



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

Environmental Resources Branch

JUL 10 2017

TO ALL INTERESTED PARTIES:

The Draft Supplemental Environmental Assessment (SEA) for the Modification of State Route (SR) 155 at French Gulch Recreation Area (RA) is now available for public review. A Draft Finding of No Significance is also available. These documents have been prepared in conjunction with the Isabella Lake Dam Safety Modification (DSM) Project in Kern County, California, by the U.S. Army Corps of Engineers (USACE) in cooperation with the California Department of Transportation and the United States Department of Agriculture Forest Service. Construction of Isabella Dam and Lake was authorized by the Flood Control Act of 1944, Public Law 78-534.

In compliance with the National Environmental Policy Act, the Isabella Lake DSM Project was previously evaluated with a Final Environmental Impact Statement. The Record of Decision for the project was signed on December 18, 2012. This Draft SEA discusses and discloses any potentially beneficial or adverse effects that may result from modification to SR 155 at the French Gulch RA.

The Draft SEA is available on the USACE website for a 30-day review and comment period at: <http://www.spk.usace.army.mil/Missions/Civil-Works/Isabella-Dam>. Copies will also be available at the USFS Kern River District Offices in Lake Isabella and Kernville, and at the local libraries listed as follows:

Kern River Valley Branch Library  
7054 Lake Isabella Blvd  
Lake Isabella, CA 93240

Beale Memorial Library  
701 Truxtun Avenue  
Bakersfield, CA 93301

Wofford Heights Branch Library  
6400-b Wofford Blvd.  
Wofford Heights, CA 93285

Ridgecrest Branch Library  
131 East Las Flores Avenue  
Ridgecrest, CA 93555

Public meetings will be held in July 2017 at the following locations and times:

~~Meeting #1 – Tuesday, July 24, 2017, 6-8 p.m. at the Kern River Veterans Seniors Center (6405 Lake Isabella Road, Lake Isabella, CA 93240).~~

**\*\*\* CHANGE - Public meeting dates were listed incorrectly on the original document. Corrects dates are:**

**Meeting #1 - Monday, July 24, 2017, 6-8 p.m. at the Kern River Veterans/Senior Center (6405 Lake Isabella Road, Lake Isabella, CA 93240)**

**\*\*\* CHANGE - Public meeting dates were listed incorrectly on the original document. Corrects dates are:**

**Meeting #2 - Tuesday, July 25, 2017, 6-8 p.m. at Kernville Elementary School (13350 Sierra Way, Kernville, CA 93238)**

-2-

~~Meeting #2 - Wednesday, July 25, 2017, 6-8 p.m. at Kernville Elementary School, (13350 Sierra Way, Kernville, CA 93238).~~

Please send any written comments by August 14, 2017 to Mr. Tyler Stalker (CESPK-PA), U.S. Army Corps of Engineers, Sacramento District, 1325 J Street, Sacramento, California 95814-2922, or by email: [tyler.m.stalker@usace.army.mil](mailto:tyler.m.stalker@usace.army.mil).

Thank you for your interest in this project.

Sincerely,



Alicia E. Kirchner  
Chief, Planning Division

# Draft Supplemental Environmental Assessment

## Modification of State Route 155 at French Gulch Recreation Area *Part of the Isabella Lake Dam Safety Modification Project*

Kern County, California  
June 2017



**US Army Corps  
of Engineers®**

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



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



California Department of Transportation  
Cooperating Agency

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## General Information About This Document

### What is included in this document:

The document contains a draft Finding of No Significant Impact (FONSI), and a supplemental environmental assessment (SEA). The document examines the environmental effects of a proposed project to modify State Route 155 at the entrance to the French Gulch Recreation Area by the U.S. Corps of Engineers (USACE). The proposed modification is intended to accommodate a projected increase in recreational traffic at the intersection of the French Gulch Recreation Area on National Forest land between the towns of Lake Isabella and Wofford Heights in Kern County, California. The draft FONSI describe draft conclusions and proposed decisions based upon the draft SEA.

The draft SEA is being circulated for public review from July 14, 2017 to August 14, 2017. Written comments received on the draft document will be addressed and documented within the Final SEA.

### How you can be involved:

Read the document.

This document can be downloaded from the following website:

<http://www.spk.usace.army.mil/Missions/Civil-Works/Isabella-Dam/>

Hard copies and/or DVDs are also available at the following locations:

Kern River Valley Branch Library  
7054 Lake Isabella Blvd.  
Lake Isabella, CA 93240

Wofford Heights Branch Library  
6400-b Wofford Blvd.  
Wofford Heights, CA 93285

Beale Memorial Library  
701 Truxtun Avenue  
Bakersfield, CA 93301

Ridgecrest Branch Library  
131 East Las Flores Avenue  
Ridgecrest, CA 93555

Sequoia National Forest  
Kern River Ranger District Office  
105 Whitney Rd.  
Kernville, CA 93238

Sequoia National Forest  
Kern River Ranger District Office  
4875 Ponderosa Rd.  
Lake Isabella, CA 93240

Sequoia National Forest  
Forest Supervisors Office  
1839 South Newcomb Street

Porterville, CA 93257

Attend the public hearing:

Meeting #1 on –July 24, 2017, 6-8 p.m. at the Kern River Veterans Seniors Center (6405 Lake Isabella Road, Lake Isabella, CA 93240);

or

Meeting #2 on July 25, 2017, 6-8 p.m. in Kernville, location to be announced.

Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to USACE by the deadline. Submit comments via U.S. mail to: Tyler Stalker, (CESPK-PA)-, U.S. Army Corps of Engineers, 1325 J Street, Sacramento, CA 95814, or:

Submit comments via email to: [Tyler.m.Stalker@usace.army.mil](mailto:Tyler.m.Stalker@usace.army.mil)

Submit comments by the deadline: August 14, 2017

**What happens next:**

After comments are received from the public and reviewing agencies, USACE may 1) give environmental approval to the proposed project, 2) conduct additional environmental studies, or 3) abandon the project. If the project is given environmental approval, USACE could design and construct all or part of the project.

**DRAFT FINDING OF NO SIGNIFICANT IMPACT  
ISABELLA LAKE DAM SAFETY MODIFICATION PROJECT  
STATE ROUTE 155 MODIFICATION AT FRENCH GULCH  
RECREATION AREA, KERN COUNTY, CALIFORNIA**

The U.S. Army Corps of Engineers, Sacramento District, has conducted an environmental analysis in accordance with the National Environmental Policy Act (NEPA) of 1969 as amended. I determined that implementing the proposed State Route (SR) 155 Modification at French Gulch Recreation Area (RA) on the Sequoia National Forest (USFS) would have no significant effects on the quality of the human environment. This Supplemental Environmental Assessment (SEA) is tiered to the 2012 Isabella Lake Dam Safety Modification (Isabella Lake DSM) Project Environmental Impact Statement (EIS). The SEA focuses on continuing efforts to mitigate for USFS recreational facilities that must be relocated due to the Isabella Lake DSM Project.

The FONSI as described in the SEA is to construct road modifications on SR 155 at the intersection of French Gulch RA. The modifications would improve traffic operations by reducing possible future congestion at the interim French Gulch Boat Launch. Widening of the highway and introduction of a left-turn lane would also provide greater sight distance for vehicles accessing the Boat Launch, which is to be constructed following the SR 155 Modification.

The possible consequences of the work described in this SEA have been studied with consideration given to environmental, cultural, social, and engineering feasibility. The views of other interested agencies, organizations, and individuals have also been considered. Compensatory mitigation for habitat affected by the Proposed Project would be coordinated with the U.S. Fish and Wildlife Service, and consultation has occurred with the State Historic Preservation Officer.

In evaluating the effects of the Proposed Action, specific attention has been given to any environmental conditions that could potentially be affected. All construction would be implemented in compliance with applicable Federal, State, and local laws and regulations. The USACE is committing to implement Best Management Practices, avoidance protocols, and other minimization and mitigation measures summarized within Appendix A of the SEA. These measures would be used prior to and during construction to reduce effects related to traffic, air quality, climate change, cultural resources, biological resources and recreation such that any Proposed Action effects would be reduced to less-than-significant.

Based upon my review of the SEA, which is incorporated herein by reference, and all applicable laws, executive orders, regulations, and local government plans considered in the evaluation, I have determined that the Proposed Project would have no significant, direct, indirect or cumulative effects on environmental, social, or cultural resources. Based on these considerations, it is my determination that the Proposed Project does not constitute a major

Federal action that would significantly affect the human environment. Therefore, preparation of an Environmental Impact Statement is not required.

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Date

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David G. Ray  
Colonel, U.S. Army  
District Commander



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## LIST OF ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effects
BMPs	Best Management Practices
CAR	Coordination Act Report
CARB	California Air Quality Resources Board
CO <sub>2e</sub>	Carbon dioxide equivalent
CVRWQCB	Central Valley Regional Water Quality Control Board
CY	Cubic yards
dB	Decibel
dBA	A-weighted sound level
DEIS	Draft Environmental Impact Statement
DSM	Dam Safety Modification
EIS	Environmental Impact Statement
EDR	Environmental Data Resources, Inc
ESA	Endangered Species Act
ESA	Environmental site assessment
EKAPCD	Eastern Kern Air Pollution Control District
EO	Executive Order
ER	Engineering Regulation
FEIS	Final Environmental Impact Statement
GHG	Greenhouse Gases
GWP	Global Warming Potential
FONSI	Finding Of No Significant Impact
HTRW	Hazardous, Toxic, and Radiological Waste
Isabella Dams	Isabella Lake Main Dam, Spillway and Auxiliary Dam
KRVSP	Kern River Valley Specific Plan
NPDES	National Pollution Discharge Elimination System
NEPA	National Environmental Quality Act
ND	Negative Declaration
NHRP	National Cooperative Highway Research Program
PA	Programmatic Agreement
PM	Post Mile
RA	Recreation Area
ROD	Record of Decision
SEA	Supplemental Environmental Assessment
SHPO	California State Historic Preservation Officer
SR	State Route

SQF	Sequoia National Forest
SWPPP	Storm Water Pollution Prevention Plan
LOS	Level of Service
USACE	United States Army Corps of Engineers
USFS	United States Department of Agriculture Forest Service
USFWS	United States Fish and Wildlife Service
VELB	Valley Elderberry Longhorn Beetle

# **CHAPTER 1.0 - PURPOSE AND NEED FOR THE ACTION**

## **1.1 INTRODUCTION**

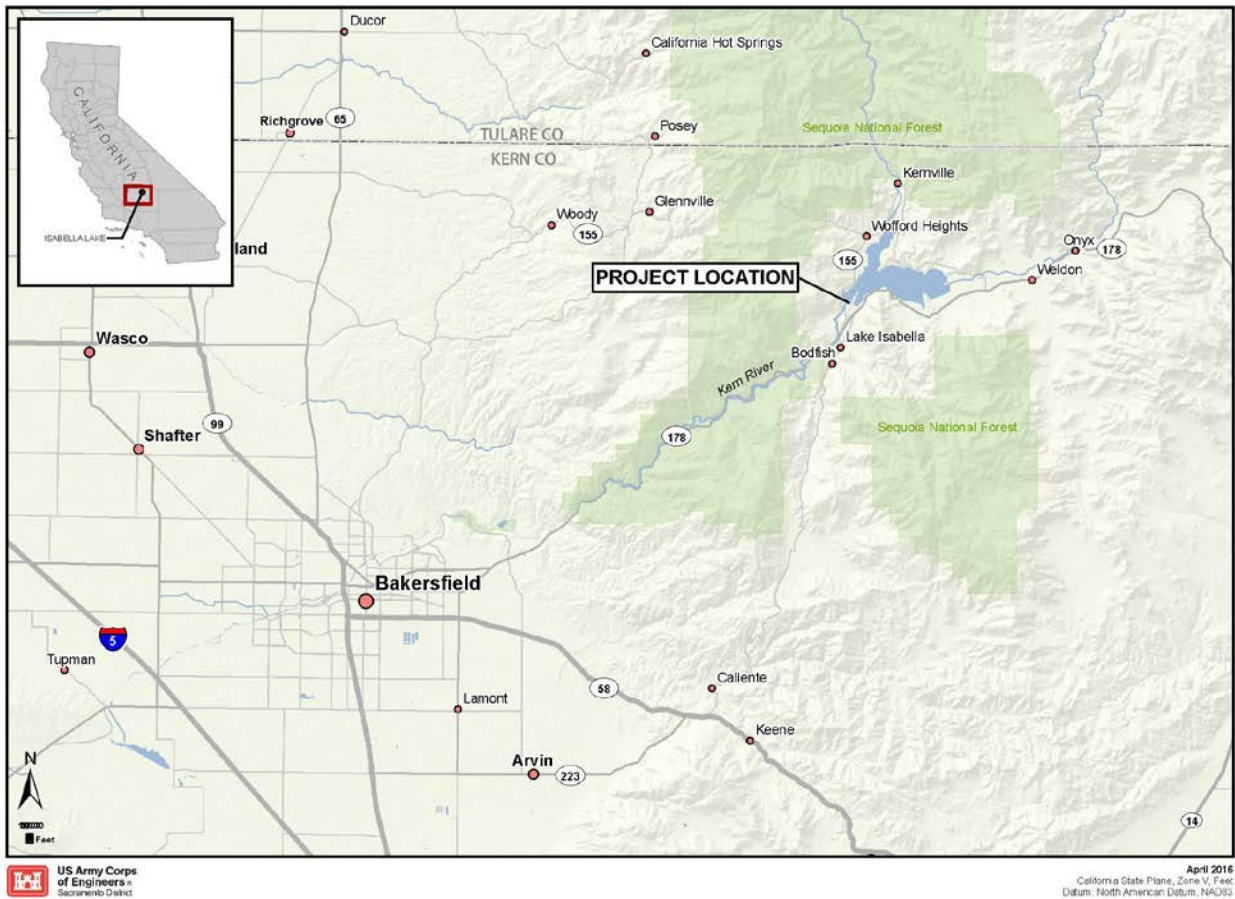
Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, this Environmental Assessment (SEA) discusses and discloses beneficial or adverse potential effects that would result from the proposed modification of State Route 155 (SR 155) at the French Gulch Recreation Area (RA), Kern River Ranger District, Sequoia National Forest. The U.S. Army Corps of Engineers (USACE), Sacramento District, is the lead agency, and the United States Department of Agriculture Forest Service (USFS) and Caltrans are cooperating agencies for the purposes of NEPA.

Isabella Lake is situated approximately 35 miles northeast of Bakersfield, along Highway 178 and one mile upstream of the town of Lake Isabella (Figure 1). Water from the Kern River is retained by Isabella Lake Dam to form Isabella Lake in the southernmost part of the Sequoia National Forest, Kern County, California. The Proposed Action (Figure 2) is situated on State Route 155 and the intersection of Daedrich Ranch Road, adjacent to and within the French Gulch Recreation Area located on the western side of the lake, approximately 4 miles from the town center of Lake Isabella and 8 miles from Kernville. The Proposed Action is situated between SR 155 post mile 68.2 and post mile 68.6.

## **1.2 PROJECT AUTHORITY**

The preliminary study for a flood reduction and water supply project on the Kern River was authorized by the Flood Control Act of 1936, 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. Additional Federal project authority is detailed in the Draft and Final Environmental Impact Statements (DEIS and FEIS) for the Isabella Lake DSM Project (USACE 2012a and b).

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

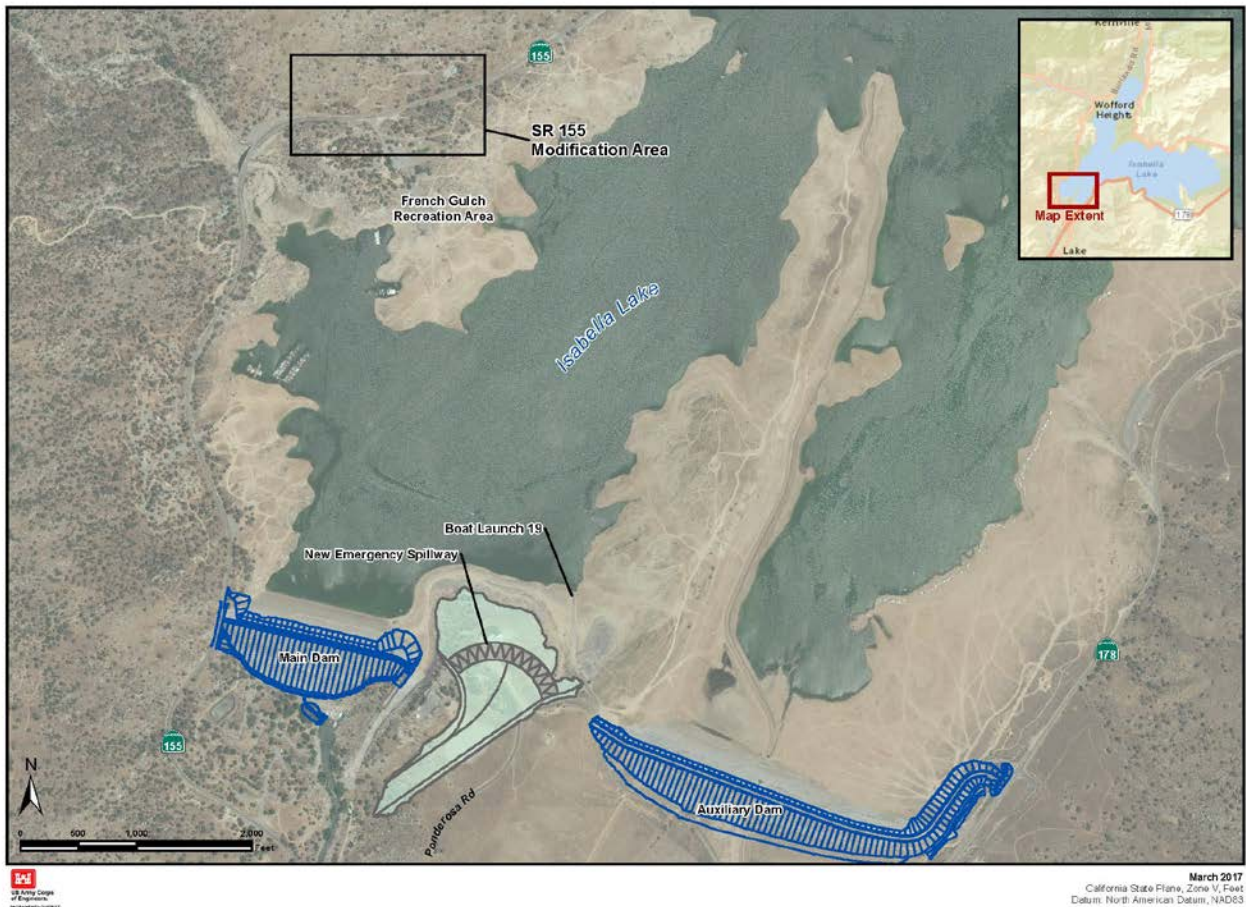


**Figure 1. Isabella Lake DSM Project Location.**

### **1.3 ISABELLA LAKE DSM PROJECT BACKGROUND**

In 2005, USACE determined through an agency 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. USACE commenced a dam safety study, and based on the risk assessment, USACE classified the Isabella Dams as Dam Safety Action Classification 1 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.

USACE completed a DSM Report in October 2012 (USACE 2012) that recommended remediation measures to reduce the public safety and property damage risks posed by floods, earthquakes, and seepage at the Isabella Dams. In October 2012, USACE published a FEIS for the proposed remediation of the Isabella Dams. The FEIS 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.



**Figure 2. SR 155 Modification at French Gulch Recreation Area.**

The approved plan included design refinements, which were described in the Final EIS and further refined in subsequent SEA documents.

## 1.4 PRIOR NEPA DOCUMENTS

This SEA tiers to the 2012 FEIS (USACE 2012) for the Isabella Lake DSM Project. The 2012 DEIS (USACE 2012b) provides a primary source for detailed environmental assessment. The FEIS is focused on preferred alternatives and subsequent changes to DEIS analyses. Additional SEAs tiered to the FEIS are as follows:

- SEA Phase I Real Estate Acquisition and Relocation 2014
- SEA Phase II Real Estate Acquisition and Relocation 2015
- SEA Phase III Real Estate Easement Acquisition of Borel Canal at Isabella Lake Auxiliary Dam without Replacement 2016
- SEA USDA Forest Service Administration and Recreation Facilities Relocation 2016



- SEA Dams and Spillway Design Refinements 2016

These NEPA documents with decision documents are available online at:  
<http://www.spk.usace.army.mil/Missions/Civil-Works/Isabella-Dam/>

Hard copies of the Draft and Final Isabella DSM EIS and other NEPA documents may also be obtained by contacting the Sacramento District Public Affairs Office, 1325 J Street, Sacramento, CA 95814.

Since the release of the FEIS the approved plan has changed to eliminate the need for relocation of State Route 155, State Route 178 and Lake Isabella Blvd (USACE 2015). Removal of the highway relocation from the Isabella DSM Project eliminated substantial construction activity and as a result, DSM Project costs have been reduced and environmental, economic and human consequences have been further minimized.

The 2012 FEIS Record of Decision (ROD) signed on December 18, 2012 described USACE's lack of authority to mitigate for any USFS administrative and recreation facilities adversely affected by the DSM Project. Since that time, USACE concluded in conjunction with the Office of Management and Budget that sufficient authority exists to allow USACE to use its appropriated funds to mitigate and relocate USFS facilities impacted by the DSM Project (USACE 2016a).

## **1.5 PURPOSE AND NEED**

### **1.5.1 Purpose**

The purpose of the Proposed Action is to improve traffic operations at the intersection of SR 155 and Daedrich Ranch Road, also known as French Gulch Road, to accommodate a projected increase in recreational traffic with boat trailers at the French Gulch Boat Launch during the interim closure of Boat Launch 19. In addition, a left-turn lane would be constructed for improved access to the Kern County Parks Maintenance Yard. The French Gulch Boat Launch and facilities are expected to be constructed concurrently or soon after the completion of the proposed SR 155 widening at French Gulch Road. This SEA also fulfills the commitment to address recreation mitigation for the Isabella Lake DSM Project identified in the Isabella Lake DSM Project (ROD) signed December 2012, which stated that USACE would explore and identify mitigation measures to offset adverse effects on recreation resulting from construction of the Isabella Lake DSM Project. The need for supplemental NEPA analysis was identified in Section 1.9 of the DEIS (USACE 2012a), and Section 1.4 of the FEIS (USACE 2012b).

### **1.5.2 Need**

Boat Launch 19 is expected to be closed to public use with commencement of DSM Project actions during the period from 2018 through 2022. To mitigate for closure of the Boat Launch

19, an interim boat launch with support facilities was to be constructed within the French Gulch RA (USACE 2016a) after construction of the proposed SR 155 widening at Daedrich Ranch Road. However, as a result of higher lake levels due to 2016 and 2017 precipitation events, the French Gulch Boat Launch construction would be conducted concurrently with SR 155 modification. It is expected that closure of Boat Launch 19 would divert most boat launch use to the French Gulch Boat Launch during the DSM Project construction. The French Gulch RA boat launch is intended to mitigate for Boat Launch 19 that provides for low water boat launches requiring a deeper draft than can be provided at other SQF boat launches on Isabella Lake. After an assessment was conducted for projected traffic at French Gulch RA, USACE concluded that the widening of SR 155 was warranted to accommodate the interim shift of recreational boat launch traffic to the French Gulch Boat Launch and that coordination was required with Caltrans regarding SR 155. Caltrans has reviewed the Proposed Action and concurred that the widening of SR 155 is warranted due to increased RV traffic volume, and has requested intersection improvements based upon the requirements of the Caltrans Highway Design Manual (Caltrans 2016). Based upon the Caltrans Highway Design Manual, Caltrans has also requested intersection improvements in the form of an additional left-hand turn lane to the Kern County Parks maintenance yard due to the close proximity (300 feet) of the proposed left-hand turn lane into the French Gulch RA.

Vehicles arriving at French Gulch RA from the east must yield to oncoming traffic before turning left into the site. Although congestion is not a current issue, drivers can be caught off-guard by vehicles stopped ahead and waiting to make a left-turn into the RA. Available existing and historic traffic volume data from Caltrans and observations of existing traffic operations on SR 155 were compared against standards set by the NCHRP (USACE 2016b). The estimated peak-hour traffic volumes on westbound SR 155 approaching the French Gulch RA were counted at approximately 350 vehicles per hour. This number of vehicles at peak hours indicates that a separate left-turn lane at French Gulch is warranted to improve traffic operations and reduce congestion during peak hours as provided by the National Cooperative Highway Research Program (NCHRP) Report 745 (2013) *Left-Turn Accommodations at Unsignalized Intersections* (Transportation Research Board, 2013

Average daily volumes through the access intersection of SR 155 at French Gulch were approximately 5,800 vehicles in both directions based upon Caltrans data from 2011 through 2012. Based on the most recent available Caltrans data of 2012, the peak hour of traffic volume occurred between approximately 10:00 AM and 1:00 PM on a weekend day during the month of June. Peak-hour volume is assumed to be approximately 580 vehicles per hour moving in both directions. Because turning movement counts at the French Gulch RA access intersection were not available from Caltrans, average peak-hour volumes were used (USACE 2016b) to provide traffic estimates. Assuming 60 percent of peak-hour travel occurs on westbound SR 155, an estimated peak-hour traffic volume of 350 vehicles per hour on westbound SR 155 would approach the French Gulch RA access intersection from the east, while 230 vehicles would approach from the west.

Due to a lack of visitor use data for Boat Launch 19, the number of vehicles that could potentially utilize French Gulch Boat Launch was developed based on the full capacity of available parking stalls. With installation of approximately 80 new paved parking stalls at French Gulch, approximately 160 vehicles or more per day could be destined for French Gulch RA when Boat Launch 19 is closed. Of those vehicles, 25 percent would arrive and depart French Gulch RA during the peak hour, and the remaining 75 percent would likely arrive in the early morning hours and leave after the peak hour. Using an assumption of 25 percent of demand, 40 vehicles, or more, could enter and exit French Gulch during the peak hour. During organized fishing events, holidays, and cultural events at the Nuui Cunni Center, delay time and queue lengths for vehicles entering and exiting French Gulch RA would be expected to be greater.

Sight distance for vehicles exiting French Gulch RA is limited by the curvature of SR 155 and steep topography. To the west of the French Gulch RA intersection, a crest curve on SR 155 limits corner sight distance. Based on aerial imaging, sight distance at this point is approximately 360 feet (USACE 2016b). Currently, sight distance is limited on SR 155 for traveling vehicles and vehicles entering or exiting the French Gulch RA. Currently the roadway pavement and striping at the existing intersection are in poor condition. The roadway would be restored with the construction of left-turn lanes and the widening of the roadway, as well as with the improvement of the acceleration and deceleration lanes at French Gulch Road.

## **1.6 DECISIONS TO BE MADE**

The District Engineer, Commander of the Sacramento District, must decide whether or not the Proposed Action qualifies for a Finding of No Significant Impact (FONSI) under NEPA or whether a Supplemental EIS must be prepared. A mitigated draft FONSI is circulated with this document. Proposed mitigations for the FONSI are summarized in Appendix A.

## **CHAPTER 2.0 - PROPOSED ACTION AND ALTERNATIVES**

### **2.1 INTRODUCTION**

The following section describes the alternative development process, and alternative actions considered in this SEA. Only two alternatives are addressed in this SEA due to prior assessment of alternatives that were considered but did not meet the purpose and need of the Proposed Action. The Proposed Action is the only action alternative evaluated in detail in this SEA, and it is also the single Preferred Alternative for modification to SR 155 and the entrance of French Gulch RA. A No Action Alternative, required by NEPA, is also evaluated and utilized as a baseline to illustrate the potential effects of not implementing the Proposed Action. The Proposed Action will be evaluated in detail and will be compared to the No Action Alternative.

Additional alternative options, not selected as alternatives, included installation of warning signs or the use of stop lights without SR 155 modification. Stop lights and sign installation were rejected as standalone alternatives as they did not adequately fulfill the identified need to reduce potential future traffic congestion, provide an increased line of sight for traffic or provide improved access for additional vehicles towing boats exiting or entering the French Gulch RA. An option to forgo construction of a left-turn lane into the Kern County Parks Maintenance Yard was rejected when Caltrans requested that the turn lane be implemented to meet Caltrans Highway design standards. Another alternative considered but not selected involved grading all SR 155 roadway slopes within the French Gulch RA area to a 2:1 slope threshold, meeting a Caltrans standard for rural highways. This alternative would have provided a greater sight distance and similar traffic operations benefits, but was not considered due to excessive costs of excavation and removal of large amounts of material under blasting operations on the highway. Greater delay to public traffic would have also been of issue under this option.

### **2.2 ALTERNATIVE 1: NO ACTION ALTERNATIVE**

The No Action Alternative describes the future conditions that would reasonably be expected to exist in the absence of the Preferred or Proposed Action and serves as the environmental baseline against which the adverse and beneficial effects of the action alternatives are evaluated. In this SEA, the No Action Alternative would not conduct any modification of SR 155, the highway would not be widened, and the entrance of French Gulch RA would not be modified. Because Boat Launch 19 would be reopened by 2022, USACE identifies French Gulch Boat Launch as an interim facility, though the USFS may choose to maintain this facility into perpetuity after 2022. The French Gulch Boat Launch would mitigate for the inability of boaters to access Boat Launch 19 during DSM Project construction, but concurrent road modifications would not be installed.

Under the No Action Alternative, left-turn lanes would not be constructed to reduce congestion and provide greater sight distance for entrance into the French Gulch RA.

Deceleration and acceleration lane improvement to provide entrance and exit to French Gulch RA would not be constructed. Without SR 155 modification, it is expected that a larger number of vehicles towing boats to the French Gulch RA intersection would enter and exit SR 155 at a compromised speed, resulting in traffic congestion on SR 155 at peak-traffic hours. A higher risk of traffic accidents could result from an increase of vehicles entering and exiting the intersection at peak-hours with a limited sight distance to the west. Vehicles pulling trailers decelerating from SR 155 and accelerating to SR 155 from the French Gulch RA could cause delay resulting in additional congestion on SR 155.

### **2.3 ALTERNATIVE 2: PROPOSED ACTION – MODIFICATION OF STATE ROUTE AT FRENCH GULCH RECREATION AREA**

USACE proposes to modify SR 155 in the proximity of the French Gulch RA (Figure 3) at Daedrich Ranch Road, also known locally as French Gulch Road. This Alternative addresses the issues of a potential increase of traffic to the French Gulch RA and a corresponding change in the type of vehicles (vehicles with trailers) that would utilize the French Gulch RA. The Proposed Action would increase sight distance and reduce expected intersection congestion to accommodate a projected increase in recreational traffic at French Gulch RA. Proposed modification would include widening of SR 155 to accommodate a left-turn lane (left turn-bay) on the westbound lane, and improvement of the deceleration and acceleration lanes into the French Gulch RA. A left-turn lane on SR 155 for entry into the Kern County Maintenance Yard would be created by widening SR 155 approximately 200 linear feet west, and 300 linear feet east, of the existing Kern County Maintenance Yard access. The left-turn lanes would provide larger or heavier trucks with trailers, sufficient distance to decelerate and wait for a safe gap in oncoming traffic without blocking vehicles in the through travel lane of SR 155. The addition of imported fill material and excavation of existing embankments is expected to accommodate a wider SR 155 roadway. Entrance and exit routes within the French Gulch RA would be rerouted resulting in greater sight distance for oncoming eastbound vehicles at the SR 155 intersection.

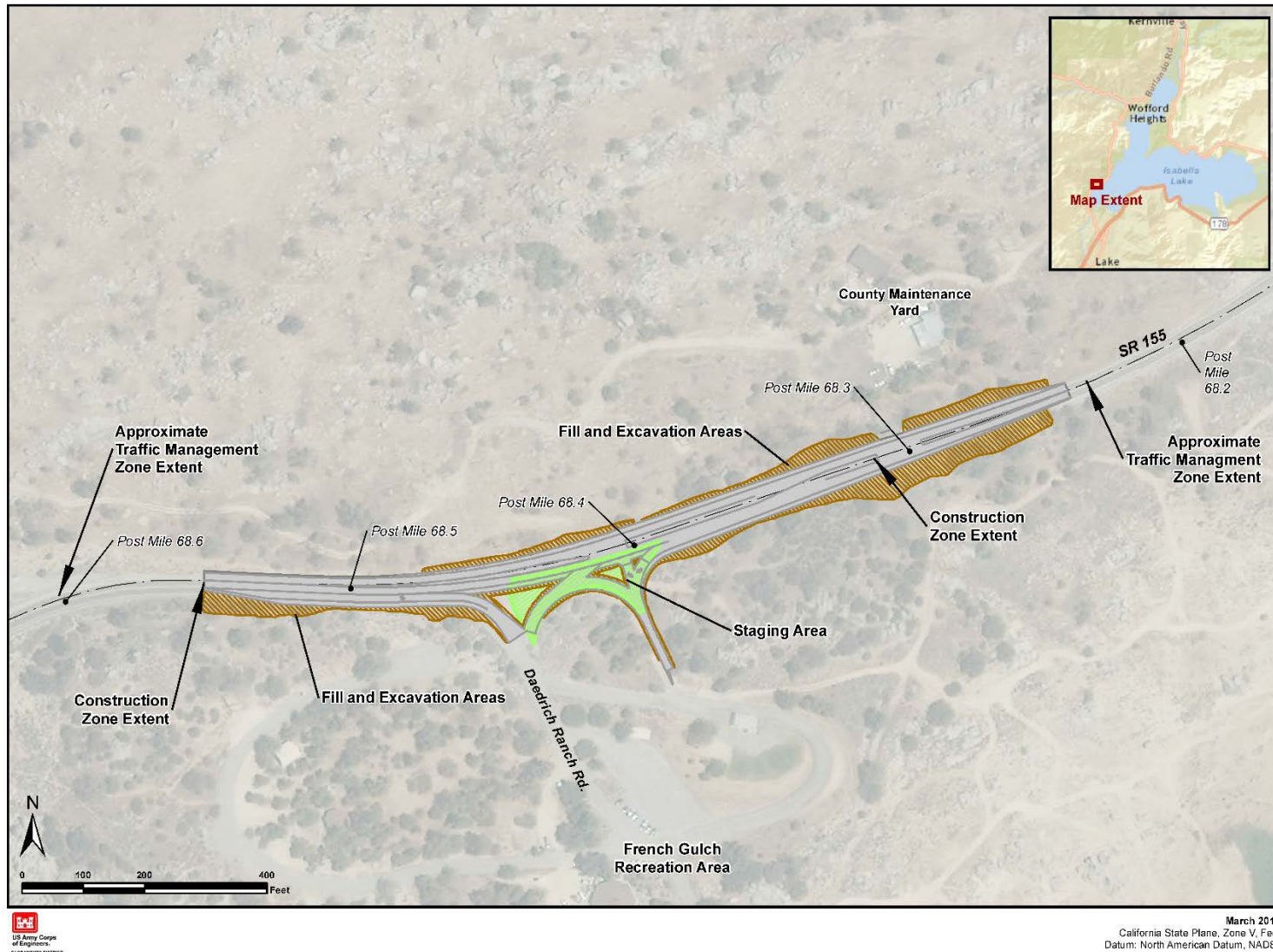
All SR 155 modification is planned within the existing Caltrans right-of-way for a distance of approximately 1,500 linear feet. SR 155 road width would be increased to a maximum of 53 feet (Figure 4). Adjacent topography would be graded or filled to provide a level surface for increased roadway width (Figure 3). Extension of road shoulders would occur in depressions with cut and fill up to eight feet in width. Where possible, slopes up to 20 feet high would be graded to a 2:1 slope by mechanical equipment. No blasting of rock would be conducted to remove material from slopes. Instead, an approval for exception from the Caltrans Highway Manual standards has been solicited from Caltrans in order to construct steeper slopes for sections of dense slope material. Steeper topography would be excavated to a 1:1 slope consistent with the existing 1:1 highway slopes. Approximately 4,100 cubic yards (CY) of excavated material would be hauled from the site, and up to 4,000 CY of imported weed-free fill would be hauled onto the site. New slope contours would be constructed similarly to the existing 1:1 and 2:1 slopes. The highway grade would not be changed. After construction actions are

completed, a native grass and forbs mixture approved by the SQF and Caltrans for erosion control, would be seeded on approximately 40,000 square feet of disturbed soil surface.

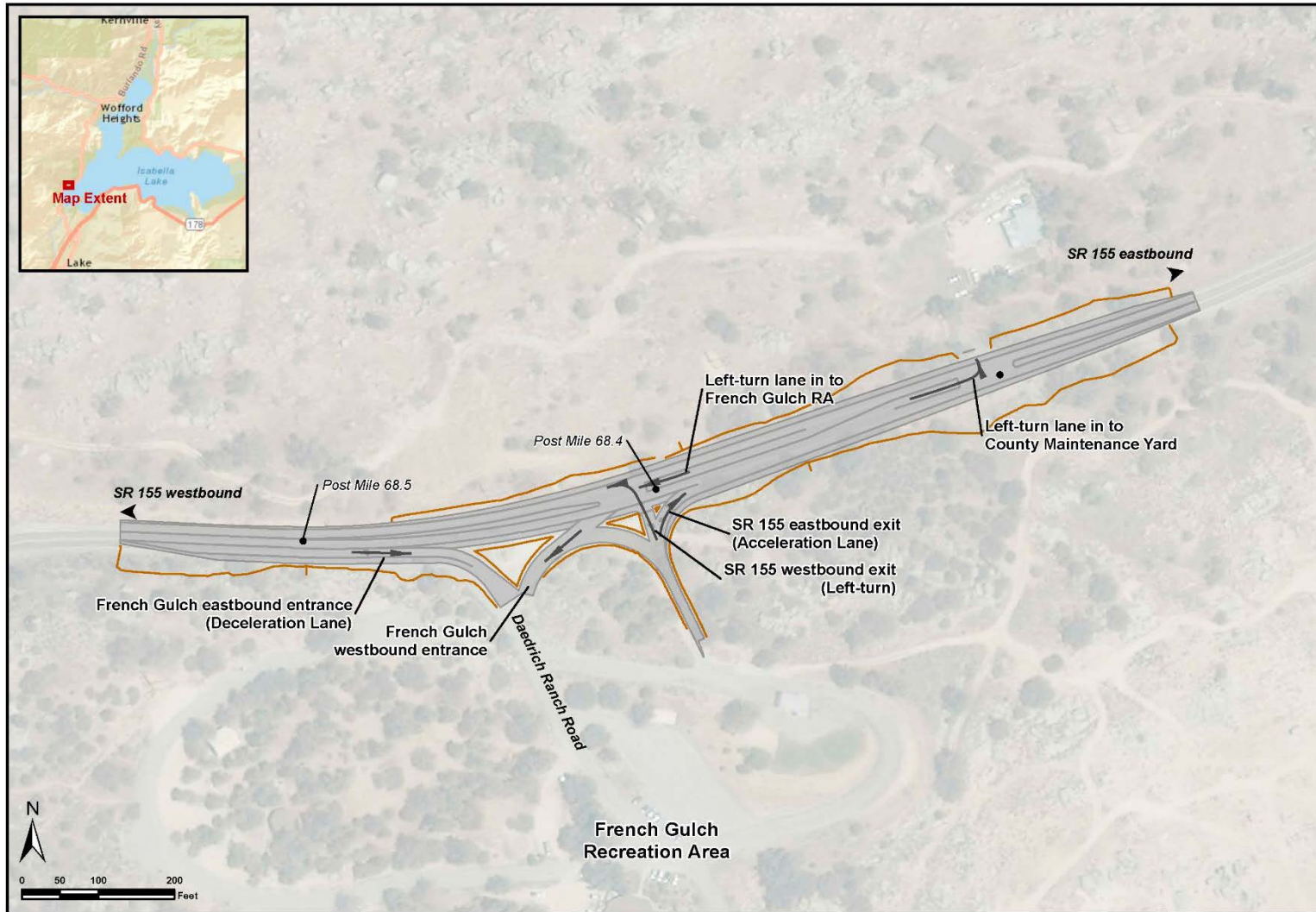
A left-turn lane of approximately 300 feet in length, relocated east of the current westbound entry, would replace the current intersection into French Gulch RA. As a result, westward sight distance would be increased for vehicles turning into the French Gulch RA. Asphalt would be replaced or augmented in the intersection and existing acceleration/deceleration lanes. Any asphalt slated for removal would be hauled off-site by the contractor to an appropriate disposal facility. Paved deceleration and acceleration lanes that run parallel to SR 155 (Figure 3) would be extended and repaved to approximately 450 feet in length. As a result, vehicles pulling boat trailers would be provided an additional margin of roadway to accelerate onto SR 155 to the east and decelerate off SR 155 from the west. Highway signs would be reinstalled with additional installation of new signs consistent with Caltrans and USFS signage standards. Additional road modification would be constructed within the French Gulch RA to improve access for exit and entry to SR 155 (Figure 4). Installment of separate entrance and exit routes would provide uninterrupted traffic flow and a reduction of congestion at the SR 155 intersection. New paving on acceleration/deceleration lanes and French Gulch RA entrance/exit routes, currently in poor condition, would provide a smoother transition to the highway.

The SR 155 modification construction is expected to commence in late November or early December with a construction duration of approximately 3 months. There is an unpredictable contingency that construction could incur delay through winter months, but in a worst case scenario, construction would cease for the annual Fishing Derby in early April. Construction is expected to occur up to six days a week from 7 am to 7 pm, unless an exemption is obtained from Kern County for additional construction hours. Contingent upon Kern County approval, construction work could potentially occur during evening hours and on Sunday to enable an earlier completion date. A detailed Traffic Management Plan would be produced by the contractor and approved by the USACE and Caltrans to ensure consistent traffic flow through SR 155. When excavation, fill, grading and paving activities require a lane closure, one lane of the two-lane highway would remain open to through traffic with staggered passage. Any traffic closures would be communicated to the public and local agencies. Timely access would be provided during local wildfire or other events requiring emergency vehicle passage.

A staging area for construction equipment and employee parking of approximately one acre in size will be situated within the French Gulch RA on a disturbed site adjacent to SR 155 (Figure 3). Equipment expected to be intermittently staged at the site could include a paving machine, grader, backhoe, roller compactors, vibratory compactor, pickup trucks and dump trucks. In addition, two excavators, two loaders, and up to ten dump trucks in rotational transit would operate to transport fill and excavated material and asphalt. Up to 15 pick-up trucks and 20 construction workers may be present at the site during construction activities.



**Figure 3. Construction Delineation for SR 155 Modification and French Gulch Recreation Area**



US Army Corps of Engineers  
 BAKERSFIELD DISTRICT

March 2017  
 California State Plane, Zone V, Feet  
 Datum: North American Datum, NAD83

**Figure 4. Lane Detail for SR 155 Modification at French Gulch Recreation Area and Kern County Maintenance Yard.**



## **CHAPTER 3.0 - AFFECTED ENVIRONMENT AND CONSEQUENCES**

### **3.1 INTRODUCTION**

This chapter explains the impacts that the Proposed Action will have on the human, physical, and biological environments. It describes the existing environment that could be affected by the Proposed Action from each of the alternatives, and proposed avoidance, minimization and/or mitigation measures. Indirect impacts are also included in the general impacts analysis and discussion that follow. Proposed Action effects are assessed for significance based on criteria established within the DEIS and FEIS. Assessment of cumulative effects is conducted in Chapter 4.

### **3.2 ENVIRONMENTAL RESOURCES NOT EVALUATED IN DETAIL**

Certain resources were eliminated from further analysis in this SEA/IS because they were addressed in the Isabella DSMP DEIS or FEIS, and the Supplemental Environmental Assessment (SEA) for the USDA Forest Service Administration and Recreation Facilities Relocation (USACE 2016a), or they would not result in new or substantially more severe significant effects than were initially evaluated. As part of the scoping and environmental analysis for the Proposed Action, the following environmental resources were considered but no adverse impacts were identified.

#### **3.2.1 Growth-Inducing Effects**

The Proposed Action would not directly or indirectly induce growth in or near the community surrounding Isabella Dam. Unplanned growth is not expected because the Proposed Action provides for modifications to SR155 necessitated by construction of interim mitigation for Boat Launch 19 at French Gulch RA. The Proposed Action would not result in a substantial increase in the number of permanent workers or employees, or a need for additional permanent housing and local services. New development would 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. The Proposed Action is expected to be consistent with Kern County General Plan policies and zoning ordinances.

#### **3.2.2 Community Impacts**

The Proposed Action is not located central to a community and would not require the relocation of any homes or businesses.

#### **3.2.3 Utilities/Emergency Services**

No utilities would be relocated. At least one lane of SR 155 would remain open for emergency vehicle passage during construction.

### **3.2.4 Geology, Soils and Seismicity**

The Geology, Soils, and Seismicity section of the Isabella DSM Project EIS (DEIS Section 3.4 pages 3-5 and FEIS Section 3.2 pages 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. Best Management Practices (BMPs) specified in Section 3.4.4 of the DEIS are expected to reduce any potential geology, soils, and seismicity impacts to a level of not significant (DEIS pages 3-30). The proposed modification to SR 155 does not present significant new circumstances or information regarding the nature and scope of effects to geology, soils, and seismicity associated with the DSM Project that would change the analysis present in the 2012 DEIS and FEIS. The Proposed Action would have no effect to geology, soils and seismicity.

### **3.2.5 Socioeconomics and Environmental Justice**

The Socioeconomics and Environmental Justice section of the Isabella Lake DSM Project EIS (DEIS Section 3.15 pages 3-345 and FEIS Section 3.13 pages 3-291) characterized the regulatory setting and affected environment for this resource. Criteria used to evaluate the intensity of impact on socioeconomic conditions and environmental justice were based on assessment of impacts on the demographic, economic, and social factors described within the section. A significant socioeconomic impact was defined as: 1) a long-term increase in population that could not be accommodated by regional infrastructure; reduction in the availability of affordable housing; long-term decreases in earnings, or employment affecting the regional economy; 2) long-term displacement of population or local business, or 3) loss in community facilities, events, population, or major industry. The proposed modification to SR 155 does not present significant new circumstances or information regarding the nature and scope of effects to socioeconomics and environmental justice associated with the DSM Project that would change the analysis present in the 2012 DEIS and FEIS.

### **3.2.6 Hazardous, Toxic, and Radiological Waste (HTRW)**

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 Code of Federal Regulations (CFR) Parts 260 and 270. A significant effect would entail: 1) exposure of workers to hazardous substances in excess of Occupational Safety and Health Administration (OSHA) standards; or 2) contamination of the physical environment, thereby exposing a hazard to humans, animals, or plant populations by exceeding Federal exposure, threshold, or cleanup limits. No HTRW is known to exist within the soil of the Proposed Action site. The Corps conducted environmental site assessment (ESA) of the Proposed Action area during October and

November 2010 (DEIS Section 3.9.2). The ESA also addressed HTRW in USFS property surrounding the lake that could be affected by the proposed project. The ESA included an environmental database search conducted by Environmental Data Resources, Inc. (EDR). EDR reviewed numerous publicly available databases to identify recognized environmental conditions in the project area, such as the presence or likely presence of any hazardous substances or petroleum products under condition that indicate an existing release a past release, or the material threat of a release into structure, the ground and groundwater or surface waters (DEIS Section 3.9.2). The ESA did not include sampling or analysis of soil or groundwater. Testing for levels of lead contamination resulting from years of vehicle emission deposition (leaded gasoline) would be conducted by USACE prior to commencement of the Proposed Action. Test results would determine any special handling and/or disposal requirements of soil. If levels do not comply with thresholds of the California Department of Toxic Substances Control, protocols would be followed to ensure that the existing site is remedied and that all excess excavated material is deposited off-site appropriately. State and Federal provisions would be included in the construction specifications for worker and public safety.

The contractor would obtain all required permits and release forms prior to work, from the Eastern Kern County Air Pollution Control District (EKAPCD), and from Kern County for proper disposal of asphalt and excavated material per Kern County Ordinance Code G-8057, and any other federal, state, or local requirements which govern disposal of solid waste. USACE has a hazardous material safety program outlined in the current version of USACE Engineering Manual 385-1-1, dated November 30, 2014, which requires staff and contractors to follow BMPs, as detailed in the 2012 DEIS under Section 3.9.4. The Proposed Action does not present significant new circumstances or information regarding the nature and scope of effects to HTRW that would change the analysis present in the 2012 FEIS.

### **3.2.7 Land Use**

The Land Use Section of the DEIS (Section 3.11) sufficiently characterized the regulatory setting for this resource. An action would be considered to have a significant effect on land use if it would result in incompatible land uses with existing and planned land used in the area. An action would be inconsistent with land use designations or goals, policy or regulation, or produce a permanent conversion of prime and unique farmlands to other land uses. No farmland or timberland lies within the Proposed Project area. The affected National Forest land is not utilized for timber harvest.

The proposed modification to SR 155 does not present significant new circumstances or information regarding the nature and scope of effects on land use associated with the DSM Project that would change the analysis present in the 2012 DEIS and FEIS.

### **3.2.8 Water Quality**

The Water Resources Section of the Isabella Lake DSM Project DEIS (Section 3.6.1) sufficiently characterizes the regulatory setting and affected environment for this resource. A significant adverse effect on water quality would result if water quality were substantially degraded; a public water supply was contaminated; ground water resources were substantially degraded or depleted; interference occurred with ground water recharge; or special status species or humans were exposed to substantial pollutant concentrations.

The proposed modification of SR 155 do not present significant new circumstances or information regarding the nature and scope of effects to water quality associated with the DSM Project that would change the analysis present in the 2012 DEIS for highway modification.

The proposed design modification would result in the disturbance of more than one acre; therefore, the contractor would be required to obtain a National Pollution Discharge Elimination System (NPDES) storm water permit (Section 402 of the Clean Water Act (CWA)) from the Central Valley Regional Water Quality Control Board (CVRWQCB). 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 material placement and stabilization. In addition, the contractor would monitor storm water runoff discharge from representative areas. Any effects on water quality would be minimal with the use of BMPs (DEIS Section 3.6.4) and mitigation measures that would be integrated into the Proposed Action and no significant effects would result.

### **3.2.9 Visual Aesthetics**

The Visual Aesthetics Sections of the DEIS (Section 3.13) and FEIS (3.11) adequately characterize regulatory and general visual resources of the Proposed Action Area. No segments of SR 155 are listed in the Statutes Relating to the Department of Transportation, Streets and Highways Code, Division 1, Chapter 2 Article 2.5, Section 263 (Scenic Highways). Caltrans determined that after performing a preliminary review of the Proposed Action site and description, as defined by the Caltrans Standard Environmental Reference Manual (Chapter 27), that there are qualifying scenic views in the area. While views of Isabella Lake qualify as scenic resources, no part of the Proposed Action would affect lake views. Preliminary measures to avoid, minimize or compensate for the potential visual impacts of the Proposed Action would be conducted as follows.

Per the Caltrans Highway Design Manual Chapter 100 (Caltrans 2016) and Storm Water Quality Handbooks Project Planning and Design Guide, efforts would be made during the design to preserve as much vegetation (Biological Resource Section 3.5) as possible. To the extent possible, grading and drainage would be implemented with harmonious lines, or smooth

transitions from existing substrate to final substrate finish where appropriate. Cuts and fills would be shaped and rounded to blend with existing landforms wherever appropriate. Though some of the slope cuts are at a 1:1 slope consistent with the current highway slopes, where possible, slope gradients would be minimized. Native grass and forbs mixtures approved by the USFS for erosion control would be seeded on disturbed soil surfaces, and would help visually blend disturbed soil with existing roadside vegetation. No views of Lake Isabella, scenic vistas, or outstanding vegetation would be affected by the Proposed Action. Mitigation measures incorporated into the Proposed Action would ensure that visual impacts would be minimal (Appendix A). Visual aesthetics would experience a permanent change consistent with area visuals of the roadway, and would not constitute a significant impact.

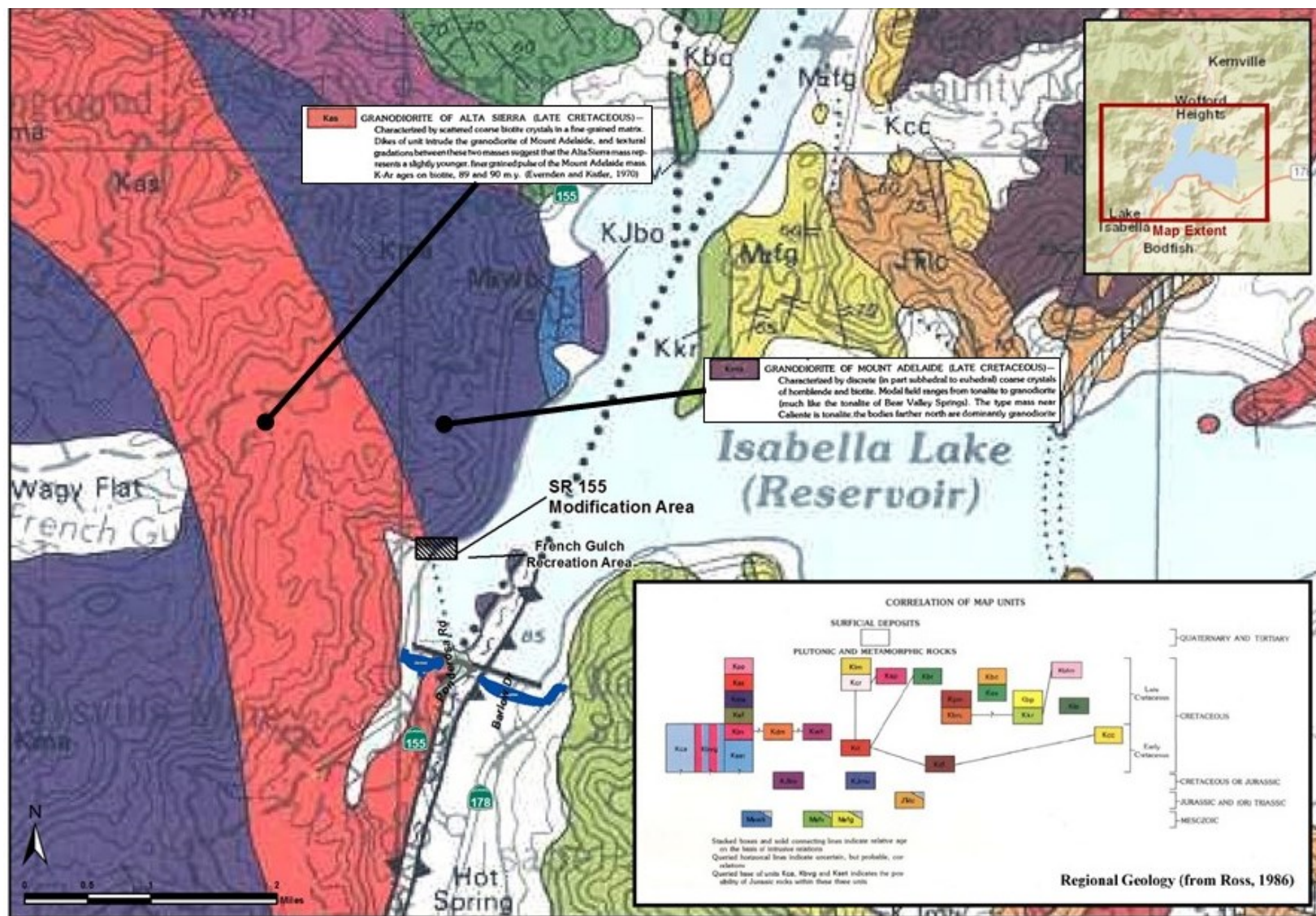
### **3.2.10 Paleontological Resources**

The proposed work area is located wholly within an area mapped as being comprised of intrusive granitic igneous rocks. These rock types are not fossiliferous (Figure 5), and as a result, there is no potential impact to any paleontological resources. The rock type is Cretaceous age granodiorite, which is a medium- to coarse-grained rock that is among the most abundant intrusive igneous rocks. It contains quartz and is distinguished from granite by possessing more plagioclase feldspar than orthoclase feldspar; its other mineral constituents include hornblende, biotite, and augite. Shallow deposits of decomposed granite (DG) and slopewash mantle some of the rock exposures. The DG is generally Holocene in age and also is a non-fossiliferous unit.

### **3.2.11 Air Quality**

The Air Quality Section of the DEIS (Section 3.5), FEIS (Section 3.3 and Appendix F) and the Regulatory Section in the Air Quality analysis (Appendix F of the FEIS) sufficiently characterize the regulatory setting and the general affected environment for the DSM Project. Greenhouse gas emissions (GHG) are assessed in Section 3.3. EKAPCD thresholds of environmental significance for air pollutants per project are as follows: reactive organic gases (ROG) 25 tons/year; Oxides of Nitrogen (NO<sub>2</sub>) 25 tons/year, and particulate matter that is 10 microns in diameter or smaller (PM) tons/year.

Short-term effects on air quality would occur during the grading and demolition periods of the Proposed Action. Emissions would be produced by equipment at the site that is expected to include a paving machine, grader, backhoe, roller compactors, vibratory compactor, pickup trucks and dump trucks. In addition, up to two excavators and two loaders, and up to ten dump trucks in rotational transit would transport fill and excavated material and asphalt. Up to 15 pick-up trucks and 20 construction workers may be present at the site during construction activities.



March 2017  
 California State Plane, Zone V, Feet  
 Datum: North American Datum, NAD83

Figure 5. Geologic Map of Proposed Action Vicinity

The relatively small magnitude of emissions released during the Proposed Action would constitute a minimal effect and would not compromise State or Federal emission thresholds. Construction activities of the Proposed Action would contribute a negligible fraction of emissions estimated in the 2012 FEIS (Section 3.3 Table 3-2) as calculated from the CalEEMod Version 2011.1.1 model which incorporates the California Air Resource Board's EMFAC2007 model (CARB 2016) for on-road vehicles. Using a CT-EMVAC air model, Caltrans (Caltrans 2017) estimated that less than ¼ pound per day, each, of Volatile Organic Compounds (VOC), NOx and PM10 would be emitted. These amounts are significantly lower than the General Conformity de minimis thresholds of 100 tons per year of Ozone precursors and 70 tons of PM10. Since projected amounts are lower than threshold, General Conformity does not apply. The combined emissions of the Proposed Action with other construction actions on the DSM Project in year 2018 is not expected to exceed State or Federal emission thresholds due to the minimal amount of emission production associated with the Proposed Action. In addition, design refinements to DSM construction actions since publication of the DEIS and FEIS, have resulted in substantial reductions of cumulative emissions and fugitive dust production on an annual and daily basis.

As a result, emission contributions would remain well below the EKAPCD thresholds for 2018 and would not be considered significant. Federal General Conformity emission thresholds would not be cumulatively exceeded for the DSM Phase II Project with the addition of the SR 155 modification in construction year 2018. Construction acceleration could occur with approval by Kern County for night or weekend construction actions. Such acceleration would produce greater emission amounts over a shorter period of time. However, even with work conducted over a 24 hour period, it is not expected that the project would exceed EKAPCD air quality thresholds or de minimis thresholds due to the limited amount of equipment operation and negligible contributions of emissions. Federal General Conformity emission thresholds would not be exceeded.

Since the release of the FEIS, the EKAPCD adopted amendments to Rule 402 for Fugitive Dust at the District's Regular Board of Directors Meeting held March 12, 2015. Amendment changes are submitted to the Environmental Protection Agency (EPA) for incorporation as part of the California State Implementation Plan (SIP). The Isabella Lake DSM Project has adopted the most recent amendments to EKCAPD's Rule 402 to reduce potential air quality impacts from fugitive dust. To comply with the Rule 402 threshold of visible dust emissions to 20% opacity with less than 50% porosity, physical measurement of opacity and porosity would be utilized. Appropriate Rule 402 options would be utilized on an individual basis by the contractor to meet threshold compliances. Localized and temporary fugitive dust could be a concern for local sensitive receptors during periods of grading. Measures outlined in the 2012 EIS and EKAPCD Rule 402 would be employed as necessary to maintain dust levels below regulatory thresholds. Mitigation measures would also include standard BMPs actions to reduce on-road and off-road vehicle emissions and fugitive dust that would ensure that air quality effects are minimal. Mitigation and Minimization measures to be incorporated into the Proposed Action are in

addition to measures identified in the EIS/ROD, or restate measures from the EIS/ROD due to importance of application. These measures are listed below:

- The contractor would prepare a fugitive dust control management plan in compliance with EKAPCD Rule 402 to reduce air quality impacts from fugitive dust and comply with State, Federal and Local thresholds. Measures that may be utilized to limit VDE to 20% opacity, include application of water or soil stabilizers; grading during lower wind intensity, lowering of off-road vehicle speed and application of water or non-toxic, organic soil stabilizer to unpaved surface roadways and material piles.
- Watering would be conducted for dust control as specified by EKAPCD Rule 402 upon excavated or graded soils to prevent excessive dust. Any dust palliatives or soil stabilizers used for control of fugitive dust would be non-toxic, biodegradable, and would be approved by the USACE Contracting Officer.
- Off-road equipment and vehicles would meet Tier 3 or 4 emission standards. Tier 4 equipment would be recommended for emissions reduction, but not required due to small contractor accommodation.
- All vehicles would be equipped with proper emissions control equipment and would be kept in proper running order to reduce NOx emissions.
- Equipment would be shut down as appropriate when not in use.
- All equipment would be maintained as recommended by manufacture manuals.
- Where appropriate, electric equipment would be used in lieu of diesel or gasoline powered equipment.
- Carpooling would be encouraged among construction workers.



## 3.3 CLIMATE CHANGE

### 3.3.1 Regulatory Setting

The United State Environmental Protection Agency is responsible for Green House Gases (GHG) regulation at the Federal level. Key Federal GHG guidance and regulations relevant to the Proposed Action are summarized below.

On March 19, 2015, President Obama signed Executive Order (E.O.) 13693; Federal Leadership in Environmental Energy and Economic Performance. The goal of E.O. 13693 is to maintain Federal leadership in sustainability and greenhouse gas emission reduction. This E.O. required Federal agencies to set a GHG emissions target; increase energy efficiency; reduce fleet petroleum consumption; conserve water, reduce waste; support sustainable communities and leverage Federal purchasing power to promote environmentally responsible products and technologies. With passage of several pieces of legislation, including State Senate and Assembly Bills and Executive Orders, California launched a proactive approach to dealing with greenhouse gas (GHG) emissions and climate change at the State level. The California Air Resources Board (CARB) is responsible for the development, implementation and enforcement of California's motor vehicle pollution control programs, GHG statewide emission estimates and goals, and development and enforcement of GHG emission reduction rules.

**Assembly Bill 1493, Pavely. Vehicular Emissions: Greenhouse Gases, 2002.** This bill requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck GHG emissions.

**Executive Order S-3-05 (signed on June 1, 2005, by Governor Arnold Schwarzenegger).** The goal of this order is to reduce California's GHG emissions to 1) 2000 levels by 2010; 2) 1990 levels by 2020, and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

**Assembly Bill 32, the Global Warming Solutions Act of 2006:** AB 32 sets the same overall GHG emissions reduction goals as outlined in Executive Order S-3-05, while further mandating that CARB create a plan, which included market mechanisms and implement rules to achieve "real quantifiable, cost-effective reductions of GHG". Executive Order S-20-06 further directs State agencies to being implementing AB 32.

**Executive Order S-01-07:** Then Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

As stated on the Federal Highway Administrations climate change website (<http://www.Fhwa.dot.gov/hep/climate/index.htm>), climate change considerations should be integrated

throughout the transportation decision-making process, from planning through project development and delivery.

The four strategies set forth by the Federal Highway Administration to lessen climate change impacts correlate with efforts that the State has undertaken and is undertaking to deal with transportation and climate change. Executive Order 13693 is focused on reducing GHG internally in Federal agency missions, programs and operations, but also directs Federal agencies to participate in the interagency Climate Change Adaptation Task Force. Climate change and its associated effects are also being address through various efforts at the Federal level to improve fuel economy and energy efficiency, such as the National Clean Car Program and Executive Order 13693. Additional discussion on Climate Change and GHG regulatory status is found in the DEIS (Section 3.5.1) and the FEIS (Section 3.3).

### **3.3.2 Existing Conditions**

Warming of the climate system is now considered to be scientifically unequivocal. Global average surface temperature has increased approximately 1.33 degree F over the last decades. In the twelve years between 1995 and 2006, eleven years ranked among the warmest year in the instrumental record of global average surface temperature, going back to 1850. Since 2006, temperatures have risen and the warmest years on record have been recorded with documented environmental effects from methane and carbon dioxide released into the atmosphere. The causes of this warming have been identified as both natural processes and as the result of human actions. Increase in GHG concentrations in the Earth's atmosphere are the main cause of human induced climate change.

Some GHGs, such as CO<sub>2</sub>, are emitted to the atmosphere through both natural processes and human activities. Other GHGs and their effects on the Earth's climate are created and emitted solely through human activities and as the compounding effect of human activities. Each GHG traps a different amount of heat. In order to compare emissions of different GHGs, a weighting factor called a Global Warming Potential (GWP) is used, in which a single metric ton (1,000 kilograms) of CO<sub>2</sub> is taken as the standard. Emission are expressed in terms of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). Therefore, the GWP of CO<sub>2</sub> is 1: the GWP of CH<sub>4</sub> is 21 and the GWP of N<sub>2</sub>O is 310. These three GHGs would be applicable to the project and potentially emitted during project construction activities.

### **3.3.3 Effects**

Project-specific actions, such as the SR 155 modification as proposed, do not generate sufficient GHG emissions to influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact though its incremental contribution combined with the contributions of all other sources of GHG.

Although climate change and GHG emission reduction are concerns at the Federal level, currently no regulation or legislation has been enacted specifically addressing GHG emissions reductions and climate change at the project level, with the recent exception of some California Air Quality Districts. Neither the U.S Environmental Protection Agency nor the Federal Highway Administration has come out with explicit guidance or methodology to conduct project-level GHG analysis. As a result, assessment and GHG emission reduction is currently conducted on the State and Federal policy level rather than by individual project level. Approximately 98 percent of California's greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made GHG emissions are from transportation.

GHG gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment and emissions arising from traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specification and by implementing better traffic management during construction phases. In addition, with innovation such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

The primary source of GHG emissions from the construction of the Proposed Action would be mobile sources. Not all GHG exhibits the same ability to induce climate change; therefore, GHG contributions are commonly quantified in Carbon dioxide equivalencies. The CO<sub>2e</sub> portions of the GHGs during construction of the DSM Project were estimated using the CalEE Mod and EMFAC 2011 programs, and the California Climate Action Registry (FEIS Section 3.3.1). EKAPCD's GHG reporting limit for CO<sub>2e</sub> is based on portable and stationary source emissions. Projects with significance (or reporting) levels over 25,000 tons/year of CO<sub>2e</sub> are required by EKAPCD to reduce GHG emission to the extent practicable but are not treated as a "major" source unless these emissions reach 100,000 tons/year.

In assessing a project's impacts, it must be determined if the project's incremental effect is "cumulatively considerable". The Proposed Action would have low to no potential for increasing cumulatively considerable GHG emissions. The following actions: pavement rehabilitation, shoulder widening, storm water work, and vegetation restoration would have minimal or no increase in operational GHG emissions. Exporting and importing material and traffic delays would provide greater increases in GHG. Construction emissions are unavoidable, however, these actions would occur for limited and intermittent periods of time. Long-term benefits resulting from the Proposed Action improvements are expected to reduce GHG by decreasing potential traffic delay for vehicles entering the French Gulch RA and the Kern County Parks Facility, and by providing improved operation on smoother pavement. CO<sub>2e</sub> estimates conducted for the entire Phase II DSM Project in year 2018 (FEIS Section 3.3.2, Table 3-3) showed emissions resulting well below the threshold. Because EKAPCD's GHG reporting

limit for CO<sub>2</sub>e is based on portable and stationary source emissions GHG impacts are also considered less-than-significant for the Proposed Action because the majority of CO<sub>2</sub>e emissions are neither portable nor stationary and consist of temporary emissions for operational activities.

Typically two terms are used when discussing the impacts of climate change. Greenhouse gas mitigation is a term for reducing greenhouse emission to reduce or mitigate the impacts of climate change. Adaptation refers to the effort of planning for and adapting to impacts due to climate change, such as adjusting transportation design standards or withstanding more intense storms and higher sea levels. There are four main strategies for reducing GHG emissions from transportation sources: 1) improve system and operation efficiencies; 2) reduce growth of vehicle miles traveled; 3) transition to lower GHG fuels, and 4) improve vehicle technologies. Though not required to mitigate impacts to less-than-significance level, the incorporation of mitigations below would reduce GHG emissions by following air quality BMPs listed in Air Quality Section 3.2.4. Mitigation and Minimization measures to be incorporated into the Proposed Action are in addition to measures identified in the EIS/ROD, or restate measures from the EIS/ROD due to importance of application. These measures are listed below:

### **3.3.4 Mitigation and Minimization Measures**

- Minimize idling time either by shutting equipment off when not in use or reduce the time of idling to 5 minutes.
- Maintain all equipment in proper working condition as recommended by manufacturer's manuals.
- Use electric equipment whenever appropriate in lieu of diesel or gasoline powered equipment.

## **3.4 CULTURAL RESOURCES**

### **3.4.1 Regulatory Setting**

The Cultural Resources section of the FEIS 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 3-123 of the DEIS. USACE project activities are in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) so long as they are undertaken pursuant to procedures described in the Programmatic Agreement (PA) among USACE, the Sequoia National Forest (SQF), the California State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation.

### **3.4.2 Existing Condition**

Record Search and Fieldwork: The areas discussed in this document are covered by a record search conducted at the SQF and Southern San Joaquin Valley Information Center. In addition, archaeological surveys of adjacent areas were performed in 2015 and 2016 by SQF and USACE archaeologists, and in 2017 by SQF archaeologists at USACE's request. These surveys resulted in the identification of one archaeological site and one isolate within the proposed area of road work on SR 155 at French Gulch.

Archaeological Site 05-13-54-0961 is a historic site on the north side of SR 155 with an early historic component representing placer mining, and a later historic component representing an Air Force campground. The mining features include stacked stone retaining walls and an earthen dam, all located on the northeast and east side of the site in and around an ephemeral drainage. The historic campground features cluster around an existing two-track road that follows the hillside contours above (north) of SR 155. The immediate vicinity, including the two-track, appears to be in use by the Kern County Parks Department whose maintenance facility compound is located off Highway 155. Importantly, all documented site features are located outside of the footprints of proposed road work activities. The site was documented by SQF Archaeologist Tim Kelly in January 2016.

Isolated groundstone fragment is a piece of granitic material with a smooth and polished exterior. The fragment measures approximately 6 x 5.5 x 4cm and appears to have been fractured by heat. The isolate was located by USACE archaeologists north of SR 155 during preliminary survey for road work in October 2016.

### Consultation

#### *State Historic Preservation Office*

USACE previously consulted with SHPO regarding the inventory efforts and finding of effect for the road work in letters dated October 19, 2016; this consultation covered some, but not all, of the area covered under this EA. USACE continued consultation on the remainder of the area covered under this EA in letters dated February 14, 2017; SHPO concurrence was received in a letter dated March 14, 2017.

#### *Native American Consultation*

USACE has consulted with Native American tribes on the areas detailed above in letters of the same dates. Consultation is ongoing with Native American tribes through a series of in-person meetings and written communication. If cultural resources beyond those discussed here are disclosed by tribes during the consultation process, USACE will ensure that they are either avoided or treated in accordance with the PA.

### Assessment Methods

Analysis of the potential impacts was based on evaluation of the changes to historic properties within the area covered by this SEA that may result from implementation of the Proposed Action. The term “historic property” refers to any cultural resource that has been found eligible for listing, or is listed, in the National Register of Historic Places (NRHP). Section 106 of the NHPA outlines the process by which Federal agencies are required to determine the effects of their undertaking on historic properties. In making a determination of the effects to the 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 (or criteria) that makes the cultural resource a historic property.

### **3.4.3 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 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.

#### No Action

This alternative would have no effect on existing cultural resource in the Proposed Action area because current conditions would remain unaltered.

#### Proposed Action

Effects to cultural resources could result 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 earthmoving activities; and (4) effects from clearing, grubbing and follow-on planting. Any cultural resources found during construction would be evaluated and consulted as stipulated in the PA.

All documented features in site 05-13-54-0961 will be avoided by construction work. Features within the site are located outside the footprints of Proposed Action work. No

significant adverse effects are expected to occur with incorporation of the following mitigation in Paragraph 3.4.4.

### **3.4.4 Mitigation and Minimization Measures**

- Pursuant to the PA, USACE has drafted, consulted on and finalized a Historic Property Treatment Plan to guide efforts to avoid or mitigation effect to historic properties for the Isabella Lake DSM Project as a whole.
- The cultural resource described here will be impacted by the Proposed Action. However, the impacts will not affect any documented features within the site. Therefore, they are not adverse effects according to Section 106. If any previously unknown resources are discovered during ongoing consultation or construction, USACE will take steps to avoid or mitigate adverse effects according to the PA.
- Should construction plans change, USACE would continue consultation as stipulated in the PA. This could entail revisiting previous consultation on portions of the new APE or initiating consultation on new areas in the APE.

## **3.5 BIOLOGICAL RESOURCES**

### **3.5.1 Regulatory Setting**

The Biological Resources section of the Isabella Lake DSM Project DEIS (Section 3.10) and FEIS (Section 3.8) sufficiently characterizes the regulatory setting, and affected general environment for vegetation, wildlife, wetlands, and special status species within the area. A final Fish and Wildlife Coordination Act Report (CAR) (FEIS Appendix C) provided by the United States Fish and Wildlife Service (USFWS) recommends vegetation compensation for wildlife habitat removed by DSM Project construction. Vegetation mitigation is in process at this time for the DSM Project.

### **3.5.2 Existing conditions**

The Biological Resource Sections of the DEIS (Section 3.10) and FEIS (Section 3.8) characterize the general affected environment for this resource. No wetlands or wetland vegetation occurs in the area affected by the Proposed Action (FEIS 3.8.1), and no discharge of material would occur into wetlands. Much of the Proposed Action area consists of bare, disturbed soil surface subjected to prior grading. Vegetation within the potentially affected area is composed of an open or sparse, pine-oak woodland alliance (Sawyer et al 2009) with an understory of California grassland containing non-native and native grasses and scattered native shrubs. Native gray pine (*Pinus sabiniana*) and non-native Aleppo pine (*Pinus halepensis*) are found within the Proposed Action area, along with two species of oak, interior live oak (*Quercus wislizeni*) and canyon live oak (*Quercus chrysolepis*). Native shrubs consist primarily of rabbitbrush (*Ericameria nauseosa*) and big sagebrush (*Artemisia tridentata*). Several rare and

sensitive plant species are known to occur in similar dry and rocky substrate within the Isabella Lake vicinity. From field survey conducted March 20, 2017, no threatened or endangered plants were found to occur in the Proposed Action area. Additional survey is necessary during spring and summer months to verify plants in bloom. Limited, but potentially suitable habitat may be present for species considered rare or sensitive by the California Native Plant Society (CNPS). Tracy's eriastrum (*Eriastrum tracyi*), Kernville poppy (*Eschscholzia californica*), rose-flowered larkspur (*Delphinium purpusii*), and Shevock's golden-aster (*Heterotheca shevockii*) have been identified in the Isabella Lake vicinity (FEIS Table 3-10) and could potentially occur with the Proposed Action area.

Elderberry has not been found in the boundaries of the Proposed Action area, and the counties of Kern, King and Tulare are no longer considered within the Federally listed range of the Valley elderberry longhorn beetle (VELB) (*Desmocerus californicus*) (USACE 2012; USFWS 2014a), and removal of elderberry shrubs would not require USFWS consultation. The Proposed Action area or immediate surroundings do not contain riparian habitat or suitable habitat for Federal or State listed species including the southwestern willow flycatcher (*Empidonax traillii extimus*), western yellow-billed cuckoo (*Coccyzus americanus*) (USFWS 2013b), or least Bell's vireo (*Vireo bellii pusillus*) and no sightings of these species at this site are known. Federal proposed or current critical habitat is not present with the Proposed Action area.

### **3.5.3 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 community or wildlife habitat, and/or interfere with the movement of any resident or migratory wildlife species. Effects on special status species would be considered significant if the proposed action would result in harm or "take" of listed species or their habitat; or if it affected a population of a non-listed species to the point where it became listed or a candidate for listing, or resulted in loss of wetlands or other waters of the US that could not be mitigated.

#### No Action

Under the No Action Alternative, there would be no SR 155 or French Gulch RA intersection modification or construct a left turn lane from SR 155 into the Kern County Parks Maintenance Yard. Construction noise would not cause temporary disturbance to wildlife, and trees would not be removed. As a result, wildlife habitat and vegetation would not be affected.

#### Proposed Action



SR 155 slopes and French Gulch RA routes that must be cleared, filled or excavated could result in tree or limb removal in up to 19 oak and pine trees along the roadways. Highway widening and entry/exit rerouting could result in removal of up to .94 acre (less than one acre) of nonnative and native grasses, and native shrubs. Up to three Aleppo pines could require removal in the French Gulch RA, in addition to four gray pines, three interior live oaks, and 3 canyon live oaks. Vegetation changes are not expected from the construction of a left hand turn lane to the Kern County Parks Maintenance Yard. Specific numbers of trees and acreage affected by the Proposed Action and limbed or removed would be determined with final project design and construction actions. Mitigation would be conducted for removed trees by planting compensatory replacements in the vicinity of the Main Dam Campground or French Gulch RA per USFWS CAR recommendations (FEIS Appendix C). Remaining trees and shrubs would be flagged or fenced before construction to prevent injury or inadvertent removal. A small patch of wetland vegetation tentatively identified west of the French Gulch RA outside of the Proposed Action area would not incur adverse effects from the SR 155 modification due to a required National Pollution Discharge Elimination System (NPDES) storm water permit (Section 402 of the Clean Water Act (CWA)) from the CVRWQCB, which requires erosion and run-off protections.

Vegetation surveys in the Proposed Action area would be additionally conducted by USACE in the summer flowering season to document the presence or absence of plant populations identified by the CNPS as rare or sensitive. Past surveys in the Isabella Lake DSM Project area have not identified threatened or endangered plants and they are not known to occur in the vicinity of the project (FEIS Section 3.8.1). Any rare or sensitive plants that are found would be marked and avoided wherever possible. The contractor would be required to take measures to preclude the import of non-native plant material (USDA Forest Service 2005). A native seed mix recommended by the USFS, Sequoia National Forest, would be used to reestablish vegetation on surfaces disturbed by construction wherever possible.

Most construction activities would occur during the nonbreeding season of migratory birds. Tree and shrub removal is expected to be completed during fall and winter outside of the spring breeding season. A direct loss of nesting habitat may occur with tree removal if roadside trees support nesting birds. In compliance with the Migratory Bird Treaty Act (MBTA), trees or shrubs would be surveyed prior to removal to protect birds wintering in cavities or in the case of project delay, spring nesting birds. Any existing raptor nests or raptors in nests will be evaluated on a case basis to provide compliance with the MBTA and State protections. Breeding bird activities are not expected during the majority of the Proposed Action, but buffers from construction activity would be established where needed to protect any occupied nests in the event of the project extending into March or April. Indirect effects of noise and construction activity could temporarily disturb resident birds over a 45 day period, but due to limited size and duration, and location of the project adjacent to and upon SR 155, substantial effects are not expected. As a result, bird populations protected under the Migratory Bird Treaty Act would not incur significant adverse effects from the Proposed Action.

Critical habitat or proposed critical habitat is not found in the Proposed Action area for State or Federal listed species. Suitable habitat is not present for least Bell's vireo (*Vireo bellii pusillus*), a riparian habitat breeding obligate, which is found at the southern end of Isabella Lake. Since the 2012 FEIS, the USFWS has designated revised critical habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) under the Endangered Species Act (ESA) (USFWS 2013). No southwestern willow flycatcher habitat is included in the Proposed Action area. On October 3, 2014, a proposed rule became effective for the USFWS determination for listing the western yellow-billed cuckoo (*Coccyzus americanus*) as a Federal threatened species protected under the ESA (USFWS 2014b). No proposed critical habitat for the western yellow-billed cuckoo is found in the Proposed Action area. On September 17, 2014, USFWS withdrew the rule to remove the VELB. Though the VELB was not delisted, the range of the VELB was determined to be smaller than the extent proposed in the delisting rule. As a result, the counties of Kern, King, and Tulare are no longer considered within the range of the species and projects proposed in those counties no longer require consultation with USFWS for VELB conservation (USFWS 2014a).

No substantial loss, degradation, or fragmentation of natural vegetative communities or wildlife habitat is expected from the Proposed Action, nor would interference occur with movement of resident or migratory wildlife species. No Federal or State listed species are known in the Proposed Action area, and no effects are expected. Vegetation, wildlife, wetlands, and special status species would not incur adverse or significant impacts. The proposed SR 155 modification does not present significant new circumstances or information regarding the nature and scope of effects to biological resources that would constitute significant adverse impacts.

#### **3.5.4 Mitigation and Minimization Measures**

- Vegetation mitigation per the 2012 CAR would be applied to oak-pine woodland removed as a result of the project. The Main Dam Campground or French Gulch RA would serve as the mitigation area for trees affected by this project.
- Vegetation and trees to be protected from construction activities would be delineated with flagging, fencing or other suitable markers. Removal of trees and tree limbs would be minimized wherever possible.
- Equipment and vehicles would be limited to areas defined by the USACE for the Proposed Action construction site.
- Excavated holes to remain overnight would be covered with plywood and with sealed edges to prevent wildlife entrapment. Trash would be removed daily.
- To avoid potential effects to birds protected by the MBTA, the following actions would be conducted:
  - A qualified biologist would survey the construction area prior to initiation of construction to determine presence or potential for raptor and passerine nests.
  - Tree, tree limb or shrub removal would be conducted primarily outside of the nesting season (March through September). Any tree or limb removal would require prior

survey for presence of cavity wintering birds, or during the nesting season, for occupied nests by a qualified avian biologist. Nests with eggs or chicks are protected by the MBTA and must be protected in place. Any such occupied nests would be protected with an appropriate buffer as recommended by USFWS.

- BMPs to preclude establishment of weed species (USFS 2001; USFS 2005) would be implemented.
- SQF recommended native Grass Seed Type and Application Rates would be used where applicable on disturbed soils created by construction actions.

## **3.6 NOISE AND VIBRATION**

### **3.6.1 Regulatory Setting**

The Noise and Vibration Section for the DEIS (Section 3.8) sufficiently characterizes the regulatory setting for this resource. The Kern River Valley Specific Plan (KRVSP) Noise Element (Kern County 2011) establishes specific goals, policies, and implementation measures for noise within the Plan area, which includes Isabella Lake and vicinity. The contractor would be responsible for obtaining any necessary permits or approvals from the County.

### **3.6.2 Existing Conditions**

The Environmental Effects section of the FEIS Section 3.6, and the Final Noise and Vibration Analysis: Preferred Alternative (USACE 2012c) characterize the general affected environment for this resource. There have been no studies or new data generated to date regarding assessment of the affected environment.

Sensitive receptors include those individuals and/or wildlife that could be affected by excessive or prolonged noise and vibration, including those generated by construction activity. Noise-sensitive receptors at the French Gulch RA include the Nuui Cunni Inter-tribal Cultural Center, the SQF French Gulch Group Campground, the Kern County Boat Patrol Office and recreationists that utilize the French Gulch RA for day use activities. The Nuui Cunni Center provides public and tribal resources and special events on weekends and weekdays. The Kern County Boat Patrol Office provides public services throughout the week, but services are most requested on summer weekends and during organized fishing events and holidays. The French Gulch Group Campground is occupied primarily during weekend and holiday events in the spring, summer and early fall. Summer is the peak season of recreational use at the French Gulch RA.

### **3.6.3 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 ground borne vibration or ground borne 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.
- 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 decibels (dB).

**Table 1. Typical A-Weighted Noise Levels.**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet-flyover at 1,000 ft.	100	Rock band
Gas Lawn Mower at 3 ft.	90	
Diesel truck at 50 ft.	80	Food Blender at 3 ft. Garbage disposal at 3 ft.et
Noisy urban area, daytime, gas lawn mower at 100 feet	70	Vacuum cleaner at 10 ft. Normal speech at 3 ft.
Heavy traffic at 300 ft.	60	Large business office
Quiet urban daytime	50	Dishwasher next room
Quiet urban night; quiet suburban night	40	Theater; Large conference room (background)
Quiet rural nighttime	30	VAWT at 60 m, Library; Bedroom at night
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2009

Sound is characterized by a number of variables, including frequency and intensity. Frequency describes the sound's pitch and is measured in hertz (Hz), while intensity describes the sounds loudness and is measured in dB using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible to humans. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound according to a weighting system

that reflects how human hearing is less sensitive at lower frequencies and higher frequencies than at the mid-range frequencies. The most commonly used filter introduces an “A” weighting and the dB level measured is called the A-weighted sound level (dBA).

### No Action

Under the No Action Alternative, USACE would not conduct SR 155 and French Gulch RA modification or construction of a left turn lane from SR 155 into the Kern County Maintenance Yard. As a result, construction actions would not produce noise and vibrations and there would be no effects to sensitive receptors.

### Proposed Action

Excavation, fill, and road construction and use of the staging area is estimated to continue from 45 days up to 3 months. Construction noise is expected to occur intermittently from Monday through Saturday under the KRVSP Noise Element of the Kern County Noise ordinance, which includes a limitation on construction from 7:00 am to 7:00 pm. Potential exists for night or weekend construction during the winter months in order to complete SR 155 modifications on an accelerated schedule, contingent on Kern County approval of a noise exemption to include Sunday and evening hours after 7:00 pm. Project generated noise and vibration from heavy truck, dozer and grading equipment would generate direct noise effects of approximately 85 dBA at 50 feet during modification of SR 155 at the entrance to the French Gulch RA and the Kern County Parks Maintenance Yard. Noise dB associated with grading, site preparation, engine start-up, vehicle backing and travel, dumping and associated activities, are expected to exceed ambient noise levels.

Construction on the left-turn lane into the County Maintenance Yard is expected to require under a month of time and would be considered a short-term effect. The Kern County Maintenance Yard would incur minimal noise as it is situated at a distance of approximately 160 feet from the proposed SR 155 construction. Occupancy of the Group Campground during winter or early spring months is rare, or does not occur, with exception of the Fishing Derby. The majority of the campsites at the Group Campground are located more than 250 feet away from SR 155, with some as far as 400 feet. At this distance and with existing ambient noise background of SR 155, noise is not expected to be at a significant dB level during noise exempt hours on weekdays. However, with night work and/or a project delay causing continued construction into the spring months, noise impacts to campers at the Group Campground could result causing displacement. Construction would not be conducted on holidays during spring and summer months, and during specified events such as the Fishing Derby.

Indirect impacts could include decreased recreation use of the area due to perceived disturbance and noise avoidance. All sensitive receptors, however, with exception of a Group Campground, are located at a sufficient distance from the construction area where noise disturbance is not expected to be significant. Recreationists are not expected to utilize the Group

Campground until the Fishing Derby occurs in early April, and excluding construction delay, would not be impacted. The Nuui Cunni Cultural Center is located approximately 500 feet from SR 155 resulting in dBA levels below 70 outside the Center building. Noise created by construction equipment could affect the outdoors enjoyment of the area by recreationists and visitors to the Nuui Cunni Center as they drive through the construction zone to a destination. The intermittent noise of large equipment operations could affect visitors of the French Gulch RA if they come within 50 feet of construction equipment. Such equipment noise could directly and indirectly affect the solitude of French Gulch RA recreationists, causing displacement to recreation areas nearby.

Construction would occur primarily during the recreation off-season when visitor attendance at the French Gulch recreation area is substantially reduced, particularly during weekdays in winter. However, if Kern County should provide exemption for construction work during night time hours, and a recreationist or visitor to the Nuui Cunni Center is present expecting night time quiet, desired solitude would be impacted within a 50 to 100 foot distance of the highway. Recreationists using French Gulch RA for boating or water-based activities would be situated over 800 feet from SR 155 and therefore would not be significantly impacted by noise levels from construction, except on approach through the French Gulch RA intersection. Vibration is not expected to affect sensitive receptors due to the distance from source equipment and the limited vibratory potential of equipment to be utilized. No blasting would be conducted for the Proposed Action, however, noise from haul trucks would indirectly contribute to the ambient noise level along SR 155 during active construction.

Construction noise is subject to the limits of County noise thresholds or permitted exemption for disturbance outside of thresholds associated with noise exempt hours. Compliance with the KRVSP Noise Element during permitted exempt hours would not constitute a significant impact on sensitive receptors, and would be considered a less-than-significant effect. The proposed action is not expected to exceed the basis of significance regarding exposure of sensitive receptors, or generate noise levels in excess of standards established in the local general plan or noise ordinance, or exceed applicable standards of other agencies. The proposed action would also not cause exposure of sensitive receptors to, or cause generation of excessive ground borne vibration or ground borne noise levels; cause a substantial permanent increase in ambient noise levels in the project vicinity above levels without the project, or cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Mitigation measures and BMPs as listed below would reduce effects of project actions. Incorporation of these mitigation measures is expected to reduce noise and vibration impacts to less-than-significant-with-mitigation.

#### **3.6.4 Mitigation and Minimization Measures**

- The contractor would comply with the Kern County Noise Control Ordinances, and would be responsible for obtaining any necessary permits or approvals from Kern County

for project related noise, and for following mitigation and minimization measures established within the DEIS and FEIS.

- Construction hours would be limited to the normal daylight working hours of 7:00 am to 7:00 pm, Monday through Saturday unless an exemption were to be provided by Kern County.
- Construction would not be conducted during the Fishing Derby event and Labor Day, Memorial Day and Fourth of July weekends. If project delays are incurred necessitating work through April, construction would cease from Thursday through Monday to avoid impact to the Fishing Derby and Fourth of July weekend events.
- A contractor-prepared Construction Noise and Vibration Monitoring Plan would be prepared before construction work begins. The contractor superintendent would serve as a noise coordinator to resolve noise complaints, and this contact information would be provided to sensitive receptors to report any noise complaints or concerns.
- Noise monitoring would commence with any repeated public nuisance complaints.
- All equipment would be equipped with noise control devices (e.g. mufflers), in accordance with manufacturer's specifications.
- Equipment would be periodically inspected to ensure proper maintenance and presence of correct noise control devices.
- Stationary equipment would be located as far as feasible from sensitive receptors and equipped with engine-housing enclosures as feasible.
- Portable noise barriers would be used to shield stationary equipment as needed and appropriate.
- Excessive idling of equipment would not be permitted.
- Written notice of construction-related activities and/or a schedule would be provided to nearby sensitive receptors including the USFS for the French Gulch RA, the Nuui Cunki Cultural Center and Kern County Boat Patrol.
- The hauling of material along any sensitive routes close to sensitive receptors would be encouraged to take place within the hours from 8 am to 5 pm.
- Engine braking (jake brakes) would be discouraged along routes with sensitive receptors.

## **3.7 TRAFFIC AND CIRCULATION**

### **3.7.1 Regulatory Setting**

The Traffic and Circulation section of the DEIS (Section 3.7), FEIS (Section 3.5), and the Final Traffic and Circulation Analysis for the Isabella Lake DSM Project (USACE 2012c) sufficiently characterizes the regulatory setting for this resource.

### **3.7.2 Existing Conditions**

The Traffic and Circulation section of the DEIS (Section 3.7), FEIS (Section 3.5), and the Final Traffic and Circulation Analysis for the Isabella Lake DSM Project (USACE 2012c) characterize much of the existing Traffic Conditions. Traffic levels used in this analysis for Proposed Action roadway segments on SR 155 did not identify exceedances for existing level of service (LOS) State of California or Kern County thresholds. No exceedances were identified for increased traffic volumes that would occur with the major construction activities of the DSM Project.

The length of SR 155 is primarily a rural two-lane conventional highway traveling from north to south. The speed limit between post mile 68 and 69 within the French Gulch RA vicinity is posted at 45 mph. Lanes are 12-foot wide and shoulders are 1-foot wide with all pavement markings and delineation visible. From the west, a separate right-turn lane from SR 155 provides for vehicles decelerating and entering French Gulch RA. Exiting French Gulch RA, a separate right-turn lane is provided for vehicles decelerating and entering French Gulch. The entire intersection, including existing deceleration and acceleration lanes is paved, but in poor condition (USACE 2016b). The Daedrich Ranch Road entrance also provides access to the Nuui Cunni Native American Inter-Tribal Cultural Center, the French Gulch Campground and the Kern County Lake Patrol Office. Visitor use data for the French Gulch RA, the Nuui Cunni Center, and the Lake Patrol Office is not available. During peak events, the upper parking area is lightly to moderately used, and the lower parking area may be half full.

Peak-hour traffic volumes published by Caltrans indicate that the peak-hour of traffic in the French Gulch vicinity occurred between approximately 10:00 AM and 1:00 PM on a weekend day during the month of June (USACE 2016b). Average daily volume in the vicinity of the French Gulch and SR 155 intersection was assumed at approximately 5,800 vehicles per day with a peak-hour volume of approximately 580 vehicles in both directions. Approximately 55 to 60 percent of traffic travels westbound during the peak traffic hour. Based upon estimated traffic volumes during the peak-hour, there are 10 or more left-turning vehicles into the French Gulch RA (USACE 2016c). Based on the average peak-hour traffic volumes, the delay for stop-controlled vehicles leaving French Gulch was estimated at approximately 15 seconds per vehicle on average. Delay for westbound vehicle turning left into French Gulch was estimated at less than 10 seconds, with queues on both approaches estimated at one vehicle on average (USACE 2016b). Heavy vehicles (trucks, mobile homes, and passenger vehicles with trailers) account for approximately 10 to 11 percent of traffic.

Events that create higher than average traffic into French Gulch RA include events at the Nuui Cunni Center, the annual 4<sup>th</sup> of July fireworks display and other holiday weekends, and the annual Fishing Derby. Approximately 40 vehicle trips per day are made by Kern County employees and visitors to the Boat Patrol and Park Maintenance Office located in the French Gulch RA (Armstrong, Pers. Comm 2017). Vehicle trips to this office increase substantially during the summer recreation season. During the high recreation season, many of the trips from the Boat Patrol office are related to emergency services associated with lake rescues. Four to



five County employees access the Kern County Parks Maintenance Yard with approximately 8 to 12 vehicles exiting or entering the Yard per workday.

The following accident history analysis was provided by Caltrans (2017a) for SR155 segment PM 68/69. The accident history for the most recent three-year period (July 1, 2012 to June 30, 2015) indicated that the accident rate for segment PM 68/69 is lower than the statewide average accident rates. The eight accidents which occurred during this time period did not contain any fatalities and were related to four cases of injury and four cases of property damage. Three of the accidents (rear end, broadside and overturn) occurred at the intersection of SR 155 and Daedrich Ranch Rd. and involved vehicles turning to French Gulch RA. The rear end accident was due to the slowing or stopped traffic ahead and the driver of the vehicle involved was at a speed greater than reasonable for the highway condition. Two of the accidents were due to improper turns where the drivers made unsafe turning movement. No recent skid test is available for Route 155.

### **3.7.3 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 the No Action Alternative, USACE would not improve the deceleration and acceleration lanes, two left-hand turn lanes would not be constructed and travel routes within the French Gulch RA would not be rerouted. With the use of French Gulch Boat Launch during peak-hours, vehicles turning left into the French Gulch RA may incur substantial traffic congestion on SR 155 which could result in an increase in traffic exceeding the existing capacity. The poor condition of the acceleration and deceleration lanes could increase congestion during peak hours as vehicles towing trailers stall or slowly move onto SR 155. Operation and safety would not be improved, and would be expected to decrease, because sight distance and lane accommodation would not increase for left-turn entry into the French Gulch RA. Standards established by the NCHRP and Caltrans thresholds would not be achieved for the expected increase of traffic volume, particularly during peak-hours of traffic at the intersection.

#### Proposed Action

The Proposed Action assumes that traffic volume accessing the French Gulch RA will increase, and a change in the type of traffic will occur, which would include larger vehicles pulling boat trailers. The Proposed Action is not expected to produce a long-term adverse effect on traffic and transportation facilities, but would reduce congestion and provide beneficial safety on a long-term basis for travelers on SR 155 and for users of the French Gulch RA. Cumulative effects on traffic with concurrent projects are discussed in Section 4.1.

Direct effects of active SR 155 construction are expected to cause intermittent delays in traffic over a period of up to 3 months of construction duration. One lane of traffic on SR 155 would be closed to traffic during some construction hours to accommodate highway modification. Traffic management would be conducted by the contractor alternate vehicle passage on a single lane for traffic safety. A backup of traffic is possible during active construction hours on the east or west bound lanes from December through February. Delay could be expected during peak-hours for vehicles on SR 155, but expedient passage would be provided for emergency vehicles. A full safety closure of SR 155 for up to one hour during non-peak hours is possible but not expected, to safely accommodate construction actions. Any such full closure of the highway would be fully coordinated by the contractors with local agencies, emergency services and Kern County, and would be scheduled during non-peak traffic hours. If westbound traffic is detained in lines sufficient in length to reach the entrance to the Kern County Parks maintenance yard, County employees could be detained in attempts to enter their facility. East bound County employees could also be detained due to construction on the left-turn lane for the maintenance yard.

The contractor would be required to obtain all necessary traffic-related permits prior to construction. Permits would include required terms and conditions during construction. A Construction Traffic Management Plan would be prepared to avoid effects or reduce any short-term effects on traffic to less than significant and ensure public safety during construction. To avoid unnecessary delays, the Traffic Management Plan would address local traffic volumes and peak traffic hours. Temporary traffic control devices would be provided in accordance with the Caltrans *California Manual on Uniform Traffic Control Devices*. Coordination would occur with local emergency and law enforcement agencies and the Kern County Parks Department to ensure timely passage of emergency response vehicles on SR 155 and access to the Kern County Parks maintenance yard.

In the French Gulch RA, traffic management would also be conducted to provide constant egress and ingress from a singular lane into the SR 155 intersection. Boundaries for vehicles and construction actions would be delineated by the contractor with flagging, fencing, or other suitable markers. The Proposed Action would contribute to intermittent traffic delay at the French Gulch RA intersection due to vehicles entering and exiting the French Gulch RA from December through February. Up to 10 dump trucks per day could be expected when hauling material to or from the project site for up to 10 round-trips per day. A maximum of 15 pick-up trucks for commuting and errands could be expected on a daily basis at the site.

SR 155 will be under constant traffic management during construction hours, and haul trucks would be directed into and out of the French Gulch intersection by traffic control. French Gulch Boat Launch construction traffic is expected to overlap with the SR 155 modification, and is addressed under Cumulative Effects, Section 4.1.

Construction traffic would contribute additional roadway and intersection volume, but is not expected to impact current traffic patterns significantly due to a relatively low base record of traffic (USACE 2012c) with high LOS projected for intersections under heavy truck traffic. In addition, lower SR 155 traffic volumes would occur primarily in winter months during low recreation use periods. Upon completion of the Proposed Action, a reduction of traffic congestion and improvement in traffic operation would provide long term beneficial effects to travelers on SR 155 and recreationists using French Gulch RA. The Proposed Action would not produce an increase in traffic or safety hazards, or cause substantial deterioration of the area roadways. Indirect effects of construction traffic are not considered significant due to the intermittent and relatively short-term nature of the project during winter months. As a result, the Proposed Action would result in less-than-significant impacts because long-term effects would not occur.

### **3.7.4 Mitigation and Minimization Measures**

The following mitigation measures would be incorporated into the project:

- Contractor would prepare a Construction Traffic Management Plan to minimize traffic disruption and provide public safety. Elements of the Plan are specified by USACE and would address local traffic volumes and peak traffic hours in order to avoid traffic delays. Contractor must obtain all necessary traffic permits prior to initiation of construction.
- Emergency response protocol would be coordinated with all local emergency response agencies.
- Boundaries for vehicles and construction activities would be clearly delineated with flagging, fencing and other methods per the Caltrans California Manual on Uniform Traffic Control Devices (Caltrans 2012)
- USACE would recommend that any concurrent Phase II work at the Main Dam that involves traffic control on SR 155 be more efficiently conducted after completion of the SR 155 modification at French Gulch.

## **3.8 RECREATION**

### **3.8.1 Regulatory Setting**

The Recreation Section of the DEIS (Section 3.12.2) characterizes the regulatory setting for this resource. The DEIS and FEIS assessed the potential effects of the Isabella Lake DSM Project on recreation facilities and opportunities as significant to recreational use on a temporary

and permanent basis. Since the release of the EIS, USACE, in coordination with the Office of Management and Budget, concluded that sufficient authority from a 1964 Memorandum of Agreement (MOA) exists to allow USACE to use its appropriated funds to relocate services of USFS facilities impacted by the Isabella Lake DSM Project.

### **3.8.2 Existing Conditions**

The DEIS (Section 3.12.3) and the SEA of the USFS Facilities Relocation (USACE 2015a) detail existing conditions of the Isabella Lake RA. The Proposed Action of the SEA for the USFS Administration and Recreational Facilities Relocation (USACE 2016a) assessed the relocation of the permanent recreational facilities and construction of temporary boat launch facilities at the French Gulch RA

Current recreational uses include the Isabella Lake Group Camping Area, the Nuui Cunni Intertribal Cultural Center (Nuui Cunni Center), and general recreation use including boating, fishing, and sightseeing. The French Gulch RA is a popular day-use recreation area for paddle boarding and swimming in addition to launching small boats and jet skis. A constructed launch is not available at French Gulch RA so only smaller watercraft are able to launch from the shoreline. French Gulch RA includes several paved parking areas, restrooms and trash receptacles. Two large paved parking lots provide car and boat trailer parking. The upper lot provides access to the restroom and the Kern County boat registration station and lake patrol office. The lower parking lot and open use area provide car and trailer parking in addition to water access for launching small watercraft.

The Group Campground is used primarily during the summer and particularly during special events, warm season holidays and the spring Fishing Derby. The Campground is accessed on a reservation and fee basis for groups containing up to 100 individuals. The Nuui Cunni Center includes 5.6 acres of grounds with native plant exhibits and tribal structures. The Center's main structure houses a museum, library, gift shop, and visitor's center. The Kern River Paiute council operates the Center through a Special Use Permit from the USFS. Native crafts workshops are held on Wednesday evenings and the Center holds special cultural events primarily on the weekends.

Kern County also maintains a facility in the upper southwestern area of French Gulch RA that houses offices for the Parks Department and Boat Patrol. Boat Patrol maintains an important function from this facility in providing all first response to lake emergencies. During peak summer use, emergency response can be required continuously over a 24-hour period. Additionally, the office provides public permits and answers boating safety questions on a daily basis. Kern County Lake Patrol maintains a floating four-slip dock on the west side of the recreation area.

### **3.8.3 Effects**

### Basis of Significance

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

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

### No Action

Under the No Action Alternative, there would be no USACE participation in modification to SR 155 at French Gulch RA, within the French Gulch RA for improvement of access to SR 155, or addition of a left turn lane from SR 155 into the Kern County maintenance yard. Modification to reduce congestion on SR 155 would not be conducted and modification would not be conducted to increase sight distance for safer vehicle access to the French Gulch RA. During high periods of use, recreationists seeking access to the French Gulch Boat Launch could experience congestion and delay, as well as limited sight distance for left-hand turns. Peak-hour traffic could indirectly affect travelers on SR 155 by increasing traffic congestion, which could exceed the existing level of capacity. The existing degraded condition of the acceleration and deceleration lanes could result in traffic issues and in combination with the absence of a left hand turn lane, could result in higher risk for vehicle accidents.

### Proposed Action

Access to the French Gulch RA would be maintained throughout the projected three month construction period of the SR 155 modification. Accessibility to all RA sites would be maintained with an open lane while realignment of routes is conducted. Direct negative effects could result to recreation from intermittent and short term traffic delay of up to 5 minutes during peak hours, while routes are graded or paved. Entrance or departure from the recreation area may also be delayed from the traffic management occurring on SR 155. Indirect effects could include avoidance of the French Gulch RA for the 45-day period during construction due to active noise and perception that recreational activity is inaccessible.

Recreation use at French Gulch RA is highest from the Memorial Day through Labor Day weekend and during the annual spring Fishing Derby. Because the Proposed Action construction would be scheduled primarily for the winter off-season, significant adverse impacts are not expected as a result of noise and traffic discussed in Sections 3.6.3 and 3.7.3. The Group Campground is not expected to be occupied during the off-season and as a result, campers are not expected to incur adverse effects from construction activities. The Nuui Cunni Center and the Kern County Boat Patrol office are expected to incur only intermittent or short traffic delays for visitors attempting to access these facilities during off-season months. The combined factors

of construction presence, noise and traffic, however, could reduce the aesthetics and enjoyment of the recreational visitor for up to a 3 month period.

Though construction activity would occur at the upper (northern) end of the RA, noise and visuals generated by construction equipment could indirectly affect recreational use at the south shoreline. Recreationists may choose to avoid French Gulch RA due to construction activity. Due to the limited construction duration and intermittent periods of construction work, these impacts would not be considered significant. Any Kern County approval for extended hours of work is not expected to produce significant impacts over a three month period. Condensing the construction actions into a shorter time frame, may serve to reduce occupancy time and reduce overall recreation impacts. A delay in construction activity would lengthen the total time of construction impacts to recreation but reduce the intensity.

Construction may generate short-term fugitive dust from soil excavation and fill actions and wind blowing across exposed soil. Dust control measures would be implemented to ensure that fugitive dust does not cause adverse impacts to recreationists, the Nuui Cunni Center and the County office. Incorporating mitigations for air quality, noise and traffic (Appendix A) for the Proposed Action would reduce effects to less-than-significant. Fencing would be installed and traffic management would be conducted to safely separate recreationists from construction areas. Upon completion of the Projected Action, a reduction of traffic congestion and improvement in vehicle operation would provide long-term beneficial effects for potential recreationists of the French Gulch Recreation Area. The Proposed Action would not result in a permanent loss of recreational opportunities or resources, or severely restrict or eliminate access to recreation opportunities and facilities, and as a result, would not constitute an adverse or significant effect.

#### **3.8.4 Mitigation Measure and Minimization Measures**

Construction of the SR 155 Modification and French Gulch RA access would not be conducted during the high recreational use period from the Fishing Derby in early April through Labor Day weekend.

- Construction would not be conducted during the Fishing Derby event and Labor Day, Memorial Day and Fourth of July weekends. If project delays are incurred necessitating work through April, construction would cease from Thursday through Monday to avoid impact to the Fishing Derby and Fourth of July weekend events.
- Fencing, signage, and other appropriate methods of distinguishing construction boundaries for the public would be employed by the contractor to reduce recreation conflicts and improve public safety.
- The contractor would provide construction schedules as recommended by the USACE. The USACE would advise the USFS on construction activity at least 48 hours before commencement.
- Coordination would be conducted with the USFS and the Kern County Boat Patrol Office to identify and minimize any visitor use conflicts.



## CHAPTER 4.0 - CUMULATIVE EFFECTS

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

This section briefly considers other major local, State, and Federal projects near the Proposed Action for which evaluation is required. Additional information on cumulative effects relative to the Proposed Action can be found in the FEIS. 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. Effects that cannot be avoided or reduced to less than significant are more likely to contribute to cumulative effects in the area.

The actions on the following list were included due to their relevance based upon their geographic area of influence, proximity to Isabella Lake and the time period as a concurrent action. The effects of the Proposed Action in this document are expected to contribute minor cumulative effects.

### 4.1 AREA PROJECTS AND PLANS

#### 1. Isabella Lake DSM Project

- Phase I Relocations. Fall, winter and spring 2018.
  - Completion of the USFS fire station (USACE 2016a) located on Isabella Blvd. and the USFS Administrative office in Kernville, is expected in October, eliminating any concurrent construction activities with the SR 155 modification.
  - French Gulch RA Boat Launch construction is expected concurrently with the SR 155 modification construction during the period of November through March 2018. The French Gulch Boat Launch construction was delayed to due to high winter precipitation that raised water levels in the lake by almost 40 feet. Construction was suspended for the 2016 boat launch until November 2017, when water levels are expected to be at a sufficient low level to construct a redesigned ramp. In the meantime, other facilities associated with the boat launch, restrooms and parking, are expected to commence in mid-September.
- Phase II Dams and Spillways. Fall 2017 and 2018 winter/spring. Concurrent work with the SR Modification project would primarily include staging area set up and haul route construction in the central area of the Auxiliary and Main Dams. Major construction does not begin until the latter part of 2018 and 2019 after expected completion of the SR 155 modification project.



2. USFS Motorized Travel Management EIS (USFS October 2009);
3. USFS Giant Sequoia Monument Management Plan EIS (USFS August 2010)
4. BLM Kern River Valley Specific Plan (Kern County July 2011)
5. Kern River Preserve Audubon Society (ongoing projects)

#### **4.1 ASSESSMENT OF POTENTIAL CUMULATIVE EFFECTS**

The Proposed Action is not expected to induce growth in or near the project area, or cumulatively and adversely affect land use, socioeconomics, environmental justice, utilities, community and emergency services and HTRW. The Proposed Action would likely have no adverse cumulative effects on the following resources: geology, soils, seismicity, water quality, air quality, climate change and recreation. With designated mitigations listed by resource and summarized in Appendix A, the Proposed Action is not expected to produce adverse cumulative impacts on traffic, climate change, cultural resources, noise and vibration, and biological resources. Visual aesthetics would experience a permanent change which is cumulatively consistent with area visuals and would not constitute a significant impact.

Short-term cumulative effects with other local factors of traffic, noise, air quality and recreation could be expected with the increase of construction equipment on SR 155 from the Proposed Action. The annual summer recreation season is the single greatest contributor to traffic, noise, air quality. Direct short-term and intermittent cumulative impacts to travelers on SR 155 could occur in the form of traffic delays during construction activities during these months. Recreationists, Nuui Cunni visitors and Kern County employees may also experience short term and intermittent delay in ingress and egress to and within the French Gulch RA. Traffic levels and recreation use are of low intensity during the Proposed Action construction period in winter. The projected 3-month construction period is not expected to produce adverse, but beneficial long term impacts for traffic and recreation. As a result, effects on traffic, noise and recreation are expected to be less-than-significant. CO<sub>2</sub>e estimates conducted for the entire Phase II DSM Project in year 2018 (FEIS Section 3.3.2, Table 3-3) showed emissions resulting well below the threshold. Completion of the USFS fire station (Lake Isabella) and the USFS Administrative building (Kernville) in October, would not contribute cumulative traffic, air quality and noise impacts. Planned projects on the SQF and within Kern County (Kern County, Audubon and BLM) are not within the vicinity of the Proposed Action or are not expected to contribute to cumulative effects.

#### **French Gulch Boat Launch, Parking and Facilities Construction**

The French Gulch RA Boat Launch, adjacent parking and facilities (USACE 2016a) were not constructed in 2017 due to high lake levels. Instead this construction is expected to commence in mid-September 2017 with a completion by the end of January 2018. There is low risk that the project would be delayed past the month of January, and as a result, concurrent construction is expected with the Proposed Action from the period of late November/early December 2017 through January 2018. The boat launch with restroom and parking facilities would be constructed directly south of the Proposed Action. In mid-November, water levels are expected to be sufficiently low for construction of all, or the larger portion of the boat launch ramp in dry soils (terrestrially). If water level does not drop sufficiently, construction may be conducted within the water (aquatically) under required thresholds specified by the CVRWQCB.

Approximately one-half acre of paved parking would be constructed on the lower level of the French Gulch RA site, with a paved access to the boat launch. Both an existing lower and upper level asphalt parking would be marked and striped for boat trailer and vehicle parking. The existing Nuui Cunni earthen parking lot would also be paved and marked. Existing cinder block restrooms would be replaced with an equivalent capacity modular vault toilet of four stalls and an outside water faucet at each stall. Construction of the parking lots and access roads would require cut and fill earthwork above the gross pool elevation. Construction of the parking lots, facilities and boat launch is limited to the weekdays in order to reduce effects to weekend recreation activities and provide uninterrupted access. Earthwork and rough grading of the parking lot access roads and boat launch ramp would be accomplished using dozers, scrapers, excavators, and haul trucks. Additional construction equipment could include paving machines, excavators, backhoes and trucks. Recreational parking and shoreline access may be temporarily closed when paving is placed during the weekdays. Boat launch construction noise would be primarily concentrated at the shoreline where sensitive receptors at the Nuui Cunni Center and Kern County Office would not be directly affected.

Parking lot and facilities construction would be partially or totally completed before commencement of the SR 155 modification construction expected in late November or early December. Concurrent boat launch and facilities construction could effectively double equipment and workers within French Gulch RA for up to 2 and a half months. However, with completion of parking lots and facilities prior to SR 155 modification, cumulative effects of noise and traffic would be reduced substantially for the period of November/December through February 2018. Without parking lot construction, construction would be focused at two locations; boat launch construction at the south end, or shoreline, of the French Gulch RA, and SR 155 modification at the north end of the RA. Though construction foci would be separated by sufficient distance that would curtail noise overlap, haul trucks and moving vehicle traffic would produce cumulative noise and traffic at the SR 155 intersection.

The total period of construction within the French Gulch is expected to extend from mid-September 2017 through February 2018, resulting in a four and a half month period of construction effects. The concurrent work schedule of up to 2 and a half months, could provide a preferred benefit in that effects to sensitive receptors would be condensed, avoiding a

construction period extending over a two year period as originally proposed. Concurrent construction schedules, however, would intensify direct effects of noise and traffic for RA sensitive receptors. The French Gulch RA will be affected by construction commencing with parking lot and facilities construction from mid-September through December/January, boat launch construction mid-November through January, and finally, SR 155 modification from late November/December to March 2018. Temporary indirect effects, expressed by area avoidance beyond the proposed construction dates, may result due to perceived disruptions of the recreation experience from construction, noise, visuals and traffic.

The Kern County Parks Office building is situated at a greater distance than the Nuui Cunni Center from active construction sites, but employees and visitors in transit could incur up to twice the noise and traffic congestion during weekdays from concurrent construction. Parking lot construction would create the loudest noise effects for the Nuui Cunni Center as one of the parking lots is directly outside the Center building, however this action is not expected to occur concurrently with SR 155 modification. The Boat Launch construction would be at sufficient distance to both the County office building and Nuui Cunni Center that noise effects would not be substantial or significant. However, intermittent truck, equipment and haul transit from the Boat Launch construction area is expected to contribute to cumulative noise, traffic and visual disturbance to the Nuui Cunni Center and to recreationists. Visitors to the Nuui Cunni Center and the County Parks office could incur increased construction traffic and noise at the SR 155 intersection over a 2 and a half month construction period. Despite the fact that cumulative traffic levels of the Phase II Project are expected to remain operating at a high LOS at all intersections during this time (USACE 2012 c), concentrated construction traffic at the SR 155 intersection could contribute to intersection congestion on active construction weekdays if haul trucks are not well coordinated for this avoidance. As a result, recreationists and Nuui Cunni Center, and Kern County Park employees could incur intermittent travel delay at this intersection over a period up to three construction months during the weekdays. Cumulative traffic could also create vehicle congestion on SR 155 if sufficient numbers of slow moving haul trucks pull in or out of the intersection. Without traffic management coordination, congestion and delay on SR 155 could result. To resolve potential congestion, contractors would be responsible for coordinating and reducing traffic conflict and ensuring that congestion is not substantially impacting to highway travelers, visitors, and Nuui Cunni and Kern County employees. Traffic management plans of both contractors would be required to address strategy to reduce vehicle conflict and maintain safety in the French Gulch RA and on SR 155.

Direct cumulative effects on recreational users are expected to be minimal and short-term due to fact that during the winter months of November through February, recreational use of the French Gulch RA is low on weekdays. Indirectly, the French Gulch RA may be avoided by recreationists during the weekdays and weekends due to perceived construction disturbance. Traffic management is required of the contractor which would maintain traffic flow without substantial delays. Due to the short-term nature of the concurrent construction period, and the low amount of recreational use during winter months at French Gulch RA, the cumulative noise and traffic effects of the two projects is not expected to be significant. Though aesthetics of the

French Gulch RA would be cumulatively reduced during the 2 and a half months of concurrent construction, this is considered a short term impact that would be resolved and improved upon with completion of the projects, and as a result would be considered less-than-significant. The benefits of new and extended parking, safer vehicle access and a boat launch are expected to outweigh the temporary effects of construction.

The magnitude of emissions that would be released from boat launch and parking lot construction is on level with that of the SR 155 modification and is considered minimal. Considering that the SR 155 modifications were estimated to produce less than one quarter pound per day of VOC, NO<sub>2</sub> and PM<sub>10</sub> and the boat launch and facilities project would release a similar amount, one half pound total of these emissions would be released per day resulting in .09 tons per year, a quantity substantially lower than the General Conformity de minimis thresholds of 100 tons per year of ozone precursors for VOC or NO<sub>x</sub> and 70 tons of PM. As a result, the cumulative effects of these emissions is minimal and would not exceed state or federal thresholds or be considered significant.

#### Isabella Lake DSM Project Phase II

The next largest cumulative contributor of traffic on SR 155 over the 3 month construction period of the Proposed Action could be Phase II of the Isabella Lake DSM Project. It is expected that Phase II would begin staging area set-up of haul route construction and emergency spillway preparation during these months. The early Phase II commencement would not contribute substantially to cumulative traffic effects because construction traffic would be concentrated off-road at the Dam sites, and upon SR 178 or SR 155 south of French Gulch RA. Truck traffic at SR 155 and 178 intersections south of the French Gulch intersection would operate under traffic management and could add short delays on these routes if Phase II trucks pull onto the highways. However, due to the infrequency of such delays and distance from the French Gulch RA, this is not expected to be an additive impact and is considered less-than-significant.

The commencement of the remaining majority of DSM Phase II construction actions are highly unlikely to occur and pose a low risk of concurrent activities with the Proposed Action during January and February of 2018. These activities include construction on the Auxiliary Dam and buttress, existing spillway wall extension, emergency spillway labyrinth, emergency spillway apron, aux dam buttress, emergency spillway wall extension and apron excavation, and the Main Dam foundation and buttress. If these activities were to commence in January of 2018, only the Main Dam foundation and buttress construction could contribute directly to traffic delay on SR 155 in the vicinity of the French Gulch intersection. Recommendations would be made to deter any concurrent Phase II work at the Main Dam that involves construction traffic on SR 155 until after completion of the SR 155 modification at French Gulch.

Additional traffic with adverse or significant cumulative effect is not expected on intersections or roadways due to a limited increase of traffic associated with Phase II from

October through February. Cumulative traffic levels of the Phase II Project were assessed and are expected to remain operating at a high LOS at all intersections along SR 155 during this time (USACE 2012 c). Because Phase II traffic would be concentrated primarily along SR 178 and upon the Phase II site, cumulative traffic effects are not expected to be significant. Emissions produced by Phase II preparatory actions prior to February 2018, are considered minimal and would not contribute to significant cumulative quantities. As a result cumulative construction emissions would not exceed Federal or State thresholds due to the limited contribution of the SR 155 modification and boat launch projects, and the reduced magnitude of emissions projected for the DSM Project (FEIS Section 3.3.2) in year 2018. Direct noise impacts are not expected to result in significant cumulative effects from the Phase II Project due to sufficient site distance capable of attenuating additional noise, and the limited intensity of construction actions during this time period.

## **CHAPTER 5.0 - COORDINATION AND COMMENTS**

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team and interagency coordination meetings. This chapter summarizes the results of efforts to identify, address and resolve project-related issues through early and continuing coordination.

Due to the project's location within the Sequoia National Forest and proximity to Wofford Heights, Lake Isabella and Kernville, the project has garnered interest by community groups and organizations that have concerns or responsibilities to the area. In addition, multiple agencies have involvement and provide input on the Proposed Action.

The USFS has jurisdiction over the land area of the Proposed Action, which is located on the SQF. The USFS was contacted early in the process regarding the Proposed Action. USACE engaged Caltrans for consultation and approval on the SR 155 and French Gulch RA intersection. Caltrans has a real property interest in the land, also known as a right-of-way, and a right of entry is required for SR modification. USACE has applied to Caltrans for an encroachment permit for SR 155 widening, modification of intersection and addition of imported fill material and excavation of embankment to allow a minor road alignment. Approval of the permit and construction design would allow USACE to conduct the Proposed Action as planned. Positive coordination has been conducted with the Kern County Parks Department regarding a new turn lane proposed for entry off SR 155 to the maintenance yard.

This SEA document will be circulated for a 30-day period from July 14, 2017 to August 14, 2017 to the public and interested Federal, State and local agencies and organizations. All comments received in the 30-day period on the draft environmental document will be addressed in the final SEA.

A total of two public meetings for providing information and soliciting comments regarding the draft environmental document will be held July 24 and July 25, 2017 in Lake Isabella and Kernville respectively. The public hearing will be publicized through direct mail announcements and local media.

## CHAPTER 6.0 - ENVIRONMENTAL COMPLIANCE

This chapter addresses Federal and State statutes, implementing regulations, and Executive Orders applicable to the proposed SR 155 Modification at French Gulch RA. Prior to initiation of construction, the project would be in compliance with all applicable laws, regulations, and Executive Orders. Additional description of environmental laws and regulations can be found in sections of this document and the 2012 DEIS.

### 6.2 FEDERAL LAWS AND REGULATIONS

Migratory Bird Treaty Act of 1918 as amended (16 U.S.C. §703-712 et seq.) *Compliance.* This Act protects over 1,000 bird species and their habitat, and regulates take, possession and disposal of migratory birds and their parts including eggs and nests. Also, this Act commits the U.S. to taking measures to protect identified ecosystems of special importance to migratory birds against pollution, detrimental alterations, and other environmental degradations. With required mitigations listed in Appendix A, implementation of the proposed action would not have significant effect on habitat or populations of MBTA protected birds.

Fish and Wildlife Coordination Act of 1934. *Compliance.* The Fish and Wildlife Coordination Act (FWCA) of 1934 as amended (16 U.S.C. §661-667e) provides authority for the USFWS involvement in evaluating effects to fish and wildlife from proposed water resource development projects. USACE would conduct vegetation mitigation consistent with prior coordination with USFWS on the DSMP and USFWS Coordination Act Report, included as Appendix C to the 2012 FEIS.

National Historic Preservation Act of 1966. *Partial Compliance.* Section 106 of the NHPA (54 U.S.C. 306108) requires that Federal agencies consider the effects of Federal undertakings of historical, archaeological, and cultural resources that are eligible for inclusion in the National Register of Historic Places. USACE, along with the SQF, the California SHPO, and the Advisory Council on Historic Preservation entered into a PA for the Isabella DSMP in 2012. USACE has previously consulted with the signatory parties to the PA, and interested Native American tribes, on proposed activities for recreation mitigation and preliminary plans for road work at SR 155 and French Gulch. In February 2017 USACE continued consultation on a larger road work footprint that encompasses all the proposed activities. USACE submitted a finding of no adverse effect to historic properties (36 CFR 800.5 [d][1]) for the proposed activities within the SR 155 APE; no responses were received from Native American tribes or the SQF, and SHPO concurrence was received in November 2016. The SR 155 Modification at French Gulch is in full compliance for road work activities. Documentation of SHPO concurrence (USACE 2016c) is available from the USACE Sacramento District.

Wild and Scenic River Act of 1968. *Compliance.* The Wild and Scenic Rivers Act of 1968 (16 U.S.C. §4321), as amended, was created to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and

future generations. The proposed action is downstream of these areas and therefore the proposed action will have no effect on protected segments.

National Environmental Policy Act of 1969. *Partial Compliance.* The National Environmental Policy Act (NEPA) (42 U.S.C. §4321 *et seq.*) commits Federal agencies to considering, documenting, and publicly disclosing the environmental effects of their actions. As required by NEPA, this Draft SEA describes existing environmental conditions at the project site, the No Action Alternative, and the Preferred Alternative (also referred to herein as the “proposed action”). After review of the SEA, the FONSI determines if the project would create any significant environmental impacts that would warrant preparing an EIS. Public comments received during the public review period will be included and incorporated into the Final SEA. The submittal of the Final SEA and a signed FONSI if appropriate, would complete the NEPA process and fully comply with this Act.

Clean Water Act of 1972. *Compliance.* The object of the Federal Water Pollution Control Act (33 U.S.C § 1252 *et seq.*), commonly referred to as Clean Water Act (CWA), is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. There would be no placement of fill into wetlands, and waters of the U.S. would not be affected, therefore a 404(b)(1) analysis is not required. Because the project would result in more than one acre of construction-related land disturbance, the Contractor would be required to pursue a General Permit for Discharges of Stormwater Associated with Construction Activity(Construction General Permit, 99-08-DWQ). Additionally, compliance with CWA will be achieved by complying with the Section 401 Certification from the CVRWQCB for the Isabella Lake DSM Project.

Clean Air Act of 1972. *Compliance.* The Clean Air Act (CAA), as amended (42 U.S.C. §7401, *et seq.*), prohibits Federal agencies from approving any action that does not conform to an approved State or Federal implementation plan. This project is not expected to exceed or contribute towards the exceedance of any Federal or State thresholds for emissions. As a result, the project would remain in compliance with Federal air quality standards and would not hinder the attainment of air quality objectives in the local air basin.

Endangered Species Act of 1973. *Compliance.* In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, Federally-funded, constructed, permitted, or licensed projects must take into consideration impacts to Federal listed or proposed, threatened or endangered species and their critical habitats. No Federal endangered or threatened species are currently known in the Proposed Action area, and project actions are not expected to affect these species. No proposed or designated critical habitat exists in or adjacent to the Proposed Action area. No protected or candidate species are expected to be affected by the implementation of the proposed action.



Executive Order 11990 Protection of Wetlands. *Compliance.* The purpose of Executive Order 11990 is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands". Wetlands are not present in the Proposed Action area, and no fill would be placed into wetlands. The Contractor would be required to pursue a General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Project implementation would not adversely affect any wetlands.

Executive Order 11988 Floodplain Management. *Compliance.* This EO requires USACE to provide leadership and to take action to (1) avoid development in the existing 100-year floodplain, unless such development is the only practicable alternative; (2) reduce the hazards and risks associated with floods; (3) minimize the impact of floods on human health, safety, and welfare; and (4) restore and preserve the natural and beneficial values of the current floodplain. The proposed action would comply with this EO as it does not lie within the 100 year floodplain.

Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds. *Compliance.* This Executive Order provides direction to Federal Agencies taking actions that have, or are likely to have, a measureable negative effect on migratory bird populations and requires protocols for implementation of a Memorandum of Understanding and for reporting accomplishments. Each agency shall support the conservation intent of the migratory bird conventions by integrating bird conservation principles, measure and practices into agency activities and by avoiding or minimizing to the extent practicable, adverse impacts on migratory bird resources when conducting agency actions. The implementation of the Proposed Action would have no significant impacts upon habitat or bird populations with implementation of mitigations specified in Appendix A.

### **6.3 FINDINGS**

Based on information in this SEA the Proposed Action would have no significant effects on the environmental resources in or within the vicinity of the project area with incorporation of Mitigation Measures identified in Appendix A. All mitigation measures identified in Appendix A, are part of the Proposed Action and conclusions of environmental analyses were conducted with assumption that these measures are part of the Proposed Action. The Proposed Action is consistent with assessment requirements for a draft FONSI as described in 40 CFR 1508.13. A draft FONSI accompanies this SEA.

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## **APPENDIX A Summary of Mitigation and Minimization Measures Included in the Proposed Modifications of State Route 155 at French Gulch Recreation Area**

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The following mitigation and minimization measures are in addition to, or reiterate, those measures adopted by the 2012 FEIS and Record of Decision.

### **Summary of Mitigation and Minimization Measures**

#### Air Quality and Climate Change

- The contractor would prepare a fugitive dust control management plan in compliance with EKAPCD Rule 402 to reduce air quality impacts from fugitive dust and comply with State, Federal and Local thresholds. Measures that may be utilized include application of water or soil stabilizers; grading during lower wind intensity, lowering of off-road vehicle speed and application of water or non-toxic, organic soil stabilizer to unpaved surface roadways and material piles.
- Watering would be conducted for dust control as specified by EKAPCD Rule 402 upon excavated or graded soils to prevent excessive dust. Any dust palliatives or soil stabilizers used for control of fugitive dust would be non-toxic, biodegradable, and would be approved by the USACE Contracting Officer.
- Off-road equipment and vehicles would meet Tier 3 or 4 emission standards. Tier 4 equipment will be recommended for emissions reduction, but not required due to small contractor accommodation.
- All vehicles would be equipped with proper emissions control equipment and would be kept in proper running order to reduce NOx emissions.
- Where appropriate, electric equipment would be used in lieu of diesel or gasoline powered equipment. Minimize idling time either by shutting equipment off when not in use or reduce the time of idling to 5 minutes.
- Maintain all equipment in proper working condition as recommended by manufacturer's manuals.
- Use electric equipment whenever appropriate in lieu of diesel or gasoline powered equipment.
- Carpooling would be encouraged among construction workers.

#### Noise and Vibration

- The contractor would comply with Kern County Noise Control Ordinances and would be responsible for obtaining any necessary permits or approvals from Kern County for

project related noise, and for following mitigation and minimization measures established within the DEIS and FEIS.

- Construction hours would be limited to the normal daylight working hours of 7:00 am to 7:00 pm, Monday through Saturday unless an exemption is provided by Kern County.
- A contractor-prepared Construction Noise and Vibration Monitoring Plan would be prepared before construction work.
- Construction would not be conducted during the Fishing Derby event and Labor Day, Memorial Day and Fourth of July weekends. If project delays are incurred necessitating work through April, construction would cease from Thursday through Monday to avoid impact to the Fishing Derby and Fourth of July weekend events.
- The contractor superintendent would serve as a noise coordinator to resolve noise complaints. The noise coordinator contact information would be provided to sensitive receptors to report any noise complaints or concerns.
- Noise monitoring would commence with any repeated public nuisance complaints.
- All equipment would be equipped with noise control devices (e.g. mufflers), in accordance with manufacturer's specifications.
- Equipment would be periodically inspected to ensure proper maintenance and presence of correct noise control devices.
- Stationary equipment would be located as far as feasible from sensitive receptors and equipped with engine-housing enclosures as feasible.
- Portable noise barriers would be used to shield stationary equipment as needed and appropriate.
- Excessive idling of equipment would not be permitted.
- Written notice of construction-related activities and/or a schedule would be provided to nearby sensitive receptors including the USFS for the French Gulch RA, the Nuui Cunki Cultural Center and Kern County Boat Patrol.
- The hauling of material along any sensitive routes close to sensitive receptors would be encouraged to take place within the hours from 8 am to 5 pm.
- Engine braking (jake brakes) would be discouraged along routes with sensitive receptors.

#### Traffic and Circulation

- Contractor would prepare a Construction Traffic Management Plan to minimize traffic disruption and ensure public safety. Elements of the Plan are specified by USACE and would address local traffic volumes and peak traffic hours in order to avoid traffic delays. Contractor must obtain all necessary traffic permits prior to initiation of construction.
- Emergency response protocol would be coordinated with all local emergency response agencies.

- Boundaries for vehicles and construction activities would be clearly delineated with flagging, fencing and other methods per the Caltrans California Manual on Uniform Traffic Control Devices (Caltrans 2012).
- During concurrent construction with the French Gulch RA Boat Launch, parking and facilities, both contractors will coordinate and reduce traffic conflict, ensuring that congestion is not substantially impacting to visitors and Nuui Cunni and Kern County employees. Traffic management plans of both contractors would address concurrent strategy and application to reduce vehicle conflict and maintain safety.
- USACE would recommend that any concurrent Phase II work at the Main Dam that involves traffic control on SR 155 would be more efficiently conducted after completion of the SR 155 modification at French Gulch.

### Recreation

- Construction would not be conducted during the Fishing Derby event and Labor Day, Memorial Day and Fourth of July weekends. If project delays are incurred necessitating work through April, construction would cease from Thursday through Monday to avoid impact to the Fishing Derby and Fourth of July weekend events.
- Fencing, signage, and other appropriate methods of distinguishing construction boundaries for the public would be employed by the contractor to reduce recreation conflicts and improve traffic design.
- The contractor would provide construction schedules. The USACE would advise the USFS on construction activity at least 48 hours before commencement.
- Coordination would be conducted with the USFS and the Kern County Boat Patrol Office to identify and minimize any visitor use conflicts.

### Visual Aesthetics

- To the extent possible, grading and drainage would be implemented with harmonious lines, or smooth transitions from existing substrate to final substrate finish where appropriate.
- Cuts and fills would be shaped and rounded to blend with existing landforms where possible.
- Vegetation removal would be minimized.

### Biological Resources

- Vegetation mitigation per the 2012 CAR would be applied to oak-pine woodland removed as a result of the project. The Main Dam Campground or French Gulch RA would serve as the mitigation area for trees affected by this project.



- Vegetation and trees to be protected from construction activities would be delineated with flagging, fencing or other suitable markers. Removal of trees and tree limbs would be minimized wherever possible.
- Equipment and vehicles would be limited to defined areas of the project construction site.
- Excavated holes to remain overnight would be covered with plywood and with sealed edges to prevent wildlife entrapment. Trash would be removed daily.
- To avoid potential effects to birds protected by the MBTA, the following actions would be conducted:
  - A qualified biologist would survey the construction area prior to initiation of construction to determine presence or potential for raptor and passerine nests.
  - Tree, tree limb or shrub removal would be conducted primarily outside of the nesting season, March through September. Any tree or limb removal would require prior survey for presence of cavity wintering birds, or during the nesting season, for occupied nests by a qualified avian biologist. Nests with eggs or chicks are protected by the MBTA and must be protected in place. Any such occupied nests would be protected with an appropriate buffer as recommended by USFWS.
- BMPs to preclude establishment of weed species (USFS 2001; USFS 2005) would be implemented.
- SQF recommended native Grass Seed Type and Application Rates would be used where applicable on disturbed soils created by construction actions.

### Cultural Resources

- Pursuant to the PA, USACE is in the process of drafting, consulting on, and implementing a Historic Property Treatment Plan to guide efforts to avoid or mitigate effect to historic properties for the Isabella Lake DSM Project as a whole.
- The cultural resource described here will be impacted by the Proposed Action. However, the impacts will not affect any documented features within the site. Therefore, they are not adverse effects according to Section 106. If any previously unknown resources are discovered during ongoing consultation or construction, USACE will take steps to avoid or mitigation adverse effects according to the PA.
- Should construction plans change, USACE would continue consultation as stipulated in the PA. This could entail revisiting previous consultation on portions of the new APE or initiating consultation on new areas in the APE.