Final Supplemental Environmental Assessment

Isabella Lake Dam Safety Modification Project

Phase II Real Estate Acquisition and Relocation
Kern County, California

June 2015

US Army Corps of Engineers

U.S. Army Corps of Engineers,
Sacramento District – Lead Agency

Forest Service

U.S. Department of Agriculture, Forest Service
Sequoia National Forest – Cooperating Agency

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LIST OF ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
APN	Assessor Parcel Number
CNEL	Community Noise Equivalent Level
Corps	U.S. Army Corps of Engineers
dB	Decibel
DSAC	Dam Safety Action Classification
DSM	Dam Safety Modification
DSS	Decent Safe and Sanitary
EIS	Environmental Impact Statement
EKAPCD	Eastern Kern Air Pollution Control District
EO	Executive Order
ER	Engineering Regulation
FONSI	Finding Of No Significant Impact
HLR	Housing of Last Resort
Isabella Dams	Isabella Lake Main Dam, Spillway and Auxiliary Dam
KCCCC	Kern County Child Care Council
KRV	Kern River Valley
L_{dn}	Day-Night Level
Mobile Home Park	Lakeside Village Mobile Home Park
NAVD	North American Vertical Datum
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NO_x	Mono-Nitrogen Oxides
OM	Operations and Maintenance
PED	Preconstruction Engineering and Design
ROD	Record of Decision
RV	Recreational Vehicle
SEA	Supplemental Environmental Assessment
SIP	State Implementation Plan
The Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
UCDC	U.S. Department of Commerce – U.S. Census Bureau
USA	USFS and Corps
USC	United States Code of Federal Regulations
USFS	U.S. Department of Agriculture – Forest Service
USGS	U.S. Geological Survey

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CHAPTER 1
PURPOSE AND NEED FOR THE ACTION

1.1 INTRODUCTION

Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, this Phase II Real Estate Acquisition and Relocation Supplemental Environmental Assessment (SEA) has been prepared to discuss and disclose any potential effects, beneficial or adverse, that may result from the proposed acquisition of additional properties, relocation of a U.S. Army Corps of Engineers – Sacramento District (Corps) Operations and Maintenance (OM) Facility, and demolition/disposal of existing buildings and structures located on lands affected by construction of the approved Isabella Lake Dam Safety Modification (DSM) Project.

The Isabella Lake DSM Project has been previously evaluated under the NEPA and documented in the Draft (March 2012) and Final (October 2012) Environmental Impact Statement (EIS). The EIS was prepared by the Corps and in cooperation with the U.S. Department of Agriculture – Forest Service (USFS) (Corps and USFS collectively called USA). The Record of Decision (ROD) was signed on December 18, 2012. A Phase I Real Estate Acquisition and Relocation SEA was previously released to the public and a Findings of No Significant Impact (FONSI) was signed 05 August 2014. The Phase I SEA evaluated the effects of acquiring two private parcels and relocation of the residents occupying these parcels located at the Lakeside Village Mobile Home Park and a single-family farmhouse residence, both located immediately downstream of the Auxiliary Dam and within the construction footprint of the Isabella Lake DSM Project.

1.2 LOCATION

Isabella Lake is on the Kern River in the Sierra Nevada, in the southernmost part of the Sequoia National Forest, Kern County, California (Figure 1). It sits approximately 35 miles northeast of Bakersfield, along Highway 178 and one mile upstream of the town of Lake Isabella. 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 approximately 90 miles from the High Sierra to their confluence, about 1¼ miles upstream of the dam site. 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 locations of parcels evaluated in this SEA are found within the Lake Isabella North U.S. Geological Survey (USGS) map at Township 26 South, Range 33 East, and Section 30 within Kern County (Figure 2).

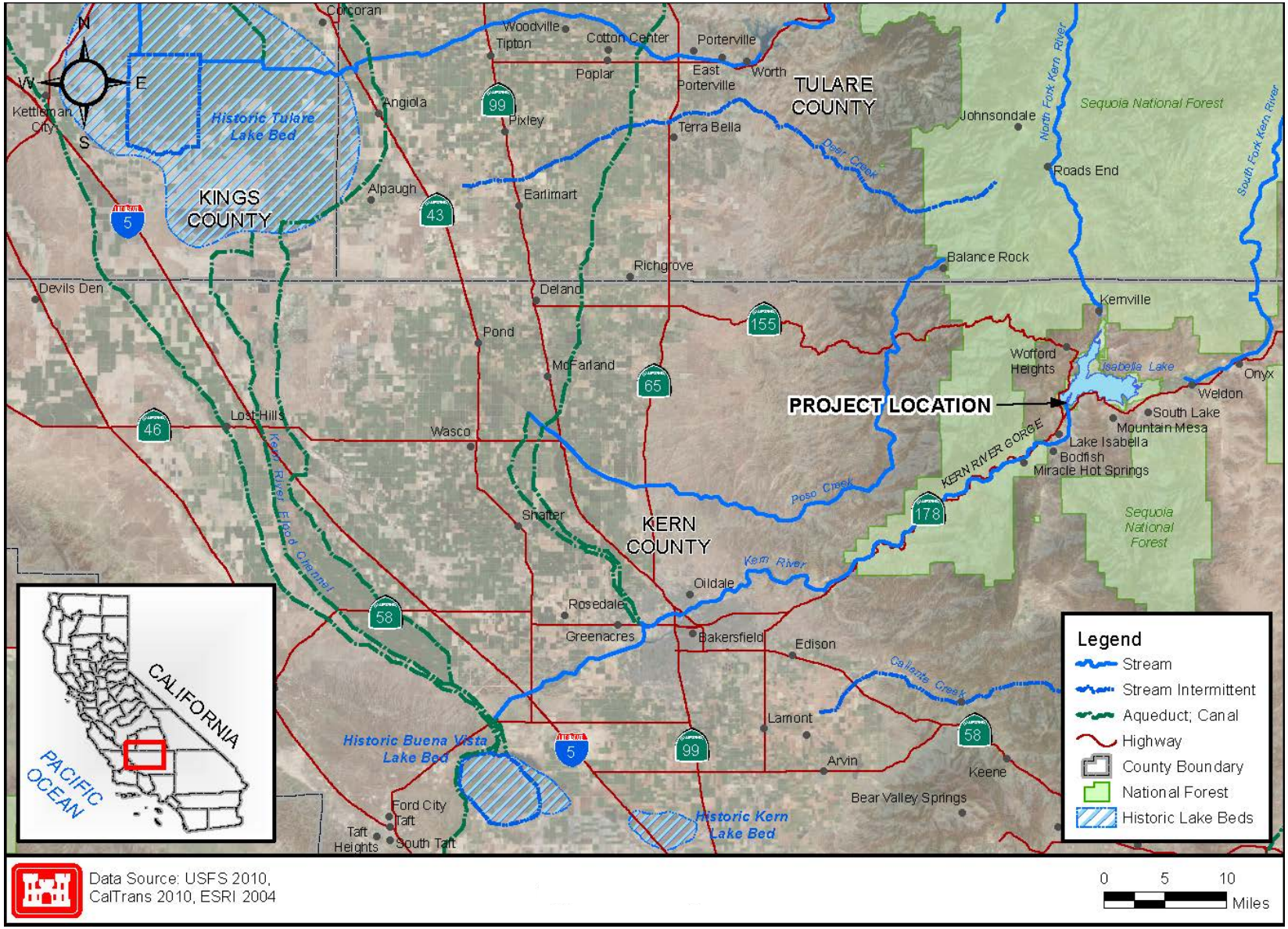

Figure 1. Project Location Map.

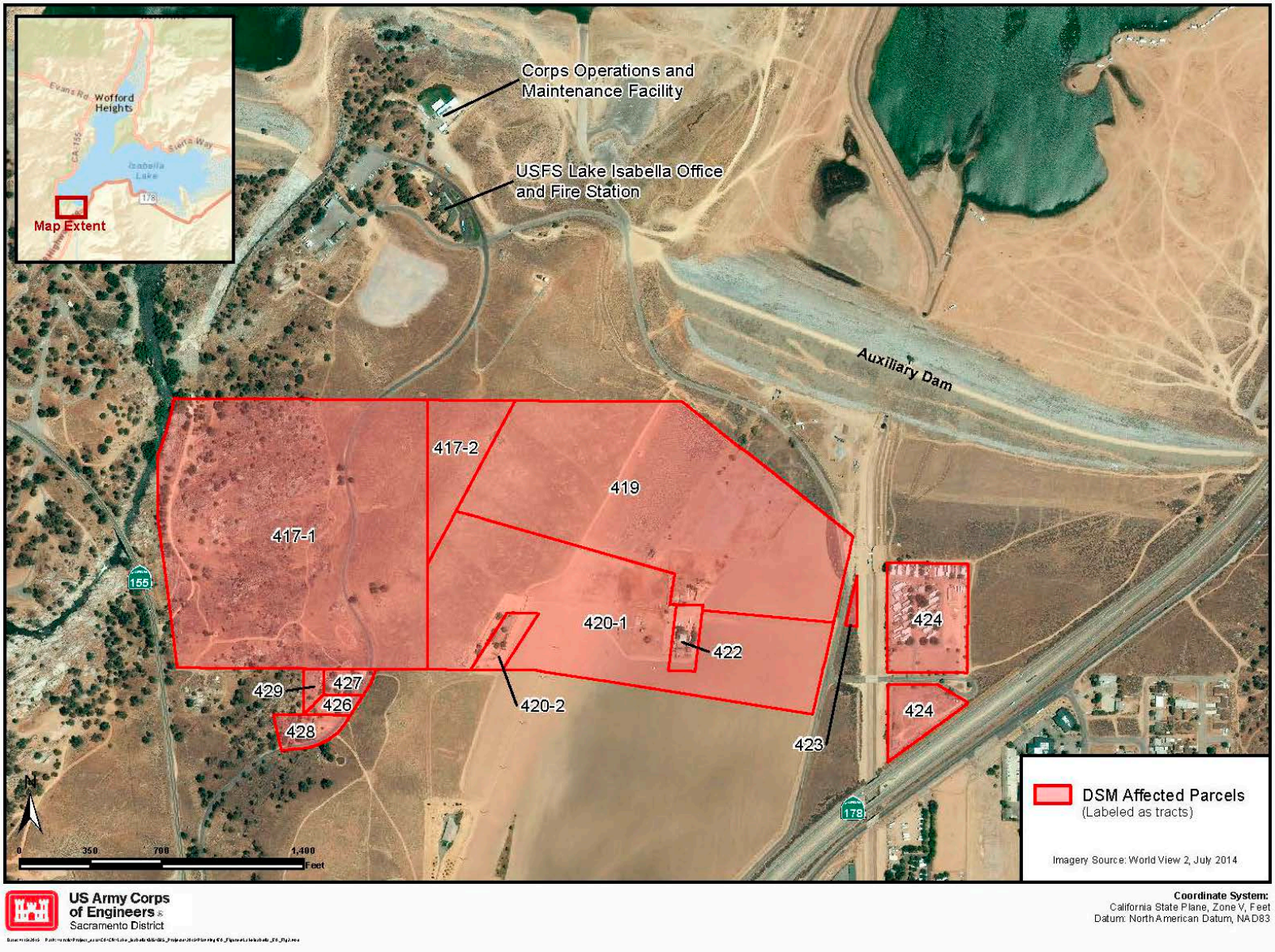

Figure 2. Affected Parcels Map.

1.3 PROJECT AUTHORITY

The initial study for a flood reduction and water supply project on the Kern River was authorized by the Flood Control Act of 1936, approved June 22, 1936. Construction of Isabella Dam and Lake was authorized by the Flood Control Act of 1944, Public Law 78-534, Chapter 665, Section 10, page 901.

The Engineering Regulation (ER) 1110-2-1156 (Final 28 October 2011) prescribes the guiding principles, policy, organization, responsibilities, and procedures for implementation of risk-informed dam safety program activities and a dam safety portfolio risk management process within the Corps. The purposes of the dam safety program are to protect life, property, and the environment by ensuring that all dams are designed, constructed, operated, and maintained as safely and effectively as is reasonably practicable. When unusual circumstances threaten the integrity of a structure and the safety of the public, the Corps has the authority to take expedient actions, require personnel to evaluate the threat, and design and construct a solution.

1.4 ISABELLA LAKE DSM PROJECT BACKGROUND

In 2005, the Corps 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. The Corps commenced a dam safety study and based on the risk assessment, the Corps classified the Isabella Dams as Dam Safety Action Classification (DSAC) I in 2008 because elements of the Isabella Dams have been determined to be unsafe under extreme loadings and could result in significant and catastrophic consequences downstream.

The Corps then began a DSM Report which was completed in October 2012. The DSM Report recommends remediation measures to reduce the public safety and property damage risks posed by floods, earthquakes, and seepage at the Isabella Dams. In October 2012, the Corps published its Final EIS for the proposed remediation of the Isabella Dams. The Corps issued its ROD for the EIS on 18 December 2012. The EIS described the anticipated direct and indirect impacts expected to occur as a result of the remediation, including impacts to existing federal, state, local and privately owned infrastructure in the Isabella Dams vicinity.

The approved plan includes the following refinements, which were described in the Final EIS:

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

1.5 PROJECT REFINEMENTS SINCE THE EIS

Since release of the EIS, the approved plan has been further refined to eliminate the need for realignment of State Route 155, State Route 178, and Lake Isabella Blvd. These refinements eliminate substantial construction activities previously planned to be constructed in advance of the main DSM work, and further minimize the environmental, economic, and human consequences for the least cost; while adequately meeting the tolerable risk guidelines and the essential Corps guidelines in accordance with the Dam Safety policy document ER 1110-2-1156. These refinements are described below:

1.5.1 Structural Refinements

State Route 155. State Route 155 would not be realigned but would be modified to include a gate closure structure on the right abutment of the Main Dam aligned with the crest to accommodate for the 16-foot dam crest raise. At the new crest location, a steel swing gate system would be constructed between the new Main Dam reinforced concrete right abutment and a gate post structure (an anchored retaining wall type) installed on the adjacent hill side. The gate post and wall would be installed such that sufficient shoulder width is provided to meet sight distance requirements for the highway. Excavation into the hill would be necessary to provide sufficient shoulder width for sight distance for the highway and to provide clearance for the swing gate operation. A portion of the highway would be replaced in conjunction with construction of the right abutment as well as to provide clearance for operating the swing gate.

State Route 178 and Lake Isabella Blvd. A new design alternative for the reconfiguration of the left abutment of the Auxiliary Dam was unanimously approved by the Corps' Executive Leadership Board on 9 January 2015, thereby eliminating the need to realign State Route 178 and Lake Isabella Boulevard. This new design alternative includes wrapping the embankment upstream to a high point in elevation on the current State Route 178 alignment but still may require a closure gate or barrier on State Route 178 and Lake Isabella Boulevard to protect against wind and wave action during extreme flood pool conditions.

State Routes 178 and 155, and Lake Isabella Boulevard, were previously scheduled to be realigned in advance of actual start-up of the DSM portion of the Project; during the first two years and a portion of the third year of the overall construction schedule spanning nearly 8 years. The EIS determined that the mitigated construction emissions of NO_x exceeded the Eastern Kern Air Pollution Control District's (EKAPCD) significance thresholds (see Table 3-1 of the Final EIS) in association with the roadway realignments that were originally proposed during the 2nd year (2015) of construction. On this basis, it was anticipated that the Isabella Lake DSM Project construction activities would conflict with applicable air quality plans and was unavoidable.

Elimination of the need to realign State and County highways and roads has effectively reduced the overall mitigated construction emissions of NO_x to less than significant as all other years of air quality pollutant emissions were projected to remain below the significant thresholds. This is relevant because the proposed structure demolition activities described in this SEA are expected to occur during the timeframe originally held by the highway and road realignment activities. Further discussion on air quality emissions may be found in Section 3.4 and Chapter 4 of this SEA.

The approved Isabella Lake DSM Project features, including refinements, are shown on Figure 3.

1.5.2 Non-Structural Refinements

The Isabella Lake DSM Project EIS described the Corps lack of authority to implement replacement of USFS office and recreation facilities that would be adversely affected by the Project. The EIS suggested a collaborative approach with USFS and other stakeholders to identify other options for implementation.

Since release of the EIS, the Corps, in coordination with the Office of Management and Budget, has concluded that sufficient authority exists to allow the Corps to use its appropriated funds to relocate all USFS facilities impacted by the Isabella Lake DSM Project. Removal or replacement of affected USFS facilities is consistent with the 1964 *Memorandum Of Agreement By The Secretaries Of Land And Water Resources At Water Development Projects Of The Corps Of Engineers Located Within Or Partly Within The National Forest System* and the 1991

Memorandum Of Understanding Between And Pertaining To Interchange Of Lands And Management Of The Water And Land Resources At Isabella Lake Project, Sequoia National Forest, Kern County, California. These written agreements state, in part, that if the Corps construction at Isabella impacted existing USFS structures or facilities, the Corps would replace such facilities in a location determined by USFS and in a manner that provides an equivalent level of service and access, subject to interagency budgetary procedures.

Replacement of USFS facilities affected by construction of the Isabella Lake DSM Project would be fully described and assessed in a subsequent supplemental NEPA document tiered to the EIS. This USFS Lake Isabella Office and Recreation Mitigation SEA is anticipated to be available for public review and comment July 2015.

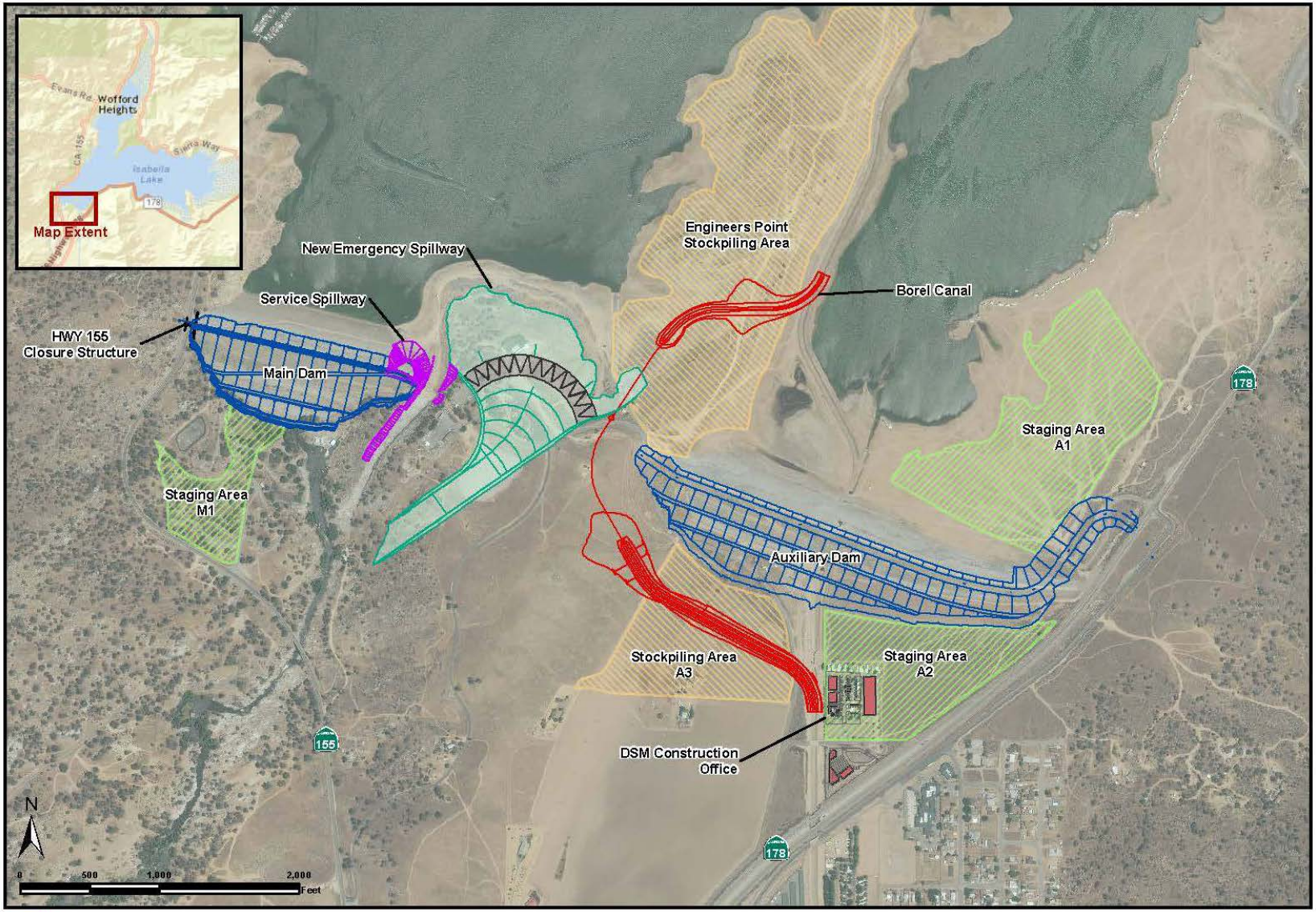

Figure 3. Approved Isabella Lake DSM Project Features.

1.6 PURPOSE AND NEED FOR THE ACTION

The Isabella Lake DSM Project EIS determined that sensitive receptors in the immediate vicinity of the Isabella Lake DSM Project area would likely experience temporary unavoidable significant adverse effects in the form of nuisance and potential human health effects associated with construction activities (Corps 2012a). Even with elimination of the need for State Route highway realignments, nearby sensitive receptors would still likely be exposed to noise, diesel emissions, fugitive dust, and glare from construction lighting that may approach or exceed health standards. Additionally, several properties are needed for construction-related activities.

Noise and vibration levels, specifically, are a major concern for the Isabella Lake DSM Project due to the potential of exposure of persons to or generation of noise levels in excess of applicable standards. If landowners are allowed unencumbered use and access to the lands affected, there could be significant issues with:

Exposure of Sensitive Receptors to Project-Generated Construction Equipment-Related Noise Levels. Construction equipment-related activities would result in noise levels that exceed applicable standards, create a substantial increase in ambient noise, and other maximum instantaneous noise levels. A significant noise impact would result from implementation of the Isabella Lake DSM Project with regards to annoyance and/or sleep disruption for the nearby existing noise-sensitive receptors.

Exposure of Sensitive Receptors to Project-Generated Vibration Levels. Vibration levels associated with the use of construction equipment could exceed Caltrans standards for the prevention of structural damage, and the Federal Transit Administration's maximum-acceptable vibration standards for human annoyance for residential uses at existing nearby sensitive receptors. Implementation of the Isabella Lake DSM Project could also result in a significant impact due to the generation and exposure of persons to excessive ground-borne vibration or noise levels.

Exposure of Receptors to Increased Traffic Noise Levels Due to Project-Related Traffic on Local Roadways. Several parcels are located immediately adjacent to construction haul routes for the Isabella Lake DSM Project. Sensitive receptors along Isabella Lake DSM Project area roadways would likely be exposed to exterior and interior noise levels exceeding local noise level standards due to project-related traffic on local roadways.

The following Table 1 identifies specific noise sensitive receptors modeled for the Isabella Lake DSM Project (see Figure 3-11 of the Draft EIS for modeled sensitive receptor locations). Table 2 provides a summary of construction noise levels modeled for the Isabella Lake DSM Project.

Table 1. Modeled Noise Sensitive Receptors Located near the Isabella Lake DSM Project.

Sensitive Receptor	Description	Existing Ambient Noise Level, L_{dn}[1]	Approximate Location Coordinates
1	Lakeside Village Mobile Home Community	52 dB	35.638878°, -118.472951°
2	Single-family residential	52 dB	35.638823°, -118.473266°
3	Single-family residential	52 dB	35.638829°, -118.476265°
4	Single-family residential	52 dB	35.638067°, -118.457821°
5	Single-family residential	52 dB	35.637709°, -118.459946°
6	Single-family residential	55 dB	35.638065°, -118.462424°
7	Single-family residential subdivision	55 dB	35.638078°, -118.465264°
8	Happy Trails Trailer Park	55 dB	35.636486°, -118.469115°
9	Single-family residential Subdivision	55 dB	35.634352°, -118.474497°
10	Lake Isabella Motel	55 dB	35.628656°, -118.479905°
11	Shepherd of the Hills Lutheran Church	55 dB	35.626156°, -118.481195°
12	Single-family residential	52 dB	35.638057°, -118.479135°
13	Pioneer Point Recreation Area	55 dB	35.649552°, -118.486245°
14	French Gulf Recreation Area	55 dB	35.657265°, -118.480216°
15	Old Isabella Recreation Area	55 dB	35.649517°, -118.458950°

Source: j.c. brennan & associates 2012
L_{dn} = day-night average noise level, dB = decibel
[1]Existing ambient noise levels are based on results obtained at nearest representative ambient noise monitoring location.

Table 2. Construction Noise Levels Modeled for the Isabella Lake DSM Project.

Sensitive Receptor[1]	Existing Ambient Noise Level (L_{dn}), dBA[2]	Exterior Noise Level (dBA)[3]		Estimated # of Days Exceeding 65 dB Ldn	Maximum Increase in Daily Ambient Noise Level, Ldn	Interior (dBA)[4]
		Hourly, Leq	Daily L_{dn}/CNEL			Maximum Daily L_{dn}/CNEL
1[5]	52	53-86	54-87	570	35 dB	61 dB
2[5]	52	52-68	53-69	1020	17 dB	44 dB
3[5]	52	50-68	51-69	930	17 dB	44 dB
4	52	41-58	42-59	0	7 dB	34 dB
5	52	41-60	42-61	0	9 dB	36 dB
6	55	42-63	43-64	0	9 dB	39 dB
7	55	44-67	45-68	870	13 dB	43 dB
8	55	45-64	46-65	0	10 dB	50 dB
9	55	46-63	47-64	0	9 dB	39 dB
10	55	42-59	43-60	0	5 dB	35 dB
11	55	41-58	42-59	0	4 dB	34 dB
12 [5]	52	50-69	51-70	930	18 dB	45 dB
13	55	46-63	47-64	0	9 dB	N/A
14	55	44-61	45-62	0	7 dB	N/A
15	55	41-61	42-62	0	7 dB	N/A
Gray shading indicates an exceedance of one of the listed noise criteria below.						
Significance Threshold[6]		67 dBA L_{eq}	67 dBA L_{eq}	65 dBA L_{dn}	5 dBA Increase	45 dBA L_{dn}

Sources: j.c. brennan & associates 2012; FHWA RCNM 2006

[1]Locations of modeled sensitive receptors are described in Table 1 of this SEA and shown on Figure 3-11 of the Draft EIS.

[2]Existing ambient noise levels are based on results obtained at nearest representative ambient noise monitoring location.

[3]Modeled project-generated construction-related noise levels include the following sources: heavy-duty truck travel on potential haul routes for material transport, and the major pieces of heavy-duty construction equipment at the proposed dam construction, staging, and borrow sites, and occurring for one 10-hour daylight shift/day for L_{dn} calculation. Calculations assume one nighttime (6:00 a.m. – 7:00 a.m.) hour of operation and seven daytime (7:00 p.m. – 10:00 p.m.) hours of operation for most equipment. Stationary dewatering pumps were assumed to round 24-hr/day and powered by grid electricity.

[4]Based on exterior-to-interior noise reductions of 15 dBA (for mobile homes and adobe structures) and 25 dBA (for typical single-family residences).

[5]Sensitive receptors/parcels proposed for relocation/acquisition in Phase I and Phase II Real Estate Acquisition and Relocation SEA.

[6]Kern County has not adopted a noise ordinance; as such, these standards represent applicable levels specified by the EPA, US Department of Transportation, the State of California, and Kern County (in the General Plan Noise Element). Noise level is not considered significant where existing noise levels currently exceed the noise standard.

The effects of acquiring occupied lands and relocating residents affected by the Isabella Lake DSM Project were described and assessed in the Phase I Real Estate and Relocation SEA. To further mitigate public health concerns from Isabella Lake DSM Project construction generated noise, the Corps proposes to acquire additional unoccupied or unimproved private lands. The Corps also proposes to relocate the Corps OM facility, and demolish and dispose of existing buildings and structures on all affected parcels of land. This Phase II Real Estate Acquisition and Relocation SEA documents this proposed real estate action.

1.7 PURPOSE OF THIS SEA

This Phase II Real Estate Acquisition and Relocation SEA partially fulfills the commitment to continue the NEPA analysis of the potential effects of implementing the Isabella Lake DSM Project. 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 DSM Project. As a result, it was determined that a series of supplemental NEPA analyses would be required at a later time to 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 Actions. Throughout the PED phase of the Isabella Lake DSM Project, the Corps has continued our endeavor to minimize potential impacts from construction that may require relocation of residents or acquisition of private lands. The details on which properties may be affected and measures that the Corps may take have been determined, and therefore may be fully described and further analyzed in two separate supplemental NEPA documents tiered to the EIS:

- The Phase I Real Estate Acquisition and Relocation SEA specifically evaluated the effects of acquiring affected occupied lands and relocation of residents located at the privately owned 6.70-acre, 33-rental-space Lakeside Village Mobile Home Park on 2959 Eva Avenue, Lake Isabella, California, and the privately owned 0.99-acre single-family farmhouse residence located nearby 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 Isabella Lake DSM Project construction-related activities have now been relocated out of the area affected by DSM Project construction.

- This Phase II Real Estate Acquisition and Relocation SEA evaluates the effects of structure demolition/disposal associated with the 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 DSM Project. This Phase II Real Estate SEA will also evaluate relocation of the Corps 1.4-acre OM Facility.

USFS Lake Isabella Office Relocation and Recreation Mitigation. At the public's request, a draft Recreation Report was released in February 2014 articulating potential mitigation options to offset significant loss of recreation facilities incurred from implementation of the Isabella Lake DSM Project. On 20 February 2015, the Corps attended a Constituent meeting to discuss options for replacement of the USFS Lake Isabella Office, at the invitation of Congressman Kevin McCarthy (CA-23).

A subsequent USFS Lake Isabella Office Relocation and Recreation Mitigation SEA will be developed for public release which specifically describes and evaluates the effects of relocating the USFS Lake Isabella Office and fire station, as well as mitigation necessary to offset the adverse effects to recreation resulting from construction of the Isabella Lake DSM Project. The USFS Lake Isabella Office Relocation and Recreation Mitigation SEA is anticipated to be release for a 30-day public review in July 2015.

1.8 PREVIOUS ENVIRONMENTAL DOCUMENTS AND ORGANIZATION OF THIS SEA

The Isabella Lake DSM Project Final EIS was released for public review and comment in October 2012, and the ROD was signed on December 18, 2012. The Draft EIS is the primary source for detailed affected environment and environmental impact information for the Isabella Lake DSM Project, with the Final EIS focusing on the preferred alternative and subsequent changes to the Draft EIS analyses.

This SEA is tiered to the Draft and Final EIS, and will update the analysis provided in that document with a focus on the Phase II real estate acquisition, demolition and Corps relocation actions proposed. Throughout this document, information and analyses that have not changed since the Final EIS will be referenced back to that document, which will be 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 by contacting 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 or not the proposed action qualifies for a FONSI under NEPA or whether a Supplemental EIS must be prepared.

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CHAPTER 2
ALTERNATIVES

2.1 INTRODUCTION

This section addresses alternative formulation, alternatives that were not considered, and presents the final array of alternatives to meet the purpose and need described above for the proposed action. A No Action alternative is considered to illustrate the potential effects of not implementing the preferred alternative.

2.2 ALTERNATIVES ELIMINATED FROM CONSIDERATION

2.2.1 Structure Modification for Public Health Issues

The buildings and structures located in the high impact zone of the Isabella Lake DSM Project could be retrofitted with soundproofing insulation and air filtration and purification systems. However, widespread application of interior noise and hazard air reduction measures would likely be impractical due to the proximity of necessary construction staging areas, as well as the cost effectiveness of retrofitting the types of residences affected (older structures and mobile homes). For these reasons, this alternative was removed from further study.

2.2.2 Use of Barriers

Sensitive receptors could be shielded by placing walls, berms, or other structures between the noise source and the receiver. Trees and other vegetation may also help to acoustically "soften" the effects of noise transmission. However, use of barriers on a large scale to shield sensitive receptors would likely be impractical due to barrier implementation cost constraints and schedule start of the Isabella Lake DSM Project. The use of vegetation to provide some level of sound attenuation would have only a minor beneficial effect. The use of barriers or vegetation would not be effective for reducing noise levels below safety thresholds. For these reasons, this alternative was removed from further study.

2.2.3 Use of Setbacks/Structure Relocation

Noise and hazard air exposure may be reduced by increasing the distance between the source and the receiver. The available noise attenuation from this technique is limited by the characteristics

of the noise source but is generally about 4 to 6 decibels per doubling of distance from the source. For the Isabella Lake DSM Project, the use of increased setbacks would have practical limitations due to space constraints. Stationary construction equipment has been located as far as practicable from sensitive receptors in order to maximize noise reduction levels.

Any buildings or structures remaining on acquired lands could be physically relocated to new locations. Moving individual structures to new sites would entail relocation of the structures in their entirety, most likely by a professional house moving company, and ensuring that appropriate locations for structures to be relocated are available and acquired.

Lakeside Village Mobile Home Park. Several of the recreational trailers located at the Lakeside Village Mobile Home Park (tract 424) that could be moved have been relocated outside of the project area. All remaining mobile homes are older. Inspections by qualified professionals determined that the remaining mobile homes do not meet Public Law 91-646 DSS standards, State of California current codes or the entry standards /requirements of the replacement mobile home parks in the area and would need to be removed for off-site salvage. Since the remaining mobile homes do not meet occupancy standards, mobile home relocation was removed from further study.

Single Family and Vacation Structures. Two single family homes (farmhouse located on tract 422 and ranch house located on tract 420-2) and two manufactured homes on tracts 426 and 427 are permanent structures with foundations. The cost of physically relocating a permanent structure would much higher than that of in-place demolition and debris removal (moving residential structures can cost $120,000 per structure or more), thus the action would be less cost-effective. This alternative also only avoids structure demolition, and does not address other health and safety, easement acquisition and relocation requirements. Since the cost of physically relocating these older structures would likely be much higher than that of comparable dwelling replacement (2011 median house value in the Lake Isabella community was $84,154), relocation of these four structures was found to be less cost-effective and removed from further study.

USFS Lake Isabella Office Compound and Corps Operation and Maintenance Facility. The 3,800 square-foot metal prefabricated maintenance/shop structure associated with the Corps OM Facility was built in 2009/2010. There are current discussions with the USFS to explore the possibilities of repurposing this structure for use outside of the project area. Otherwise, all other buildings located on USA lands are older slab foundation structures constructed in the 1950s and 1960s. The cost of physically relocating permanent structures would be much higher than that of in-place demolition and debris removal. Since the cost of physically relocating and renovating these older structures would likely be much higher than that of constructing a comparable replacement to current building standards and materials, relocation of the older USA facilities was found to be less cost-effective and removed from further study.

2.2.4 Acquisition of Temporary Work Easements

Temporary construction easements are acquired for many purposes to meet needs that are only temporary such as providing working room for construction equipment. Several of the smaller, unimproved parcels assessed in this SEA could be returned to the fee title holder upon completion of the Isabella Lake DSM Project. However, the anticipated 6 to 8-year duration of DSM construction activities, along with the need to heavily encumber land use on affected properties during the easement period, would increase the costs of acquiring a temporary work easement on par with fee title acquisition. As such, this alternative would not be cost effective and removed from further study.

2.2.5 Alternate Locations for Corps Operations and Maintenance Facility

Numerous locations for the permanent Corps OM Facility have been proposed throughout the PED phase. The following locations identified in Table 3 and presented in Figure 4 below provide information on those locations that were considered but not selected for further study:

Table 3. Corps Operations and Maintenance Facility Alternate Locations.

Name	Location	Reason Not Selected
Permanent Corps Facility Proposal 1	Right Abutment Main Dam	• Difficult access. • Site preparation costs.
Permanent Corps Facility Proposal 2	Right Abutment Auxiliary Dam	• Within active seismic zone. Potential for severe ground shaking and liquefaction.
Permanent Corps Facility Proposal 3	Left Abutment Auxiliary Dam	• Potentially significant adverse effects to aesthetics and recreation.

Figure 4. Corps Operations and Maintenance Facility Alternate Locations.

2.3 NO ACTION ALTERNATIVE

In accordance with NEPA guidelines, the no action alternative is included here as a baseline for comparison with the proposed alternatives. Under the no action alternative, no action would be taken to acquire the remaining unoccupied or unimproved private parcels, relocate the Corps OM Facility, or demolish any affected structure as necessary to meet current dam safety requirements. If landowners are allowed unencumbered use and access to the lands in the immediate vicinity of the Isabella Lake DSM Project area, they would likely experience temporary unavoidable significant adverse effects in the form of nuisance and potential human health effects associated with construction activities.

Proceeding with the construction of the Isabella Lake DSM Project, while exposing sensitive receptors to significant health and safety risks, is not a prudent or reasonable alternative. As such, the no action alternative would also mean that there would be no Federal participation in remedial improvements to the Isabella main dam, spillway, or auxiliary dam. Isabella Dam would then continue to be operated in accordance with the established Water Control Plan and Flood Control Diagram. In accordance with ER 1110-2-1156, the Isabella Dams would be operated at the pre-Interim Risk Reduction Measure elevation of 2,609.26 feet NAVD 88 (568,070 acre-feet). However, under the no action alternative, the Isabella Dams still would have an unacceptably high risk of failure. The potential environmental, economic, and human consequences of dam failure would be extremely high.

2.4 PREFERRED ACTION – PROPERTY FEE TITLE ACQUISITION, CORPS OPERATION AND MAINTENANCE FACILITY RELOCATION AND STRUCTURE DEMOLITION

2.4.1 Property Fee Title Acquisition

Twelve parcels of privately owned land totaling 105.65 acres have been identified to be in areas of high risk to human health from construction generated noise and air emissions, or would be of use in connection with the Isabella Lake DSM Project construction activities. Two of the properties; the 6.70-acre, 33-rental-space Lakeside Village Mobile Home Park and the 0.99-acre single family farmhouse, were previously assessed and approved for acquisition and resident relocation with a FONSI in August 2014. Acquisition and resident relocations involving these two parcels were completed in February 2015. Disposition of the trailers and structures remaining on these properties is described further in Section 2.4.3 of this SEA. Proposed full fee title acquisition of the remaining ten unoccupied or unimproved parcels affected by Isabella Lake DSM Project construction activities would commence immediately following FONSI and project

approval anticipated in 2015. Table 4 identifies all of the affected properties' by tract number, assessor parcel number (APN), physical address or location, reason for take and acreage.

Table 4. Fee Title Acquisitions.

Tract Number	APN	Description, Physical Address or Location	Reason for Take	Acreage
417-1	485-090-01	Outbuildings between Ponderosa Way and Kern River	Emergency Spillway Footprint, Staging Area A1	38.35
417-2	485-070-01	Unimproved lands adjacent and east of Tract 417-1	Air Quality and Noise Impacts	4.00
419	485-070-24	Unimproved lands adjacent to Barlow Road	Borel Outlet, Staging Area A3, Air and Noise Impacts	29.81
420-1	485-070-25	Unimproved lands adjacent to Barlow Road and south of Tract 419	Staging Area A3, Air and Noise Impacts	22.01
420-2	485-070-23	Ranch house at 2557 Mulkey Way, Lake Isabella, CA	Noise Impacts	1.03
422	485-070-14	Single-family farmhouse at 4547 Barlow Drive, Lake Isabella, CA	Noise Impacts	0.99
423	485-070-28	Unimproved lands adjacent to Barlow Road and existing Borel Canal	Borel Outlet, Staging Area A3, Noise Impacts	0.15
424	485-070-03	33-space mobile home park and business at 2959 Eva Avenue, Lake Isabella, CA	Staging Area A2, Noise Impacts	6.70
426	485-120-15	Vacation cabin at 4463 Ponderosa Way, Lake Isabella, CA	Noise Impacts	0.31
427	485-120-14	Vacation cabin at 4487 Ponderosa Way, Lake Isabella, CA	Noise Impacts	0.44
428	485-120-28	Unimproved land at 4455 Ponderosa Way, Lake Isabella, CA	Noise Impacts	0.61
429	485-120-13	Unimproved land west and below Tract 428	Noise Impacts	0.40

The Real Estate Design Memorandum, dated 10 December 2012 and prepared by the Corps' Sacramento District Real Estate Division, states;

"An Environmental Assessment will be prepared prior to the proposed acquisition of the [affected parcels] located within Kern County as part of the Isabella Lake DSM Project. Immediately after acquisition of the required properties, the U.S. Army Corps of Engineers will prepare a disposal plan [and EA] to demolish and dispose of existing buildings and structures and make necessary Health and Safety modifications to the properties for off-site removal of waste. The EA will reference the Isabella Lake DSM Project Draft EIS, dated March 22, 2012 which discusses the environmental impacts associated with the construction of the modified earthen embankment dam. The EIS indicates that traffic, noise, fuel emissions and dust levels anticipated with the proposed construction will exceed the Environmental Protection Agency's health risks and safety standards and will require relocation of affected residents within the immediate proximity of the construction and staging sites. Upon completion of the Isabella Lake DSM Project construction, any lands not needed for Isabella Dams operations and maintenance will be disposed of in accordance with real property disposal regulations."

All real estate to be acquired would be fee simple interest estates. No easements would be acquired for construction. Escrow and Title contracts would be awarded following authorization to acquire those necessary properties. The proposed action would not require any new access roads for the property acquisitions. Existing public roads would be utilized for access to the properties.

2.4.2 Corps Operations and Maintenance Facility Relocation

The current 1.4-acre Corps OM Facility, located on federal property at 4901 Ponderosa Way, Lake Isabella, California, consists of a wood framed office building of approximately 2,000 square feet and houses 5 permanent Corps employees. The shop/maintenance building is approximately 3,800 square feet and is comprised of a standing seam metal pre-fabricated structure on a slab foundation. The wood framed office building is a converted residence originally constructed in the early 1960's. The shop/maintenance building was constructed in 2009/2010.

The Corps OM Facility is currently located within the footprint of the approved new emergency spillway, labyrinth weir and approach channel to be constructed as part of the Isabella Lake DSM Project. As such, this facility, its personnel and dam operations would need to be relocated. Permanent relocation of this facility is not feasible until after dams and spillway modifications under the Isabella Lake DSM Project are nearly complete. This would require construction of a temporary facility for continued operations of the Isabella Dam in accordance with the Isabella Lake Regulation Manual dated May 1953, revised January 1978 (Corps 1978) and other agreements and decisions during the Isabella Lake DSM Project construction period.

The preferred locations of a temporary and permanent Corps OM Facility are further described below:

Corps Operations and Maintenance Facility Temporary Location. The Corps OM Facility would be temporarily relocated into a modular building within tract 424 located south of the Auxiliary Dam (Figure 5). Tract 424 was the former location of the Lakeside Village Mobile Home Park. The facility would be set up to co-house both dam maintenance and construction oversight staff for the Isabella Lake DSM Project. The proposed temporary dam maintenance, operations, and construction oversight facility is described below:

- Two separate modular type buildings housing (1) routine dam maintenance and operations staff, Resident Engineers and contract administration staff, and; (2) Isabella Lake DSM Project quality assurance staff. The building sizes would be approximately 3,300 square feet for the Resident Engineers building and approximately 3,600 square feet for the quality assurance staff building.
- The Resident Engineers building would consist of 3 private offices of approximately 200 square feet each. The staff area of the Resident Engineers building would allow work cubicles for up to 12 employees. A conference room of approximately 450 square feet and break room/kitchen of approximately 250 square feet would also be constructed.
- The Quality Assurance building would provide for cubical office space for up to 28 employees and a conference room of approximately 300 square feet.
- Both buildings would require power and communication wiring for high speed internet service. Both building also would be plumbed for sewer and water, and provide men's and women's restrooms of approximately 450 square feet per building.
- Both buildings would meet ADA requirements and other guidance for accessible design such as entry ramps. All other construction requirements per local and state building codes would be followed. The entire office complex would be surrounded by security fencing and an all weather entrance road would be constructed.
- Parking would be provided for approximately 8 Government vehicles and approximately 40 privately-owned vehicles.

Detailed design and plans/specifications of this proposal are currently being developed with implementation anticipated late 2015. This would allow completion of temporary facility construction by end of 2016 before implementation of the Isabella Lake DSM Project in 2017.

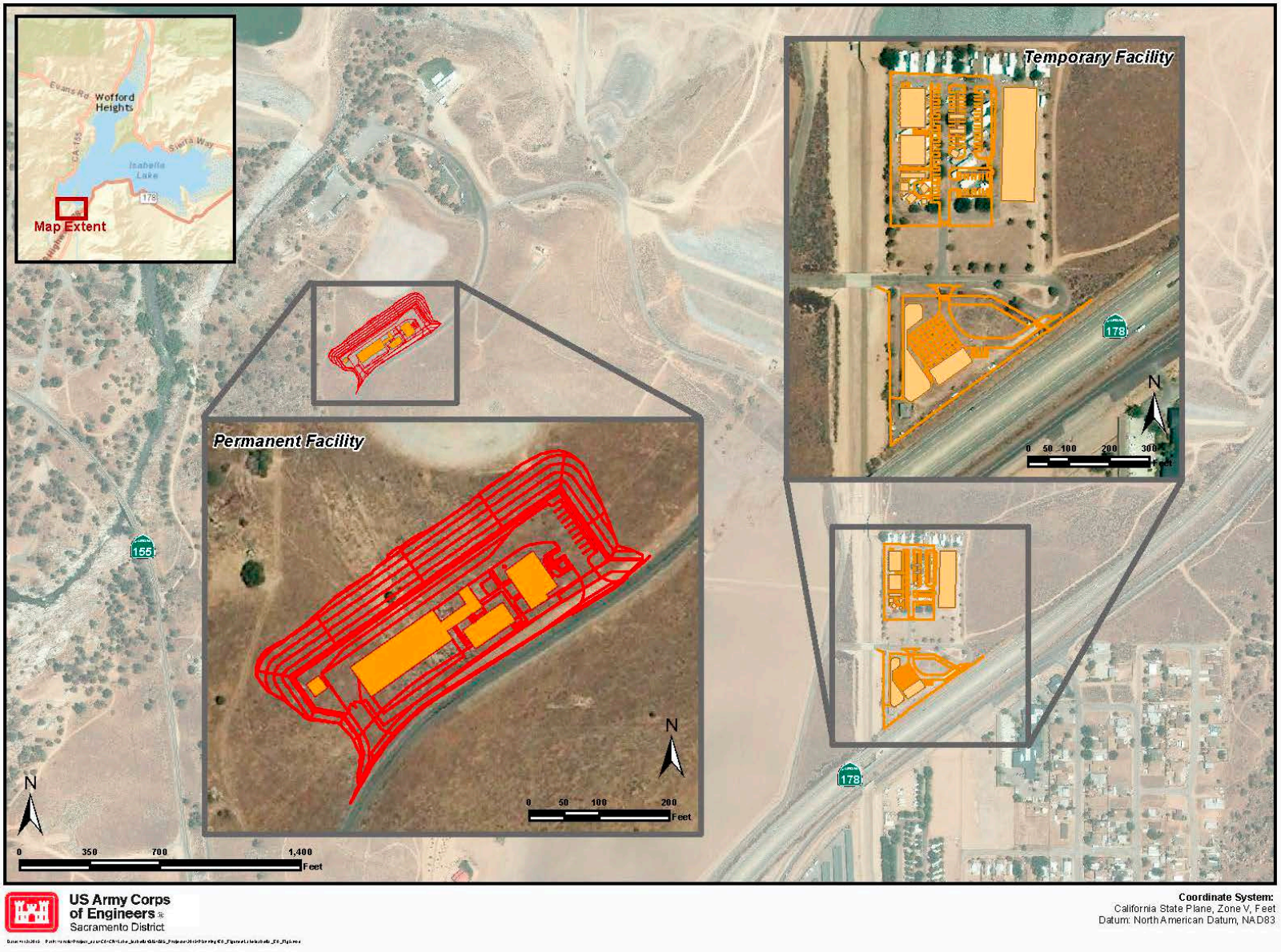

Figure 5. Preferred Corps Operations and Maintenance Facility Temporary and Permanent Locations.

Corps Operations and Maintenance Permanent Location. After the dam and spillway modifications are completed under the Isabella Lake DSM Project, the Corps OM Facility would be permanently relocated to a site suitable for the routine and long-term operations and maintenance of Isabella Dam. The proposed location of this facility is shown on Figure 5. Construction details would be "in-kind" in relation to the current footprint, building size and function towards fulfilling the mission of the Corps.

2.4.3 Structure Demolition

After acquisition, and either before the initiation or concurrent with DSM construction, the Corps would demolish and/or dispose of all the existing buildings and structures located on the acquired and/or affected lands. Six of the twelve parcels of land identified in Table 2 (tract numbers 417-1, 420-2, 422, 424, 426, and 427) have outbuildings or structures located on these lands. The farmhouse structure located in tract 422 and associated outbuilding structures located on adjacent tracts (419 and 420-1) are considered to be historic properties as defined by the National Historic Preservation Act of 1966, as amended (NHPA) and will require mitigation prior to demolition as described in the Cultural Resources Section 3.11 of this Phase II Real Estate SEA. The demolition of all other structures located on acquired lands, and the removal and abandonment of gas, water, septic, and power infrastructure, would commence following a FONSI and project approval which would be anticipated in 2015.

The Corps has proposed the demolition of structures rather than holding the structures intact to avoid potential health and safety issues with transients and use as playgrounds by children. Additionally, abandoned buildings can become bat rookeries, which would add additional environmental issues to any other project that might occur in the area.

The 33 vacated mobile homes from the Lakeside Village Mobile Home Park would be immediately removed for off-site commercial recycling by towing, trailer, or other method(s) that comply with applicable federal, state, and local requirements. ~~On-site demolition or modifications would be minimal, and conducted only to allow for removal of mobile homes. Trailer pads would remain intact. Utilities would be capped and sealed and left in a safe condition.~~ The trailer pads and underground utilities may also be removed should the Corps choose to exercise this option after removal of mobile homes.

The Corps OM Facility and USFS Lake Isabella Office and fire station would remain staffed and deferred for demolition with other affected buildings and structures until implementation of the Isabella Lake DSM Project in 2017. Demolition of these facilities would include foundation removal.

Permits and Utilities. Prior to the initiation of demolition, the contractor would be responsible for obtaining all the necessary permits and release forms to perform work. Necessary permits would include a building permit for structure demolition and the Demolition Permit Release from the San Joaquin Valley Air Pollution Control District (SJVAPCD). The contractor would be responsible for proper disposal of unrecyclable materials at an appropriate California certified landfill. Additionally, the contractor would also be responsible for obtaining National Pollutant Discharge Elimination System (NPDES) permit from the Central Valley Regional Water Quality Control Board (CVRWCB), and would be responsible for the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP).

The contractor would be required to verify the locations of all existing waterlines, electrical power, natural gas, telephone, and/or other utilities that are situated within the project area. All existing utilities would be located and marked prior to initiation of demolition work. The contractor would be required to coordinate with the appropriate utilities companies to remove and cap off the existing utilities infrastructure.

Demolition. The contractor would be required to dismantle and demolish any existing structures, including stem wall foundations, and properly dispose of the debris and material at an approved landfill or recycling center. There would not be any removal of paved or aggregate roads. The contractor would be required to develop and submit a Demolition Plan for Corps approval. All demolition and activities associated with the proposed action would comply with the Kern County Ordinance Code G-8057, which governs the disposal of solid waste at Kern County waste facilities (Kern County 2010). The contractor would be required to comply with Kern County's established recycling regulations, which define what material may be recycled from building demolition, and which landfills are approved for recycling and disposal of materials. Demolition debris consisting of wood, concrete, asphalt, glass, roofing material, metal flashing/piping, flooring, etc. would be separated and recycled to the greatest extent possible. Materials not able to be recycled would be disposed of offsite at a sanitary landfill that accepts construction debris waste. There are 7 sanitary landfills in Kern County that could be used by the construction contractor for construction debris.

Access Roads and Routes. Access to the demolition sites would use existing gravel and paved roads. No new roads would be required to access the project demolition sites. Only infrequent occasional heavy truck traffic would occur on existing roads for the action. The routes to be used by the trucks, however, are already designated and constructed as transportation and access roads and would not be affected by the few heavy trucks anticipated for this project.

Clean-up, Revegetation, and Landscaping. All disturbed surface areas would be reseeded with native grasses and vegetation to promote wildlife values and minimize soil erosion. All rubbish

would be removed from the work site, and the entire work area would be left in a safe and neat condition suitable to the natural setting of the surrounding area.

Land Management. After the structures have been demolished and the debris removed, the Corps Isabella Dams operations and maintenance personnel would monitor and maintain the vacant lots as Corps properties for construction activities under the Isabella Lake DSM Project.

2.4.4 Staging and Disposal Areas

The structures to be demolished are residential and outbuildings surrounded by large previously disturbed, unnatural areas, such as driveways, yards, and parking lots, and residential roads. These disturbed or paved areas would be used as temporary staging and storage sites during the demolition process.

2.4.5 Construction Schedule

The proposed property acquisitions would commence immediately following FONSI and project approval anticipated in 2015. Subsequent demolition of most structures located on affected parcels described in this SEA would occur post-acquisition and before implementation of the Isabella Lake DSM Project. The Corps OM Facility and USFS Lake Isabella Office and fire station would remain staffed and deferred for demolition with other affected buildings and structures until implementation of the Isabella Lake DSM Project in 2017.

CHAPTER 3
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This section describes the environmental resources in the action area, as well as any effects of the proposed action on those resources. Each resource section below presents the existing resource conditions, environmental effects, and when necessary, mitigation measures are also proposed to avoid, reduce, minimize, or compensate for any significant effects. In determining the effects, the consequences of the proposed action are compared to the consequences of taking no action. 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.

3.2 ENVIRONMENTAL RESOURCES NOT EVALUATED IN DETAIL

Certain resources were eliminated from further analysis in this SEA because they were addressed adequately in the 2012 Isabella Lake DSM Project EIS. In addition, the proposed property acquisition, structure demolition or removal, and Corps facility relocation would not result in any new or substantially more severe significant direct and indirect effects, including short- and long-term effects, than were initially evaluated in the Isabella Lake DSM Project EIS. The following is a brief discussion of these resources.

3.2.1 Geology, Soils, and Seismicity

The Geology, Soils and Seismicity section of the Isabella Lake DSM Project 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 Draft EIS (Section 3.4.3) details the potential impacts of the approved Isabella Lake DSM Project and associated activities. The consequences of refinement to the realignment and reconfiguration of the Borel Canal and tunnel-conduit where it passes through Engineers Point west of the Kern Canyon Fault shear zone was described in Section 3.2.2 of the Final EIS.

As discussed earlier in Section 2.2.5 of this SEA, Proposal 2 for the permanent location of the Corps OM Facility was considered but not selected for detailed study because of its proximity to the Kern Canyon Fault zone. Refinement of the location of this facility, identified as the permanent preferred action location in Figure 5, may result in less vulnerability to future seismic events. The preferred action would have no effect to geology, soils and seismicity.

3.2.2 Special Status Species

The Biological Resources section of the Draft EIS (Section 3.10) and Final EIS (Section 3.8) sufficiently characterizes the general regulatory setting and existing condition for this resource. The Isabella Lake DSM Project was found in full compliance with the Endangered Species Act (ESA), and a U.S. Fish and Wildlife Service (USFWS) biological opinion (BO) was included in Appendix C of the Final EIS. Changes to the regulatory setting for this resource since release of the Final EIS are described below:

Southwestern Willow Flycatcher. On 03 January 2013, USFWS designated revised critical habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) under the ESA (USFWS 2013b). 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 that were woven within this segment, the privately owned and operated Hafenfeld Ranch (0.2-mile of stream on the south side of the river) and Audubon California's Sprague Ranch (2.5-mile of stream on the north side of the river) are excluded from the final designation.

Western Yellow-Billed Cuckoo. On 03 October 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 03 October 2014, the proposed rule became effective and finalized the USFWS determination for listing the western yellow-billed cuckoo but not its critical habitat (USFWS 2014). Yellow-billed cuckoos are recognized as state endangered in California.

On 05 August 2014, the USFWS announced a proposal to designate critical habitat for the western distinct population segment of the yellow-billed cuckoo under the ESA. 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 12 November 2014 and closed on January 12, 2015. Comments and information received from concerned Federal and State agencies, the scientific community, and other interested parties regarding the proposed critical habitat designation are currently under consideration by USFWS.

Valley Longhorn Elderberry Beetle. On 02 October 2012, the USFWS announced a proposal to remove the Valley elderberry longhorn beetle (*Desmocerus californicus*) (VELB) from the federal list of endangered and threatened wildlife under the ESA. The public comment period for this proposed rule was reopened on 23 January 2013 and closed on 22 February 2013.

On 17 September 2014, the 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 had 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 to be 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 would no longer need to consult with the USFWS for VELB conservation.

Since release of the Final EIS, the affected environment has been updated with focus on the areas directly affected by the actions described in this document and relevant to the discussion of the affected environment. An updated list of threatened, endangered and candidate species for the project area is included in Appendix A.

Access to private lands affected by the Isabella Lake DSM Project was obtained and several reconnaissance site visits were conducted from March through October 2014. Corps biologists visually inspected and documented site conditions on these lands. As described in Section 3.8 – Vegetation and Wildlife, the proposed project area is composed primarily of agricultural, ornamental, non-native, ruderal vegetation, and residential land uses. There is no suitable habitat in the immediate vicinity of the proposed action that would support special status species. No critical habitat is located within the proposed project area. No federally listed or candidate species were observed during the site investigations.

The action area considered within this SEA is not within the range of any federally listed threatened or endangered species. The Phase II real estate acquisition and relocation action proposed in this SEA would have no effect to special status species/federally listed threatened or endangered species due to its size, scope and location.

3.2.3 Recreation

The recreation section of the Draft EIS (Section 3.12.2) sufficiently characterizes the regulatory setting and general affected environment for this resource. A draft Recreation Report was released to the public in February 2014 which presented new data and information relevant to the

discussion of the affected environment. The draft Recreation Report is available online at http://www.spk.usace.army.mil/Missions/CivilWorks/IsabellaDam.aspx.

The Draft EIS (Section 3.12.3) details the potential impacts of the Isabella Lake DSM Project on recreation. Project refinements based upon agency and public comments reduced potential recreation impacts (see Section 3.10.2 of the Final EIS). However, even with the refinements, the Isabella Lake DSM Project would still result in short-term but significant impacts on recreation.

Since release of the EIS and draft Recreation Report, the Corps, in coordination with the Office of Management and Budget, has concluded that sufficient authority exists to allow the Corps to use its appropriated funds to relocate all USFS facilities impacted by the Isabella Lake DSM Project, consistent to this existing authority. Replacement of USFS facilities affected by construction of the Isabella Lake DSM Project will be fully described and assessed in a subsequent supplemental NEPA document tiered to the EIS. This USFS Lake Isabella Office and Recreation Mitigation SEA is anticipated to be available for public review and comment July 2015.

The Phase II real estate acquisition and relocation action proposed in this SEA would have no effect to recreation due to its size, scope and location.

3.2.4 Socioeconomics and Environmental Justice

The Socioeconomics and Environmental Justice section of the Isabella Lake DSM Project EIS (Draft EIS Section 3.15 and Final EIS Section 3.13) sufficiently characterizes the regulatory setting and affected environment for this resource. A Phase I Real Estate Acquisition and Relocation SEA was released to the public in August 2014 which described and updated the existing social, economic and environmental justice characteristics within the local Kern River Valley (KRV) area of influence for the action proposed in this SEA. The Phase I Real Estate Acquisition and Relocation SEA and FONSI are available online at http://www.spk.usace.army.mil/Missions/CivilWorks/IsabellaDam.aspx.

All residential and business relocations would be conducted in compliance with Federal and State relocation laws, and relocations would be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 United States Code, Section 4601 et seq.), and implementing regulation, 49 Code of Federal Regulations, Part 24. This law requires that appropriate compensation be provided to displaced residential and nonresidential landowners and tenants, and that residents be relocated to comparable replacement housing and receive relocation assistance. Provisions include relocation advisory services, moving costs reimbursement, replacement housing, and reimbursement for related expenses and rights of

appeal. Compensation for living expenses would be provided for temporarily relocated residents and negotiations regarding any compensation for temporary loss of business would cover temporary relocations. This law applies to residential relocations as well as farms and businesses if they would be displaced for any length of time. The impacts on the small number of affected parties would be long-term, high and adverse, and possibly significant. However, the above-mentioned relocation provisions and other mitigations would reduce these potential impacts to less-than-significant levels.

3.3 NOISE AND VIBRATION

3.3.1 Regulatory Setting

The Noise and Vibration Section of the Draft EIS (Section 3.8) sufficiently characterizes the regulatory setting for this resource.

3.3.2 Existing Conditions

The Noise and Vibration Section of the Draft EIS (Section 3.8) sufficiently characterizes the affected environment for this resource. There have been no studies or new data generated to date that are relevant to the discussion of the affected environment.

Sensitive Receptors. Sensitive receptors include those individuals and/or wildlife that could be affected by excessive or prolonged noise and vibration generated by construction activity. Sensitive land uses in the project area include residences, visitors, and some wildlife taxa. Table 1 in this SEA identifies specific noise sensitive receptors modeled for the Isabella Lake DSM Project (see Figure 3-11 of the Draft EIS for modeled sensitive receptor locations).

3.3.3 Effects

Basis of Significance. An alternative would be considered to have a significant noise and vibration effect if the project would result in:

- Exposure of sensitive receptors to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

- Exposure of sensitive receptors to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels without the project. The threshold of increase is generally defined as 3-5 dB, as shown in Table 5.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. This threshold is also generally defined as 3-5 dB.

Table 5. Subjective Reaction to Changes in Noise Levels of Similar Sources

Change in Level, dBA	Subjective Reaction	Factor Change in Acoustical Energy
1	Imperceptible (except for tones)	1.3
3	Just barely perceptible	2.0
6	Clearly noticeable	4.0
10	About twice (or half) as loud	10.0

Source: Egan 1988

No Action. Under this alternative the lake capacity would be returned to and the dam would be operated at the pre-IRRM elevation of 2,609.26 feet NAVD 88 (568,070 acre-feet). There would be no Federal participation in remedial improvements under the Isabella DSM Project at the Isabella Main Dam, Spillway, or Auxiliary Dam. There would be no construction–related noise or vibration effects and no change from current noise levels resulting from construction and operation of the Isabella DSM Project. Some of the identified sensitive receptors are located in areas currently exposed to exterior and interior traffic noise levels approaching and/or exceeding the applicable Kern County noise level standards.

Proposed Action. Construction activities from the proposed action, such as the demolition of structures, would temporarily increase the noise levels near the project area. While large vehicles currently use the roadways within the project area to do routine operation and maintenance activities at the Isabella Dams, large vehicles, such as the transport trucks and construction equipment could result in higher levels of noise within the project area. However, structures proposed for demolition are located away from urban areas, and the size, duration and method of structure demolition or removal of trailers would not be expected to produce enough noise to adversely affect sensitive receptors in the project area.

3.3.4 Mitigation

The contractor would follow the Kern County Noise Control Ordinances and ensure that the noise level does not exceed the established 67 dB(A) maximum A-weighted noise level.

Construction hours would be limited to the normal daylight working hours of 7:00 am to 7:00 pm, Monday through Saturday. Compliance with the limited construction hours would minimize short-term construction noise effects on sensitive receptors to less than significant.

3.4 AIR QUALITY, CLIMATE AND CLIMATE CHANGE

3.4.1 Regulatory Setting

The Air Quality Section of the Draft EIS (Section 3.5), Final EIS (Section 3.3) and Regulatory Setting Section in the detailed Air Quality Analysis (Appendix F of the Final EIS) sufficiently characterizes the general regulatory setting 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 at the Rosamond Community Services District, 3179 35th Street West, Rosamond, CA. Rule 402 will be submitted through EKAPCD to the Environmental Protection Agency (EPA) for incorporation as part of the California State Implementation Plan (SIP). This action would constitute a SIP revision.

3.4.2 Existing Conditions

The Air Quality section of the Isabella Lake DSM Project Drat EIS (Section 3.5) sufficiently characterizes the affected environment for this resource.

3.4.3 Effects

Methodology. Air quality effects associated with the proposed action in this SEA were evaluated through identification of all potential air emission sources, evaluation of potential emissions, evaluation of existing requirements for their control, and determination of on-site measures to reduce them to less-than-significant levels.

Both the Federal Government and State of California have established ambient air quality standards for several different pollutants, a summary of which is provided in Table 2.2-1 of the detailed Air Quality Analysis (Appendix F of the Final EIS).

Basis of Significance. EKAPCD has established thresholds of significance to evaluate the potential impact of a proposed project on the District’s ability to continue to comply with State

and Federal air quality regulations. EKAPCD has determined that a project would have a significant adverse impact on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality standard;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or state ambient air quality standard (including emissions which exceed quantitative thresholds for ozone precursors). Specifically, would implementation of the project exceed any of the following thresholds:
    - Stationary Sources – as determined by District Rules:
        - 25 tons per year,
    - Operational and Area Sources:
        - Reactive Organic Gases (ROG): 25 tons per year,
        - Oxides of Nitrogen (NOX): 25 tons per year,
        - Oxides of Sulfur (SOX): 27 tons per year,
        - Particulate Matter (PM10): 15 tons per year, and
        - Carbon Dioxide Equivalent (CO2e): 25,000 tons per year;
        - Expose sensitive receptors to substantial pollutant concentrations; or
        - Cause the creation of objectionable odors affecting a substantial number of people.

No Action. Under this alternative the lake capacity would be returned to and the dam would be operated at the pre-IRRM elevation of 2,609.26 feet NAVD 88 (568,070 acre-feet). There would be no Federal participation in remedial improvements under the Isabella DSM Project at the Isabella Main Dam, Spillway, or Auxiliary Dam. Construction-related emissions and greenhouse gas contributions to climate change from the Isabella DSM Project would not occur. Construction related dust would not occur although higher lake levels may reduce particulates due to less exposure of the lake bottom.

Proposed Action. This alternative would have short-term effects on air quality during the demolition periods of the project. The operation of vehicles and heavy equipment, including large transport trucks, front-end loaders, and water trucks, would produce emissions such as exhaust and PM_{10}. In addition, there would be short-term increases in PM_{10} and $PM_{2.5}$ due to excavation and operation of vehicles and heavy equipment. Tables 6 - 7 shows the emission estimates for the demolition of the structures, as calculated from the Urbemis 2007 9.2.4 Land Use Projects Emissions Model (Urbemis 2015) and compared to EKAPCD threshold standards.

However, these short-term emissions would not result in emissions that would exceed EKAPCD threshold standards or conflict with the air quality goals of the Kern River Valley Specific Plan (Kern County 2011). On this basis and with application of best management practices (BMPs), construction of the proposed action would not be considered to impede compliance with applicable air quality plans or violate any Federal or state ambient air quality standard.

Table 6. Emission Estimates from the Proposed Demolition of Structures[1].

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5
2015 TOTALS (tons/yr)	0.61	8.70	3.15	0.01	8.36	0.35	8.71	1.74	0.32	2.07
2017 TOTALS (tons/yr)	0.84	11.66	4.30	0.02	12.34	0.47	12.81	2.57	0.43	3.01
2015										
Fugitive Dust	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.01	0.00	0.01
Demo Off Road Diesel	0.08	0.51	0.31	0.00	0.00	0.04	0.04	0.00	0.04	0.04
Demo On Road Diesel	0.53	8.18	2.77	0.01	0.04	0.31	0.35	0.01	0.29	0.30
Demo Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017										
Fugitive Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01
Demo Off Road Diesel	0.10	0.70	0.45	0.00	0.00	0.05	0.05	0.00	0.05	0.05
Demo On Road Diesel	0.74	10.95	3.75	0.02	0.06	0.42	0.47	0.02	0.38	0.40
Demo Worker Trips	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1]Proposed demolition of structures is anticipated to occur during the 2015 and 2017 calendar year only.

Table 7. The Area Source and Operational Emission Estimates from the Proposed Demolition of Structures.

AREA SOURCE EMISSION ESTIMATES								
		ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year)		0.41	0.12	0.40	0.00	0.00	0.00	155.31
OPERATIONAL (VEHICLE) EMISSION ESTIMATES								
		ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year)		0.40	1.16	4.35	0.00	75.09	15.94	448.02
SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES								
		ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year)		0.81	1.28	4.75	0.00	75.09	15.94	603.33

3.4.4 Mitigation

The Isabella Lake DSM Project has adapted the most recent amendments to Rule 402 as commitments in an effort to further reduce potential air quality impacts from fugitive dust. Best management practices (BMP), such as applying water to form a visible crust on the soil, limiting off-road vehicle speed to 15 mph or less, and the application of water to the exterior of the buildings and to unpaved surfaces where materials may fall during demolition, are required to minimize fugitive dust from the project. Compliance with the applicable EKAPCD rules and implementation of the appropriate BMPs such as controlling fugitive dust by watering disturbed soils would minimize air quality effects to a less-than-significant level.

3.5 WATER QUALITY

3.5.1 Regulatory Setting

The Water Resources Section of the Isabella Lake DSM Project Draft EIS (Section 3.6.1) sufficiently characterizes the regulatory setting for this resource.

3.5.2 Existing Conditions

The Water Resources Section of the Isabella Lake DSM Project DEIS (Section 3.6.2) sufficiently characterizes the affected environment for this resource. There have been no additional revisions, studies, or new data relevant to the discussion of the affected environment.

3.5.3 Effects

Basis of Significance. An alternative would be considered to have a significant adverse effect on water quality if it would substantially degrade water quality, contaminate a public water supply, substantially degrade or deplete ground water resources, interfere with ground water recharge, or expose special status species or humans to substantial pollutant concentrations.

No Action. In accordance with ER 1110-2-1156 (Safety of Dams – Policy and Procedure), the Isabella Dams would be operated at the pre-Interim Risk Reduction Measure elevation of 2,609.26 feet NAVD 88 (568,070 acre-feet). However, based on Corps 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. This would substantially degrade water quality, contaminate water supply, and expose humans or special status species to substantial pollutant concentrations. The no action would have a significant, long-term adverse effect to water quality.

Proposed Action. While there would be no in-water work for the proposed action, it would result in the disturbance of more than one terrestrial acre (approximately two acres of soil disturbance). However, the demolition areas are heavily impacted by previous human disturbance, being primarily disturbed by residential or agriculture use, thus reducing water quality in the immediate vicinity of the proposed demolition action. The disturbance of soil during the proposed demolition of the structures could degrade local water quality further due to increased surface runoff in areas adjacent to the Kern River, Isabella Lake, and Borel Canal, impacting both the chemical and biological aspect of water quality. Inadvertent spills of oil or fuels from construction equipment could be a source of ground water contamination at work or staging areas.

3.5.4 Mitigation

The proposed project would result in the disturbance of more than one acre; therefore, the contactor would be required to prepare a NPDES storm water permit (Section 402 of the CWA) from the CVRWCB. The Construction Storm Water Permit covers storm water discharges from construction sites discharging to waters of the United States. A storm water pollution prevention plan (SWPPP) is typically required under this permit and would be the responsibility of the contractor. The SWPPP would be designed prior to groundbreaking and include necessary BMPs to prevent potential pollutants from leaving the construction site during a storm event. Fugitive dust control measures are also included as part of the SWPPP. The contractor would be responsible for implementing, maintaining, and monitoring BMPs during demolition.

There would be no dredge or fill effects to streams, creeks, drainages, or any other bodies of open water; therefore, Federal CWA Section 404 documentation would not be required. In addition, there is no in-water activity which would require a State CWA Section 401 Certification.

3.6 TRAFFIC AND CIRCULATION

3.6.1 Regulatory Setting

The Traffic and Circulation section of the Draft EIS (Section 3.7) sufficiently characterizes the regulatory setting for this resource.

3.6.2 Existing Conditions

The Traffic and Circulation section of the Draft EIS (Section 3.7) sufficiently characterizes the affected environment for this resource. There have been no studies or new data generated to date that are relevant to the discussion of the affected environment.

3.6.3 Effects

Basis of Significance. An action would be considered to have a significant effect on transportation if it would:

- cause an increase in traffic that is substantial in relation to the existing load and capacity of a roadway; cause an increase in safety hazards on area roadways, or;
- cause substantial deterioration of the physical condition of area roadways.

No Action. Under this alternative the lake capacity would be returned to and the dam would be operated at the pre-IRRM elevation of 2,609.26 feet NAVD 88 (568,070 acre-feet). There would be no Federal participation in remedial improvements under the Isabella DSM Project at the Isabella Main Dam, Spillway, or Auxiliary Dam. There would be no construction–related traffic effects and no changes in the traffic levels and circulation resulting from construction and operation of the Isabella DSM Project.

Proposed Action. There would be short-term increase in traffic on State Route 178, State Route 155, Barlow Road, and Ponderosa Way during the demolition of structures on the acquired

parcels. Based on the number of parcels with structures (7 of 13), it would take an estimated 45 to 60 trips to and from the sites to haul off trailers, demolish any structures and recycle or dispose of the material offsite. Demolition of the structures is not expected to have a significant effect on traffic patterns on Barlow Road or Ponderosa Way due to the light volume of traffic in the area. However, there could be a significant impact to traffic on State Route 178 from the heavy equipment and transport trucks entering the road from the locations downstream of the dam and State Route 155; State Route 178 is a main thoroughfare to regional traffic to and from the residences and businesses located in the Bakersfield area. Although the proposed action would not likely result in a substantial deterioration of the physical condition of area roadways, it could cause an increase in potential safety hazards.

3.6.4 Mitigation

The contractor would be responsible for preparing a Traffic Management Plan, including placing appropriate signs, flaggers, barricades, and traffic delineation to minimize disruption and ensure public safety. The Traffic Management Plan would recommend that transport of material off-site be directed for disposal/recycling eastbound on State Route 178 towards Ridgecrest in order to avoid the more congested westbound State Route 178 into Bakersfield. This would minimize the short-term impacts on traffic to less than significant.

The contractor would be required to obtain all necessary traffic-related permits prior to initiation of construction; these permits would include required terms and conditions during construction, including the preparation of the Traffic Management Plan to avoid effects or reduce any short-term effects on traffic to less than significant and ensure public safety during construction.

3.7 HAZARDOUS, TOXIC, AND RADIOLOGICAL WASTE

3.7.1 Regulatory Setting

The hazardous, toxic, and radiological waste (HTRW) section of the Draft EIS (Section 3.9.1) sufficiently characterizes the regulatory setting for this resource.

3.7.2 Existing Conditions

The hazardous, toxic, and radiological waste (HTRW) section of the Draft EIS (Section 3.9.2) sufficiently characterizes the general affected environment for this resource. Since release of the

Final EIS, the affected environment has been updated with focus on the areas directly affected by the actions described in this SEA and relevant to the discussion of the affected environment.

In 2014, the prior 2011 Phase I Environmental Site Assessment (ESA) was updated with a focus on those USA and private parcels affected by the Isabella Lake DSM Project. This updated ESA was conducted to identify recognized environmental conditions, including the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or the material threat of a release into structures, the ground, and groundwater or surface waters of the affected properties. The ESA was prepared in accordance with American Society for Testing and Materials (ASTM) E1527-94, ER 1165-2-132, HTRW Guidance for Civil Works Projects, and EC 1105-2-206, Project Modifications for Improvement of the Environment. A literature search, environmental database search, site visit, and interviews with appropriate personnel were conducted in order to compile information for this ESA. This assessment did not include sampling of environmental media (soil and/or groundwater) for laboratory analysis.

Organization of ESA. The ESA divided the project area into two different area groups:

Group 1: A group of USA (Corps and USFS) properties shown in Figure 2 was assessed for the presence of HTRW sources. Features associated with this group of properties are described below as follows:

- Corps OM Facility (1.4 acres) and adjacent undeveloped parcel (unspecified acres) consisting of an office, workshop/ maintenance area.
- USFS property (1.23 acre parcel) undeveloped.
- USFS property (5.97 acre parcel) consisting of an office, parking lot/storage area, maintenance yard/workshop area.
- USFS property (3.52 acre parcel) undeveloped with evidence of usage as a general storage area.
- USFS property (16.53 acre parcel) undeveloped.

Group 2. A group of 13 privately owned properties identified as tract numbers in Figure 2 was also assessed for the presence of HTRW sources. General information about the features of this group of private properties is provided in Table 4.

Record Review. An Environmental Database Resources (EDR) records search was used to construct a list of sites that have recognized environmental condition(s) near the subject properties. The EDR records search area included a ½ mile buffer zone that covered the existing

dam, a portion of the town of Lake Isabella near the dam, and a section of land downstream from the dam. The EDR record search was performed on 102 databases (federal, state, local, tribal and proprietary) and generated a list of 33 sites where environmental recognized conditions exist. None of the 33 sites listed have the potential to affect the planned construction.

Site Reconnaissance.

Group 1 Sites. During February 2014, personnel from the Environmental Engineering Section of the Corps – Sacramento District visited the Group 1 sites. The objective of the visit was to visually inspect the properties and determine if there were any recognized environmental conditions present that would affect future construction. Inspectors looked for visual evidence indicating an existing/ongoing release, a past release, or a material threat of a release on or into the ground, groundwater, or surface water. Common environmental concerns were assessed by the inspection team and are presented below:

- Hazardous Materials Associated with Property Use. Although asbestos containing material (ACM) and lead based paint (LBP) were not sampled as part of this Phase 1 ESA, the Corps has been provided information that the USFS Lake Isabella staff office likely contains these materials. ACM and LBP may also be assumed for the Corps OM Facility. Both of these offices were built prior to the household paint lead ban in 1978. Since implementation of the Isabella Lake DSM Project would require demolition of these structures, proper abatement would need to occur prior to demolition.
- Hazardous Substances Associated with Storage Containers. A vent/fill pipe was noted protruding from the ground surface on the USFS property (3.52 acre parcel) which is evidence of a potential underground storage tank (UST) at this location. This parcel is adjacent to the USFS storage/maintenance yard.
- Indications of PCBs. No evidence of leaking electrical transformers or other PCB containing equipment either in use or in storage was noted on USA properties during the site visit.
- Indications of Other Wastes/Releases. The USFS property (3.52 acre parcel) adjacent to the USFS maintenance yards also had two areas where evidence of burning was found. These areas are identified as Burn Area #1 and Burn Area #2 in the ESA. The burned material is unknown. Field sampling would be required at these two locations to determine the type and concentrations of contaminants in the burn residue and soil. The sampling and analysis plan for these two burn areas should be designed to assess the volume of waste material and soil that has been impacted and to determine proper handling/disposal criteria.

Group 2 Sites. On May 5-6 2014, personnel from the Environmental Engineering Section of the Corps – Sacramento District visited the study area and performed site reconnaissance on 9 of the 13 private property parcels for Group 2. These parcels are (per tract number): 420-1, 420-2, 422, 424 North, 424 South, 426, 427, 428, and 429. Refer to Figure 2 for locations of these properties.

Common environmental concerns were assessed by the inspection team and are presented below:

- Hazardous Materials Associated with Property Use. Although ACM and lead based paint LBP were not sampled as part of this Phase 1 ESA, these materials may also be assumed for structures associated with tract 422. The single family farmhouse was built prior to the household paint lead ban in 1978. Since implementation of the Isabella Lake DSM Project would require demolition of this structure, proper abatement would need to occur prior to demolition.
- The reconnaissance found no indication that a recognized environmental condition existed at any of the other parcels listed above. Activity on the property parcels is considered consistent with residential type activities. Roads had typical oil spots from vehicular traffic and small patches where burning occurred. No stressed vegetation was observed. General cultural debris piles were present but none containing evidence of HTRW type waste.
- Hazardous Substances Associated with Storage Containers. Propane fuel and water distribution systems were observed at various locations and all containment tanks were aboveground.
- Indications of PCBs. No evidence of leaking electrical transformers or other PCB containing equipment either in use or in storage was noted during the private property reconnaissance visit.
- Indications of Other Wastes/Releases. No evidence of HTRW waste was observed during the private property reconnaissance visit.

<u>Landowner and Occupant Interviews</u>. The Phase 1 ESA process includes conducting interviews with existing and past property owners to determine if there are any recognized environmental conditions on or around the property parcel(s) being studied. Since no prior ownership information for the Corps properties was provided, interviews were attempted with existing owner representatives only.

A phone interview was conducted with the Corps' Isabella Lake Dam Maintenance Supervisor on 20 March 2014. Interview questions were also provided to the USFS. The results of the

interviews indicate that, other than the likely presence of ACM and LBP, there are no recognized environmental conditions at the USA properties.

Several Group 2 property owners were verbally interviewed during the site reconnaissance visit on 5-6 May 2014. No information was provided that indicated the presence of a recognized environmental condition on the properties they owned.

3.7.3 Effects

Basis of Significance. 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, and if they would (1) expose workers to hazardous substances in excess of Occupational Safety and Health Administration (OSHA) standards, or (2) contaminate the physical environment, thereby posing a hazard to humans, animals, or plant populations by exceeding Federal exposure, threshold, or cleanup limits.

No Action. Under the No Action Alternative, there would be no Federal participation in remedial improvements to the Isabella Main Dam, Spillway, Auxiliary Dam, or Borel Canal. Operation of Isabella Dam would continue in accordance with the established Water Control Plan and Flood Control Diagram. Since no construction would occur under the No Action Alternative, there would be no effects on HTRW in the project area.

However, seepage would continue to deteriorate the Auxiliary Dam foundation, and the likelihood and consequences of dam failure would remain high. With the No Action Alternative, one or both dams have unacceptably high risk of failure. Potential consequences due to dam failure and catastrophic floodwater release would be high, adverse, and significant in the area affected by inundation of floodwater in Bakersfield, where the number of potential HTRW sources that could be affected is substantial.

Proposed Action. Under the proposed action, all Group 1 structures would be removed or demolished. A temporary Corps OM Facility would be constructed on tract 424. A permanent Corps OM Facility would be constructed on existing USA lands after completion of the Isabella Lake DSM Project at an approximate location shown in Figure 5.

Under the proposed action, the Group 2 properties not already acquired through Phase I real estate activities would be acquired, and all affected Group 2 structures would be removed or demolished. However, existing vegetation on all unimproved parcels and on most parcels with structures would remain in-place and the soils on all parcels (with exception of those structures requiring foundation removal) would be left relatively undisturbed. Thus any potential HTRW

within the soils would remain relatively undisturbed. No effects are anticipated as a result of the implementation of the proposed action. However, there is a preexisting risk of contaminated soil in the project area.

3.7.4 Mitigation

Research and surveys would be conducted prior to implementation of the proposed action in any area that has the potential for a risk of contamination. Any potential hazardous materials would be sampled to determine proper handling and disposal during demolition. Best management practices would be implemented during demolition to prevent contamination of the environment and protection of construction crews. Impacted soil from burn areas or the potential UST would be sampled to determine proper handling and disposal of materials during excavation activities for the new spillway. Contaminated soil would only be removed to the extent necessary to complete construction. If contamination remains, the state of California would be notified and the responsible party would be pursued for remedial action. Further BMPs and avoidance measures would have to be implemented to protect the construction crews on site.

3.8 VEGETATION AND WILDLIFE

3.8.1 Regulatory Setting

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

3.8.2 Existing Conditions

The Biological Resources section of the Draft EIS (Section 3.10) and Final EIS (Section 3.8) sufficiently characterizes the general affected environment for this resource. A final Fish and Wildlife Coordination Act Report (Appendix C of the Final EIS) provided the U.S. Fish and Wildlife Service (USFWS) recommendations and vegetation compensation needs for wildlife habitats affected by construction of features associated with the Isabella Lake DSM Project. However, the report did not address any additional potential effects to vegetation and wildlife resources resulting from demolition of structures affected by the Isabella Lake DSM Project.

Since release of the Final EIS, the affected environment has been updated with focus on the areas directly affected by the actions described in this document and relevant to the discussion of the affected environment. Access to private lands affected by the Isabella Lake DSM Project was obtained and several reconnaissance site visits were conducted from March through October

2014. Corps biologists visually inspected and documented site conditions on these lands. A summary of findings is presented in Table 8 below:

Table 8. Parcel Site Descriptions.

Tract Number	Acreage	Site Description
417-1	38.35	Non-native and ornamental vegetation surround outbuildings located on a plateau above and adjacent to the Lower Kern River (1.87 acres). Floral taxa include Aleppo pine (*Pinus halepensis*), oleander (*Nerium oleander*), and a variety of other ornamental trees and shrubs. Native riverfront vegetation includes open canopy of mature Fremont cottonwood (*Populus fremontii*) and Goodding's willow (*S. gooddingii*). Remaining portion of parcel (36.48 acres) is undeveloped rocky mountain slope with largely open canopy dominated by interior live oak (*Quercus wislizenii*), California buckeye (*Aesculus californica*), gray pine (*Pinus sabiniana*), canyon live oak (*Quercus chrysolepis*), and blue oak (*Q. douglasii*).
417-2	4.00	Unimproved lands consisting mainly of mixed ruderal and grassland habitats. Appears heavily grazed by livestock.
419	29.81	Unimproved lands adjacent to Barlow Road. Current use is in agricultural pursuits involving tilled farming. Some acres in-use for cattle pasturage. Vegetative portion of land consists of mixed ruderal and grassland habitats that have been heavily grazed by livestock.
420-1	22.01	Unimproved lands adjacent to Barlow Road and south of Tract 419. The site is situated in and surrounded by land being utilized as dry farming of feed grasses.
420-2	1.03	Non-native and ornamental vegetation surround a two bedroom, two bath, single family dwelling with 1238 feet of living area on sloping hill. The remainder of parcel contains concrete walkway and driveway, lawn, and bare dirt.
422	0.99	Non-native and ornamental vegetation surround a one bedroom, one bath, single family dwelling with 772 feet of living area. The remainder of parcel contains driveway, accompanying out-structures, highly trafficked grassy areas and bare dirt.
423	0.15	Unimproved remnant parcel adjacent to and between Barlow Road and existing Borel Canal. Heavily disturbed road shoulder of Barlow Road and Borel Canal inspection road. Some residual big sagebrush (*Artemisia tridentata*) and yellow rabbitbrush (*Chrysothamnus viscidiflorus*) exists.
424	6.70	Non-native and ornamental vegetation surround this 34-space mobile home park and business. Interspersed between the concrete trailer pads are mulberry trees, oleander, and young Western sycamore (*Platanus racemosa).* Property fence line boarded with remnant big sagebrush and yellow rabbitbrush. Access roads are bare dirt.
426	0.31	Parcel is heavily impacted by river rock landscape terraces and 395 square foot efficiency apartment with 595 square foot attached garage. One or two canyon live oak and gray pine provide open overstory. Remaining understory consists of weedy ruderal patches and bare dirt.
427	0.44	Non-native and ornamental vegetation surround this 736 square foot manufactured house with detached garage. Single gray pines and mature interior live oak provide overstory around large monolithic granite outcrops. Understory consists of mixed ruderal patches and bare dirt.
428	0.61	Highly impacted ruderal vegetation and bare dirt surround a low quality manufactured home on sloping home site to the northerly side of Ponderosa Drive. One or two canyon live oak and gray pine provide open overstory.
429	0.40	Unimproved land west and below Tract 428 on mountain downslope. Disturbed understory resulting from mobile home fire. Open overstory of gray pines and canyon live oak. Understory consists of mixed ruderal patches and bare dirt.

3.8.3 Effects

Basis of Significance. Effects on vegetation and wildlife would be considered significant if the alternative would result in substantial loss, degradation, or fragmentation of any natural vegetation communities or wildlife habitat and/or interfere with the movement of any resident or migratory wildlife species.

No Action. Under the No Action Alternative, operation of Isabella Dam would continue in accordance with the established Water Control Plan and Flood Control Diagram and the lake capacity (gross pool elevation) operated at the pre-IRRM elevation of 2,609.25 feet NAVD 88 (568,070 acre-feet). That is, 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 those associated with normal operations. Routine flood reduction and water storage operations at Isabella Dam and Lake sometimes result in prolonged inundation of riparian vegetation along the North and South Fork Kern River delta areas.

Proposed Action. The proposed action would result in a long-term loss of approximately 2 acres of ornamental, non-native, and ruderal vegetation due to the demolition of structures and removal of foundations. This loss is not significant, however, because it is not a native habitat, and is such a small portion of the greater surrounding native habitat in the area. The demolition areas are also heavily impacted by human disturbance, being primarily disturbed by residential or agriculture use, thus reducing the quality of habitat available in the immediate vicinity of the proposed demolition action. The riparian vegetation (scattered cottonwood and willow trees) associated with tract 417 and any native vegetation located outside structure demolition footprints and unimproved parcels would be avoided during the demolition of structures and removal of the debris off-site.

There would be short-term adverse effects on wildlife, as noise, air quality issues (dust), vibrations, and the removal of debris might disturb any wildlife within or near the project area. These effects would be short-term, and post-construction wildlife access should resume at pre-construction levels. To minimize any potential adverse effects, construction of the proposed action would take place outside of nesting season, and construction activities would be limited to the smallest area possible.

3.8.4 Mitigation

Effects to vegetation would be avoided or minimized by limiting demolition areas to the smallest size possible, and by implementing BMPs that would inhibit the establishment of weed species.

However, where construction activities would result in the removal or disturbance of vegetation or disturbance of soils, these areas would be treated by seeding with native grass seed, wood fiber mulch, and tackifier per application rates below:

Native Grass Seed Type and Application Rates:

- Three weeks fescue (*Vulpia microstachys*) or equivalent, 8 lbs/acre;
- Nodding needlegrass (*Nassella cernua*) or equivalent, 7 lbs/acre;
- Pine bluegrass (*Poa secunda*) or equivalent, 6 lbs/acre;
- Desert needlegrass (*Achnatherum speciosa*) or equivalent, 20 lbs/acre;
- Indian ricegrass (*Achnatherum hymenoides*) or equivalent, 4 lbs/acre, and;
- Squirreltail (*Elymus elymoides*) or equivalent, 5 lbs/acre.

Wood Fiber Mulch (EcoFibre® or equivalent), 2,000 lbs/acre.

Tackifier (PLANTAGO® Binder or equivalent), 200 lbs/acre.

To avoid any potential effects to migratory bird species or migratory bird habitat, structure demolition would take place outside of nesting season (March-August). If work must be done during the nesting season, a qualified biologist would conduct a pre-construction survey of all habitats suitable for use by nesting migratory birds within 350 feet of the project boundary as allowable. If any migratory birds are found, a protective buffer would be delineated, and USFWS and the California Department of Fish and Wildlife (CDFW) would be consulted for further actions.

Implementation of the mitigation measures mentioned above would reduce any effects to vegetation and wildlife to less than significant.

3.9 LAND USE

3.9.1 Regulatory Setting

The Land Use section of the Draft EIS (Section 3.11) sufficiently characterizes the regulatory setting for this resource.

3.9.2 Existing Conditions

The Land Use section of the Draft EIS (Section 3.11) and Final EIS (Section 3.9) sufficiently characterizes the general affected environment for this resource. Tracts 419 (29.81 acres) and 420-1 (22.01 acres) are being utilized as till farming, cattle pasturage and dry farming of feed grasses. The National Resource Conservation District (NRCS) has designated these lands as Grazing Lands (USDA 2012). Tract 424 is classified as Urban and Built-Up Land. The remaining parcels are classified as Nonagricultural and Natural Vegetation Lands.

3.9.3 Effects

Basis of Significance. An alternative would be considered to have a significant effect on land use if it would result in:

- land uses that are incompatible with existing and planned land uses in the area;
- an inconsistency with land use designations or goals, policy or regulation, or;
- the permanent conversion of prime and unique farmlands to other land uses.

No Action. Under the No Action Alternative, land use conditions in the project area and vicinity would stay substantially the same; there would be no short-term or long-term land use impacts since there would be no construction to affect adjacent land use. However, the No Action Alternative would allow existing deficiencies in the Main and Auxiliary Dams (e.g., seepage and piping, poor foundation materials, and seismic weakness) and the likelihood of dam failure to remain. In the event of dam failure, catastrophic and extensive damages would likely occur to current land uses in the vicinity of the dam and downstream, including floodwater inundation in the Bakersfield area. This would constitute a significant adverse impact on downstream land use.

Proposed Action. USA lands would remain within USA jurisdiction. However, permanent removal of the USFS Lake Isabella Office, and removal and relocation of the Corps OM Facility, would be considered both a short- and long-term effect, but less-than-significant change in the current established land use. The temporary location proposed for the Corps OM Facility would be located on lands currently classified as Urban and Built-Up Land.

All acquired lands currently classified as Nonagricultural and Natural Vegetation Lands would remain consistent with current land use designations and compatible with existing and planned land uses in the area. The two tracts currently classified as Grazing Lands (51.82 acres) would be converted to Nonagricultural and Natural Vegetation Lands. The lands would not be subject

to a Williamson Act Contract/Farmland Security Zone Contract, which requires a minimum parcel size of 80-acres gross. Although none of the lands directly affected by the actions described in this document are classified as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland by NRCS, the changes in the current established land use would be considered both a short and long-term, but less-than-significant.

3.9.4 Mitigation

A subsequent USFS Lake Isabella Office Relocation and Recreation Mitigation SEA will be developed for public release which specifically describes and evaluates the effects of relocating the USFS Lake Isabella Office and fire station, as well as mitigation necessary to offset the adverse effects to recreation resulting from construction of the Isabella Lake DSM Project. The USFS Lake Isabella Office Relocation and Recreation Mitigation SEA is anticipated to be release for a 30-day public review in July 2015.

The coordination of demolition schedules with local businesses and other users, including providing temporary access during construction, if needed, would also mitigate for temporary affects on land use. As would providing notice of access and utility disruptions and implementing efforts to minimize demolition noise, dust, and glare from lighting. As there would be no other effects on land use, no additional mitigation is necessary.

3.10 AESTHETIC RESOURCES

3.10.1 Regulatory Setting

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

3.10.2 Existing Conditions

The Aesthetics Resources section of the Draft EIS (Section 3.13) characterizes the affected environment for this resource. There have been no additional revisions, studies or new data generated that are relevant to the discussion of the affected environment.

3.10.3 Effects

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 increase levels of visual contrast as compared to surrounding conditions.

No Action. Under this alternative, the IRRM pool level restriction would be discontinued, and Isabella Dam and lake would be operated at a lake elevation of 2,609.26 feet NAVD 88 (568,070 acre-feet). This would continue to maintain the visual landscape of the Isabella Lake basin. However, based on Corps studies, the project would continue to present an unacceptable risk. The timing and nature of such an event cannot be specified. The catastrophic loss of one or both dams would significantly alter the visual landscape of the Isabella Lake basin, as well as the San Joaquin Valley, due to major downstream flooding of the areas between Isabella Lake and Bakersfield, and the visual impact would continue long-term. This would be considered a significant adverse impact on visual resources.

Proposed Action. This alternative would have both short- and long-term effects on the local views during and after demolition. These effects would include the short-term disturbance of the existing natural landscape in the project area and local views by construction equipment and activities, and long-term effects on the parcels of land containing structures proposed for demolition. Post-demolition and clean-up, the local view shed would no longer contain buildings. In the short-term, the land in these areas would look disturbed and scarred; however, as the post-demolition revegetation fills in, the view shed would soon blend with the surrounding natural environment. Thus, in the long-term, the proposed action would not impede the local view shed within the project area, nor would it have a substantial increase in levels of visual contrast as compared to the surrounding conditions.

3.10.4 Mitigation

Effects on visual resources would be less than significant. Post-construction revegetation and landscaping at the demolition sites would be sufficient mitigation.

3.11 CULTURAL RESOURCES

3.11.1 Regulatory Setting

The Cultural Resources section of the Draft EIS (Section 3.14) sufficiently characterizes the regulatory setting for this resource. For further discussion of Traditional Cultural Properties, as

well as the regulatory setting for compliance with the Archaeological Resources Protection Act and the Native American Graves Protection and Repatriation Act refer to pages 3-319 through 3-323 of the Draft EIS. An additional cultural resource inventory reference for the survey and evaluation of the USFS Lake Isabella Office and compound, Corps OM Facility, and other structures may be found in Chapter 4 of the Final EIS as well.

3.11.2 Existing Conditions

Cultural History. The cultural resource section of the Draft EIS (Section 3.14) sufficiently characterizes the general cultural history of the study area. What follows below is a more specific historical context for the areas directly affected by the actions described in this document and relevant to the discussion of the affected environment.

Ranching, Agriculture, and Commerce. Agriculture and ranching activities near the Kern River began in the early days of the mining industry. Sheep were introduced to the area in the 1850s and in 1862 the first cotton crop was laid in (Bailey n.d.). Agriculture around Bakersfield, along the east side of the San Joaquin valley, intensified in the late 1880s producing cotton, hay, vegetables, and alfalfa (Comfort 1934). Gradually these industries displaced mining in economic importance. The post-European contact history of the Hot Springs Valley includes an active history of pioneers, ranchers, and entrepreneurs. The names Hot Springs Valley and Kern River Valley are often used interchangeable in the historic record to describe the same general physical location. The Hot Springs Valley/Kern River Valley (valley) is located just downstream of the confluence of the North Fork and South Fork of the Kern River. Ranching was a livelihood for many in the valley, as were businesses associated with the nearby hot springs and the construction of the Borel Canal. Many of the original families of the valley were connected through marriage and occupation, their impact on history obvious today. Many had an undeniable connection to the land by working ranches.

Early settlement of the land surrounding Isabella Dam was by the Gilliam family, Robert and Julia Ann, who originally emigrated to Linn's Valley, west of Old Isabella, in search of gold in 1858 (Powers 1979). Prior to legal homesteading of the land it is likely the valley was used as an open range. In 1902, Neill purchased 840 acres in the valley, including Gilliam's holdings and the Hot Springs House, and moved his family to the valley. John Neill spent 27 years working in the Evans Sawmill and the Neill family ranch was on Wagy Flat, northwest of the valley, prior to his acquiring property in Hot Springs Valley. The Hot Springs House was a well-known and centrally located hotel that served as a kind of de facto headquarters for the Kern River Company as they built the Borel Canal as part of the hydroelectric plant on the Kern River. In addition to operating and improving the hotel, Neill raised cattle, sheep, and alfalfa on the land, and supported the Borel Canal construction efforts by operating a slaughterhouse on his ranch. Construction of the Borel Canal and associated features was complete in 1904 (Powers 1979).

In 1910, John Neill's family had a substantial presence in Hot Springs Valley, living in the area with his wife Annie, two daughters Mildred and Dora, cousin Robert J. Little who was a boarder, and two Chinese cooks (U.S. Census Bureau 1910), most likely still running and operating the Hot Springs House while splitting time between the ranch in the valley and the family ranch in Wagy Flat. Primary development and the most extensive shaping and use of the land now covered by the dam and reservoir as well as immediately below it for ranching occurred from 1910 when John Neill's daughter Dora married Alex Silicz, a local cowboy, to 1982 with the death of Burel Mulkey, Dora's son-in-law who continued to run the ranch after her death.

Hydroelectric power stations were built at many locations along the Kern River including one above the confluence of the north and south forks and three below the current location of the dam. The construction of hydroelectric plants on the Kern River contributed to the development of the area by bringing more people, business, and prosperity to Hot Springs Valley. Between the workers and hot springs seekers, there was a growing need for supplies and services to support the burgeoning population of the area. Stage business to and from the area boomed, as did entrepreneurs who established hotels such as the well known Hot Springs House, and farmers and ranchers experienced demand for their cattle and crops (Powers 1979). The early twentieth century was an extremely busy time in the valley for these various industries and businesses but ranching was the backbone of the land and the people who settled and developed the area in the long term.

Isabella Dam and Lake. In 1948 with the ground breaking for Isabella Dam, the 60 year old vision of Assistant State Engineer, James D. Schuyler was realized. The location for the Dam was at a point indentified by Schuyler, immediately below the junction of the north and south forks of the Kern River. The primary purpose of the Dam was flood control with the additional benefit of water supply.

The initial study for a project on the Kern River was authorized by the Flood Control Act of 1936. This study provided for a preliminary examination and survey of the Sacramento and San Joaquin Valleys. Separate studies were done on various sub basins in the two watersheds. Construction of Isabella Dam and Lake was proposed in the report of the Corps' Chief of Engineers and was contained in House Document 513, January 26, 1944. The project was authorized for construction by the Flood Control Act of 1944. However, Congress acted slowly to fully fund the project and it took from 1948 until 1953 to complete construction. Construction of the lake required the creation of two earthen dams and the relocation of the small settlement of Isabella on the South Fork of the Kern River, the town of Kernville on the North Fork, State Route 155, and State Route 178. The low-flow Borel Canal, which was finished in 1904 to deliver water to a downstream power plant, was rerouted within the lake to accommodate the new Dam, and the Auxiliary Dam was constructed over it. Construction also required relocating

roads and utilities and acquiring land. Buildings and other floatable material were removed from the lake. In April 1953, water was stored in the project for the first time, and the project was first operated for water supply conservation in April 1954. Construction of the Isabella Partners power plant on the Main Dam outlet began in August 1989 and was completed in December 1990. Power production began in June 1991.

In 2010, the main and auxiliary dam was recorded as part of the current project. The dams and associated features were evaluated and found not eligible for listing in the National Register (Corps 2010).

Post Dam Construction. Settlement of the town of Lake Isabella after the construction of Isabella Dam in 1953 brought additional people to the area to live. Although the cattle and ranching industries were still very active in the Kern River Valley during this time, many residents also came to the area as part of the recreation industry that resulted from the inundated reservoir. Isabella is also a short to moderate distance from Bakersfield and Los Angeles and continuing development of the town brought in additional housing, including more affordable and portable housing such as manufactured housing consisting of single and double-wide trailers organized into trailer parks.

Record Search. The entire area discussed in this document has been subject to a record search at the Sequoia National Forest, Southern San Joaquin Valley Information Center, Kern Valley Historical Society, and the Kern County Recorder's Office. In addition, the entire area has been subject to at least one archaeological survey, including a series of surveys undertaken on lands recently acquired by or currently under acquisition of the Corps. Historic age buildings have been evaluated as well for their eligibility for listing in the NRHP.

Known Cultural Resources. Only one archaeological site was previously recorded within the area, a pictograph panel (CA-KER-2528). Six additional sites were recorded during the course of the survey, including a petroglyph panel, ranch complex, trailer park, two historic trash scatters, and a historic garage (Polson and Montag 2015).

- CA-KER-2528 is single panel pictograph with curvilinear elements. The Corps has determined that this panel is *eligible* for listing in the NRHP under Criterion C as it represents the aesthetic values of the Native American Tribes of the region.
- A small historic trash scatter (PLS-1) that is a known area where trash from the surrounding area was taken to be burned. The Corps has determined that this site is *not eligible* for the NRHP.
- A mid-20th Century Trailer Park (PLS-3). The Corps has determined that this site is *not eligible* for listing in the NRHP.

- A Ranch Complex dating as early as 1902 (PLS-4). The Corps has determined that this site is *eligible* under Criterion A as it has made important contributions to the broad patterns of history (ranching) of the region. Additionally, the Corps has determined that the Ranch Complex is *eligible* under Criterion B as it is associated with persons significant to the past (Silicz/Mulkey family). Finally, the Corps has determined that the site is *eligible* under Criterion D for its potential to yield important information about the past.
- A single panel petroglyph site with a series of 19 cupules (PLS-5). The Corps has determined that this panel is *eligible* for listing in the NRHP under Criterion C, as it represents the aesthetic values of the Native American Tribes of the region.
- A large historic trash scatter covering approximately half an acre (PLS-6). The Corps has determined that this site is *not eligible* for listing in the NRHP.
- A historic garage possibly associated with PLS-3 (PLS-7). The Corps has determined that this building is *not eligible* for listing in the NRHP.

Consultation.

State Historic Preservation Officer. During the completion of the EIS for the Isabella DSM project, the Corps determined that the proposed undertaking would likely result in adverse effects to historic properties. Additionally, substantial portions of the Isabella APE, had either not been surveyed and effects could not be determined. At that time, the Corps prepared and executed a Programmatic Agreement (PA) with the SHPO, ACHP and Native American Tribes to guide the Section 106 process during project implementation. Surveys and other investigations completed for this phase of the project have been completed in compliance with the PA, which has stipulations to address the identification and evaluation of cultural resources, and development and implementation of HPTPs. Specific mitigation measures would be developed in accordance with the PA to address any adverse effects on historic properties. The Corps has initiated consultation with the SHPO for the areas and actions covered under this EA on two separate occasions. The first consultation, on 21 November 2014 covered Federally owned lands adjacent and south of the dam. The SHPO concurred with this consultation and finding of no historic properties affected on 24 December 2014. A second consultation concerning private lands acquired or in acquisition by the Corps was initiated on 11 March 2015. The Corps has determined that there are three eligible properties within the boundaries and that there would be adverse effects to one of these sites. The SHPO concurred with these findings on 16 April 2015. Copies of correspondence can be found in Appendix B.

Native American Consultation. Native American consultation for this project is ongoing, commensurate with the PA. Consultation specific to this survey was presented during a Sequoia National Forest Tribal Forum Meeting in December 2014, and local Tribes have been consulted concerning the overall Isabella DSM project area. Additionally, consulting Tribes would continue to be notified of the Corps findings and ongoing project activities and the Corps would continue to solicit their participation and comment.

Assessment Methods. Analysis of the potential impacts was based on evaluation of changes to historic properties within the study area that may result from implementation of the project. The term "historic property" refers to any cultural resource that has been found eligible for listing, or is listed, in the NRHP. Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), outlines the process in which Federal agencies are required to determine the effects of their undertakings on historic properties. In making a determination of the effects to historic properties, consideration was given to:

- Specific changes in the characteristics of historic properties in the study area.
- The temporary or permanent nature of changes to historic properties and the visual study area around the historic properties.
- The existing integrity considerations of historic properties in the study area and how the integrity was related to the specific criterion that makes a historic property eligible for listing in the NRHP.

3.11.3 Effects

Basis of Significance. Any adverse effects on cultural resources that are listed or eligible for listing in the NRHP (i.e., historic properties) are considered to be significant. Effects are considered to be adverse if they:

- Alter, directly or indirectly, any of the characteristics of a cultural resource that qualify that resource for the NRHP so that the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association is diminished.
- Disturb any human remains, including those interred outside of formal cemeteries.

No Action. Under the No Action Alternative, Isabella Dam would continue to operate in accordance with the established Water Control Plan and Flood Control Diagram. The lake capacity (gross pool elevation) operated at the pre-IRRM elevation of 2,589.26 feet NAVD 88 (568,070 acre-feet). The Isabella DSM Project would not be implemented and no action would be taken to acquire the remaining unoccupied or unimproved private parcels, relocate the Corps

OM Facility, or demolish any affected structure that would have been affected by the Isabella Lake DSM Project.

The impacts of a catastrophic flood and dam failure are not within the scope of this analysis but the likelihood and consequences of this occurring would continue to be present under the No Action Alternative. The high probability of dam failure under this alternative would retain the potential for long-term direct significant impacts on recorded and unrecorded cultural resources downstream of dam from flooding and erosion.

Proposed Action. Effects to cultural resources would be from four types of construction related actions: (1) effects to the integrity of the visual and physical setting of historic properties; (2) effects to the structural integrity of historic buildings and structures from demolition; (3) effects from earth moving activities; and (4) effects from clearing, grubbing, and follow-on planting.

The Corps has determined that the ranch complex (PLS-4) is eligible for listing in the NRHP under Criterion A, B, and D and that the project will have an adverse effect on the characteristics that make this site eligible for the NRHP. Construction activities in the area include using portions of the site as a construction staging area for the project. In addition to requiring the area for construction, the site will be subjected to long term vibration which would likely compromise the integrity of any structures, if left standing. As part of construction, the Corps proposes to demolish all standing structures associated with this site to ground level and remove the materials from the site. However, only minimal ground disturbing activities are planned.

3.11.4 Mitigation

While the Corps feels that the structures have been sufficiently recorded, the Corps will develop an HPTP to resolve adverse effects to the site prior to construction actions, specifically the proposed demolition of all structures connected to this site. This mitigation may include the writing and publication of history of the Niell, Silicz, Mulkey family and their contribution to the area that would be made available to the public. This plan will be developed in compliance with the PA and in consultation with the SHPO, ACHP and other appropriate parties. In addition, the plan may include monitoring of any initial ground disturbing activities and temporarily fencing off any areas suspected to contain buried features. If any subsurface cultural deposits or features are found, construction would stop and the find evaluated by an archaeologist.

The Corps has determined that it will avoid both rock art sites (CA-KER-2528 and PLS-5) and so no mitigation measures are necessary for either historic property. Should construction plans change, the Corps will reopen consultation with the SHPO and Native American Tribes as stipulated in the PA.

These mitigation measures would reduce effects to historic properties to less than significant.

CHAPTER 4
CUMULATIVE AND GROWTH-INDUCING EFFECTS

The NEPA regulations require an EA to discuss project effects that, when combined with the effects of other projects, result in significant cumulative effects. The NEPA regulations define a cumulative effect as:

"*The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor or collectively significant actions taken over a period of time*" (40 CFR 1508.7).

NEPA requires an environmental evaluation to discuss cumulative projects effects. The effects of the proposed Phase II Real Estate Acquisition and Relocation action would result in minor net cumulative effects for some resources. Resources such as wildlife habitat would be affected somewhat during construction, but should recover to comparable levels over the long term as a result of mitigation measures.

The Phase II Real Estate Acquisition and Relocation activities would likely have no adverse cumulative effects on geology, soils and seismicity, socioeconomics, recreation, aesthetics, cultural resources, or special-status species. There would be short term cumulative effects on traffic and air quality. The amounts of traffic and emissions would increase due to the operation of construction, and mitigation measures would be implemented to reduce the effects.

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

4.1 LOCAL PROJECTS

This section briefly describes other major local, State and Federal projects near the project area. All of these projects are required to evaluate the effects of the proposed project features on environmental resources in the area. 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.

Isabella Lake DSM Project. The Isabella Lake DSM Project is a federal action approved to remediate significant seismic, seepage, and hydrologic dam safety concerns at the Isabella Lake Main and Auxiliary Dams. The planned features of the Isabella Lake DSM Project are listed below:

- *Phase I Relocations*. Summer 2014 to summer 2017. Preparation for the Phase II dams and spillways and Phase III Borel Canal realignment. Major work includes acquisition of affected private lands, relocation of affected residents, relocation of the USFS Lake Isabella Office, fire station, and Corps OM Facility, replacing affected recreation facilities, and vegetation mitigation activities.
- *Phase II Dams and Spillways*. Spring 2017 to summer 2020. Major work includes Staging area setup, haul route construction, emergency spillway preparation, auxiliary dam foundation preparation, auxiliary dam embankment and buttress construction, existing spillway wall extension, emergency spillway labyrinth construction, emergency spillway apron and excavation, main dam excavation, auxiliary dam buttress construction, and main dam foundation and buttress construction.
- *Phase III Borel Canal*. Fall 2019 to fall 2022. Major work includes Borel Canal upstream coffer dam and tunnel construction, upstream portal, Borel Canal control tower, concrete canal lining, Borel Canal access roads, Borel Canal coffer dam removal, spoils and Engineers Point topsoil.
- *Demobilization and Site Restoration*. Spring 2022 to fall 2022.
- *Return to Routine and Long Term Operations at Isabella Dams*. Spring 2023.

Forest Service Motorized Travel Management EIS (USFS October 2009);

Forest Service Giant Sequoia Monument Management Plan EIS (USFS August 2010);

Kern River Valley Specific Plan (Kern County July 2011);

Kern River Preserve (ongoing);

Borel Hydroelectric Project (ongoing);

Isabella Partners Hydroelectric Project (ongoing);

Bakersfield Resource Management Plan (ongoing);

Weldon Ranch Solar Project (ongoing) and;

Weldon (Foresight) Solar Projects.

The actions on the above 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 frame as a viable action and/or planning period involved. Detailed descriptions of these projects can be found in Section 4.3 of the Isabella Lake DSM Project Draft EIS.

4.2 ANALYSIS OF POTENTIAL CUMULATIVE EFFECTS

4.2.1 Noise

Projects with the potential to affect noise in the project vicinity include various portions of the Isabella Lake DSM Project, the Borel Hydroelectric Project and the Isabella Partners Hydroelectric Project. The proposed project would have negligible noise impacts in the project vicinity and would take place during daytime hours. Cumulative noise impacts would occur for residential areas along Barlow Road and junction of State Route 178 and 155, particularly if the Isabella Lake DSM Project Phase I relocations activities coincide. Similar construction activities include: earthwork, concrete work, and truck hauling operations. The Isabella Lake DSM Project activities have mitigation measures to minimize noise impacts and are anticipated to reduce the impacts to a less than significant level. All cumulative projects would occur outside the project area and would be responsible for minimizing their own noise levels. Noise

generated from the proposed project would be temporary and would occur during daytime hours. The proposed project is not expected to contribute to a significant cumulative noise impact.

4.2.2 Traffic

The Phase II Real Estate Acquisition and Relocation activities would likely overlap with portions of the Isabella Lake DSM Project Phase I Relocation activities. It is expected that traffic impacts would be primarily from the hauling of equipment and material to and from the proposed project sites. The proposed construction activities would temporarily increase traffic levels on some local and regional roadways. Since the project is short term and the haul route for demolition debris disposal would be directed east on State Route 178, the proposed project would not significantly contribute to cumulative effects in the project vicinity.

4.2.3 Air Quality

There is the potential for accumulation of air pollutants with overlap of activities during the proposed project and the Isabella Lake DSM Project Phase I relocations. Also, the proposed future construction-related activities would result in a direct effect on air quality from project-generated criteria air pollutant (PM_{10}) and precursor emissions (ROG and NO_X) from heavy-duty truck travel on proposed haul routes; and from heavy-duty construction equipment at the proposed dam construction, staging, and excavation sites. However, elimination of the need to realign State and County highways and roads originally scheduled during the proposed project timeframe has effectively reduced the overall mitigated construction emissions of NO_x to less than significant. All other years of air quality pollutant emissions were also projected to remain below the significant thresholds. Table 9 below revises the Isabella Lake DSM Project estimated construction emissions with the addition of the proposed Phase II Real Estate Acquisition and Relocation activities:

Table 9
Estimated Construction Emissions (*)

Construction Year	Criteria Pollutants (tons/yr)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
MITIGATED						
2014 Emissions	~~0.67~~	~~4.60~~	~~6.28~~		~~1.34~~	~~0.40~~
	0.00	0.00	0.00	0.00	0.00	0.00
2015 Emissions	~~3.98~~	~~27.51~~	~~37.58~~	~~0.00~~	~~8.01~~	~~2.38~~
	0.61	8.70	3.15	0.01	8.71	2.07
2016 Emissions	~~0.99~~	~~6.86~~	~~9.37~~		~~2.00~~	~~0.59~~
	0.00	0.00	0.00	0.00	0.00	0.00
2017 Emissions	~~7.50~~	~~16.65~~	~~124.88~~	~~0.26~~	~~2.22~~	~~1.82~~
	2.72	15.82	35.52	0.09	13.37	3.57
2018 Emissions	1.54	3.83	30.57	0.02	3.69	0.93
2019 Emissions	4.55	10.47	78.48	0.14	2.88	2.14
2020 Emissions	3.38	8.60	57.08	0.11	1.60	0.98
2021 Emissions	0.61	1.92	15.26	0.01	0.12	0.04
2022 Emissions	0.42	1.46	12.39	0.00	0.09	0.03
EKAPCD SIGNIFICANCE THRESHOLDS	*25*	*25*	*--*	*27*	*15*	*--*
Exceed Threshold?	*No*	~~*Yes*~~ *No*	*No*	*No*	*No*	*No*

(*) See Final EIS – Appendix F: Air Quality Analysis for emissions modeling details on the DSM portion of the Project.

4.2.4 Land Use

The areas affected by the proposed action include the area immediately below Isabella Dams, the reservoir, and adjacent lands. Ten additional private parcels not acquired through the Phase I Real Estate actions would be acquired, and all affected buildings or trailers removed or demolished. This is due to the Isabella Lake DSM Project, which will be implemented within the foreseeable future. To prevent human habitation of land subject to excessive noise levels and fugitive dust during construction, acquisition would be simple fee title. For all real property acquisitions, as described in the current proposed action, landowners are to be compensated based on fair market value of their property. Landowners may also be entitled to relocation expenses provided in accordance with the Uniform Relocation and Real Property Policies Act of 1970, as amended. For these reasons, implementing the current and future projects would not make a significant cumulative effect on land use.

4.3 GROWTH-INDUCING EFFECTS

The proposed action would not directly induce growth in or near the project area. New development must be consistent with existing Kern County general plan policies and zoning ordinances regarding land use, open space, conservation, flood protection, and public health and safety. Local population growth and development would be consistent with the Land Use Element of the Kern River Valley Specific Plan. As mentioned previously, the goal of the proposed action is to mitigate public health concerns from Isabella Lake DSM Project construction generated noise. Construction activities associated with the proposed action would not result in a substantial increase in the number of permanent workers or employees.

CHAPTER 5
COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

5.1 FEDERAL LAWS AND REGULATIONS

Clean Air Act, as amended and recodified (42 U.S.C. 7401 et seq.) *Compliance*. The primary objective of the Clean Air Act is to establish Federal standards for various pollutants from both stationary and mobile sources and to provide for the regulation of polluting emissions via state implementation plans. The project is not expected to violate any Federal air quality standards and would not hinder the attainment of air quality objectives in the local air basin.

Clean Water Act (33 U.S.C. 1251 et seq.) *Compliance*. The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. A Section 404 permit or a section 401 water quality certification application would not be required because the project would not involve the placement of fill in wetlands or 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 Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ).

Endangered Species Act (16 U.S.C. 1531 et seq.) *Compliance*. There are no special-status species that have the potential to occur in or near the proposed action area. There is no proposed or designated critical habitat in or near the proposed action area. No protected or candidate species would be affected by the implementation of the proposed action.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. *Compliance.* The order directs all Federal agencies to identify and address adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. There are no effects on minority or low-income populations.

Fish and Wildlife Coordination Act (16 U.S.C. 661, et seq.) *Compliance*. This act requires Federal agencies to consult with the USFWS and the California Department of Fish and Wildlife before undertaking projects that control or modify surface water. Consultation was not required for the proposed action, as no modification to surface waters would occur as a result of the proposed action.

Farmland Protection Policy Act (7 U.S.C. 4201 et seq.) *Compliance*. This Act requires a Federal agency to consider the effects of its actions and programs on the Nation's farmlands.

The proposed action will not result in any long-term effects on any areas of potential prime or statewide important farmland.

Migratory Bird Treaty Act, as amended (16 U.S.C 703 et seq.) *Compliance*. The Migratory Bird Treaty Act implements various treaties and conventions between the United States, Canada, Japan, Mexico, and Russia, providing protection for migratory birds as defined in 16 U.S.C. 715j. The construction would not disturb any potential or existing habitat in the action area for migratory birds, and the implementations of the proposed action would have no significant effect on this habitat. The proposed action is in compliance with the provisions of this Act.

National Environmental Policy Act (42 U.S.C 4321 et seq.) *Compliance.* This final SEA includes a signed FONSI. Comments (with responses) received during the public review period are included as Appendix C.

National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.). *Compliance.* Section 106 of the NRHP requires a Federal agency to consider the effects of Federal undertakings on historic properties, i.e., cultural resources that are listed in, or are eligible for listing in, the National Register of Historic Places. The implementing regulation for Section 106 is 36 CFR Part 800 (revised 2004), "Protection of Historic Properties," which requires Federal agencies to initiate Section 106 consultation with the California SHPO.

On April 16, 2015, the SHPO concurred with the Corps' determination of eligibility under 36 CFR 800.4(a)(1) and a finding of no effect for the acquisition of 154.4 acres of private lands for the Isabella Lake DSM Project pursuant to 36 CFR 800.4(c)(2), and with Stipulation II.D of the Programmatic Agreement among the Corps, USFS, SHPO and the Advisory Council on Historic Preservation. The SHPO concurrence letter is included in this final SEA (Appendix B).

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. Section 4601, et seq.) *Compliance.* This Act provides for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by Federal and Federally assisted programs and to establish uniform and equitable land acquisition policies for Federal and Federally assisted programs. The proposed action is in compliance with the provisions of this Act.

5.2 COORDINATION AND REVIEW OF THE SEA

The Draft SEA was announced through local media venues and circulated for 15 days to agencies, organizations, and individuals known to have an interest in the project. Copies of the Draft SEA were posted on the Corps website at http://bit.ly/IsabellaDam and provided by mail upon request. Public scoping meetings were conducted on May 4th and 5th in Kernville and Lake Isabella, California. Approximately 35 persons total attended the two meetings, each of which consisted of a brief project update, a description of the proposed action as described in the SEA, and a question/answer period.

Public comments submitted at the public meetings and during the comment period were considered and incorporated into this Final SEA, as appropriate (Appendix C). None of the public comments received necessitated a change in the proposed action or the alternatives or a significant change in the impact analyses or conclusions described in the Draft SEA. This project has been coordinated with all relevant government resources agencies including the USFWS, USFS, EKAPCD, CVRWCB, Kern County, the California SHPO and American Indian Tribes with interest in the project.

5.3 FINDINGS

Based on information in this SEA, the proposed action would have no significant effects on the environmental resources in the project area. Therefore, the proposed action would require no mitigation beyond avoidance, protection, implementation of BMPs, and additional measures proposed in this SEA. The proposed action would meet the requirements for actions permitted following completion of a FONSI as described in 40 CFR 1508.13. These actions would not have a significant effect on the quality of the natural and human environment. Thus, these actions do not require preparation of an Environmental Impact Statement. A FONSI accompanies this SEA.

CHAPTER 6
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CHAPTER 7
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APPENDIX A
SPECIES LIST

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

April 2, 2015

Document Number: 150402062626

Mitch Stewart
U.S. Army Corps of Engineers - Sacramento District
Environmental Resources Branch
1325 J Street
Sacramento, CA 95814

Subject: Species List for Isabella Lake DSM Project - Phase II Real Estate Acquisition and Demolition Project

Dear: Mr. Stewart

We are sending this official species list in response to your April 2, 2015 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be July 01, 2015.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found http://www.fws.gov/sacramento/es/Branch-Contacts/es_branch-contacts.htm.

Endangered Species Division

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 150402062626

Current as of: April 2, 2015

Quad Lists

Listed Species

Fish

Hypomesus transpacificus
delta smelt (T)

Amphibians

Rana draytonii
California red-legged frog (T)

Birds

Coccyzus americanus occidentalis
Western yellow-billed cuckoo (T)

Empidonax traillii extimus
southwestern willow flycatcher (E)

Gymnogyps californianus
California condor (E)

Vireo bellii pusillus
Least Bell's vireo (E)

Candidate Species

Mammals

Martes pennanti
fisher (C)

Quads Containing Listed, Proposed or Candidate Species:

LAKE ISABELLA NORTH (260B)

County Lists

No county species lists requested.

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

APPENDIX B
SHPO CONSULTATION

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

Environmental Resources Branch

NOV 2 1 2014

Dr. Carol Roland-Nawi
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Dear Dr. Roland-Nawi:

In accordance with the Programmatic Agreement among the U.S. Army Corps of Engineers (Corps), the Sequoia National Forest (SQF), the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) regarding the Isabella Lake Dam Safety Modification Study Project, Kern County, California (COE0801C), we are initiating consultation concerning Federal lands within the area of potential effect (APE) located south of Isabella Main and Auxiliary Dams as seen in Enclosure 1. The Corps is authorized to complete work on Isabella Dam under the Flood Control Act of 1944, Public Law 78-534, Chapter 665, Section 10, Page 901.

In accordance with Stipulation II.D, the Corps, in consultation with the SQF, has reviewed the work completed within the boundaries and finds that the area has been subject to at least one archaeological survey, and only three sites have been recorded within the APE. The areas recorded and labeled as Isabella Main Dam and Isabella Aux Dam are outside the APE (USACE 2010). Additionally, many parts of the area under question have been previously disturbed due to dam construction and ongoing maintenance of the dam and other facilities. The Corps has determined that no further surveys are necessary on the areas under Corps jurisdiction, and has consulted with SQF archaeologists Tim Kelly and Karen Miller who agree that no further survey work is necessary on lands under SQF jurisdiction within the boundary depicted in Enclosure 1. A list of projects and a CD with applicable reports is included as Enclosure 2.

Enclosure 1 shows the location of the three sites within the portion of the APE being consulted on at this time: CA-KER-12, P-15-17031, and CA-KER-7791H. CA-KER-7791H was previously determined not eligible for listing in the National Register of Historic Places (National Register) by the SQF in consultation with your office and requires no further consideration.

CA-KER-12 represents a complex bedrock milling site with multiple outcrops and, in the earlier recordings, evidence of midden and artifacts on the surface was noted.

Although no midden and artifacts can be seen at this site currently, the Corps and SQF concur that further testing of the site is necessary to determine if subsurface deposits still exist and whether it is eligible for the National Register.

Finally, P-15-17031 is a small, heavily disturbed site located on SQF property that has evidence of midden deposits. The site was recorded in 2013 by Corps archaeologists Richard Perry (now retired) and S. Joe Griffin (Enclosure 3). Although the site is heavily disturbed, there is some potential that it still retains integrity and may be eligible for the National Register. The Corps, in consultation with SQF, has determined that the site requires archaeological testing to evaluate its eligibility.

At this time, the Corps, in consultation with the SQF, is requesting your concurrence with our determination that no additional survey work is necessary within the portion of the APE depicted in Enclosure 1. Additionally, the Corps is requesting your concurrence with our finding of *no historic properties affected* within this boundary, excluding sites CA-KER-12 and P-15-17031. The Corps will submit an Evaluation Plan for these two sites at a later date. We ask that you provide your response within thirty days of receipt of this letter. Comments or questions may be sent to Ms. Nikki Polson, CESPK-PD-RC, U.S. Army Corps of Engineers, 1325 J Street, Sacramento, California 95814; email at nikki.polson@usace.army.mil; or telephone at (916) 557-6977.

Sincerely,

Alicia E. Kirchner
Chief, Planning Division

Enclosures

cc: (w/enclosures)
Ms. Karen Miller, Forest Archaeologist, Sequoia National Forest, 1839 South Newcomb Street, Porterville, CA 93257
Mr. Tim Kelly, Archaeologist, Kern River Ranger District, Sequoia National Forest, 105 Whitney Road, P.O. Box 9, Kernville, CA 93285
Mr. Reid Nelson, Director, Office of Federal Agency Programs, Advisory Council on Historic Preservation, Old Post Office Building, 1100 Pennsylvania Avenue, NW, Suite 809, Washington, DC 20004

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
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(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

December 24, 2014 Reply in Reference To: **COE080125R**

Alicia E. Kirchner - Chief, Planning Division
Department of the Army
U.S. Army Corp of Engineer District, Sacramento
Corp of Engineers
1325 J Street
Sacramento, CA 95814-2922

Re: Section 106 consultation for the Isabella Lake Dam Safety Modification Study Project in Kern County, California.

Dear Ms. Kirchner;

Thank you for your letter received November 24, 2014, continuing consultation pursuant to the *Programmatic Agreement* among the U.S. Army Corps of Engineers (COE), the Sequoia National Forest (SQF), the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) for the Isabella Lake Dam Safety Modification Study Project. In addition to your letter, you have submitted the following supporting documentation:

- *Memorandum for Record May 8, 2013, Subject: Cultural Resources Survey for the Proposed Isabella Lake Dam Emergency Spillway Geotechnical Exploration and Construction Projects* (Griffin and Perry 2013)

The COE is currently consulting on an area of the overall APE between the Isabella Dam and Spillway and the Auxiliary Dam for the construction activities related to the updating of both of the Dams, the construction of a new spillway, staging areas, access roads, geotechnical borings and building demolition. The area that is currently being consulted (as depicted in the attached map) on also includes an additional area to the east of the auxiliary dam that was not previously included in the APE for this undertaking. Therefore, the COE is also providing documentation of a revised APE to include this area, and requesting my concurrence on this revised APE. The areas proposed for construction related activities in this consultation have been subject to a number of archaeological investigations including a records search and survey conducted by the COE. While two archaeological sites were identified within the APE adjacent to the currently proposed work areas (CA-KER-12 and P-15-17031), they will be excluded from all construction related activities at this time until they can be fully evaluated for NRHP eligibility. These sites will be protected through signage and fencing during construction in the surrounding area. The COE will be submitting an evaluation plan for these resources in the future. Therefore, the COE is requesting my concurrence with their finding on *no historic properties affected* for this portion of the undertaking.

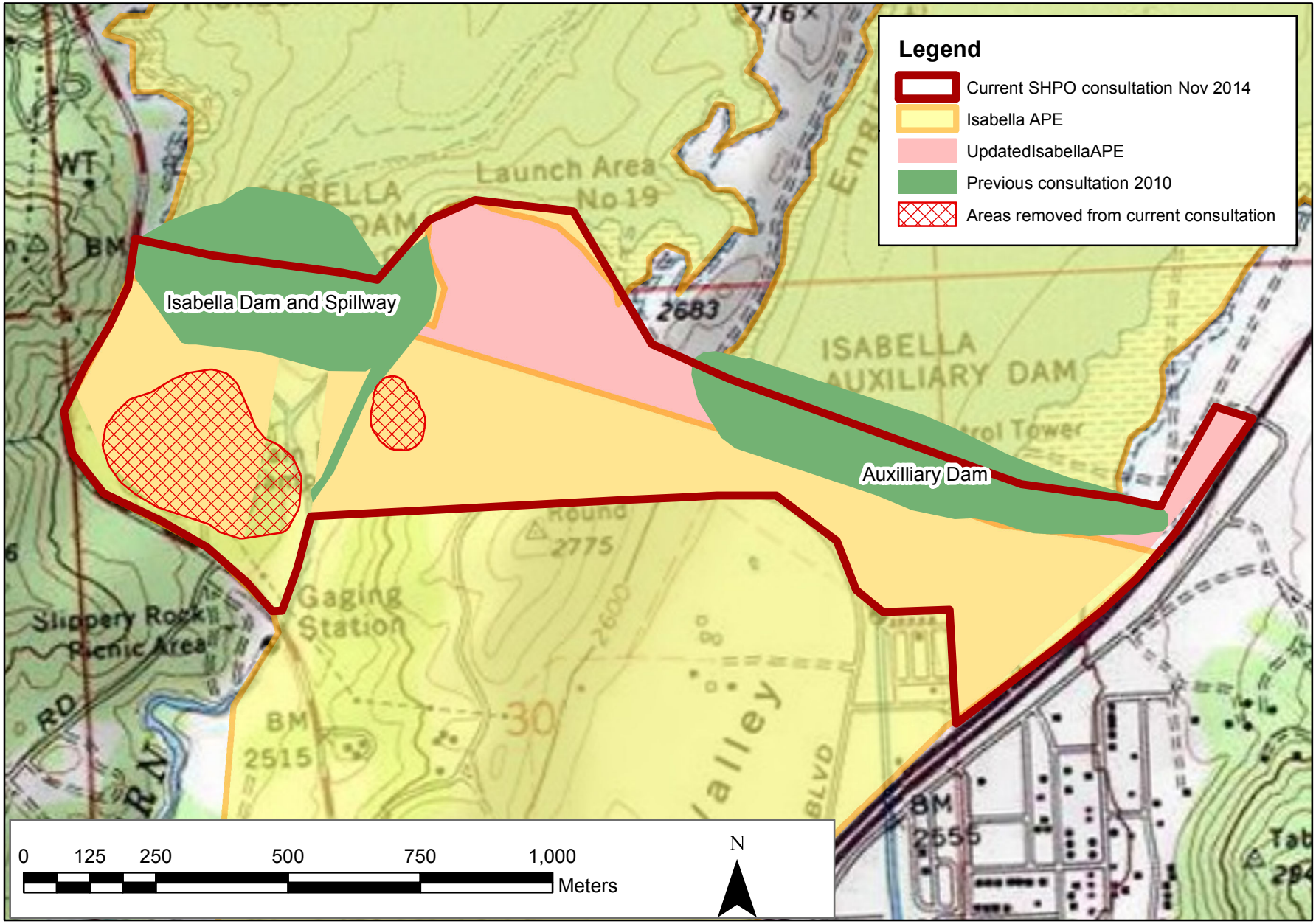
- Based on a review of submitted materials, **I concur** with your finding of *no historic properties affected* for this section of the undertaking. Please provide an evaluation plan to my office for CA-KER-12 and P-15-17031for review and comment prior to initiating any construction related activities that might affect these sites.

Thank you for considering historic properties as part of your project planning. Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Part 800. If you have any questions, please contact Jessica Tudor of my staff at (916) 445-7016 or jessica.tudor@parks.ca.gov.

Sincerely,

Carol Roland-Nawi, PhD
State Historic Preservation Officer

Isabella Consultation on Federal Land South of Isabella and Auxilliary Dam, November 2014.



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

REPLY TO
ATTENTION OF

Environmental Resources Branch

MAR 11 2015

Ms. Carol Roland-Nawi
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Dear Ms. Roland-Nawi:

In accordance with the Programmatic Agreement among the U.S. Army Corps of Engineers (Corps), the Sequoia National Forest, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the Isabella Lake Dam Safety Modification Study Project, Kern County, California (COE0801C), we are initiating consultation concerning private and recently acquired lands within the area of potential effect located south of Isabella Main and Auxiliary Dams as seen on Enclosure 1. The Corps is authorized to complete work on Isabella Dam under the Flood Control Act of 1944, Public Law 78-534, Chapter 665, Section 10, Page 901.

In accordance with Stipulation II.D, the Corps has completed an archaeological and historic building survey within the survey area seen on Enclosure 1. At this time we are submitting our report entitled, "Cultural Resources Inventory of 154.4 Acres of Private Land to be Acquired as Part of the Isabella Dam Safety Modification Project, Kern County, California," (Enclosure 2). This report details the survey methods, findings, determinations and finding of effect.

The survey found and recorded one previously recorded site (CA-KER-2528) and six newly recorded sites (PLS-1, -3, -4, -5, -6, -7). The Corps has evaluated each of the seven sites under the four criteria (A, B, C, and D) and determined that three of the sites are eligible for listing in the National Register of Historic Places (National Register) and four of the sites are not eligible and we are asking for your concurrence on the determinations as specified below. Additional information for each of the sites and determinations can be found in the enclosed report (Enclosure 2).

a. **CA-KER-2528** is single panel pictograph with curvilinear elements. The Corps has determined that this panel is *eligible* for listing in the National Register under Criterion C as it represents the aesthetic values of the Native American tribes of the region.

b. **PLS-1** is a small historic trash scatter that is a known area where trash from the surrounding area was taken to be burned. The Corps has determined that this site is *not eligible* for the National Register.

c. **PLS-3** is a mid-20th Century Trailer Park. The Corps has determined that this site is *not eligible* for listing in the National Register.

d. **PLS-4** is a Ranch Complex dating as early as 1902. The Corps has determined that this site is *eligible* under Criterion A as it has made important contributions to the broad patterns of history (ranching) of the region. Additionally, the Corps has determined that the Ranch Complex is *eligible* under Criterion B as it is associated with persons significant to the past (Silicz/Mulkey family). Finally, the Corps has determined that the site is *eligible* under Criterion D for its potential to yield important information about the past. The period of significance of this site is 1910-1982.

e. **PLS-5** is a single panel petroglyph site with a series of 19 cupules. The Corps has determined that this panel is *eligible* for listing in the National Register under Criterion C, as it represents the aesthetic values of the Native American Tribes of the region.

f. **PLS-6** is a large historic trash scatter covering approximately half an acre. The Corps has determined that this site is *not eligible* for listing in the National Register.

g. **PLS-7** is a historic garage, possibly associated with PLS-3. The Corps has determined that this building is *not eligible* for listing in the National Register.

The Corps has also made a finding of effect concerning the three eligible properties within the project area. The Corps will avoid sites CA-KER-2528 and PLS-5 and will have no adverse effect on either of the rock art panels. The third site, PLS-4, will be adversely affected by construction activities within site boundaries as described in Enclosure 2. The Corps proposes to develop a Historic Property Treatment Plan for the mitigation of effects to this site in compliance with Stipulation VIII of the Programmatic Agreement.

At this time, the Corps is requesting your concurrence with our determinations of eligibility for the seven sites discussed in Enclosure 2. Additionally, the Corps is requesting your concurrence with our finding of *adverse effect* to PLS-4 and no adverse effect to CA-KER-2528 and PLS-5.

We ask that you provide your response within 45 days of receipt of this letter. Comments or questions may be sent to Ms. Nikki Polson, CESPK-PD-RC, U.S. Army Corps of Engineers, 1325 J Street, Sacramento, California 95814; email at nikki.polson@usace.army.mil; or telephone at (916) 557-6977.

Sincerely,

Alicia E. Kirchner
Chief, Planning Division

Enclosures

cc: (w/enclosures)
Mr. Reid Nelson, Director, Office of Federal Agency Programs, Advisory Council on Historic Preservation, Old Post Office Building, 1100 Pennsylvania Avenue, NW, Suite 809, Washington, DC 20004

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www.ohp.parks.ca.gov

APR 2 3 2015

April 16, 2015 Reply in Reference To: COE100825A

Alicia E. Kirchner
Chief, Planning Division
US Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

RE: 154.4 acres of private land to be acquired for the Isabella Lake Dam Safety Modification Project, Kern County, California.

Dear Ms. Kirchner:

Thank you for your letter dated March 11, 2015, requesting consultation regarding the above noted undertaking in accordance with the *Programmatic Agreement Among the U.S. Army Corps of Engineers, The Sequoia National Forest, The California State Historic Preservation Officer and the Advisory Council on Historic Preservation Regarding the Isabella Lake Dam Safety Modification Study Project, Kern County, California* (PA;2012). The U.S. Army Corps of Engineers, Sacramento District (COE) is requesting my concurrence on their determinations of eligibility under 36 CFR §800.4(a)(1) and a finding of effect for the acquisition of 154.4 acres of private lands for the Isabella Lake Dam Safety Modification Project pursuant to 36 CFR§800.4(c)(2), and with Stipulation II.D of the PA.

The Isabella Lake DSM Project EIS determined that residents at the mobile home park and nearby single-family farmhouse could potentially be exposed to significant levels of noise, dust and diesel particulate matter that exceed health standards. To mitigate health concerns, the COE proposes to acquire the affected lands and relocate the residents. Though the acquisition will not result in the potential to effect cultural resources, the subsequent use of the lands for construction related purposes are subject to compliance with the PA for this undertaking. The survey and project area for this portion are within the APE for the Isabella Lake Dam Safety Modification Study Project south of the Isabell Main and Auxiliary Dams as mapped on Enclosure 1 of the current consultation submission. In addition to your letter of March 11, 2015, you have submitted the following document as evidence of your efforts to identify and evaluate historic properties in the project APE:

- *Cultural Resources Inventory of 154.4 Acres of Private Land to be Acquired as Part of the Isabella Dam Safety Modification Project, Kern County, California* (Polson and Montag, 2015)

The COE performed a records search in 2008 and 2009 for the study area which included the Southern San Joaquin Valley Information Center, Bureau of Land Management and U.S. Forest Service archives. Only one previously recorded cultural resource was identified within the study area, a single boulder outcrop with a pictograph (CA-KER-2528). The Kern Valley Museum and Kern River Valley Historical Society records were also accessed, and oral interviews conducted with local residents. A pedestrian survey of study area was conducted in April, June and October, 2014 by COE Archaeologist Nikki Polson and COE Historian Melissa Montag. The survey identified a total of 7 sites including two rock art panels, two historic trash scatters, a trailer park, and a ranch complex. Native American consultation is ongoing for this undertaking and the

consultation specific to this survey took place during a Sequoia National Forest Tribal Forum Meeting in December, 2014. The COE evaluated each of the 7 sites and has made the following determinations of eligibility:

Site #	Site Description	Eligibility Determination
CA-KER-2528	Single panel pictograph	Eligible under Criterion C
PLS-1	Small historic trash scatter	Not Eligible
PLS-3	Mid-20th century trailer park	Not Eligible
PLS-4	Ranch Complex	Eligible under Criteria A, B, and D.
PLS-5	Single panel petroglyph with 19 cupules	Eligible under Criterion C
PLS-6	Large historic trash scatter	Not Eligible
PLS-7	Historic garage	Not Eligible

The Corps has determined that CA-KER-2528 and PLS-5 will be avoided by the undertaking and there will be no adverse effect to either of the rock art panels. However, PLS-4 cannot be avoided by the undertaking and will be adversely affected by construction related activities within the site boundaries. Therefore, the COE proposes to develop a Historic Property Treatment Plan for the resolution of adverse effect to PLS-4 in compliance with Stipulation VIII of the PA. At this time, the COE is requesting my concurrence on their determinations of eligibility for the 7 sites identified within the study area and with their finding of adverse effect to PLS-4 and no adverse effect to CA-KER-2528 and PLS-5. After reviewing the submitted documentation, I have the following comments:

- Pursuant to 36 CFR 800.4(c)(2) and Stipulation III.C of the PA, I concur with the determinations of eligibility presented in the table above. Please ensure that the site records for the sites that have been recorded with temporary field numbers (PLS-1 through PLS-7) are submitted to the Southern San Joaquin Valley Information Center and that primary numbers are requested for these resources.
- Pursuant to 36 CFR 800.5 and Stipulation VII of the PA, while I agree with that the undertaking will not adversely affect CA-KER-2528 and PLS-5, I would like to acknowledge that a single finding of adverse effect is appropriate for this study area, due to the finding that PLS-4 will be adversely effected as a result of the undertaking.
- I support the COE's proposal to prepare a historic property treatment plan in order to resolve adverse effects to PLS-4, pursuant to Stipulation VIII of the PA.
- Please ensure that the HPTP also includes the chosen avoidance measures to be taken in order to ensure that CA-KER-2528 and PLS-5 will be preserved in place and will not be adversely affected by the undertaking.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the COE may have additional future responsibilities for this undertaking under 36 CFR Part 800 and the PA. Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions or concerns, please contact Associate State Archaeologist, Jessica Tudor at (916) 445-7016 or at email at jessica.tudor@parks.ca.gov.

Sincerely,

Carol Roland-Nawi, Ph.D.

Carol Roland-Nawi, PhD
State Historic Preservation Officer

APPENDIX C
RESPONSE TO COMMENTS ON DRAFT SEA

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US Army Corps of Engineers ®
Sacramento District

Public Comment Sheet

Name: Chuck Dunn **Phone:** 951-685 3419

Address: Box 1082 Murrieta, CA 92564

E-Mail: Chuck ~~Dunn~~ @ socalsk8 and surf.com

Comment/Question:

I spoke with Kelly Boyd. I asked why Don Rinaldi had not been contacted She said Gary Hall had spoke with him. ~~A Few~~ Around the time Don was retiring I told her that the # provided by Gary Hall was a number that rotated around the U.S. it was not Don's. I have emailed his current contact months ago. ~~No~~ I told Kelly no one has contacted Don. I related Core staff had threated that the Core would seize the property by Eminent Domain I told her were working with Chicago Title. She Kelly would contact Don. We also discussed me sending emails copying Amanda Fuller.

SIERRA CLUB
KERN-KAWEAH CHAPTER

CENTER for BIOLOGICAL DIVERSITY
Because life is good.

SEQUOIA FORESTKEEPER®

VIA ELECTRONIC MAIL

May 12, 2015

U.S. Army Corps of Engineers
Sacramento District Public Affairs Office
Contact: Tyler M. Stalker
1325 J Street
Sacramento, CA 95814
Email: isabella@usace.army.mil; tyler.m.stalker@usace.army.mil

RE: **Draft Supplemental EA Phase II Real Estate Acquisition and Location Isabella Lake Dam Safety Modification Project.**

Dear Responsible Officer:

The Kern-Kaweah Chapter of the Sierra Club, Sequoia ForestKeeper, and the Center for Biological Diversity ("Center") (collectively "conservation groups") thank you for this opportunity to submit comments on the Draft Supplemental Environmental Assessment ("SEA") for Phase II Real Estate Acquisition and Location associated with the Isabella Lake Dam Safety Modification Project. Our groups have participated in the public review process for the U.S. Army Corps of Engineers ("Corps" or "ACOE") Isabella Lake Dam Safety Modification Project including by submitting comments on the DEIS on May 21, 2012 and supplemental comments on the DEIS providing new information to the Corps on January 7, 2015. Those comments are incorporated as though fully set forth herein. 2.1

The SEA relates primarily to project refinement but fails to address several issues. In addition to ongoing questions raise in our earlier comments regarding the adequacy and implementation of mitigation measures for Southwestern Willow Flycatcher and the need for additional mitigation for the Western Yellow-Billed Cuckoo, the conservation groups

are concerned that the Corps has not adequately addressed the following issues related to impact avoidance, minimization and mitigation measures for the project:

- Impacts to Alkali Mariposa Lily from the proposed siting of a small visitor center in the Bob Marshal Preserve
- The need for effective measures to prevent the spread of invasive weeds particularly during the drawdown and for specific measures to be adopted to reduce and eliminate invasive tamarisk.

2.1

Alkali Mariposa Lily

The Alkali Mariposa Lily (*Calochortus striatus)* is a species of concern limited to the edges of alkali marshland. It grows in mineralized soil in four distinct areas in the Kern River Valley and was one of the reasons the Bob Powers Preserve was set aside as a natural area. 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).

For several years, Alison Sheehey and other botanists conducted surveys of the fecundity of the Alkali Mariposa Lily on the preserve during the flowering season which occurs between May 1 and June 4. The best date for survey is typically the third week of May under average precipitation and temperature patterns.

2.2

The Army Corps of Engineers is considering placing a tiny visitor center on the Bob Powers Preserve that is in line with their strategic plan. (See http://www.co.kern.ca.us/artman2/main/uploads/1/bob-powers-gateway-preserve.pdf Unfortunately, the footprint of potential new visitor center and footpaths are directly adjacent to the lily which doesn't appear conducive to protection. We urge the Corps to consider other alternatives to avoid impacts to the lily.

Invasive Weeds and Tamarisk Control

The drawdown of the reservoir for the "repair" has had an unintended consequence of exposing millions of invasive species seeds, specifically salt cedar. Five species of Tamarix have been identified in California: *T. ramosissima, T. chinensis, T. gallica, T. parviflora,* and the less-invasive *T. aphylla*. The four highly invasive species are finely-branched shrubs or trees less than twenty-six feet tall with small scale-like leaves that look similar to conifers in the juniper group. These fast growing invasives crowd out native riparian vegetation and create an overly alkaline condition from leaf drop. The habitat created is less than optimum for many of the riparian obligate species but in areas with no native habitat available, salt cedar becomes an important albeit poor substitute.

2.3

As the drawdown of the reservoir is wholly a condition of the Army Corps of Engineers repair of the Isabella dam but has been compounded by the continuing drought, the underfunded effort by the U.S. Forest Service is understandable but completely

unsatisfactory. The removal of salt cedar is best when the entire plant is pulled and removed. The larger plants also respond to being pulled and removed but treating the trunks immediately with herbicide applied directly to the quickly healing cut is necessary. Broadcast spray by unsupervised operators is absolutely ineffective and dangerous in an area that supplies the potable water for over ½ million people.

The conservation groups believe that time is of the essence but the removal of the salt cedar must be funded and done by licensed and well-trained contractors in order to alleviate this problem. In addition, interspersed within the salt cedar seedlings and saplings are red, black, and yellow willow and Fremont cottonwood that must be protected as extremely valuable primary and mid-stage seral habitat for Southwestern Willow Flycatcher and Western Yellow-billed Cuckoo. 2.3

U.S. Forest Service has indicated that funding for surveys of the lakebed for evidence of archeological and cultural sites must be completed prior to implementation of the tamarisk (tamarix) removal project, so these resources are protected from damage. This should provide more than sufficient time for the Corps to consider and adopt a meaningful and effective protocol for tamarisk removal during the drawdown period.

Given this information we urge the Corps to revise the SEA to include alternatives and other measures to protect the Alkali Mariposa Lily and to reduce and eliminate the spread of invasive weeds including tarmarisk during the drawdown as part of the refinement of the Isabella Lake Dam Safety Modification Project. 2.4

Respectfully submitted,

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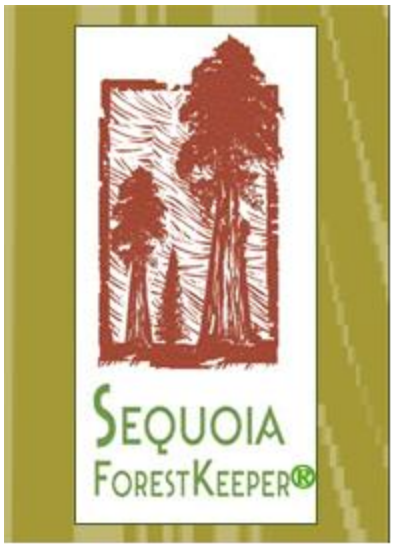

VIA ELECTRONIC MAIL

May 13, 2015

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RE: **Draft Supplemental EA Phase II Real Estate Acquisition and Location Isabella Lake Dam Safety Modification Project.**

Dear Responsible Officer:

Sequoia ForestKeeper thanks you for this opportunity to submit comments on the Draft Supplemental Environmental Assessment ("SEA") for Phase II Real Estate Acquisition and Location associated with the Isabella Lake Dam Safety Modification Project. Sequoia ForestKeeper has participated in the public review process for the U.S. Army Corps of Engineers ("Corps" or "ACOE") Isabella Lake Dam Safety Modification Project including by submitting comments on the DEIS on May 21, 2012 and supplemental comments on the DEIS providing new information to the Corps on January 7, 2015, and on the SEA on May 13, 2015. Those comments are incorporated as though fully set forth herein.

3.1

The SEA relates primarily to project refinement but fails to address an additional issue. In addition to ongoing questions raise in our earlier comments regarding the adequacy and implementation of mitigation measures for Southwestern Willow Flycatcher and the

need for additional mitigation for the Western Yellow-Billed Cuckoo, as well as for the Alkali Mariposa Lily, Sequoia ForestKeeper is concerned that the Corps has not adequately addressed the following issues related to impact avoidance, minimization, and mitigation measures for the project:

- Impacts to groundwater from the proposed diversions from the water table to be used for dust abatement and used for washing the crushed and screened rock needed to generate the various sands, gravels and rock for construction.
- The need for effective measures to prevent the spread of particulates that are washed out of the sand gravel, and rock from being disbursed during washing and dust abatement and for specific measures to be adopted to reduce and eliminate particulates from entering into the reservoir or downstream navigable waterways of the Kern River.

3.1

CORPS Statements at the Meeting on the SEA in Kernville, CA on May 4, 2015

Ara Marderosian attended the Corps Meeting on the SEA in Kernville, CA on May 4, 2015. The following notes of statements made by Corps representatives during the meeting: "Borel canal issue – the canal relocation is being discussed, but it is still part of the plan – PM 2.5 and PM10 monitors and detectors are going to be used surrounding the project area – groundwater will be used for dust abatement.
The new design that includes crushing the rock available after blasting will create some dust plumes. Water placed in the unused Borel canal and held for use to abate dust plumes created during the rock crushing activity and sand /gravel hauling activities could be used to abate the dust. The depth of the diversions from the water table could affect some local wells. We are working to see where we will acquire the water we need for dust abatement and operations. The reservoir water is fully allocated. We are discussing the options."

3.2

CORPS Statements on the use of water for implementation of the Isabella Lake Dam Safety Modification Project

The DEIS and SEA for the Isabella Lake Dam Safety Modification Project make a number of statements regarding the use of water for implementation of the Isabella Lake Dam Safety Modification Project.

"Proposed Action. This alternative would have short-term effects on air quality during the demolition periods of the project. The operation of vehicles and heavy equipment, including large transport trucks, front-end loaders, and water trucks, would produce emissions such as exhaust and PM10. In addition, there would be short-term increases in PM10 and PM2.5 due to excavation and operation of vehicles and heavy equipment." (SEA page 34)

3.3

"The Isabella Lake DSM Project has adapted the most recent amendments to Rule 402 as commitments in an effort to further reduce potential air quality impacts from fugitive dust. Best management practices (BMP), such as applying water to form a visible crust on the soil, limiting off-road vehicle speed to 15 mph or less, and the application of water

to the exterior of the buildings and to unpaved surfaces where materials may fall during demolition, are required to minimize fugitive dust from the project. Compliance with the applicable EKAPCD rules and implementation of the appropriate BMPs such as **controlling fugitive dust by watering disturbed soils** would minimize air quality effects to a less-than-significant level." (SEA page 36)

"Basis of Significance. **An alternative would be considered to have a significant adverse effect on water quality if it would substantially degrade water quality, contaminate a public water supply, substantially degrade or deplete ground water resources, interfere with ground water recharge, or expose special status species or humans to substantial pollutant concentrations.**" (SEA page 37)

"Basis of Significance. An alternative would be considered to have a significant adverse effect on water quality if it would substantially degrade water quality, contaminate a public water supply, substantially degrade or deplete ground water resources, interfere with ground water recharge, or expose special status species or humans to substantial pollutant concentrations." (SEA page 37)

"Proposed Action. While there would be no in-water work for the proposed action, it would result in the disturbance of more than one terrestrial acre (approximately two acres of soil disturbance). However, the demolition areas are heavily impacted by previous human disturbance, being primarily disturbed by residential or agriculture use, thus reducing water quality in the immediate vicinity of the proposed demolition action. The disturbance of soil during the proposed demolition of the structures could degrade local water quality further due to increased surface runoff in areas adjacent to the Kern River, Isabella Lake, and Borel Canal, impacting both the chemical and biological aspect of water quality. Inadvertent spills of oil or fuels from construction equipment could be a source of ground water contamination at work or staging areas." (SEA page 37)

"The proposed project would result in the disturbance of more than one acre; therefore, the contactor would be required to prepare a NPDES storm water permit (Section 402 of the CWA) from the Central Valley Regional Water Quality Control Board (CVRWCB). The Construction Storm Water Permit covers storm water discharges from construction sites discharging to waters of the United States. A storm water pollution prevention plan (SWPPP) is typically required under this permit and would be the responsibility of the contractor. The SWPPP would be designed prior to groundbreaking and include necessary BMPs to prevent potential pollutants from leaving the construction site during a storm event. Fugitive dust control measures are also included as part of the SWPPP. The contractor would be responsible for implementing, maintaining, and monitoring BMPs during demolition." (SEA page 37)

"There would be no dredge or fill effects to streams, creeks, drainages, or any other bodies of open water; therefore, Federal CWA Section 404 documentation would not be required. **In addition, there is no in-water activity which would require a State CWA Section 401 Certification**." (SEA page 38)

3.3

"In 2014, the prior 2011 Phase I Environmental Site Assessment (ESA) was updated with a focus on those USA and private parcels affected by the Isabella Lake DSM Project. This updated ESA was conducted to identify recognized environmental conditions, including the presence or likely presence of any hazardous substances or petroleum products under conditions that indicate an existing release, a past release, or the material threat of a release into structures, the ground, and groundwater or surface waters of the affected properties." (SEA page 40)

"The Corps has determined that construction of the Emergency Spillway would require controlled blasting during excavation to break up the rock-outcrops located in the proposed channel. The blasting program anticipated for this construction is described in Section 2.3.13 (Support Actions Common to Alternatives).
It is anticipated that excavated materials from the proposed Emergency Spillway channel would be used as the main borrow material source to construction the modification features for the Alternative Base Plan. The **excavated materials likely would be crushed, screened and washed** as needed to generate the various sands, gravels and rock required and either temporarily stockpiled or placed directly into permanent construction." (ACE DEIS March 2012 pg2-11)

"The following dust control measures:
a. **Water a minimum of twice daily unpaved/untreated roads and disturbed soil areas**.
b. Cease all clearing, grading, earth moving, and excavation during periods of winds greater than 20 miles per hour when disturbed material is easily windblown.
c. **Water or secure all fine material transported off-site**.
d. **Periodically water stockpiles of soil or other fine loose material**.
e. Control weeds by mowing instead of discing were acceptable to the fire department.
f. **Seed and water inactive soil areas in the construction site** until plant growth is evident, or treat with a dust palliative, or **water twice daily until restored** according to a contractor-prepared *Site Restoration Plan*.
" (ACE DEIS March 2012 pgES-13)

"Water rights for irrigation are defined for lands within the lake area and downstream of Isabella Dam. The water control manual states that the lands within Isabella Lake up to elevation 2,620.76 feet, together with their water rights, have been acquired in fee by the United States government (Corps 1978). The State of California estimated that the average amount available from these combined water rights is 6,500 acre-feet per season (April, May, and June). This is based on the assumption that the average seasonal consumption of the lake area from gravity diversion is the measure of the combined appropriative water rights of the landowners in that area. This includes 6,000 acre-feet from South Fork rights and 500 acre-feet from North Fork rights. During a dry year, the water available from the North Fork would remain at about 500 acre-feet, while that available in the South Fork would be reduced to about 2,000 acre-feet. The lands suitable for farming or grazing were available for leasing. The leases may use the water in the same manner as it was used in the past. The remainder of the water is stored in Isabella Lake for public recreation (Corps 1978). The use of Kern River water for irrigation

3.3

downstream of Isabella Dam has been governed by the Miller-Haggin agreement of July 1888 and as amended most recently in 1964." (AEC DEIS March 2012 pg1-11)

"The typical work day (including daylight) would be 10 hours for workers, with a daily running time for the majority of equipment and vehicles of 8 (daylight) hours, except for mechanics trucks, fuel/lube trucks, and pick-up trucks, whose typical running time would be 4 (daylight) hours. A notable exception to the typical equipment running time would be the diesel generators (up to four) required at the Auxiliary Dam to keep the dewatering pumps at the Auxiliary Dam operating 24-7 for the duration of the construction periods (for each alternative) to support construction of the remediation measures at the Auxiliary Dam. The dewatering wells would be required when the downstream foundation area of the Auxiliary Dam is temporarily excavated and re-compacted below the existing ground surface. Dewatering would be required during this time to ensure dam safety and to improve constructability." (AEC DEIS March 2012 pg2-57)

Questions Not Answered in the Meeting on the SEA in Kernville, CA on May 4, 2015:

(1) From where is the water to be acquired for processing the excavated material while blasting, hauling, crushing, screening, and washing?
(2) How will the Corps deal with the lite materials (sand, PM10 and PM2.5) captured and entrained by the washing process to prevent these particles from contaminating Isabella Reservoir or down-stream Kern River?
(3) Because a washing process using water to wash the products of this crushing, screening, and washing process could cause sediment / particulates of various sizes to be washed into the reservoir or river, have Section 401 and Section 404 Clean Water Act certifications been applied for and acquired for this crushing, screening, and washing process? Please provide copies of the applications and certificates acquired for this crushing, screening, and washing process.
(4) If water needed for dust abatement and operations to wash sand, gravel, and rock for use in construction of the Isabella Dam Modification Project were taken by diversions from the water table and those diversions could affect some local wells or could cause sediment / particulates of various sizes to be washed into the reservoir or river, does this use of surface or groundwater conflict with the "waste or unreasonable use" section of the California Constitution. (See Article 10, Section 2: "It is hereby declared that . . . the waste or unreasonable use . . . of water be prevented . . . The right to water or to the use or flow of water . . . does not and shall not extend to the waste or unreasonable use . . . of water." [See Appendix A]

There should be more than sufficient time for the Corps to consider and adopt a meaningful and effective protocol for washing and dust abatement processes during the construction period that does not cause sediment to flow into the Kern River or Isabella Reservoir.

Given this information we urge the Corps to revise the SEA to include alternatives and other measures to protect the reservoir and downstream navigable waterways of the Kern River and to reduce and eliminate the spread of sediment and particulates during the

3.3
3.4
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3.8

sand, gravel, and rock washing and dust abatement processes as part of the refinement of the Isabella Lake Dam Safety Modification Project.

3.8

Respectfully submitted,

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Appendix A

California Constitution

ARTICLE 10 WATER
"SEC. 2. It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water. Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained."

RESPONSE TO COMMENTS ON DRAFT SEA

Phase II Real Estate Acquisition and Relocation
Isabella Lake Dam Safety Modification Project
Kern County, California

1. Mr. Chuck Dunn

1.1. The comment expresses concern that key landowners have not been contacted. The comment has been noted.

2. Conservation Groups

2.1. The comment presents introductory material. Thus, no response is provided.

2.2. The comment urges the Corps to consider other alternatives to avoid impacts to the Alkali Mariposa Lily (*Calochortus striatus).* The Phase II real estate actions proposed in this SEA will not impact the Alkali Mariposa Lily. This species is not known to be present on lands proposed for actions as described in this SEA.

2.3. The comment suggests that the Corps is responsible for the recent infestations of tamarisk (*Tamariz ramosissima*) (salt cedar) within the gross pool of the reservoir due to the Isabella Lake DSM Project and operation of the reservoir at an interim risk reduction measure (IRRM) pool elevation of 2,589.26 feet above sea level (361,250 acre-feet). The comment also requests the Corps to consider and adopt a meaningful and effective protocol for tamarisk removal during the drawdown period. Surveys conducted by the USFS have determined that nearly all tamarisk populations are currently located well below the IRRM pool elevation of 2,589.26 feet above sea level (361,250 acre-feet). Thus, the tamarisk infestation is more likely due to the State-wide exceptional drought which has evolved from much less than average precipitation during the last four years. On March 17, 2015, the USFS initiated a request for comments regarding their proposal to control tamarisk at Isabella Lake (File Code 1950/2900). We encourage the commenter to pro-actively participate in the USFS public scoping process for this important topic.

2.4. The comment presents an overall summary of comments previously addressed. Thus, no response is provided.

3. Sierra ForestKeeper

3.1. The comment presents introductory material. Thus, no response is provided.

3.2. The comment reiterates statements made by the Corps at the public meeting held on May 4, 2015 in Kernville, California regarding the Phase II real estate actions proposed. Thus, no response is provided.

3.3. The comment cites written text from the SEA, and the Draft and Final EIS for the Isabella Lake DSM Project, with a focus on the use of water from implementation of the Isabella Lake DSM Project. Thus, no response is provided.

3.4. The comments asks from where is the water to be acquired for processing the excavated material while blasting, hauling, crushing, screening, and washing. The Phase II real estate actions proposed in this SEA will not involve blasting, hauling, crushing, screening, or washing. However, water used to reduce fugitive dust emissions generated from any structure demolition proposed would likely be purchased from a water service provider which is contracted to reduce fugitive dust emissions to the extent required under Rule 402 as part of the California State Implementation Plan.

3.5. The comment asks how the Corps will deal with the (***light***) materials (sand, PM10 and PM2.5) captured and entrained by the washing process to prevent these particles from contaminating Isabella Reservoir or down-stream Kern River. The Phase II real estate actions proposed in this SEA will not involve material washing. However, the proposed project would result in the disturbance of more than one acre and require the approval of a storm water pollution prevention plan (SWPPP) by the Central Valley Regional Water Quality Control Board (CVRWQCB) before any land disturbing activities are implemented. Since any proposed demolition is located downstream of the reservoir and well away from the Kern River, there would be no significant effect to Waters of the US with implementation of Best Management Practices approved by the CVRWQCB.

3.6. The comment states that a washing process using water to wash the products of the crushing, screening, and washing process could cause sediment/particulates of various sizes to be washed into the reservoir or river. The comment also asks if a Section 401 and Section 404 Clean Water Act certifications been applied for and acquired for this crushing, screening, and washing process. The comment also requests copies of the applications and certificates acquired for this crushing, screening, and washing process. The Phase II real estate actions proposed in this SEA will not involve blasting, hauling, crushing, screening, or washing, nor is any in-water work anticipated. Thus, a 401 certification or 404 permit under the Clean Water Act is not required for the proposed action.

3.7. The comment references a section of the California Constitution (Article 10, Section 2) and asks if water necessary for dust abatement would be considered a “waste or unreasonable use” of water. The amount of water necessary for proposed action dust abatement would likely not be substantial. A majority of the structures are trailers and, as stated in the SEA, would be hauled off-site for recycling. For those structures requiring on-site demolition, some would only be demolished down to slab foundation with minimal soil disturbance. Other structures with foundations requiring removal would use water to the minimum amount required for fugitive dust abatement. The use of water to control fugitive dust for the proposed action would not be considered a waste or unreasonable use of water.

3.8. The comment presents an overall summary of comments previously addressed. Thus, no response is provided.