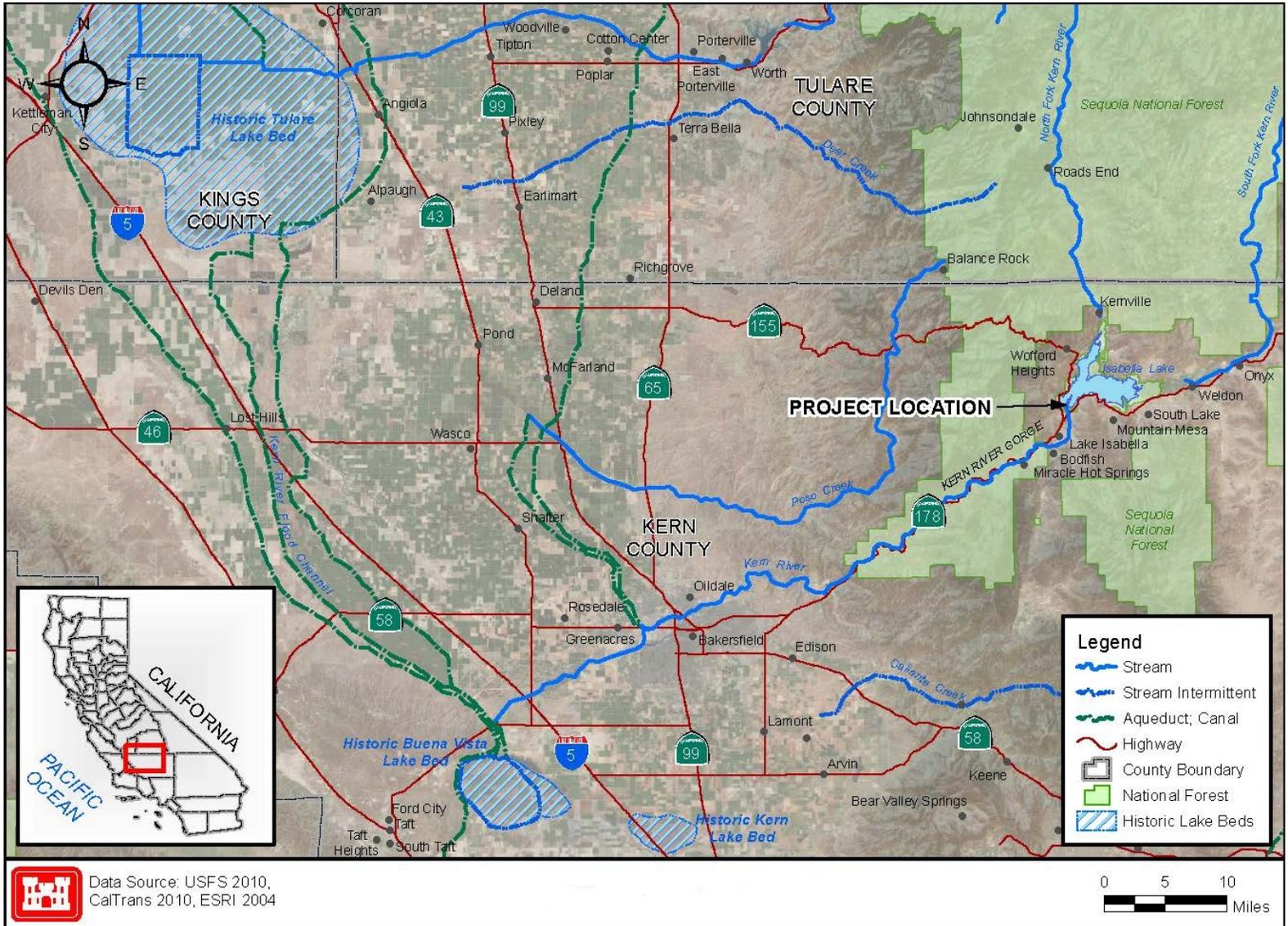


Figure 1. Lower Kern River Watershed and Vicinity Map.

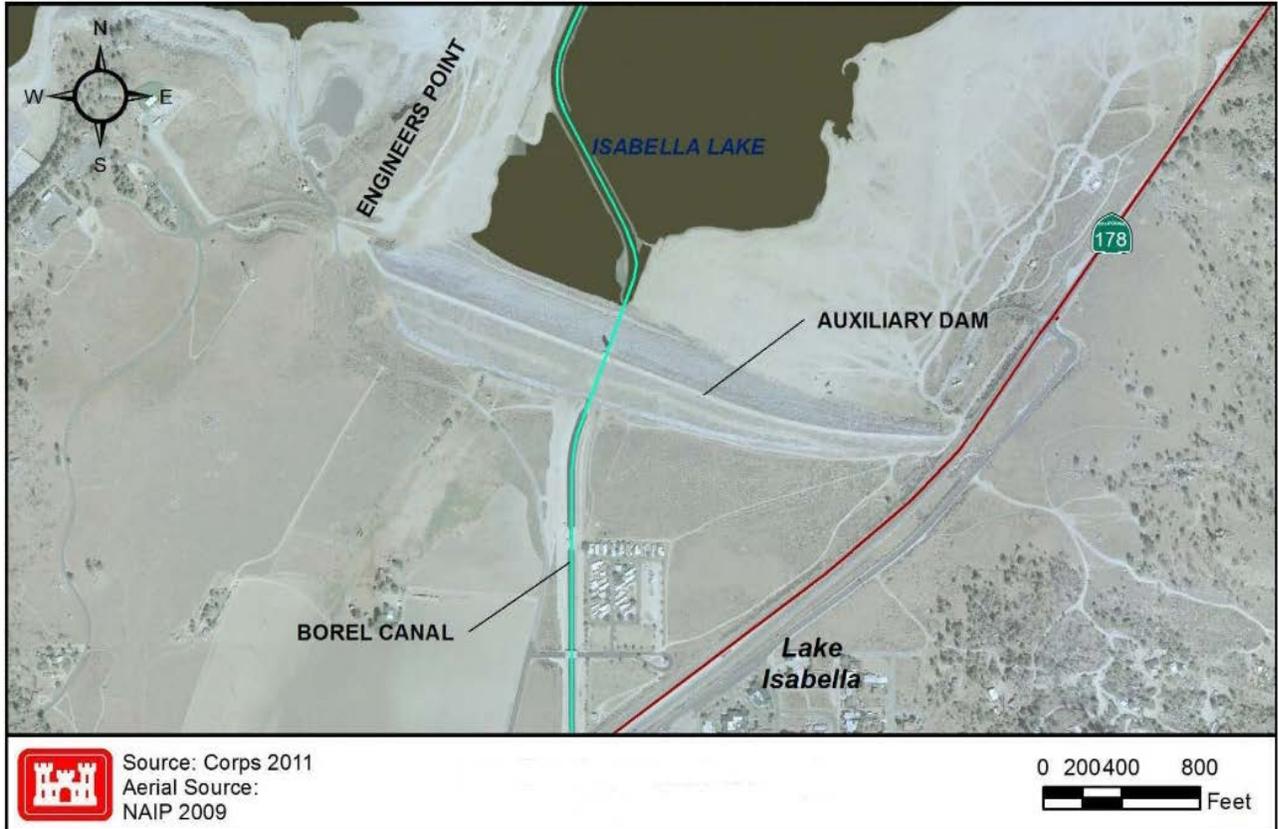


Figure 2. Existing Alignment of Borel Canal through the Auxiliary Dam.

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, Safety of Dams – Policy and Procedures, dated March 31, 2014, 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 purpose of the dam safety program is to protect life, property, and the environment by ensuring 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 mitigation measures to increase public safety and reduce 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 (FEIS) for the proposed remediation of the Isabella Dams. USACE issued its Record of Decision (ROD) for the FEIS on December 18, 2012. The FEIS 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).

1.5 PROJECT REFINEMENTS SINCE THE ENVIRONMENTAL IMPACT STATEMENT

Since release of the FEIS, three SEAs have been completed. The SEAs address refinements to the approved plan that require additional review. The first two SEAs covered real estate acquisition actions to mitigate noise impacts and 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 current approved DSMP plan includes the following features and elements:

- Main dam full height filter and drain, with approximately 16-foot crest raise
- Raising of main dam control tower
- Improvements to the existing service spillway
- Construction of a 300-foot wide emergency spillway

- Auxiliary dam modification, with a 16-foot crest raise, an 80-foot wide downstream buttress, and shallow foundation treatment
- Acquisition of the Borel Canal easement in proximity to and through the Auxiliary Dam (Figure 4)
- Realignment of the Borel Canal and filling of the Borel Canal conduit under the auxiliary dam
- Demolition/in-fill of the canal upstream and downstream of the Auxiliary Dam (Figure 4)
- Removal of the auxiliary dam control tower
- Restoration of USFS recreation facilities
- Construction of USFS administrative offices and fire station response facilities, and temporary recreation facilities

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 is to extinguish the 1,300 foot Southern California Edison (SCE) Borel Canal easement that runs immediately upstream, through, and immediately downstream of the Auxiliary Dam; this was first recommended in the 2012 DSMR. The 2012 FEIS and ROD evaluated the easement acquisition, demolition/in-fill of the canal and conduit, and construction of a new bypass tunnel and canal to continue Borel hydroelectric operations. The 2012 FEIS and ROD did not evaluate the current proposed action because on October 14, 2011, SCE advised the USACE that it had “no interest in divesting itself of [its] renewable resource,” and was unwilling to consider any option in the DSMP but a relocated tunnel and resumption of its Borel Project operations. However, SCE approached USACE in 2014 to discuss other Borel Hydroelectric Project alternatives. SCE stated in an August 22, 2014 letter that they were “...open to considering all viable options for determining the future of SCE’s Borel Hydroelectric Project” including payment in cash as just compensation for the DSMP’s interference with its Borel Project, instead of the relocation described in the 2012 FEIS. This proposed action is one of the SCE alternatives and would meet the DSMP’s 2012 EIS-ROD objectives and 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 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. Design progress and public and stakeholder input also inform the decision making process.

This SEA will discuss a revised alternative under the DSMP to acquire and abandon the SCE Borel Canal easement that runs immediately upstream, through, and immediately downstream of the Auxiliary Dam without constructing a replacement bypass tunnel and canal to continue Borel hydroelectric operations.

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) evaluated 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 evaluated relocation of USACE's 1.4-acre O&M Facility. A FONSI was signed July 2015.

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). A FONSI was signed February 5, 2016.

1.8.2 SEA Document Organization

Section Two of this SEA identifies and describes the range of alternatives evaluated. Section Three describes the affected environment and assesses the consequences of alternative implementation. Section Four covers cumulative analysis. Sections Five through Seven identify the environmental regulatory compliance requirements, list of document preparers, and cited references. 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 alternative is identified to meet the purpose and need for the proposed action. This alternative is the Proposed Action and is evaluated in detail in this SEA versus the FEIS Alternative and a No Action Alternative. The No Action Alternative sets the baseline to illustrate potential effects of not implementing the Proposed 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 FEIS. However, 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 FEIS. Since this alternative was analyzed in the 2012 FEIS, the details will not be reiterated in this SEA (#4).

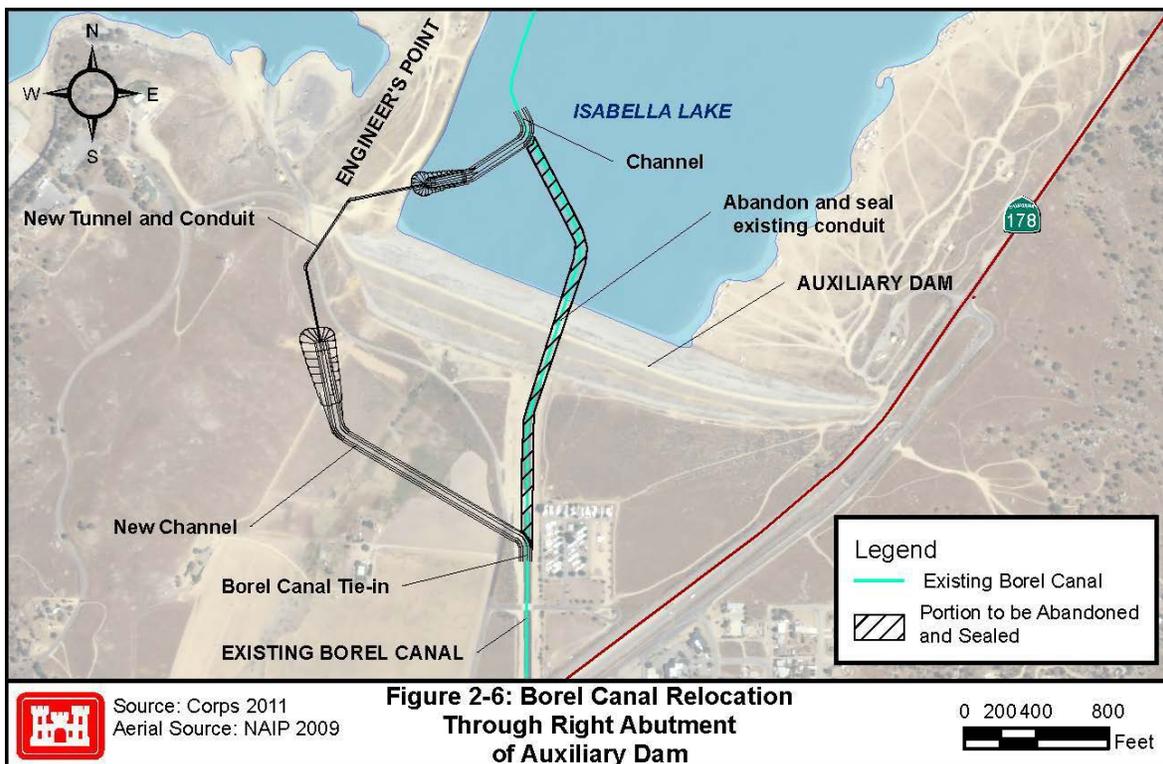


Figure 3. Proposed Bypass Conduit and New Channel, 2012 FEIS Alternative.

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 direct effect of ceasing current Borel Project operations. If operations cease, any action SCE takes would include separate or concurrent “consultation” and/or approval actions. SCE will require approval through FERC and/or implementation of SCE’s FERC license 4(e) requirements. SCE would require California Public Utilities Commission (CPUC) approval. The CPUC regulates public utilities like SCE through actions that can affect what ratepayers pay for electricity. Because SCE’s Borel facilities are located on public and private land, SCE may require consultation and/or approval from the USFS, Bureau of Land Management (BLM), Kern County, underlying private property owners 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). This action is consistent with the 2012 Approved Plan (see Figure 4) analyzed in the FEIS-ROD.
- Seal off the existing conduit through the Auxiliary Dam by filling it with concrete and abandoning the sealed conduit in place. This action is consistent with the 2012 Approved Plan (see Figure 4) analyzed in the FEIS-ROD.
- Demolish and/or fill in portions of the canal within the acquired easement up and downstream of the Auxiliary Dam (see Figure 4). This action is consistent with the 2012 Approved Plan (see Figure 4) analyzed in the FEIS-ROD.
- Payment of fair market value to 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 FEIS.

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

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

The impacts associated with loss of power production at Borel Hydroelectric Project is an immediate effect of this proposed action. SCE is the owner and operator of the Borel Hydroelectric Project and has not identified options or a course of action that could be evaluated as a connected action in this SEA. However, any action SCE takes will require consultation and

approval through FERC and CPUC, and may require or have significant input from USFS, BLM, Kern County, underlying private property owners, and other applicable regulatory agencies. The FERC process would require preparation of a NEPA document to evaluate the SCE proposal and would include input from the public. CPUC approval may require preparation of a California Environmental Quality Act (CEQA) environmental document. SCE and the appropriate regulatory agencies would ultimately take on and be responsible for all actions associated with whatever course of action SCE chooses to undertake.

ISABELLA LAKE DAM SAFETY MODIFICATION PROJECT APPROVED PLAN

Map Updated: January 2016

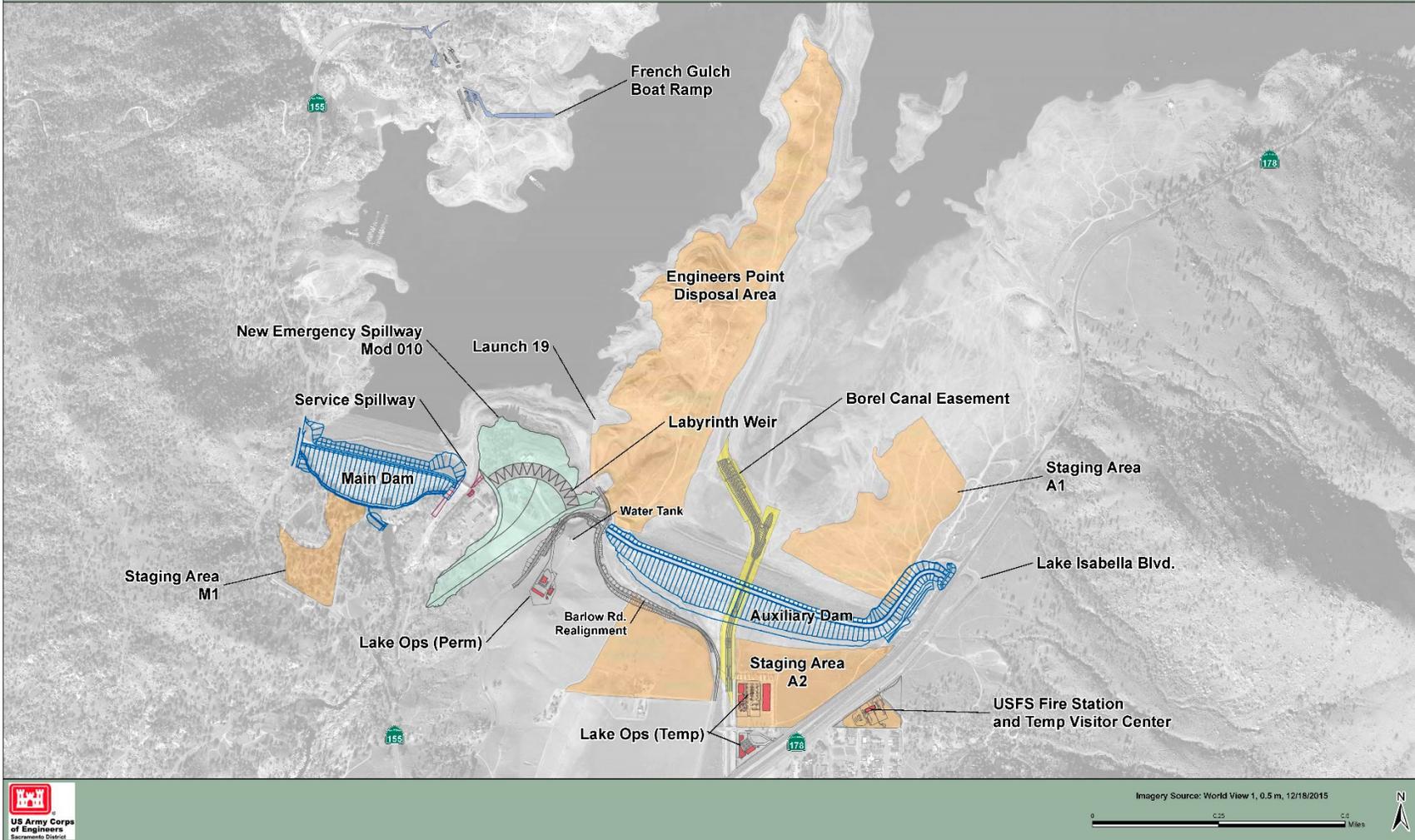


Figure 4. Borel Canal Easement Acquisition Area.

3 AFFECTED ENVIRONMENT AND CONSEQUENCES

This section describes the environmental resources in the construction footprint, as well as effects of the 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-term and long-term effects, than were initially evaluated in the Isabella Lake DSMP FEIS. A brief discussion of these resources follows. For the following resource areas, there are potential impacts associated with any follow-on course of action SCE takes. As identified in Section 2.3, any follow-on action SCE proposes on the Borel Hydroelectric Project will require FERC and CPUC approval, which will trigger NEPA and possibly CEQA requirements, including evaluation of the environmental impacts of the proposed action, identification of mitigation measures, and opportunity for public review and comment.

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 Draft 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 FEIS) 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 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 (Draft 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.

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 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 to less than significant levels.

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 Proposed Action is not expected to produce any adverse effect noise. The proposed action should 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 Draft 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)² 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.

3.2.3 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

² All elevations in this document are based on North American Vertical Datum 1988 (NAVD 88) unless otherwise noted.

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 as described in the 2012 FEIS. 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 FEIS would no longer occur, or would be reduced. The cofferdam 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 FEIS. 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 at the beginning of construction where the lake level would be required to stay below 2,543 feet to abandon the Borel Canal and conduit section adjacent to the Auxiliary Dam.

SCE's existing 605 cfs water right could 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). Increased flows in the Kern River between Isabella Dam and the Borel Powerhouse may be beneficial for fisheries management, agricultural supply, and recreational activities. A change in water release would mean that algal growth inhibitors (such as copper sulfate) periodically used in the canal by SCE would no longer be required. Until the appropriate regulatory agencies approve any SCE action(s) that require(s) a change in the method for evacuating stormwater, the Borel Canal would continue to receive and evacuate local stormwater between the dam and the Borel Power Plant. Proposed Action implementation would have no significant effect on water resources or water quality.

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) from 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 as described in the 2012 FEIS.

3.3.3.2 Proposed Action – Easement Acquisition without Replacement Measure

Construction effects on wildlife and fisheries as described in the 2012 FEIS are expected to remain or be reduced. The cofferdam 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 FEIS. 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 at the beginning of construction where the lake level would be required to stay below 2,543 feet to abandon the Borel Canal and conduit section adjacent to the Auxiliary Dam. In addition, the overall length of construction could be reduced.

SCE's existing 605 cfs water right could 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). Increased in the Kern River between Isabella Dam and the Borel Powerhouse may be beneficial for fisheries management. A change in the point of water release would mean that algal growth inhibitors (such as copper sulfate) periodically used in the canal by SCE would no longer be required. Algal growth inhibitors have been shown to have detrimental effects to the aquatic community by reducing the macroinvertebrate density below the Borel Powerhouse

(FERC 2005). Proposed action implementation would have no significant effect on fish and wildlife resource.

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 California Department of Fish and Wildlife.
- 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 a 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 species, 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*

USFWS designated a 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 miles of stream on the south side of the river) and Audubon California's Sprague Ranch (2.5 miles 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 endangered in the State of 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 then 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*

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 then 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 have 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 United States 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 as described in the 2012 FEIS.

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 Federal 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 could improve riparian habitat creating better habitat conditions for special status species. Proposed action implementation would have no significant effect on 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 established 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. 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 HPTP 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 ensure 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 Hydroelectric Project was built in 1904. Water was diverted from the North Fork Kern River by intake works near Wofford Heights into a canal that stretched for approximately 11 miles to a powerhouse in the Kern Canyon. When USACE constructed the 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 identified thus far by local tribal members is 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). The massacre site is located south of the present-day town of Wofford Heights, near the intake for the Borel System and more than four miles north of the easement. USACE has no planned actions for the intake structure, which is fully outside of the easement to be acquired from SCE.

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 on 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 alteration 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 action affects only the acquired easement area (Figure 4). Once the easement is acquired from SCE, all interests in the property will revert to the Federal government as the underlying landowner. USACE will retain responsibility as the designated Federal Land Management Agency. The easement will serve as the defined APE for USACE cultural resource concerns. Current and future consultation with SHPO, USFS, and interested tribes will address the APE determination. The proposed action would affect the Borel Project by filling in and sealing the conduit through the dam, removing the downstream sections of the canal within the APE, and filling in the upstream section of the canal within the APE. The Borel Project was evaluated in its entirety for SCE in 1996 by Stephen D. Mikesell, with a focus on the integrity of the system rather than a cultural landscape approach. Mikesell concluded that although 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 for concurrence or non-concurrence, 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. it does not comprise a consensus determination).

At this time, USACE does not plan to revisit the determination of eligibility for the entire Borel System, the majority of which is located outside of the Isabella DSM APE. Instead, USACE would pursue a Determination of Effect for only the portion of the Borel System within the boundaries of the easement and the APE. In the event of a determination of adverse effect, USACE would develop and implement a treatment plan to mitigate any adverse effects to the Borel Canal within the APE. Throughout the process described above, USACE will carry out consultation according to the stipulations laid out in the PA.

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 5). 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 5. 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 as analyzed in the 2012 FEIS.

3.6.3.3 Proposed Action – Easement Acquisition without Replacement Measure

As stated in the 2012 FEIS, 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 FEIS 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 FEIS 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 FEIS; 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 BLM Keyesville Special Recreation Management Area (Figure 6). Recreational facilities provided by both agencies include picnic grounds, campgrounds, hiking/mountain biking/horse riding trails, and boating access. 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.

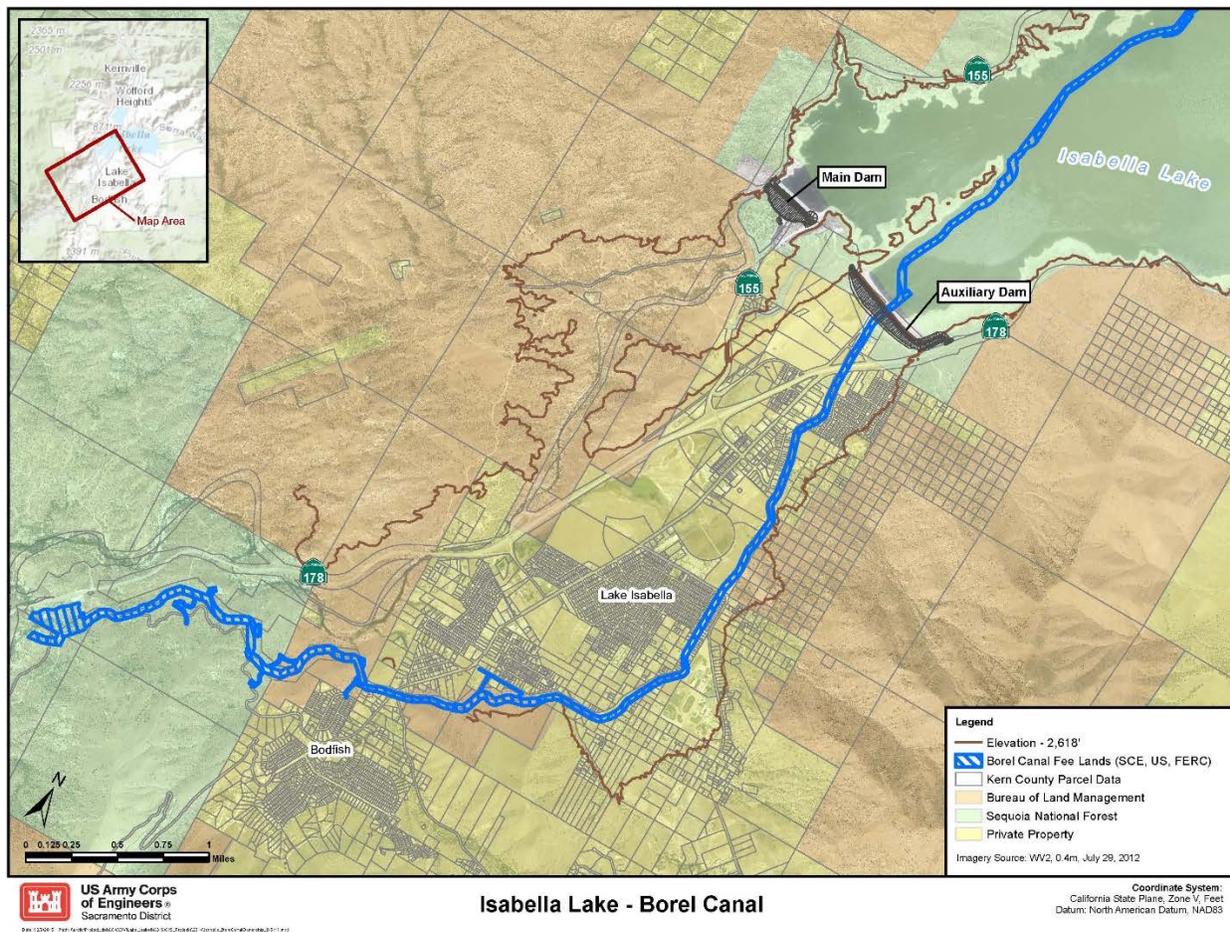


Figure 6. Public-Private Lands in the Lower Kern River Area.

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 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 high and adverse as described in the 2012 FEIS.

3.7.3.3 Proposed Action – Easement Acquisition without Replacement Measure

Implementation of the proposed action would reduce impacts to recreation because the cofferdam 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 FEIS. 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 at the beginning of construction where the lake level would be required to stay below 2,543 feet to abandon the Borel Canal and conduit section adjacent to the Auxiliary Dam. In addition, the overall length of construction may be reduced.

SCE's existing 605 cfs water right could 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). Proposed action implementation would have no significant effect on recreation resources.

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 FEIS. 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 inactive 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 could 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 between May and June 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

capacity³. On a regional basis, 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's 12 MW of capacity represents 0.0028% of this online capacity and 0.0012% of the total permitted capacity to date. Cessation of Borel power production does not represent a significant loss of renewable power production capacity.

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 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.
- 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 California Department of Fish and Wildlife and USFWS for proper avoidance and minimization measures. Monitoring may be required for raptor nests.

³ 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%.

- 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 BMPs 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, native grass seed, wood fiber mulch, and/or tackifier would be placed.

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 Federal, State, and local 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) and will not be restated in this SEA (#4). The cumulative impacts discussion in this SEA (#4) will focus on additional cumulative effects related to potential actions related to the Borel Hydroelectric Project as described in Section 4.1.3. 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 FEDERAL 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 features⁴ 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

⁴ Subject to this SEA resulting with a FONSI, and an agreement is reached with the SCE.

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, auxiliary dam buttress construction, 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, conduit fill and sealing, and canal demolition and filling within the acquired easement (Figure 4).
- 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 Borel Hydroelectric Project

Any SCE proposed action would require FERC approval and may require CPUC approval. If SCE's proposed action is to decommission the Borel Hydroelectric Project, SCE would be required by law to follow a decommissioning process in coordination with FERC and CPUC. A decommissioning process will trigger NEPA, and depending on scope, could trigger a CEQA action through the CPUC. Although there are differences between the Federal and State laws (i.e. NEPA vs CEQA), both require stakeholder and public involvement. Because SCE is the owner/operator of the FERC licensed Borel Hydroelectric Project, SCE, in coordination with

applicable regulatory agencies, is responsible for all actions associated with any decision associated with follow actions such as 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 and return to ambient after the work is completed. Additional potential effects are discussed in the following sections, which address 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 and pulls 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.

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 Fish, Wildlife and Special Status Species

Any SCE action could have impacts considered negative (eg demolition of facilities) and beneficial (eg. habitat restoration, increased river flow between Main Dam and Borel powerplant) effects to biological resources. The direct and indirect cumulative effects of any SCE action would be assessed through the NEPA-CEQA process with FERC and CPUC, in consultation with the USFS, BLM, Kern County and other Federal, State, and local regulatory entities.

4.2.3 Cultural Resources

The direct and indirect cumulative effects of any SCE action would be assessed through the NEPA-CEQA process with FERC and CPUC, and in consultation with SHPO and local tribes as part of a Programmatic Agreement that SCE entered into with the USFS and other Federal, State, and tribal entities.

4.2.4 Aesthetics

Any SCE action could have impacts considered negative (eg. short-term from construction activity) and beneficial (eg. facility removal, habitat restoration, increased river flow between Main Dam and Borel powerplant). The direct and indirect cumulative effects of any SCE action would be assessed through the NEPA-CEQA process with FERC and CPUC, in consultation with the USFS, BLM, Kern County and other Federal, State, and local regulatory entities.

4.2.5 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 2015 USDA Forest Service Administration and Recreation Facilities Relocation Supplemental EA-FONSI (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 2015 USDA Forest Service Administration and Recreation Facilities Relocation Supplemental EA-FONSI sufficiently compensate to provide additional in-kind recreation experiences and facilities.

4.2.6 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. Kern County's Planning and Community Development web page⁵ 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 online (California Energy Commission 2015).

Southern California Edison also has a new Service Center proposed for Lake Isabella. The proposed project 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 OF THE PROPOSED ACTION

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 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 Action 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 2012 Final EIS.

⁵ <http://pcd.kernmdsa.com/planning/renewable-energy> (Accessed December 14, 2015)

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 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 Federal or

State 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 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. EO 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 EO 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 SEA, the proposed action would have no significant effects on the environmental resources in or near the vicinity of the action area. Therefore, the proposed action would require no mitigation beyond those measures proposed in this SEA or applicable measures previously proposed in the 2012 FEIS. The proposed action would meet the requirements for completion of a FONSI as defined in 40 CFR 1508.13. The Proposed Action would not have a significant effect on the quality of the natural and human environment, nor require preparation of an Environmental Impact Statement. A FONSI accompanies this SEA.

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8 APPENDICES

Response to Public Comments

Commenter	Comment	Response
USFS	Title is confusing- Shouldn't the title of this document be <i>Phase IV</i> (four) not <i>Phase III</i> SEA? Wasn't phase III the <i>USDA Forest Service Administration and Recreation Facilities Relocation?</i> (as described on p.7 of this EA?)	The USDA Forest Service Administration and Recreation Facilities Relocation Supplemental Environmental Assessment (SEA) was SEA #3. The Borel SEA is the fourth supplemental document and is part of Phase III real actions, which may occur concurrent with Phase II construction.
USFS	The terms " <i>preferred action</i> ", " <i>preferred alternative</i> " and " <i>proposed action</i> " appear to be used interchangeably. This is confusing. Suggest consistent use of one term, "proposed action" since this is the EA.	Comment appreciated. The SEA has been revised.
USFS	Similar to the issue above, a number of terms regarding a future NEPA document appear to be used interchangeably. This is confusing. Suggest consistent use of one term, " <i>a subsequent FERC-SCE NEPA analysis</i> ". The varying terms include: <i>These potential issues would be evaluated by SCE in a future NEPA document led by FERC, FERC-SCE NEPA analysis, future FERC/SCE decommissioning environmental document, separate NEPA analysis, follow-on NEPA document developed by SCE and FERC, future NEPA document, a NEPA document developed by SCE and FERC, FERC-SCE NEPA process, FERC-SCE NEPA process.</i>	Comment appreciated. The SEA has been revised.
USFS	The numerous discussions of the decommissioning and/or demolition of the Borel System makes that undertaking appear to be a connected action of the present undertaking. The relationship between the proposed action and future decommissioning and/or demolition with a subsequent FERC-SCE NEPA analysis is not clearly explained. Please clarify what is the proposed action and what is a connected action, and what will be reviewed in a subsequent FERC-SCE NEPA analysis.	Comment appreciated. The SEA has been revised.
USFS	Confusing syntax error, since phase II is complete, not in process. Sentence 1 states " <i>This Phase II Real Estate Acquisition and Relocation SEA #2 (USACE 2015a) evaluates...</i> " Appears to be a cut and paste error. Should read " <i>The Phase II...evaluated</i> ".	Comment appreciated. The SEA has been revised.

USFS	Sentence 2 states " <i>This Phase II Real Estate SEA will also evaluate</i> " should read " <i>The Phase II SEA evaluated...</i> " The description of SEA #2 should include a final sentence indicating that the Final EA was completed and a Decision Notice and Finding and No Significant Impact was signed on 7/1/2015.	Comment appreciated. The SEA has been revised.
USFS	The description of SEA #3 should include a final sentence indicating that the Final EA was completed and a Decision Notice and Finding and No Significant Impact was signed on 2/5/2016.	Comment appreciated. The SEA has been revised.
USFS	Why do indirect impacts in paragraph 1 include ceasing Borel Operations while direct impacts in paragraph 5 include loss of power production? This is confusing and It seems these should be reversed.	Comment appreciated. The SEA has been revised.
USFS	Need to include a map of the project area showing the portion of SCE Borel easement to be acquired by the Army Corps. Nowhere in the document is this easement boundary defined or how it relates to the Borel FERC License area. Is this easement boundary shown in the map on p. 9? This makes it difficult to assess project impacts throughout the document. Adding this map would clear up much confusion. (Greg Krzys provided a very helpful map upon request on 3/2/16)	Comment appreciated. The SEA has been revised.
USFS	Specialists appear to be analyzing impacts to different project areas: Water Quality (pp. 15-16) analyzes downstream of dam, Hazardous Materials (p. 13) refers only to powerhouse, Cultural Resources (pp. 22-24) refers to 17 sites, but focuses only on those associated with the Borel Canal, Aesthetics (pp. 24-27) considers only Auxiliary Dam and the upstream portion of the canal, while Recreation (pp.27-32) addresses only Keysville, Launch 19 and the area downstream of the dam. The impression left by the analysis is that the project area is larger than just the easement. Please clarify which are direct or indirect effects of the current proposed action and which connected actions should be further analyzed in a subsequent FERC-SCE NEPA analysis.	Comment appreciated. The SEA has been revised.
USFS	The Area of Potential Effects to cultural resources is not identified for the project. Does it include only the easement acquisition area or is it larger? What areas will need additional analysis in a subsequent FERC-SCE NEPA analysis? Please define.	The Area of Potential Effect (APE) has been identified. In addition, a figure has been added to the SEA delineating the easement acquisition area.

USFS	<p>The Forest Service has concerns about the adequacy of the 2011 Pacific Legacy Survey of the Borel Canal cited by the EA. The required concurrence with SHPO was not received on this document. Additional problems included fieldwork conducted with snow on the ground and numerous historic-period resources in its survey area that were missed or ignored. Therefore the segment of canal between Lake Isabella and the powerhouse cannot be said to be fully inventoried. This should be noted in the EA. Also a statement should be included that this issue will need to be addressed in subsequent NEPA. Please refer to the comment letter under separate cover from the Sequoia National Forest related to this issue.</p>	<p>Comment appreciated. The SEA has been revised. The APE has been delineated and USACE is following the Isabella Programmatic Agreement and Historic Property Treatment Plan process. SHPO has been engaged and public outreach has occurred through the Tribal Consultation Policy.</p>
USFS	<p>Table 1 does not list the Traditional Cultural Property associated with the Massacre of 1863. This should be added to the list.</p>	<p>Comment appreciated. The SEA has been revised.</p>
USFS	<p>Please include language clarifying whether the new SHPO determination will be completed as part of the proposed project or in a subsequent NEPA.</p>	<p>SHPO has been engaged on the SEA proposed action. The cultural resources section of the SEA was revised to reflect that additional consultation for the boundaries of the easement will be completed.</p>

USFS	<p>The Forest Service has concerns regarding the status of historical resources affected by the project. The Cultural Resources finding of no effect appears to rely in part upon pending SHPO consultation regarding the 1996 Determination of Eligibility by Stephen D. Mikesell. The Forest Service has identified the following concerns with Mikesell's finding of "not eligible":</p> <ol style="list-style-type: none"> 1) The historic context for the Borel System is incomplete and inadequate both for determining historical significance and as a basis for assessing integrity. 2) The context fails to note the Borel System's pivotal role in the Pacific Electric Railway and the growth of the greater Los Angeles area. 3) Unique technological features of the system that contribute to its significance (the transmission line was the first to use steel towers) are additionally overlooked. 4) The period of significance is too limited and does not fully reflect the historical significance of the Borel System. 5) Construction activities at the powerhouse that occurred <i>during</i> that limited period of significance are incorrectly deemed impacts to integrity. 6) The document does not present sufficient architectural description to sustain its findings of integrity for the powerhouse. 7) Integrity of design, materials, workmanship and association for the Borel Canal are inadequately described and considered. 8) The Borel System is incorrectly evaluated in the context of SCE's KR1 and KR3 systems rather than the Pacific Electric system. <p>Please refer to the comment letter under separate cover from the Sequoia National Forest related to this issue.</p>	<p>USACE is following the Isabella Programmatic Agreement and Historic Property Treatment Plan process. SHPO has been engaged and public outreach has occurred through the Tribal Consultation Policy.</p>
USFS	<p>Confusing. Paragraph 4, sentence 2 should be reworded as it indicates that that the "DSMP will result in..." The DSMP NEPA is already completed, so this should be reworded to say "the proposed action will result in..."</p>	<p>Comment appreciated. The SEA has been revised.</p>
USFS	<p>The BMP section does not clearly identify the extent of project area. For example, on p. 22 the cultural resources section notes 17 sites "in close proximity of the canal." Yet, the BMP section does not describe protection measures for cultural resources. Either those cultural resources are outside the APE of the project, in which case their appearance in the document is confusing, or they are in the APE and protection measures need to be considered.</p>	<p>A figure depicting the proposed action has been added to the SEA.</p>

USFS	<p>The BMP section states that the proposed action reduces the footprint of the Isabella DSMP. The varying descriptions of the project area in the specialist discussions, many of which include the Borel System, give an impression that footprint would be larger, not smaller. Please clarify. Perhaps it would be more correct to state that the direct effects would be smaller, but the indirect effects would be increased, and should be considered in a subsequent FERC-SCE NEPA analysis.</p>	<p>Comment appreciated. The SEA has been revised.</p>
USFS	<p>Is the SCE Service Center a connected action to the current undertaking? If not its appearance confuses the scope of the project and it should be mentioned that is an unrelated project. If it is connected, the relationship should be disclosed, e.g. the office is being built, at least in part, to assist with decommissioning of the Borel Canal.</p>	<p>The SCE Service Center is a separate project within the Kern River Valley. It is assessed in the cumulative impacts area as required.</p>
USFS	<p>Stipulation III C (Evaluation) states that the Corps in consultation with the SHPO and the SQF, as appropriate, shall ensure that determinations of eligibility are made in accordance with criteria set forth in 36 CFR 60.4 for all properties within the area of potential effect. If the Corps, the SQF, and the SHPO cannot agree on the National Register (NR) eligibility of a property, the Corps will obtain a determination from the Keeper of the National Register in accordance with 36 CFR Part 63. The determination of the Keeper shall be final for purposes of this PA. Objection 1: The Forest has, on a number of occasions beyond the single conference call, discussed with Corps staff several objections on the adequacy of the historic evaluation report for the Borel Hydroelectric System. The Borel Canal is a component of the Southern California Edison Company's Borel Hydroelectric System Project (FERC No. 382). To date the Forest Service concerns have not been addressed and the cited project is moving forward without resolution of our concerns. Resolution 1: The Forest asks that an evaluation report be submitted to the SHPO and/or Keeper for final resolution of NR status.</p>	

Stipulation IX (Tribal Involvement) states that the Corps will consult with appropriate Indian tribes to identify historic properties within a project's area of potential effect (APE), particularly those areas with traditional religious and cultural importance. No APE was ever established for this project. The list of identified properties and identification efforts that are provided seem incomplete, but it is difficult to assess without an established APE. No specialist report was provided. Objection 2: No tribal or Forest Service staff consultation was conducted for the project despite the identified presence of the Tubatulabal Massacre and burial site. This important site is discussed in the draft EA but its prior historic property status never disclosed. SHPO had previously concurred that the Tubatulabal Massacre and Burial Site qualified for NR listing as a Traditional Cultural Property (TCP) under 36 CFR 60.4 (criteria A). The upstream section of the Borel Canal bisects the TCP boundaries on National Forest System lands. No consultation was undertaken with the tribes to identify direct or indirect effects of the proposed undertaking to this TCP. When assessing potential effects to Traditional Cultural Properties, it is the tribes' role to make effects assessments, not agency heritage specialists acting independently with no input from tribal experts. Resolution 2: The Forest asks that consultation be completed by the Corps to identify any potential project impacts to places of tribal importance including the known Tubatulabal Massacre and Burial Site. Consultation should include a map of the APE, prior identification efforts, and known potential historic properties within that APE. A copy of those supporting documents should be provided to Forest Service heritage staff.

USACE is following the Isabella Programmatic Agreement and Historic Property Treatment Plan process. SHPO has been engaged and public outreach has occurred through the Tribal Consultation Policy.

USFS

USFS	<p>Stipulation XV (Tribal Consultation and Treatment of Human Remains) states that Indian tribes identified in the PA will be invited to participate in the implementation of the terms of this PA. As stated in No. 2 above, tribes were not invited to participate in the project effects assessments. Issue 3: Crucial historical and tribal partners were excluded from the heritage effects assessments for the draft EA. These partners are critical for the continued use of the expedited processes allowed under the terms of the project PA. Resolution 3: The Forest Service is asking the Corps of Engineers, as lead federal agency, to initiate consultation with the tribes on this component of the project and its potential effects to places of Native American interest. The Forest Service is also asking the Corps to submit a National Register historical evaluation report of the Borel Hydroelectric System to the SHPO and/or Keeper for final resolution.</p>	
Matt Volpert - Kern River Outfitters	<p>We are in support of the decommissioning of Borel Powerplant, for the following reasons.</p>	<p>Comment appreciated.</p>
Matt Volpert - Kern River Outfitters	<p>The facility will have a detrimental impact on recreation users. Borel is the sole influence of the plan to lower Isabella Lake to a restricted level of 72,237 in 2020. At lake levels this low, a Lower Kern rafting season at best would be an extremely short rafting season, with barely raftable flows. With such a short operating window, and with subpar flows, recreation enjoyment will be severely impacted because of the diminished quality of the river.</p>	<p>Comment appreciated.</p>
Matt Volpert - Kern River Outfitters	<p>Recreation tourism is vital to the economy of the Kern River valley. Historically, the Lower Kern has a long river recreation season, stretching from midmay into September. These users come from all over California to raft, kayak, fish and play on the Lower Kern river. They stay in our communities hotels, eat out at our restaurants, and spend money in our stores. Even if we have a brief season with low water, the knowledge that the Army Corp of Engineers will be lowering the lake will have adverse affects on recreational tourism as the mindset will be that the river and the lake will be too low to enjoy. This has been proven as we have struggled through the drought: our reservations plummeted as our clientele believed that the river was completely dried up.</p>	<p>Comment appreciated.</p>

<p>Matt Volpert - Kern River Outfitters</p>	<p>Borel Powerplant is a low producing powerplant. On average, Borel Powerplant produces just 7.2 megaWatts of energy. According to the National Hydro Power Association, 7.2 megaWatts only powers 4,680 homes making it one of the lowest energy producers of Southern California Edison. Additionally, Borel has had two turbines removed (from 5 to 3) which has decreased it's power output. A decommission of Borel Powerplant will have a minuscule effect on California's energy supply.</p>	<p>Comment appreciated.</p>
<p>tomnlinda2@verizon.net</p>	<p>With the Acquisition Easement Rights to the Borel Canal at the Isabella dam by the US Army Corp of Engineers and SCE. The USACE must assume the obligation of the health, safety and environmental liabilities they are creating. The Corp must include into the budget of the Dam Modification Project the dismantling of the entirety of the Borel Canal from the dam itself all the way to the Hydroelectric Power Plant at end of the canal, and the restoration of the land to it's original form before the Borel Canal was constructed and to be completed in the time frame of the DSMP.</p>	
<p>tomnlinda2@verizon.net</p>	<p>Leaving the Borel Canal in place without dismantling it would be an environmentally unhealthy habitat and Safety hazard to all the people in this area. The environmental and health considerations are numerous. The cumulative effects are:</p>	
<p>tomnlinda2@verizon.net</p>	<p>1. The empty canal is already becoming a trash dump.</p>	
<p>tomnlinda2@verizon.net</p>	<p>2. The empty canal bottom now has standing water from the rains for weeks to months on end. Fostering the breeding pools for the West Nile Virus and the Zika Virus.</p>	
<p>tomnlinda2@verizon.net</p>	<p>3. The Canal is a burden to our Schools safety of our Children. The Elementary, Middle, and High school all back up to the Canal. That creates a huge burden to the School Patrol, in monitoring their students. The canal blocks their view and allows the children a place to hide form the School Police Patrols.</p>	
<p>tomnlinda2@verizon.net</p>	<p>4. The Canal hinders the Sheriff department in patrolling the area to fight the drugs and crime in this area below the school.</p>	
<p>tomnlinda2@verizon.net</p>	<p>5. Neighborhood crime uses the empty canal as a cover to run their all terrain vehicles up and down in the empty canal to enter and exit homes and transport stolen items from place to place out of sight of the police and public's view.</p>	<p>USACE and SCE met in June 2014 to discuss the Borel canal and overall Borel system. The current EA proposed action is one of three options discussed at the June 2014 meeting. The other two options were variations on a new Borel tunnel (1) around the Auxiliary Dam and (2) from Boat Launch 19. SCE sent USACE a letter dated October 2014 stating "...SCE is open to considering all viable options for determining the future of SCE's Borel Hydroelectric Project." Because SCE is the FERC licensed entity and owner of the Borel hydroelectric system, per its FERC license, SCE is responsible for all actions associated with the Borel hydroelectric system in coordination/cooperation with the underlying property owner(s) and appropriate regulatory agencies. If there are issues with dumping,</p>

tomnlinda2@verizon.net	Living adjacent to this canal for the last forty years I have personally witnessed ALL of the above over and over. It is not getting any better. Our Sheriff Department has to deal with the Canal blocking their way to fight crime and protect the public and deal with all the above daily. The canal cuts off enormous street access making safety issues difficult.	health and safety, etc. in the canal, then SCE, USFS, BLM, Kern County and local law enforcement are the entities to whom these issues should be presented.
tomnlinda2@verizon.net	If the USACE is going to save a tremendous amount of tax payers money by doing the job this way, as they spoke on at their 3/23/2016 Scope SAE #4 meeting, they need to finish the job. The USACE are addressing the problems of the Dam to improve the conditions environmental for all the people downstream to the San Joaquin Valley.	
tomnlinda2@verizon.net	Now the new issue is the Borel Canal being decommissioned in a safe and thorough way to ensure the health and safety of the Kern River Valley. This Phase 4 part of the Isabella DSMP must be absorbed by their, (the USACE) project's budget and not passed on to SCE. Because SCE will not pay the cost out of their pockets but pass it on to their customers in this immediate district as a rate hike that will never be removed.	
Thomas Schwass	With Southern California Edison (SCE) being compelled to become involved in the US Army Corp of Engineers (USACE) Isabella Dam Safety Modification Plan (DSMP). SCE is being asked to abandon and decommission the USACE's Borel Canal's conduit line and tower at the Isabella Auxiliary Dam. The Corp has laid this at the feet of SCE to make a very important decision. What does SCE do with the rest of the Borel Canal through the township of Lake Isabella, Bodfish and down the stream to the Borel Power Plant on the lower Kern river?	USACE and SCE met in June 2014 to discuss the Borel Canal and overall Borel system. The current EA proposed action is one of three options discussed at the June 2014 meeting. The other two options were variations on a new Borel tunnel (1) around the Auxiliary Dam and (2) from Boat Launch 19. SCE sent USACE a letter dated October 2014 stating "...SCE is open to considering all viable options for determining the future of SCE's Borel Hydroelectric Project." Because SCE is the FERC licensed entity and owner of the Borel hydroelectric system, per its FERC license, SCE is responsible for all actions associated with the Borel hydroelectric system in cooperation/coordination with the underlying property owner(s) and appropriate regulatory agencies.

If SCE relinquishes their Easement Rights in this acquisition of the USACE easement with SCE on the Isabella dam project, how do they handle the problem with the private property owners in Lake Isabella and Bodfish with the decommissioned Canal that rests on the surface of Private Land? Especially, when those Property Deeds, mine included, describes a: "Borel Canal Surface Rights easement." Meaning, SCE has a Right to conduct their business over the surface of every real property it comes in contact with. But if SCE's Borel Canal is abandoned and decommissioned at the auxiliary dam. How could they continue to conduct business and run water through the canal to generate electric power at their Borel Power Plant? They can't! Here-in lies the Problem: No water, no electric power. No power, no business. If that is the case, then what business does SCE have being on our private property with their abandoned and derelict canal sitting there on the surface? NONE! Webster's Family Dictionary describes the word derelict as: #1. abandoned by the owner : 2. negligent in his duty : 3. one that is not a responsible or accepted member of society. This description may sound quite harsh, but the Borel Canal is a piece of operating equipment that needs constant maintenance and attention to operate safely. If not, it turns into a refuse setting abandon and rotting with no Right for it to be there on someone else's property anymore.

Any action SCE takes will require consultation and approval through FERC and CPUC, and may require input from USFS, BLM, Kern County, underlying private property owners and other applicable regulatory agencies. The FERC process would require preparation of a NEPA document to evaluate the SCE proposal and would include input from the public. CPUC approval may require preparation of a California Environmental Quality Act (CEQA) environmental document. SCE and the appropriate regulatory agencies would ultimately take on and be responsible for all actions associated with whatever course of action SCE chooses to undertake.

Thomas Schwass

Thomas Schwass	<p>The real Big question is: Who is going to pay for the removal of the Borel Canal? Should it be the USACE Isabella/ DSMP that started all of this in the first place? Or, should it be SCE? I feel the cost should be included in the Isabella DSMP project. If left to SCE, it could quite possibly get passed on to all of the consumer users of SCE in a rate raise in this SCE district Area. In this case, all of our future generations would still be paying that rate hike long after the cost would be completed. It is not right to make us pay for SCE's cleanup when honoring their obligation to their Surface Rights on our private property. They should not be allowed to pass their problems forward. They need to honor our land by returning it back to us in the same condition it was when they took it by Surface Rights.</p>	<p>If SCE decommissions and closes the Borel Hydroelectric Project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process. Responsibility for payment of associated costs will be determined consistent with FERC license requirements and applicable law.</p>
Thomas Schwass	<p>In the Isabella/DSMP document, 4.1.3 Decommissioning the Borel Hydroelectric Project, it states: <i>Any action taken by SCE, such as decommissioning the entire Borel Project, would be further analyzed through a follow-up NEPA document developed 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.</i></p>	
Thomas Schwass	<p>Question: How does one become so absolutely certain today, that: <i>SCE would ultimately take on and be responsible for all actions associated with decommissioning?</i></p>	<p>This section has been revised. However, the SCE-FERC process is the same. Because SCE is the FERC licensed entity and owner of the Borel hydroelectric system, per its FERC license, SCE will have to comply with the FERC decommissioning process.</p>
Thomas Schwass	<p>When section 4.1.3 describes further future analyzing, following up with another document, then even more future NEPA documents being developed with input from the public and then, finally, SCE ultimately takes on all the responsibility for all the actions before any of us knows where any of this is going in the first place! Hmmm? I'm very uncomfortable about getting to these future issues and finding out that I'm too late to have any cause and effect on the out come of those future meeting and finalization of documents.</p>	

Thomas Schwass	<p>I, Thomas F. Schwass, am writing this letter on this day, March 7, 2016, to be entered into The Record for consideration and input on all Isabella/DSMP Phase #4, SEA-4 acquisition of easement for decommissioning and abandonment of the Borel Canal Conduit and tower at the auxiliary Dam and the removal of the entire Canal and power plant downstream. The cost of which to be funded entirely by the USACE Isabella/DSMP. NOT at SCE expense i.e. SCE energy consumer's expense.</p>	<p>If SCE decommissions and closes the Borel Hydroelectric Project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process. Responsibility for payment of associated costs will be determined consistent with FERC license requirements and applicable law.</p>
Peter Sickels	<p>After staying in the area last weekend, we drove around and saw the sad sight of a long-drained lake. Given the long range possibility of drought conditions and global climate change, has the possibility of returning the river to its wild state and stopping work on the dam been considered? A whole new industry could begin to rebuild Old Kernville/ Whisky Flat again. It's time to begin making significant adjustments to reality and not waste so much money on low expectations of the lake returning on a permanent basis. Those expectations of course affect the power plant as well as downstream adjustments to water usage. Save the River!</p>	<p>The dam removal alternative was not considered viable because of the resulting annual flood damages and lives at risk downstream; the loss of irrigation and power generation; and the cost of removal and waste generation. In general, the overall cost of the dam removal alternative, including the cost of mitigating for impacts, would be up to five times greater than the action alternatives brought forward for further analyses.</p>
Jon Ream	<p>The SEA#4 just does not work with all the secrecy involved in the negotiations. 20, 40 60 million for the by-pass tunnel is just not believable even though your credibility has here to fore been spotless. To salvage this you should now include the Kern County board of Supervisors, the B.L.M. and all private land holders along the canal. As I said at the Lake Isabella meeting, "If you cut the head off of the snake, you are responsible for the dead body." Far too many questions are unanswered for the SEA#4 to skate through. I get the feeling someone gave you orders to cut the budget where ever you can. That person works for us, we the people. He now has the responsibility to explain those orders to us. That is the way the Constitution was written. Jon Ream. Lake Isabella and Bodfish Property Owners Association.</p>	<p>USACE and SCE met in June 2014 to discuss the Borel Canal and overall Borel system. The current EA proposed action is one of three options discussed at the June 2014 meeting. The other two options were variations on a new Borel tunnel (1) around the Auxiliary Dam and (2) from Boat Launch 19. SCE sent USACE a letter dated October 2014 stating "...SCE is open to considering all viable options for determining the future of SCE's Borel Hydroelectric Project." Because SCE is the FERC licensed entity and owner of the Borel hydroelectric system, per its FERC license, SCE is responsible for all actions associated with the Borel hydroelectric system in cooperation/coordination with the underlying property owner(s) and appropriate regulatory agencies.</p>

Karene R Williams	I have given a lot of thought to the latest SEA concerning the Borel Canal and Power Plant. My main concern is that by abandoning the Borel Canal there will be no outlet for water that is on the Auxiliary Dam side. With no outlet, water will stagnate and become an even bigger problem than the earthquake fault.	Historical monitoring data indicates that the lake is mixed for most months of the year despite reservoir pool levels changing. There is almost constant mixing due to wind and wave action, especially in shallower areas near the auxiliary dam. Based on findings from the Lake Isabella water quality monitoring efforts, the reservoir continues to stay well mixed at the auxiliary dam area despite many ranges of outflows from the dam. It is anticipated that well-mixed conditions will continue after any potential auxiliary dam modifications. Lake Isabella is regularly subjected to high winds which are the most likely cause of the unique mixed characteristics of the lake. Wind energy mechanically distributes most of the heat near the surface with the use of waves to mix the water. The natural mixing will be an important factor in preventing stagnation. Please see the FEIS and the 2011 Isabella Lake DSAP Monitoring Report for more discussion on lake mixing.
Karene R Williams	I believe the originally proposed canal along Engineer Point should be constructed and water kept running through the canal to the Power Plant.	
Fred Roach	I would like to go on record as fully supporting Alternative 3:Proposed Action Alternative - Easement Acquisition without Replacement Measure.	Comment appreciated.
Eugene Hacker	As a resident and business owner in Lake Isabella, the news that the ACOE is considering decommissioning the Borel hydro-project is very welcome. The fact that the dam project could be completed faster and that the lake level would not have to be lowered during the project are major benefits for the local community. The biggest concern I hear is that it may take a long time for this decision to be finalized. With the lake level so low right now, it would be great if the sealing of the conduit could completed as soon as possible so the lake will not have be held at a low level or lowered to complete this step in the future. The higher we can keep the lake, the more of an asset it is for the local economy and the life style of local and visitors which value it for recreation.	Comment appreciated.

<p>Kern Valley Sun</p>	<p>We are concerned about the elimination of the Boral Canal conduits (through the Auxiliary Dam). The existing flume provides water to flow thus creating the movement in the lake water at the Auxiliary Dam. Once that water flow is stopped the lake water at the Auxiliary Dam could or will become stagnant which could inevitably be a health issue as well as encouraging mosquito infestation as has happened in the past in Wofford Heights. We would like assurance from a Hydrologist that this will not be an issue.</p>	<p>Historical monitoring data indicates that the lake is mixed for most months of the year despite reservoir pool levels changing. There is almost constant mixing due to wind and wave action, especially in shallower areas near the auxiliary dam. Based on findings from the Lake Isabella water quality monitoring efforts, the reservoir continues to stay well mixed at the auxiliary dam area despite many ranges of outflows from the dam. It is anticipated that well-mixed conditions will continue after any potential auxiliary dam modifications. Lake Isabella is regularly subjected to high winds which are the most likely cause of the unique mixed characteristics of the lake. Wind energy mechanically distributes most of the heat near the surface with the use of waves to mix the water. The natural mixing will be an important factor in preventing stagnation. Please see the FEIS and the 2011 Isabella Lake DSAP Monitoring Report for more discussion on lake mixing.</p>
<p>Kern Valley Sun</p>	<p>The second issue is that once the COE purchases that easement from Southern California Edison the Boral power plant as well as the balance of the flume will be abandoned, some of which is on private property. The abandoned flume will become a catch all for standing rain water, again an encouragement for mosquito infestation, trash dumping and a safety hazard. At some point the abandoned flume will have to be removed and if not included in this project will have to be looked at by Southern California Edison down the road, and at that point we are certain the cost will be absorbed through our electric rates. The Corp of Engineers will save millions of dollars and speed up the time line by acquiring the Boral easement and should have a plan to remove the remaining abandoned flume during the course of this project rather than leave the burden on the residents of the Kern River Valley in the form of possible electrical rate increases down the road and the most certain mosquito infestation, dumping and related safety problems. The demolition of the proposed abandoned Boral Canal (SCE equipment) should be part of the mitigation included in SEA#4 to restore the property of those land owners it affects as well as avoid the long term effects and expense to SCE rate payers in the future the abandonment will create.</p>	<p>If SCE decommissions and closes the Boral Hydroelectric Project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process. Responsibility for payment of associated costs will be determined consistent with FERC license requirements and applicable law.</p>

Kern Valley Sun	The Kern Valley Sun is opposed to the Boral Acquisition as it has been presented. We would support the acquisition if the Corp of Engineers can provide us with a solution to avoid the stagnation at Auxiliary Dam and assume the responsibility for the abandoned flume in order to assure residents will not pay through rate hikes down the road and be left with a healthy and safe environment.	See response to the first two comments from the Kern Valley Sun.
Thomas G McKinney	I am opposed to this plan in closing down the Borel Power Plant. The State of California is asking for renewable energy and the Corp want to shut this plant down, sitting safety concerns with the present canal passing through the dam. They approved a plan to dig a tunnel around the west end of the auxiliary dam already in 2012, and now they have come up with the plant to close down Borel and save them money by not digging the new tunnel. This will also cause a delay with a new Environmental Report.	The Borel Hydroelectric Project has the potential to produce up to 12 MW. However, in practice, the project produces on average 43% of this capacity and has produced no power since June 2013. The Borel system is not considered a significant source of renewable energy. In addition, USACE and SCE met in June 2014 to discuss the Borel Canal and overall Borel system. The current EA proposed action is one of three options discussed at the June 2014 meeting. The other two options were variations on a new Borel tunnel (1) around the Auxiliary Dam and (2) from Boat Launch 19. SCE sent USACE a letter dated October 2014 stating "...SCE is open to considering all viable options for determining the future of SCE's Borel Hydroelectric Project."
Thomas G McKinney	Who is going to pay for all the relocation for the existing power lines, removal of the miles of canal and the power plant. From what was said last night, it appears the SCE rate payers will be passed along the cost.	If SCE decommissions and closes the Borel Hydroelectric Project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process. Responsibility for payment of associated costs will be determined consistent with FERC license requirements and applicable law.
Thomas G McKinney	I heard the Corp say at the meeting they want to save the taxpayers 60 million by not putting the tunnel, I am still saying they built the dam in the first place, why should SCE have to carry the burden of removing all of their facilities. If they the COE, created the error, I believe they should stand up and do as they planned in 2012.	By accepting the 2006 FERC license renewal, SCE committed to the future costs to operate, maintain, and/or decommission their facilities.

<p>Kern River Valley Chamber of Commerce</p>	<p>We are concerned about the elimination of the Boral Canal conduits (through the Auxiliary Dam). The existing flume provides water to flow thus creating the movement in the lake water at the Auxiliary Dam. Once that water flow is stopped the lake water at the Auxiliary Dam could or will become stagnants which could inevitable be a health issue as well as encouraging mosquito infestation as has happened in the past in Wofford Heights. We would like assurance from a Hydrologist that this will not be an issue.</p>	<p>See response to the Kern Valley Sun comments.</p>
<p>Kern River Valley Chamber of Commerce</p>	<p>The second issue is that once the COE purchases that easement from Southern California Edison the Boral power plant as well the balance of the flume will be abandoned, some of which is on private property. The abandoned flume will become a catch all for standing rain water, again an encouragement for mosquito infestation, trash dumping and a safety hazard. At some point the abandoned flume will have to be removed and if not included in this project will have to be looked at by Southern California Edison down the road, and at that point we are certain the cost will be absorbed through our electric rates. The Corp of Engineers will save millions of dollars and speed up the time line by acquiring the Boral easement and should have a plan to remove the remaining abandoned flume during the course of this project rather than leave the burden on the residents of the Kern River Valley in the form of possible electrical rate increases down the road and the most certain mosquito infestation, dumping and related safety problems. The demolition of the proposed abandoned Boral Canal (SCE equipment) should be part of the mitigation included in SEA#4 to restore the property of those land owners it affects as well as avoid the long term effects and expense to SCE rate payers in the future the abandonment will create.</p>	<p>See response to the Kern Valley Sun comments.</p>
<p>Kern River Valley Chamber of Commerce</p>	<p>The Kern River Valley Chamber of Commerce is opposed to the Boral Acquisition as it has been presented. We would support the acquisition if the Corp of Engineers can provide us with a solution to avoid the stagnation at Auxiliary Dam and assume the responsibility for the abandoned flume in order to assure residents will not pay through rate hikes down the road and be left with a healthy and safe environment.</p>	<p>See response to the Kern Valley Sun comments.</p>

Ron Benoit	<p>On completion of the Dam Modification Project the public will then begin to use the camping area at the Auxiliary Dam. Whenever the water in the lake drops low enough it will expose Engineers Point above water for it's entire length. The result is a shallow pool of water that has no way of replenishing itself due to the lack of an outflow that previously would have provided for a current to allow for an exchange of water. This could bring about a serious health hazard. The lake on the Main Dam side of Engineers Point is much deeper, and has an egress by way of the lower Kern River. This allows for the current to provide for an exchange of water. I would ask that a study of this matter be considered.</p>	
Ron Benoit	Who built the canal, and who or how many people own the Canal	<p>Pacific Light and Power Company built the original canal. The entire Borel Hydroelectric Project, including canal, are owned by SCE. Borel project facilities are located on USFS, BLM, and private lands.</p>
Ron Benoit	<p>The USACE and Edison are in discussions about mitigation due to the potential loss of production of electrical energy. That outcome has some serious consequences should the USACE fail to provide for a tunnel through Engineers Point and connect to the existing canal. Instead of water going down the canal and providing Edison with an opportunity to continue operations, we will find an empty canal that's going to sit there until it's filled with rubbish and small pools of water that will be breeding grounds for various insects. If Edison wants too much, and they may, just build the tunnel and be done with it. Let Edison take care of the canal. Mitigation for a few years of construction may not be nearly as bad as the compensation for the future.</p>	<p>USACE and SCE met in June 2014 to discuss the Borel Canal and overall Borel system. The current EA proposed action is one of three options discussed at the June 2014 meeting. The other two options were variations on a new Borel tunnel (1) around the Auxiliary Dam and (2) from Boat Launch 19. SCE sent USACE a letter dated October 2014 stating "...SCE is open to considering all viable options for determining the future of SCE's Borel Hydroelectric Project." Because SCE is the FERC licensed entity and owner of the Borel hydroelectric system, per its FERC license, SCE is responsible for all actions associated with the Borel hydroelectric system in coordination/cooperation with the underlying property owner(s) and applicable regulatory agencies. If there are issues with dumping, health and safety, etc. in the canal, then SCE, USFS, BLM, Kern County, and local law enforcement are the entities to whom these issues should be presented.</p>

Joe Ciriello - Golden State Surplus	<p>It has come to my attention that the Army Corps of Engineers would like to close the Edison Boral Power Plant and thus eliminate the need to re-route the canal feeding it from under the Auxiliary Dam. I would like to have included in those plans the complete demolition and filling in of the entire canal that currently serves the Boral Plant. I believe it is seven miles long. It could be a health and safety hazard in our community. Many in our community including myself are afraid that the government and Southern California Edison would like to just abandon the canal. This would be a disaster for our community. I understand you would like to eliminate the power plant to save money. Funds to demolish and fill in the canal must be included in the agreement to close the power plant.</p>	<p>USACE and SCE met in June 2014 to discuss the Borel Canal and overall Borel system. The current EA proposed action is one of three options discussed at the June 2014 meeting. The other two options were variations on a new Borel tunnel (1) around the Auxiliary Dam and (2) from Boat Launch 19. SCE sent USACE a letter dated October 2014 stating "...SCE is open to considering all viable options for determining the future of SCE's Borel Hydroelectric Project." If SCE decommissions and closes the Borel project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process. Responsibility for payment of associated costs will be determined consistent with FERC license requirements and applicable law.</p>
Robert & Gaye Pickett	<p>Forwarded op-ed pieces from Kern Valley Sun and Thomas McKinney expressing agreement/support for the same comments.</p>	<p>See response to the Kern Valley Sun comments.</p>
Dianne Anderson	<p>I am very concerned about the historical significance of the plant itself. The numbers of things that were done first at Borel are numerous. I would hate to see it abandoned or torn down. I can understand the need to push this agreement through and get started, but I am concerned that not having something even partially binding in this agreement could mean that this gets swept under the carpet. The plant could be a great attraction. It could draw interested people to our area.</p>	<p>Comment appreciated. The SEA has been revised to incorporate mitigation. However, if SCE decommissions and closes the Borel project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process.</p>
Rich Burdge	<p>This project must be worked 24-7.</p>	<p>Comment appreciated.</p>
Harold Chiprin	<p>I would like to see the Boral Power Plant continue in operation. After the dam project or take out the canal completely and leave the old power plant as a historic site.</p>	<p>If SCE decommissions and closes the Borel project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process.</p>
Unknown	<p>Don't make the dam any higher just fix it</p>	<p>Hydrology modeling indicates a significant overtopping event risk exists at the current dam height elevation. The dam height will be raised to mitigate this risk. This issue was addressed in the 2012 EIS-ROD.</p>

Ron Anderson	Your presentations have been done well, You have shown respect and consideration to all of us. Sometimes that is not returned. I am concerned about what is going to happen to the Borel Canal and power plant. It would be a shame if it was abandoned, left in place and left for our community to deal with. If this were to happen, there would be bad feelings for a long time.	If SCE-decommissions and closes the Borel project, SCE will have to comply with its FERC license requirements and FERC's decommissioning process.
Tom Schwass	Q. Borel canal abandonment?	Comment noted.
Chuck Dunn	Around 4pm a vehicle entered my property at 1040 Hwy 155. They traveled to the end of my property near the base of the spillway. The 3 men go out and faced the spillway. They got back in their black suv and proceeded to leave. I stopped them and asked if I could help them. License US Govt 17682 as I recall. They said they were from Verizon looking and power and telephone lines.	Comment noted.

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The DSEA relates primarily to project refinement, to update, discuss, and disclose potential effects, beneficial or adverse, that may result from the proposed easement acquisition, and decommissioning of the historic Borel Canal at the Isabella Lake Auxiliary Dam by the U.S. Army Corps of Engineers, Sacramento District (Corps). The Borel Canal has provided water to the 12-MW Borel Power Plant since its construction in 1904. The Corps has purchased the private trailers in the trailer park adjacent to the Borel Canal via eminent domain and is in the process of removing them. Closure of the canal at the dam is part of the ongoing Isabella Lake Dam Safety Modification Project (DSMP), but the Corps has failed to adequately address and consider several issues including: the availability and reuse of the right of way from the decommissioned Borel Canal in a manner that benefits the community (such as for a commuter bike and hiking path); impacts from the dewatered canal on the foraging patterns and nest quality of the Borel Road population of Tricolored Blackbirds (<i>Agelaius tricolor</i>); loss of habitat for diving ducks; the potential impacts to the substantial population of Alkali Mariposa lilies at the KVLJ Barlow Road Meadow; loss of non-fossil fuel energy source; loss of ground water recharge in San Joaquin Valley and infrastructure use in the Kern River Valley when the reservoir is filled to capacity; and mass wasting of unconsolidated fill on Engineer Point into Isabella Reservoir. The Corps must consider ways to:</p>	<p>As a general opening comment, please see responses to the detailed comments.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Mitigate for loss of foraging and roosting habitat for Tricolored Blackbird in and adjacent to the Borel Canal easement zone by providing an alternate shallow water source;□</p>	
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Mitigate the loss of diving duck waterfowl habitat in the high water flow Borel Canal where there was little human encroachment on the duck territory;</p>	
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Mitigate impacts to Alkali Mariposa Lily from the proposed abandonment of the Borel Canal and less recharge due to seepage stoppage;</p>	
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Monitor ground water levels below auxiliary dam to determine if the dam repair causes aquifer depletion;</p>	

Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	Mitigate for the loss of hydroelectric power generation by installing clean solar on all local buildings and parking structures owned by the Coprs;	
Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	Mitigate for loss of use and damage to infrastructure (campgrounds, roads, pit toilets, recreation areas, hiking trails, nature preserves, ranches) when water levels in the reservoir exceed 350,000 acre feet;	
Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	Mitigate by reducing the level of water impoundment to 350,000 acre feet by sending water to refill natural lakes and marshes specifically: Kern Lake, Buena Vista Lake, and Goose Lake; the overdraft of aquifers in the San Joaquin Valley is in large part caused by the damming of Sierra rivers, in this instance, the Kern River; □	
Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	Limit impacts from excavated material placed onto seismically unstable Kern Canyon Fault on Engineer Point which may cause a mass wasting lake tsunami; and	
Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	Mitigate impacts to the community including for example, by consulting with Southern California Edison and Kern Council of Governments (Kern COG) about turning the decommissioned Borel Canal right of way into a commuter bike path and hiking trail.	
Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	And certainly the Corps must not award any contracts before the environmental review is complete.	
Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	The Tricolored Blackbird is a candidate for listing under the California Endangered Species Act and undergoing a status review by USFWS for listing under the Federal ESA. Increased construction traffic may cause disturbance to the nesting habitat for a colony of Tricolored Blackbirds along Barlow Road next to the KVLI radio station tower and a possible take.	Federal actions are not subject to the California Endangered Species Act. In addition, the Federal Endangered Species Act provides no statutory protection for species of concern or status species. Migratory birds are protected under the Migratory Bird Treaty Act. Conservation measures for migratory birds have been included in the DEIS, FEIS-ROD, and the USFWS CAR and BO. The proposed action assessed in this SEA does not change those conservation measures nor does it affect the area identified around the KVLI tower and property.

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The colony of Tricolored Blackbirds nest in an area that had been set aside to protect alkali mariposa lily adjacent to the KVLI radio station transmission facility but that agreement did not transfer to the new owners. The blackbirds also nest northeast of the radio transmission facility along Barlow Road and roost in the trees in the trailer park and utilize the Borel Canal for water, forage, and mud for nest construction.</p>	<p>Comment noted.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Winter resident diving ducks also use the canal for resting and foraging. The Corps staff, when asked about mitigating impacts to these species at the Corps meeting in Kernville, CA on February 24, 2016, said that the trees in the trailer park would not be removed, but the canal and the depression will be filled. We suggest that the Corps could mitigate the loss of the water and food source for the Tricolored Blackbirds by putting in an aerated shallow pond. The Corps should consider this and other mitigations before proceeding.</p>	<p>The action area on Borel Canal extends downstream of the Auxiliary Dam to the USGS gauging station. A new figure has been inserted in the SEA clearly delineating the project footprint.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The Corps must also analyze whether the lack of seepage from the auxiliary dam will lower the downstream water table level in the Tricolored Blackbird marsh habitat, lily area, and the small marsh just below the dam. The Corps must consider and adopt some mitigation for any loss of habitat now created by the seepage once all seepage and water in the Borel Canal ceases in the easement area.</p>	<p>All seepage issues, impacts, and mitigations were fully addressed in the DEIS and FEIS-ROD.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The alkali mariposa lily (<i>Calochortus striatus</i>) is a species of concern, which grows at the edges of alkali marshland. It grows in mineralized soil in four distinct locations in the Kern River Valley. It was last reviewed for listing as endangered in 1993 [9-30-1993 58 FR 51144 51190]. It is included in the CNPS Inventory of Rare and Endangered Plants on list 1B.2 (rare, threatened, or endangered in CA and elsewhere).</p>	<p>Comment noted.</p>

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>In 1992, Reed Tollefson, Manager of Audubon Kern River Preserve, surveyed the lilies at the KVLI meadow between Barlow Road and Hwy 178. He counted three populations totaling 4074 plants. The flowering season typically occurs between May 1 and June 4 in the Kern River Valley. In dry years the plant may be dormant. The greatest threat to the seasonally moist alkaline meadow habitat is the lowering of water tables³. Reduction in seepage below the dam and from the Borel Canal may cause a change in the water table which is necessary for the survival of the Lake Isabella populations of Alkali Mariposa Lily.</p>	<p>All seepage issues, impacts, and mitigations were fully addressed in the DEIS and FEIS-ROD.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The Corps must analyze this potentially significant impact and should also provide monitoring wells below the dam to determine how and when the loss of the Borel Canal and/or lack of seepage causes a drop in the local water table. It is possible that the impacts to lily populations by the Corps activity could be partially mitigated by purchase of a conservation easement on the privately owned property adjacent to the KVLI transmission facilities mentioned in the Tricolored Blackbird paragraph above. The Corps must fully consider these impacts and potential mitigation before moving forward with the project.</p>	
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The Corps needs to consider the impact from the loss of the 12-MW carbon neutral hydroelectric power from the Borel Power Plant and mitigate that impact. The Corps has stated it plans on placing two windmills and/or sufficient solar panels to provide only 10% of the electricity needed to power the replacement Sequoia National Forest Service Isabella fire station. In light of climate change, government agencies should be at the forefront of leaving fossil fuels behind.</p>	<p>The loss of 12 MW of potential power production has been assessed in the SEA and is less than significant, and therefore no mitigation is proposed. The issue of wind and solar has been addressed in the USDA Forest Service Administration and Recreation Facilities Relocation EA-FONSI.</p>

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The Conservation Groups strongly support providing substitute power with solar panels but object to the proposal to place wind turbine in this area. In an area with averages of 6.75-7.75 kWh/m²/day of direct solar radiation⁴ and with the average electric usage of the three Kern River Valley Kern County Fire Stations at 75kW per day⁵, the amount of power generated via solar panels could easily equal 100% of daily usage utilizing already built structures and graded areas with no additional habitat impacts and is likely to be economically viable. In contrast, the placement of windmills in any part of the Pacific Flyway is problematic for migrating species. The Kern River Valley has some of the most biologically diverse habitats in the interior United States, attracting over 300 species of birds annually along with 15 species of bats that may be adversely affected by human objects built within the flyway. Windmills in the Kern River Valley would cause significant additional impacts to avian species including direct mortality placing at risk, literally millions of individual birds and bats that live in and migrate through the area. Far from mitigating the impacts of the project, these wind turbines could undermine conservation in this area.</p>	<p>Comment noted. The loss of 12 MW of potential power production has been assessed in the SEA and is less than significant and therefore no mitigation is proposed.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Another alternative that was not considered by the Corps is that Isabella Partners⁶ could potentially capture the lost flow of the Borel Canal and increase their power generating capacity at the Isabella Hydroelectric Project powerhouse at the base of the main dam outflow from their average 13.9-MW⁷ to recapture the non-fossil fuel energy of the water flowing through the dam.</p>	<p>Comment noted. The loss of 12 MW of potential power production has been assessed in the SEA and is less than significant and therefore no mitigation is proposed. USACE is not the owner, operator, water right holder, or FERC licensee of the Borel Hydroelectric Project or the Isabella Partners Hydroelectric Facility. This would be an alternative for SCE and/or Isabella Partners to potentially assess in a FERC-CPUC process, including any environmental analyses required by NEPA and CEQA.</p>

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>At the Corps meeting in Kernville, CA on February 24, 2016, the Corps staff stated that the new spillway would be at the height of the current dam, which is 16' above the current dam spillway. The reasoning that they gave for adding more gravel to the dam was to increase the height so that a catastrophic flood event would not destroy the new dam. Please clarify this statement. If true, it means that the Corps intends that the new reservoir capacity can and would exceed the legal limit of 568,000 acre-feet during catastrophic flood events, flooding roadways and other infrastructure, Sequoia National Forest South Fork Wildlife Area, Audubon Kern River Preserve, and local farms and ranches. The reservoir typically reaches peak acre-feet between mid-June and late July, in flood years, when the nests of Southwestern Willow Flycatchers and Western Yellow-billed Cuckoos as well as countless other resident and summer nesting birds would be destroyed if the reservoir exceeded the legal limit of 568,000 acre-feet. The SEA mentions the Southwestern Willow Flycatcher and Western Yellow-Billed Cuckoo, but the SEA fails to consider the impacts to these species in the foraging habitat in the primary seral stage and the nesting habitat in the secondary seral stage riparian forest that now exists in the reservoir bed during such events. The SEA discussed conditions for wetland dependent species and riparian vegetative communities downstream of the dam, but fails to discuss the riparian habitat dependent species that have and will utilize to the new vegetation that has grown in the reservoir bottom with the drawdown of the reservoir upstream of the dam that will be impacted when the reservoir is flooded. The SEA fails to state that the new reservoir capacity will cause substantial loss, degradation, and fragmentation of the natural riparian habitat communities and wildlife in the bed of the reservoir or in the upstream channels of both the north and south forks of the Kern River when the implemented project floods the reservoir up to and potentially beyond the legal limit.</p>	<p>The DSM proposed action has been addressed in the DEIS and FEIS-ROD. In addition, consultation with USFWS has occurred and a Biological Opinion issued.</p>
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<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The southern San Joaquin Valley is in serious overdraft due to use of groundwater in areas where aquifers are no longer recharged by the natural lakes and marshes as Isabella and Success Reservoirs are controlling the water that once flowed freely to the Buena Vista Basin. Kern Lake was a 24,000 acre capacity lake, Buena Vista was a 34,000 acre capacity lake, and Goose Lake was a series of meandering sloughs and marshes that fed into Tulare Lake, which was a 486,000 acre capacity lake. The Corps reservoirs in the Kern River Valley and Springville are directly responsible for loss of significant recharge in those valley groundwater storage areas. These natural lakes and marshes were home to millions of nesting birds, reptiles, and fish. Adding an additional 75,500 acres of storage behind the dam that is increased by 16' will not prevent a catastrophe but actually increase the likelihood of a catastrophe of the commons. Utilizing the natural lakes for the storage of excess runoff would help replenish aquifers and prevent further ground subsidence in the San Joaquin Valley and be far less costly in the long run.</p>	<p>No additional storage will be added. The primary purpose of the project is flood control. The DSM proposed action has been addressed in the DEIS and FEIS-ROD.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Much of the tourism infrastructure of the Kern River Valley including parking areas, boat ramps, and campgrounds lies at approximately the 360,000 acre-foot level of reservoir capacity. The flooding of these resources reduces the economic stability of the Kern River Valley and increases pressure on upstream resources and facilities. The optimum level of the reservoir should be maintained between 300,000 and 360,000 acre-feet absent of drought conditions to continue the recreational benefit of the reservoir while maintaining its value for irrigation and flood control. The natural lakes and marshes of the southern San Joaquin Valley should be used as nature intended to hold flood waters. The Corps must consider this alternative before moving forward with a project that would increase the dam capacity further.</p>	<p>Recreation facilities have been constructed and are managed in relation to fluctuating reservoir levels. Recreation facilities (affected environment and consequences) have been fully assessed in the DEIS, FEIS-ROD, and USDA Forest Service Administration and Recreation Facilities Relocation supplemental EA-FONSI.</p>

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The instability of the fill beneath the auxiliary dam remains a concern especially with increased reservoir capacity and therefore increased pressure on the dam in a potential seismic event. Liquefaction of unconsolidated material is a real danger. Eroded sand from the Sierra Nevada is very fine and has created serious quicksand pockets. The Corps plan states the dam will be built to withstand a 13-foot displacement, but the 1872 earthquake in Lone Pine had an average 16-foot displacement.</p>	<p>The DSM proposed action has been addressed in the DEIS and FEIS-ROD.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Most troubling is the Corps plan to dump excavated material on top of the Kern Canyon fault at Engineer Point. Even a relatively mild seismic event may cause mass wasting of the fill on Engineer Point into the reservoir at its deepest point, creating a lake tsunami that could overtop the dam⁸ and damage nearby infrastructure with no warning. We strongly encourage finding another site to dump excavated material and that the Corps consider ways to beneficially reuse this material. For example, the construction of a predator and human free island with the excavated material in the center of the south fork channel could potentially mitigate the loss of Buena Vista Lake's now extinct Pelican Island. The Corps must consider this and other alternatives to dumping at Engineer Point to prevent the risk of mass wasting near the dam structures and potentially mitigate the loss of that habitat from the project.</p>	<p>Engineers Point waste disposal is not a component of this SEA. Engineers Point waste disposal site option was identified in the FEIS-ROD, and will be evaluated in detail in a separate Environmental Assessment.</p>

<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The Corps should consider ways to convert the entire Borel Canal right of way that is not under the reservoir into a community resource; as an example for use as a commuter bike path. While the staff at the Corps meeting in Kernville, CA on February 24, 2016 believed the Corps is only responsible for the easement on the Borel Canal, that belief is not a true measure of the responsibility the Corps bears with regard to creating an attractive nuisance with the abandoned canal caused by their project. Converting this right-of-way into a commuter bike path, especially considering its proximity to three schools on Erskine Creek Road in Lake Isabella, would be a very important conversion for the benefit of the community that will be losing jobs associated with the shuttering of the Borel Power Plant. It is possible that working with local agencies and SCE, funding could be acquired through Transportation Development Act: Article 3 for Kern County Roads. These funds could be acquired and used to pave and upgrade the canal for commuter bike transportation uses, which could be a major step in preventing motor vehicle hazards.</p>	<p>USACE did not construct the Borel Hydroelectric Project and is not the owner, operator, water right holder, or FERC licensee of the project. This is a responsibility of SCE to address with the FERC and CPUC through their administrative processes, including any required environmental analyses under NEPA and/or CEQA.</p>
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>Bicycling is one of the greenest methods of travel, but roads are inherently dangerous for cyclists. Annually two percent of traffic fatalities involve bicycle/vehicle collisions. Twenty-nine percent of all bicycle injuries are caused by vehicle collisions⁹. Isolated bike lanes via a Class I Bikeway¹⁰ is the best solution. A commuter bike path may also be utilized by recreational hikers and other non-motorized users increasing tourism revenue that will partially offset the loss of hydroelectric jobs. The conversion of this right-of-way to a commuter bike path would also help mitigate the carbon footprint of construction.</p>	
<p>Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper</p>	<p>The Corps stated at the SEA Borel meeting in Kernville, CA on February 24, 2016 that they would be building vault toilets as mitigation for the taking of the camping facilities. When we mentioned the potential for using composting toilets, the Corps staff stated they had already started the bid process. If the SEA is not anticipated to be complete until May, no contracts should already be out to bid. Such pre-decisional actions violate both the letter and the spirit of NEPA and its public review component.</p>	<p>This issue has been addressed in the DEIS, FEIS-ROD, Recreation report, and the USDA Forest Service Administration and Recreation Facilities Relocation supplemental EA-FONSI signed February 5, 2016. There is no pre-decisional issue as the NEPA document(s) were complete prior to the Borel SEA public meetings and any contracting effort.</p>

Sierra Club, Center for Biological Diversity, Sequoia Forest Keeper	Given the above provided information we urge the Corps to reanalyze the impacts of the project on biological resources and revise the SEA to fully analyze all impacts, include additional alternatives, and consider additional mitigation measures.	Comment noted.
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