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

FINDING OF NO SIGNIFICANT IMPACT

Isabella Lake Dam Safety Modification Project
Fay Ranch Road East Vegetation Mitigation
Kern County, California

The U.S. Army Corps of Engineers (Corps), Sacramento District, in cooperation with the U.S. Department of Agriculture, Forest Service (USFS), has conducted an environmental analysis in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended. This Supplemental Environmental Assessment (SEA) No. 9, dated October 26, 2022, for the Isabella Lake Dam Safety Modification Project (DSMP), Fay Ranch Road East Vegetation Mitigation, addresses the construction of vegetation habitat for the purpose of mitigation as required by the Fish and Wildlife Coordination Act. Authority for the Isabella Lake DSMP is discussed in Section 1.5 of the SEA. The Final Environmental Impact Statement (EIS) for the Isabella Lake DSMP was completed in October 2012. This SEA is an updated environmental document that tiers to the Final EIS and eight SEAs subsequent to the Final EIS. The SEA, incorporated herein by reference, evaluated the no action alternative and the proposed action alternative.

Under the no action alternative, the Corps would not mitigate for habitat impacts from new project elements (*e.g.*, the new borrow site and haul route) and would install 11.2 acres of habitat mitigation at the Main Dam Campground (MDCG) location as described in the original 2012 Final EIS and Final Coordinate Act Report. The existing 144 acres that have already been developed as mitigation for the Isabella Lake DSMP, plus the acreage to be developed at the MDCG, would be the total acreage established, keeping the Federal government in a deficit for required habitat mitigation.

Under the proposed action alternative, the Corps would restore vegetation habitat as mitigation measures to offset adverse effects on vegetation habitat resulting from construction of the Isabella Lake DSMP. This would include impacts from new elements (borrow area and southern haul route) and moving the remnant 11.2 acres of pine woodland to the Fay Ranch Road East location due to an anticipated increase in recreation at the MDCG. In its the current approved location at the MDCG, the pine woodland would be vulnerable to human impacts from recreators at the campground. The Fay Ranch Road East location, by contrast, would ensure the success of the habitat due to its location within an existing preserve, consolidating habitat to one area rather than creating isolated pockets of pine woodland in and around the project area. This proposed action is detailed in Section 2.2 of the SEA.

For both alternatives, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the proposed action is listed in Table 1.

Table 1: Summary of Potential Effects of the Recommended Plan

	Less than significant effects	Less than significant effects as a result of mitigation	Resource unaffected by action
Aesthetics and Visual Resources	☐	☐	☒
Air Quality	☒	☐	☐
Cultural Resources	☒	☐	☐
Hazardous, Toxic & Radioactive Waste	☒	☐	☐
Geology, Soils, and Seismology	☐	☐	☒
Land Use	☒	☐	☐
Socioeconomics and Environmental Justice	☐	☐	☒
Noise and Vibration	☒	☐	☐
Traffic and Circulation	☒	☐	☐
Vegetation and Wildlife	☒	☐	☐
Special Status Species	☒	☐	☐
Water Resources and Quality	☒	☐	☐
Recreation	☒	☐	☐

No compensatory mitigation is required as part of the proposed action.

According to the Corps' NEPA implementing guidance, Engineer Regulation 200-2-2, Section 11, since the proposed action is not a feasibility, continuing authority or special planning report, nor is it an operation and maintenance activity involving discharge of dredged or fill material, a draft SEA was not circulated for public comment. Rather, a notice of availability of the SEA and FONSI will be sent to concerned agencies, organizations, and the interested public.

Pursuant to Section 7 of the Endangered Species Act of 1973, as amended, the Corps determined that the recommended plan would have no additional effects to federally listed species or their designated critical habitat beyond what has been covered under the existing U.S. Fish and Wildlife Service biological opinion for the Isabella Lake DSMP as shown in the 2012 Final EIS.

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended, the Corps determined that the recommended plan has no effect on historic properties.

All applicable environmental laws have been considered and coordination with the appropriate agencies and officials has been completed.

Based on the evaluation of the effects from the proposed action as described in the SEA, the reviews by other Federal, state, and local agencies, tribes, and the review by my staff, I find that the proposed action will cause no significant environmental impacts not already disclosed in the 2012 Final EIS and Coordination Act Report. Accordingly, preparation of an EIS is not required.

04-Nov-2022

Date

Chad W. Caldwell, P.E.
Colonel, U.S. Army
Commander and District Engineer

Supplemental Environmental Assessment No. 9

Isabella Lake Dam Safety Modification Project
Fay Ranch Road East Vegetation Mitigation

Kern County, California

October 26, 2022

Lead Agency:
U.S. Army Corps of Engineers
South Pacific Division
Sacramento District

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

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Acronyms and Abbreviations

APE	Area of Potential Effects
BMPs	Best Management Practices
BO	Biological Opinion
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNVMP	Construction Noise and Vibration Monitoring Plan
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
DSM	Dam Safety Modification
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FACW	Facultative wetland
FEIS	Final Environmental Impact Statement
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
GHG	Greenhouse Gases
HPTP	Historic Properties Treatment Plan
HTRW	Hazardous, Toxic, and Radiological Waste
Isabella Dams	Isabella Lake Main Dam, Spillway and Auxiliary Dam
MDCG	Main Dam Campground
NAGPRA	Native American Graves Protection and Repatriation Act of 1990
NPDES	National Pollution Discharge Elimination System
NEPA	National Environmental Quality Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PA	Programmatic Agreement
RWQCB	Regional Water Quality Control Board
SEA	Supplemental Environmental Assessment
SHPO	California State Historic Preservation Officer
SQF	Sequoia National Forest
SWPPP	Storm Water Pollution Prevention Plan
USDA	U.S. Department of Agriculture
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Fish and Wildlife Service

1.0 PURPOSE AND NEED FOR ACTION

1.1 Proposed Action

Pursuant to the National Environmental Policy Act of 1969 (NEPA), as amended, this Supplemental Environmental Assessment (SEA) discusses and discloses beneficial or adverse potential effects that would result from the construction of vegetation habitat for the purpose of mitigation as required by the Fish and Wildlife Coordination Act (FWCA; 16 U.S.C. 661), as part of the Isabella Lake Dam Safety Modification (DSM) project. The U.S. Army Corps of Engineers, Sacramento District (Corps) is the lead agency and the U.S. Forest Service (USFS) is the cooperating agency for the purposes of NEPA.

1.2 Location of the Project Area

Isabella Lake is situated approximately 35 miles northeast of Bakersfield in Kern County, California, along California State Road 178, 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. The proposed alternative is situated north of the town of Weldon, on the east side of Fay Ranch Road (Figure 2).

1.3 Background and Need for Action

In 2005, the Corps 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. The Corps commenced a dam safety study, and based on the risk assessment, 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.

The Corps completed a DSM Report in October 2012 that recommended remediation measures to reduce the public safety and property damage risks posed by floods, earthquakes, and seepage at the Isabella Dams. The Corps prepared a Draft Environmental Impact Statement (DEIS) in March 2012 (2012a). In October 2012, the Corps published a Final Environmental Impact Statement (FEIS) for the proposed remediation of the Isabella Dams (2012b). The FEIS describes the anticipated direct and indirect impacts expected to occur because of the remediation, including impacts to existing federal, state, local and privately owned infrastructure in the Isabella Dams vicinity (Corps 2012b).

The Corps began construction on the Isabella Dam Safety Modification (DSM) Project in 2018. Project elements included relocations and additions of Sequoia National Forest (SQF) facilities, raising the Isabella Main and Auxiliary Dams, construction of a new Emergency Spillway, new Corps Operations complex, and off-site vegetation mitigation. To date, 144 acres have been developed as mitigation for the Isabella DSM Project. Of this, sixty-four acres was

developed at the South Fork Wildlife Preserve area, owned and managed by the US Forest Service, and 80 acres was developed at Sprague Ranch, owned and managed by the Audubon Society. In March 2021, the construction contractor requested to open a new borrow area for additional construction materials. The full extent of the proposed borrow area footprint was approximately six acres in size and excavated to a maximum depth of 90 feet; it was located adjacent to the new emergency spillway on the southern side (Figure 3).

This borrow area located next to the new emergency spillway constituted a new design element that had not been previously analyzed or considered for mitigation requirements. Project team members completed supplementary documentation for environmental and cultural laws from March-August 2021 (Corps 2021, Kraus 2021). The new borrow area triggered additional Corps mitigation responsibilities under both Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA; 54 U.S.C. 306108), and the Fish and Wildlife Coordination Act (FWCA; 16 U.S.C. 661). Section 106 mitigation requirements included several spot actions at various SQF recreation facilities around the lake. FWCA mitigation responsibilities for impacts from the new borrow area comprise the installation of roughly 3.8 acres of restored habitat on a parcel owned and managed by the Audubon Society near Weldon, CA.

A second new element, a haul route to the south of the new emergency spillway also constitutes a new design element that had not been previously analyzed or considered for mitigation requirements (Figure 4). Project team members completed supplementary documentation for environmental and cultural laws from March-August 2021 (Corps 2022, Kraus 2022). The new haul route triggered additional Corps mitigation responsibilities under the FWCA (16 U.S.C. 661). FWCA mitigation responsibilities comprise the installation of roughly 3.55 acres of restored habitat.

Currently, 11.2 acres of vegetation mitigation requirements remain outstanding from previous DSM Project construction impacts. These 11.2 acres were originally targeted to be developed at the Main Dam Campground (MDCG). The Corps is proposing to move the 11.2 acres from the MDCG due to timing conflicts, as the campground is being used as a staging area and will not become available to develop until the end of the DSM Project. In addition, there is concern that heavy use of the MDCG by visitors could negatively impact the long-term success of any mitigation located at this site. The Corps is therefore proposing to consolidate the total 18.55 acres, comprising of the 3.8, 3.55, and 11.2 acres, at Fay Ranch Road East. The new proposed vegetation mitigation area, 20.9 acres in total, is located on the east side of Fay Ranch Road opposite from the project's existing Sprague Ranch vegetation mitigation site. The Fay Ranch Road East property is large enough to accommodate the temporary roads and staging needed to maintain the 18.55 acres of required habitat mitigation. The property is currently owned and managed by the Audubon Society, which utilizes the land as a nature preserve. The Audubon Society uses cattle grazing as part of their vegetation management regime. This practice reduces fuel loads in selected areas and causes minor beneficial ecological disturbances that reduces the accumulation of dead vegetation to simulate nutrient cycling and new growth. However, it does reduce biodiversity (CDFW 2022)

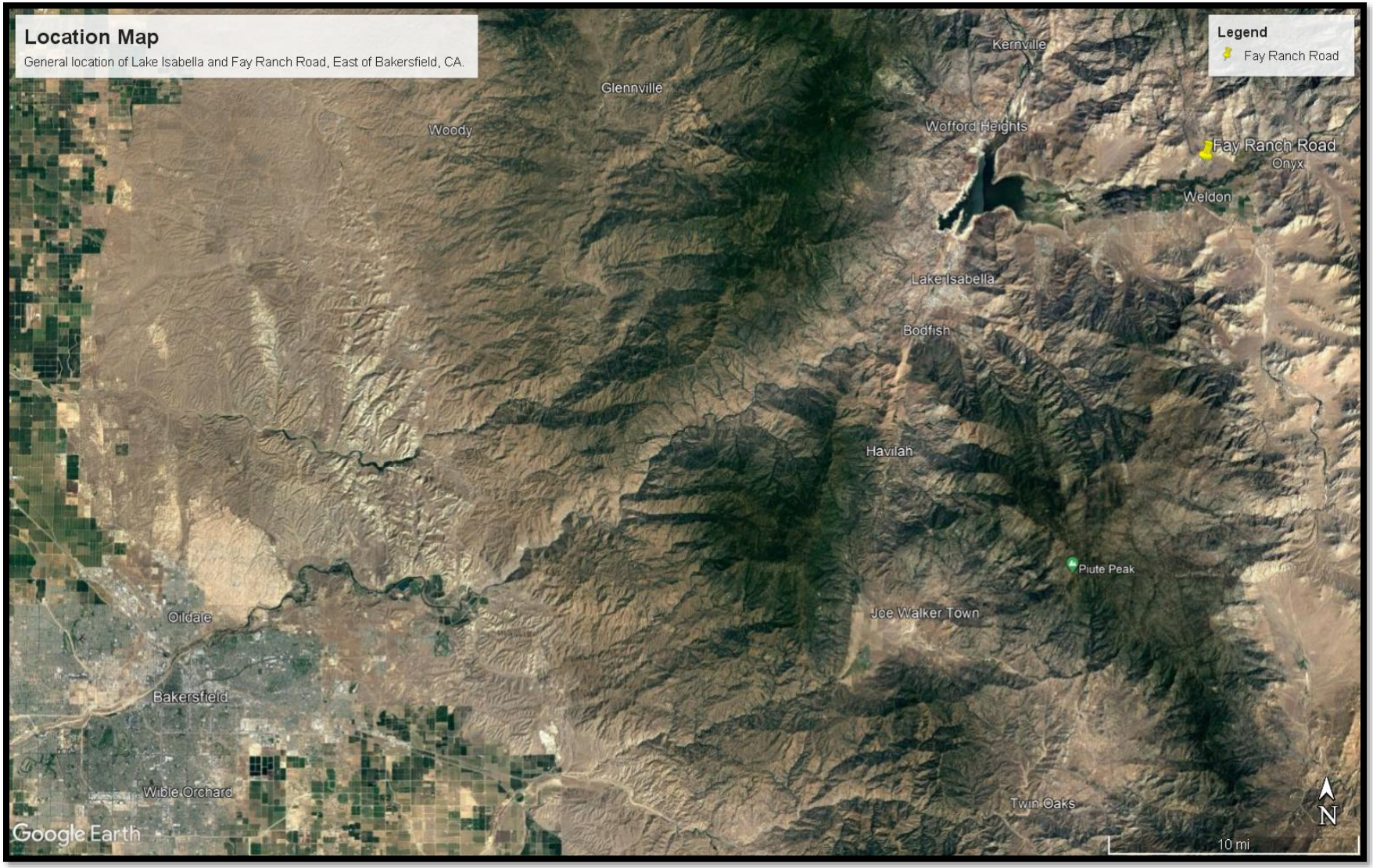

Figure 1. Project location.

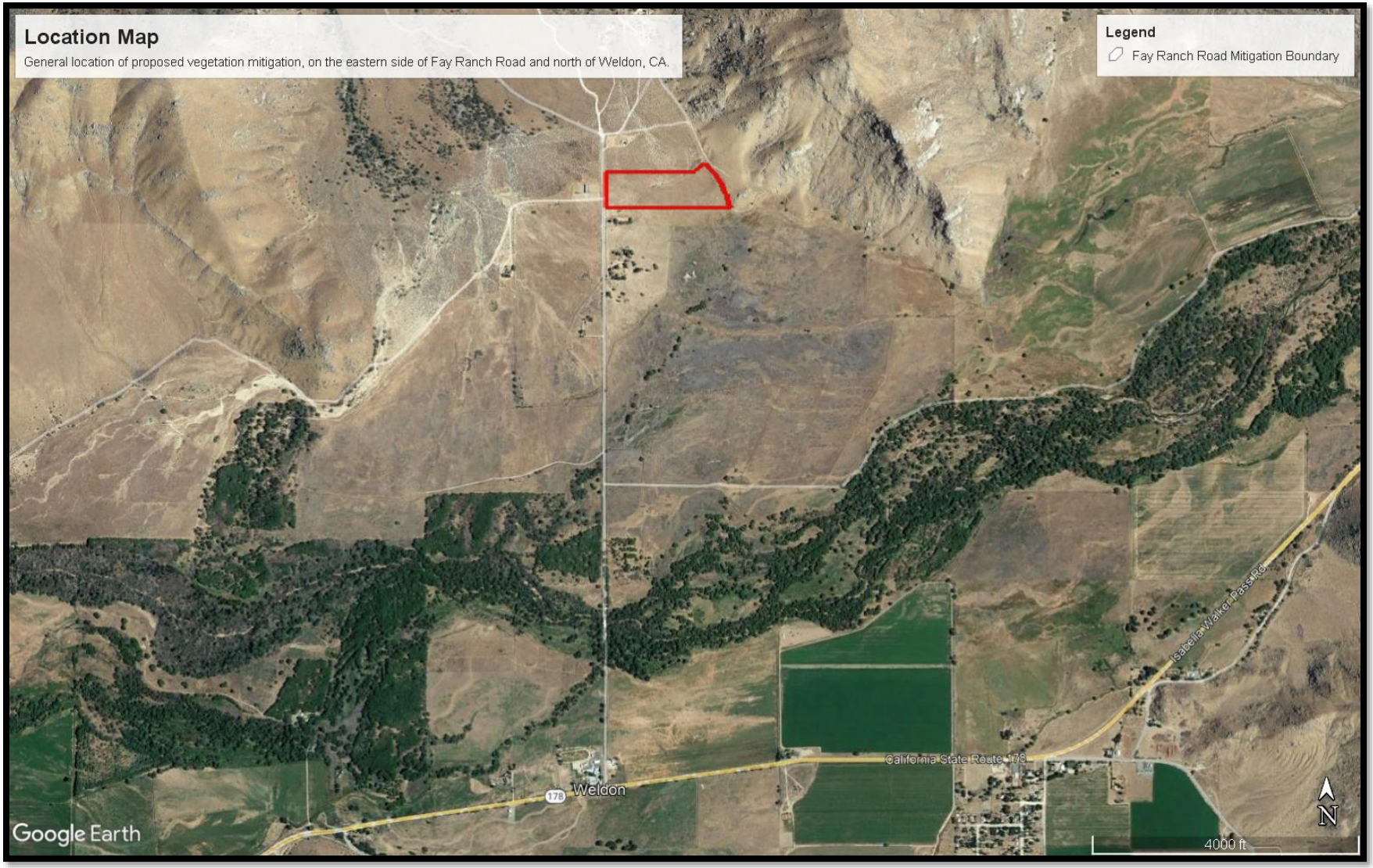

Figure 2. Location of proposed vegetation mitigation site.

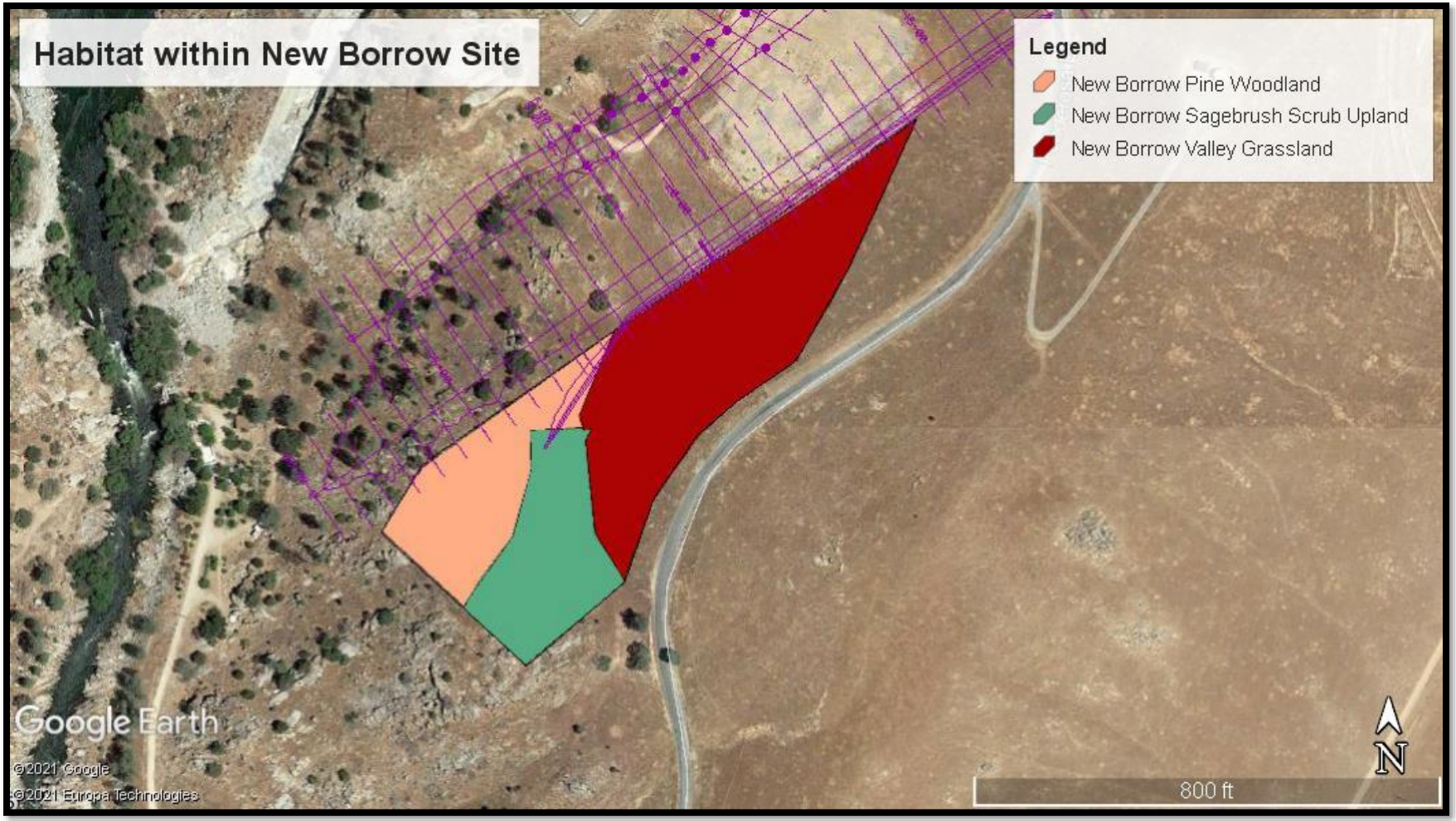

Figure 3. New borrow area impacted habitat. Valley grassland will be mitigated by reseeding onsite.

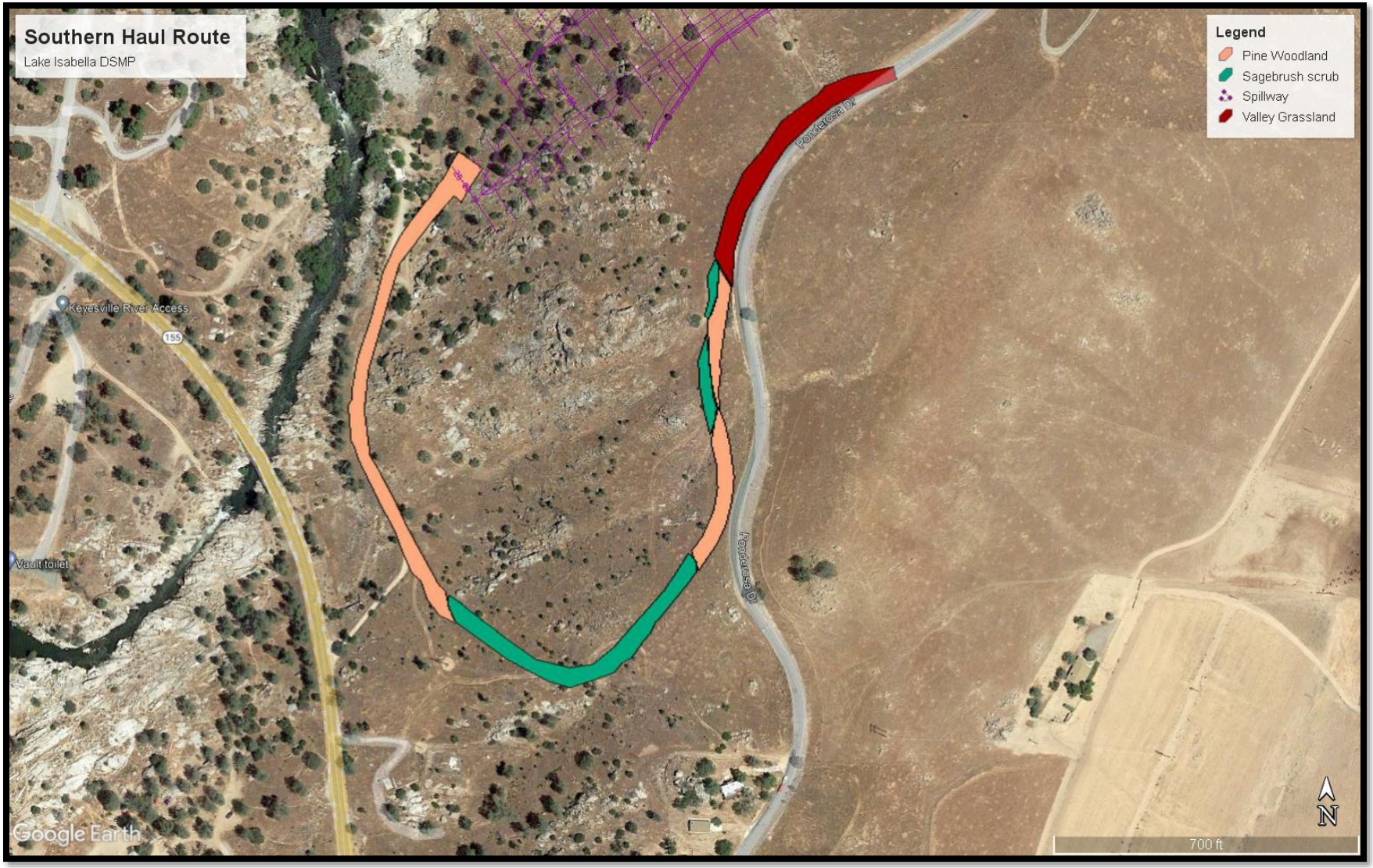

Figure 4. New haul route impacted habitat.

1.4 Purpose and Need

The purpose of this SEA is to assess the environmental effects of constructing vegetation habitat in compliance with recommendations by the U.S. Fish and Wildlife Service (USFWS) and requirements of Corps policy, as coordinated under the FWCA to mitigate for habitat loss caused by the construction of the Isabella DSM Project. The need for supplemental NEPA analysis was identified in Section 1.9 of the DEIS (Corps 2012a), and Section 1.4 of the FEIS (Corps 2012b). This SEA also addresses in part the Isabella Lake DSM Project Record of Decision, signed December 2012, which stated that the Corps would explore and identify mitigation measures to offset adverse effects on vegetation habitat resulting from construction of the Isabella Lake DSM Project.

1.5 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 FEIS for the Isabella Lake DSM Project (Corps 2012b).

1.6 Decision Needed

This SEA fulfills the commitment to continue NEPA assessments of the potential effects of the Isabella Lake DSM Project. Due to project complexity and unresolved design issues, the 2012 FEIS identified the need for supplemental NEPA assessments to address subsequent design refinements. As with other supplemental NEPA assessment needs identified in Section 1.4 of the FEIS, this SEA is tiered to the FEIS. Information and assessments that have not changed since the 2012 FEIS analysis will not be restated in this SEA.

The District Engineer, Commander of the Sacramento District, must decide in the Final SEA whether the proposed action alternative qualifies for a Finding of No Significant Impact (FONSI) under NEPA or whether a supplemental environmental impact statement must be prepared due to potentially significant environmental impacts.

1.7 Prior NEPA Documents

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

- SEA 1 – Phase I Real Estate Acquisition and Relocation 2014
- SEA 2 – Phase II Real Estate Acquisition and Relocation 2015
- SEA 3 – U.S. Department of Agriculture (USDA) Forest Service Administration and Recreation Facilities Relocation 2016
- SEA 4 – Borel Canal Easement Acquisition 2016

- SEA 5 – Dams and Spillway Design Refinements 2016
- SEA 6 – French Gulch State Route 155 Improvements 2017
- SEA 7 – Temporary Water Control Manual Deviation 2017
- SEA 8 – Permanent Relocation of the U.S. Forest Service Visitor Center 2021

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

Copies of the Isabella Lake DSM Project FEIS and other NEPA documents may also be obtained by contacting the Sacramento District Public Affairs Office, 1325 J Street, Sacramento, CA 95814. Phone (916) 557-5101; email: isabella@usace.army.mil.

2.0 ALTERNATIVES

This SEA is intended to aid Corps decision-making, as it is the primary agency responsible for the habitat mitigation necessary to mission of visitor use and recreation at Isabella Lake and surrounding lands. The following sections describes the alternative development process, and alternative actions considered in this SEA.

2.1 Alternative 1 - No Action

NEPA requires the Federal lead agency (Corps) to analyze a "no action" alternative that describes the future conditions that would reasonably be expected to exist in the absence of the Preferred Alternative 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 (Alternative 1) would not mitigate for habitat impacts at the new borrow site or haul route and would instead install the original 11.2 acres of habitat mitigation at the MDCG location as described in the original 2012 FEIS, final FWCA Report, and subsequent SEAs.

The current 144 acres plus the acreage to be developed at the MDCG, that have already been developed as mitigation for the Isabella DSM Project, would be the total acreage established thus keeping the Federal government in a deficit for required habitat mitigation[1].

2.2 Alternative 2 – Vegetation Habitat Mitigation

Under this alternative, the Corps will restore vegetation habitat as mitigation measures to offset adverse effects on vegetation habitat resulting from construction of the Isabella Lake DSM Project. This will include impacts from new elements–creating habitat mitigation caused by impacts from the new borrow area and southern haul route totaling 7.35 acres–and moving the remnant 11.2 acres of pine woodland mitigation to the Fay Ranch Road East location due to an anticipated increase in recreation at the MDCG. In its the current approved location, the pine woodland would be vulnerable to human impacts from recreators at the campground. The Fay Ranch Road East location, by contrast, would ensure the success of the habitat due to its location

[1] Required b/c of U.S. Army Corps of Engineers policy, Appendix C of PGN. Available from: https://planning.erdc.dren.mil/toolbox/library/Ers/prepub-1105-2-100-c.pdf

within an existing preserve, with an added benefit of consolidating habitat mitigation to one area rather than creating isolated pockets of pine woodland in and around the project area.

The new borrow area caused additional impacts to 1.39 acres of pine woodland, 1.32 acres of sagebrush-scrub, and 3.17 acres of Valley grassland habitat. These impacts will be mitigated for based on the recommendations in the 2012 FWCA Report. The pine woodland habitat will be mitigated for by restoring 1.88 acres based on the ratio of 1:1.35 and the sagebrush-scrub habitat will be mitigated by restoring 1.92 acres based on the ratio of 1:1.46. The Valley grassland habitat will be mitigated for by reseeding an equal amount of acreage at the borrow site once work is complete.

The new haul route caused additional impacts to 1.41 acres of pine woodland, 0.74 acres of sagebrush-scrub, and 0.57 acres of Valley grassland habitat. These impacts will be mitigated for based on the recommendations in the 2012 FWCA Report. The pine woodland habitat will be mitigated for by restoring 1.90 acres based on the ratio of 1:1.35 and the sagebrush-scrub habitat will be mitigated by restoring 1.08 acres based on the ratio of 1:1.46. Since the new haul route will become a permanent maintenance road once the Isabella DSM Project is completed, it is not possible to mitigate for the impacts to Valley grassland habitat by reseeding onsite. Therefore, the impacts to Valley grassland habitat will be mitigated for by reseeding an equal amount of acreage at the Fay Ranch Road East location.

Fay Ranch Road East location is currently owned and managed by the Audubon Society. In the fall of 2021, the Corps obtained an irrevocable Right of Entry to the road for a two (2) year period to allow for immediate access to the property. Following this, the Corps will obtain a perpetual conservation easement on the property (Figure 2) for the installation, maintenance, preservation, and retention of vegetative growth desirable for mitigation purposes.

The 20.9-acre site is currently a mix of ruderal habitat or arid and barren ground, with some rabbit brush (*Ericameria nauseosa*) to the northern side and salt grass (*Distichlis spicata*) in the southeast corner. The Corps will restore 18.55 acres total of pine woodland, sagebrush-scrub, and Valley grassland to meet the habitat mitigation requirements (Table 1). Native seed will be collected from the surrounding area during the fall of 2022, propagated for one season to seedling size stock, and installed the following fall. Table 2 lists the likely target plant species for seed collection and planting. During the fall, a water well will be drilled in the southwest corner of the parcel (Figure 5), and a temporary above ground drip irrigation system will be installed to water the plants. A permanent deer-friendly livestock fence, to exclude cattle grazing, will be constructed around the perimeter of the property. All irrigation materials, browse guards, and geotextile fabric mulch will be cleaned up and properly disposed of at the end of the project; however, cattle will remain excluded in perpetuity.

Table 1. Habitat mitigation needed and estimated total costs.

Habitat	Mitigated acres	Estimated total cost
Pine woodland	14.98	$1,230,000
Sagebrush-scrub	3.00	$270,000
Valley grassland	0.57	$7,500.00
Total	**18.55**	**$1,507,500**

Table 2. Container and seed plant list.

Scientific Names	Common Names
Container Plants	
Quercus wislizenii	Interior Live Oak
Pinus sabiniana	Gray Pine
Juniperus californica	California Juniper
Quercus douglasii	Blue Oak
Yucca brevifolia	Joshua Tree
Yucca whipplei	Lords Candle
Ephedra virdis	Mormon Tea
Ephedra nevadensis	Nevada Joint Fir
Opuntia basilaris	Beavertail Cactus
Cylindroputia echinocarpa	Silver Cholla Cactus
Prunus fasciculata	Desert Almond
Lupinus albifrons	Silver Bush Lupine
Ceanothus cuneatus	Buckbrush
Artemisia douglasiana	Mugwort
Rhus trilobata	Fragrant Sumac
Atriplex lentiformis	Quailbush
Chryothamnus viscidiflorus	Yellow Rabbitbrush
Coleogyne ramosissima	Blackbrush
Encelia actoni	Acton Encelia
Tetradymia spinosa	Shortspine Horsebrush
Fremontodendron californicum	California Flannel Bush
Cucurbita foetidissima	Stinky Gourd
Sphaeraclea ambigua	Desert Globemallow
Sidalcea malviflora	Checker Bloom
Asclepias erosa	Desert Milkweed
Astragalus douglasii	Douglas Milkvetch
Eriogonum fasciculatum	California Buckwheat

Artimisia dracunculus	French Taragon
Salvia dorrii	Desert Sage
Seed Plants	
Muhlenbergia rigens	Deer Grass
Koeleria macrantha	June Grass
Elymus multisetus	Big Squirreltail
Festuca microstachys	Small Fescue
Vulpia octoflora	Six Weeks Fescue
Lasthenia californica	California Goldfields
Nemophila menziesii	Baby Blue Eyes
Trifolium willdenovii	Tomcat Clover
Acmispon americanus	Spanish Lotus
Lupinus bicolor	Miniature Lupine
Lupinus excubitus	Interior Bush Lupine
Lupinus formosus	Summer Lupine

The Corps will consider the project to be fully successful based on the 60% plant survival rate used at Sprague Ranch (located immediately across the street), and the application of lessons-learned from these previous mitigation efforts. The mitigation will take up to five years, including the installation and maintenance activities. At the end of the five years, the Corps will prepare an operations and maintenance manual and turn the property back over to the Audubon Society for future sustainability of the habitat in perpetuity.

2.3 Construction of Proposed Action Alternative

1. The process:
    a. Drill the well;
    b. Install the permanent deer-friendly livestock fence around the site perimeter;
    c. Field stake the plant locations in the field;
    d. Once approved, bring in a tractor with a 12” diameter drill bit and drill all the holes;
    e. Trench (12-18” deep) and install the irrigation main pressure line;
    f. Install the seedlings and browse guards;
    g. A tractor with a scoop will be used to transport and place wood mulch; and
    h. Install the irrigation non-pressure line (polyurethane drip lines).
2. Planting holes will be no bigger than 12-inches.
3. The well will be approximately 6-inches and approximately 300 feet deep, with possible trenching for the pressure line if the contractor chooses to bury it.
4. If the pressure line is trenched and buried, the trench will be 6” width and 12-18” deep, and machine dug, starting from the well and extend from west to east across the property (Figure 5).

5. Equipment will consist of a tractor or backhoe with a drill to dig the plant holes; a water well drilling rig; a tractor with a trencher, and a rubber tire ATV/quad to traverse around the site.
6. Entrance and egress are through the main gate located in the southwest corner of the parcel.
7. The staging area will be near the site entrance for parking, materials, and possible a temporary cargo container.
8. The work crew will be maximum 8 people.
9. An electric pump could be used by the contractor as long as it meets the project requirements for watering rate, frequency, and duration of the establishment period.
10. The well and pump will be left in place at the end of the project and turned over to the non-Federal sponsor for their use.
11. There will be no herbicide application at all.
12. The contractor is responsible for all work-related rubbish removal and cleanup. The disposal site is up to them, as long as it is a State approved disposal site.

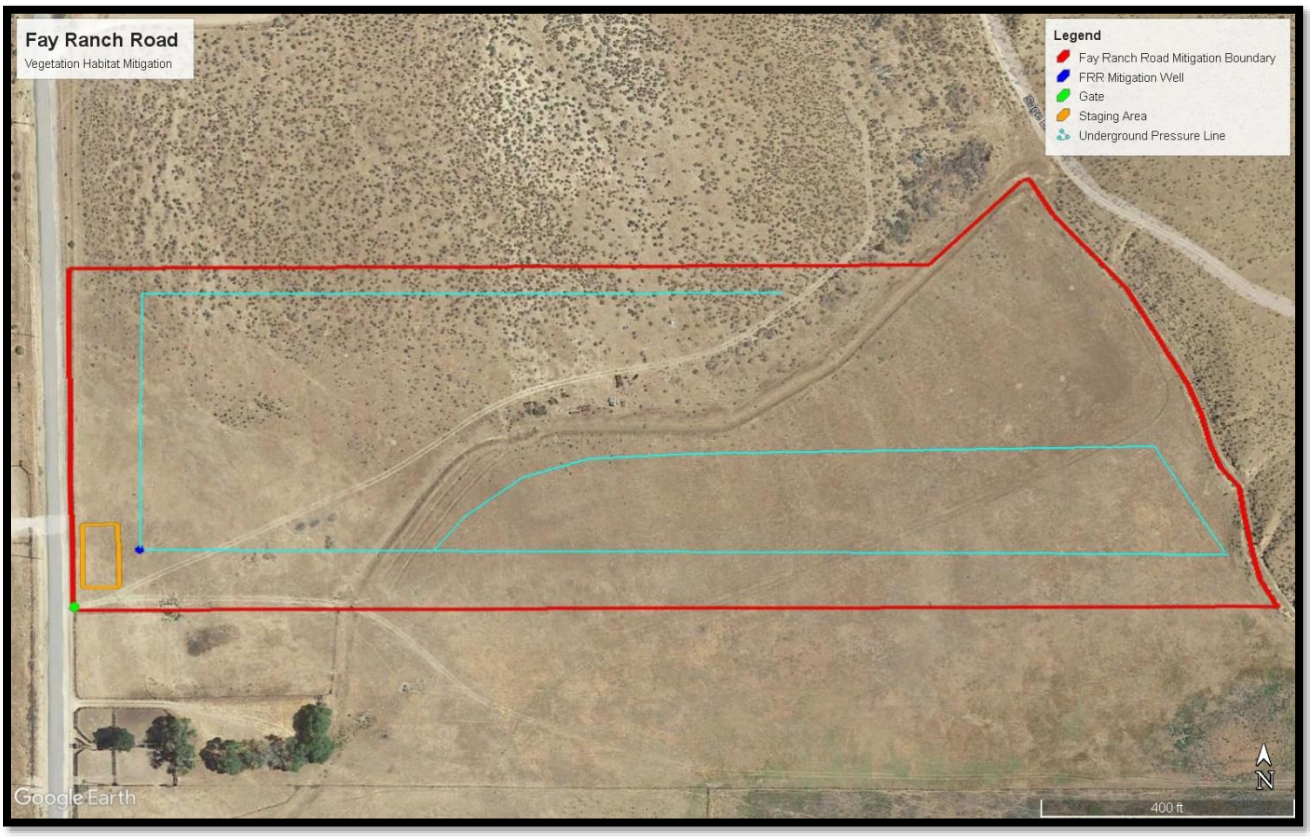

Figure 5. Project boundary and components of the Fay Ranch Road East Mitigation site.

2.4 Schedule

1. Fall 2022: Seed collection will occur.
2. Fall 2022 – Fall 2023: Propagation will start immediately after collection for some species and continue until the seedings are ready to install during the fall of 2023.
3. Summer 2023: Installation of irrigation.
4. November 2023: Planting.
5. Fall 2023 through May 2027: Routine maintenance.
6. Completion Fall 2027: Cleanup will occur during the last year of maintenance and be completed by fall 2027.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the environmental resources as well as the effects of the proposed alternatives on area resources. In determining effects, the consequences of the proposed alternatives are compared to the consequence of taking no action. Impacts are identified as direct, indirect, or cumulative; the latter are assessed in Section 4.0. Effects are assessed for significance based on significance criteria which are based on factual or scientific information and data, and the regulatory standards of federal and state agencies. Section 3.1 discusses those resources that were not evaluated in detail. Sections 3.2 through 3.5 describe the environmental resources evaluated in detail, including the existing conditions, the no action alternative, effects of the proposed action alternative, and proposed measures to avoid, reduce, minimize, mitigate, or compensate for any potential significant effects.

3.1 Environmental Resources Not Evaluated in Detail

Certain resources were eliminated from further analysis in this SEA because they were addressed adequately in the Isabella Lake DSM Project DEIS and FEIS or they would not result in any new or substantially larger significant direct and indirect effects, including short-and long-term effects, than were initially evaluated in the Isabella Lake DSM Project 2012 DEIS. A brief discussion of these resources follows.

3.1.1 Growth-Inducing Effects

Alternative 1 – No Action. The no action alternative would not directly or indirectly induce growth in or near the community surrounding the Isabella Dams. Under the no action, the Isabella DSM Project would not mitigate for habitat impacts from the new borrow site or haul route, and would instead install the original 11.2 acres of habitat mitigation at the MDCG location as described in the original 2012 FEIS and Final Coordination Act Report. The Fay Ranch Road East location would remain heavily grazed by cattle and the habitat would continue to be dominated by the current ruderal vegetation interspersed with patches of barren ground. No effects to vegetation and wildlife would take place at the Fay Ranch Road East location because no further updates would occur under the Isabella Lake DSM Project.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action will not directly or indirectly induce growth in or near the community surrounding the Isabella Dams. Unplanned growth is not expected as the proposed alternative is rural vegetation habitat mitigation and is not associated with any growth inducing actions. The proposed alternative will not result in a substantial increase in the number of permanent workers or employees, or a need for additional permanent housing and local services. The new development will 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. Therefore, the proposed action alternative will have no growth-inducing effects.

3.1.2 Land Use

Alternative 1 – No Action. The no action alternative would have no direct or indirect effect on land use in or near the community surrounding the Isabella Dams. Under the no action, the Isabella DSM Project would not mitigate for habitat impacts from the new borrow site or haul route, and would instead install the original 11.2 acres of habitat mitigation at the MDCG location as described in the original 2012 FEIS, subsequent SEAs, and final FWCA Report. This would not affect land use. The Fay Ranch Road East location would remain heavily grazed by cattle and the habitat would continue to be dominated by the current ruderal vegetation interspersed with patches of barren ground. No effects to vegetation and wildlife would take place at the Fay Ranch Road location because no further updates would occur under the Isabella Lake DSM Project.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action will have no indirect effect on land use in or near the community surrounding the Isabella Dams. The proposed action will have a minor direct effect on local land use. Under the proposed action, the Fay Ranch Road East property will continue to be managed for habitat by the Audubon Society. However, going forward cattle will be excluded in perpetuity from the project footprint by deer-friendly fencing, reducing available grazing acreage in Kern County by about 20.9 acres. In 2018, Kern County had 1,430,000 acres of range pasture available for use (Kern County 2018). The impact from the implementation of the vegetation mitigation will reduce that overall available acreage by 0.0014%. The proposed action is compatible with existing and planned land uses. Thus, it will not have a significant effect on land use.

3.1.3 Socioeconomics and Environmental Justice

Alternative 1 – No Action. The no action alternative would not have direct or indirect effects on socioeconomics and environmental justice. Based on the Environmental Justice Screening and Mapping Tool, which aggregates data from the U.S. Census and other sources, the local area within two miles of the no action alternative has a population of about 1,400 people (USEPA 2022). This area has a higher percentage of elderly (older than age 64) and low-income people, but a lower percentage of people of color compared to the state average (USEPA 2022). Indices for environmental hazards for the area are lower than state average (USEPA 2022). The no action alternative was selected based on criteria from the USFS, as well as local input, and not on the demographics of the community and would not have a disproportionally adverse effect on these populations.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action alternative will not have direct or indirect effects on socioeconomics and environmental justice. Based on the Environmental Justice Screening and Mapping Tool, which aggregates data from the U.S. Census and other sources, the local area within two miles of the proposed action alternative has a population of about 45 people (USEPA 2022). This area has a higher percentage of elderly (older than age 64) and low-income people, but a lower percentage of people of color compared to the state average (USEPA 2022). Indices for environmental hazards for the area are lower than state average (USEPA 2022). The proposed action alternative was selected based on criteria from the USFS, as well as local input, and not on the demographics of the community and will not have a disproportionally adverse effect on these populations.

3.1.4 Aesthetics and Visual Resources

Alternative 1 – No Action. The no action alternative would not have direct or indirect effects on visual aesthetics. The visual aesthetics sections of the DEIS (Section 3.13) and FEIS (Section 3.11) adequately characterized the regulatory setting and the general visual resources of the area surrounding the proposed alternatives. There have been no additional revisions, studies or new data generated that are relevant to the discussion of the affected environment. Under the no action, visitors to the area would not notice any long-term visual changes from the nearest campground, motel, or recreation area. While views of Isabella Lake, the Kern River, and the surrounding mountains and valleys qualify as scenic resources, no part of the no action alternative would affect these views.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action alternative will not have direct or indirect effects on visual aesthetics. Visitors to the area will not see any visual changes from the nearest campground, motel, or recreation area, which are approximately 4.5 miles away from the mitigation site. While views of Isabella Lake, the Kern River, and the surrounding mountains and valleys qualify as scenic resources, no part of the proposed alternatives will affect these views.

3.1.5 Geology, Soils, and Seismicity

The 2012 DEIS (Section 3.4 pages 3-5) and FEIS (Section 3.2 pages 3-2) sufficiently characterize 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.

Alternative 1 – No Action. The no action alternative would not have indirect effects on geology, soils, or seismicity. There would be minor direct effects to soil in the short term from planting and in the long term as the mitigation vegetation matures and slowly alters the structure soil. However, given the small size of the mitigation area and the slow speed that soil develops in arid climates, the effects would be less than significant. There would be no direct effect on geology or seismicity.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action alternative will not have indirect effects on geology, soils, or seismicity. There will be minor direct effects to soil in the short term from planting and in the long term as the mitigation vegetation matures and slowly alters the structure soil. However, given the small size of the mitigation area and the slow speed that soil develops in arid climates, the effects will be less than significant. However, given the small size of the mitigation area and the slow speed that soil develops in arid climates, the effect will be less than significant. There will be no direct effect on geology or seismicity.

3.1.6 Hazardous and Toxic Waste

Alternative 1 – No Action. The hazardous, toxic, and radiological waste (HTRW) section of the Draft EIS (Section 3.9.1) sufficiently characterizes the regulatory setting for this resource. The Corps conducted environmental site assessments in the area during October and November 2010 (DEIS Section 3.9.2), which did not identify any HTRW concerns. The no action alternative does not present significant new circumstances or information regarding the nature and scope of effects to HTRW that would change the analysis presented in the 2012 FEIS.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action alternative will occur at a site that has been used as a wildlife preserve for almost 20 years. Based on aerial imagery, the site has been used as grazing land for several decades. The risk of undiscovered HTRW is low. As founded by the environmental site assessments in 2010, HTRW was not present on area sites overlapping with the proposed project site. Therefore, there is a low probability of HTRW issues occurring as a result of the proposed action and thus the effect on HTRW will be less than significant.

3.1.7 Climate Change

In accordance with Executive Order 13653, climate change was comprehensively considered and evaluated in Section 3.5.1 of the DEIS and Section 3.3 of the FEIS. Warming of the climate system is now considered to be unequivocal (IPCC 2014). Global average surface temperature has increased approximately 1.4 degrees Fahrenheit (°F) over the last one hundred years, with the most severe warming occurring in the most recent decades (NASA 2018). In the twelve years between 1995 and 2006, eleven years ranked among the warmest years in the instrumental record of global average surface temperature (going back to 1850). Continued warming is projected to increase global average temperature between 2 and 11°F over the next 100 years and delaying mitigation efforts is estimated to substantially increase the difficulty of the shift to low, longer-term emission levels and narrows the range of options consistent with maintaining temperature change below 2ºC relative to pre-industrial levels (IPCC 2014).

The causes of this warming have been identified as both natural processes and as the result of human actions. Increases in greenhouse gas (GHG) concentrations in the Earth's atmosphere are thought to be the main cause of human-induced climate change. GHGs naturally trap heat by impeding the exit of solar radiation that has hit the Earth and is reflected back into space. The six principal GHGs of concern are CO_2, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons.

On August 1, 2016, the Council on Environmental Quality (CEQ) released final guidance regarding the consideration of GHGs in NEPA documents for Federal actions. The guidance "does not establish any particular quantity of GHG emissions as 'significantly' affecting the quality of the human environment or give greater consideration to the effects of GHG emissions and climate change over other effects on the human environment" (CEQ 2016). However, it recommends "…that, under NEPA, Federal decisionmakers and the public should be informed about a proposal's GHG emissions and climate change implications. Such information can help a decision-maker make an informed choice between alternative actions that will result in different

levels of GHG emissions or consider mitigation measures that reduce climate change impacts" (81 FR 51866). CEQ rescinded the guidelines in April 2017 after President Trump issued an Executive Order (CEQ 2017). CEQ was asked to reinstate the guidelines in an Executive Order issued by President Biden on January 20, 2021.

Alternative 1 – No Action. Under this alternative, 11.2 acres of habitat mitigation would be conducted at the MDCG site. However, the additional 7.35 acres of habitat mitigation from the new impacts would not occur. Short-term GHG emissions for the no action alternative would be minimal since only a few pieces of equipment would be used within a short period of time. No native habitat would be removed at the MDCG site, only weedy vegetation, and native plants would be planted for the 11.2 acres of habitat mitigation. The increase in 11.2 acres of native habitat would result in higher potential for carbon sequestration long term than the mostly bare soil and ruderal vegetation currently existing on site. Even though drier sites sequester smaller amounts of carbon (Green et al. 2019), the new native vegetation could still offer improvement in carbon sequestration potential. Since the additional 7.35 acres of impacts would not be mitigated for, there would be a long-term total net loss in sequestration potential from these impacts. However, given how little carbon is sequestered at drier sites like those that were impacted, this would represent only a minimal amount of carbon (Green et al. 2019). As a result, the effects of the no action alternative on climate change would be less than significant.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. Short-term emissions for the proposed action alternative will be minimal, with only a few pieces of equipment used within a short period of time. No native habitat will be removed, only weedy vegetation, and native plants will be planted for the habitat mitigation. While there will be minor emissions of GHG emissions from equipment during construction, it will be very minimal. Wetter soils do sequester more carbon than drier, upland soils (Nahlik and Fennessy 2016; Green et al. 2019); however, the increase in high quality native habitat will result in higher potential for carbon sequestration than the mostly bare soil and ruderal vegetation currently existing on site. Even though drier sites sequester smaller amounts of carbon (Green et al. 2019), the new native vegetation could still offer improvement in carbon sequestration potential. The mapped soil series, typically has 0.3% organic carbon (NRCS 2022). Drier sites like the this sequester minimal amounts of carbon (Green et al. 2019). With planting of the new native vegetation, there will be no net loss in carbon sequestration potential and perhaps some minor improvement in carbon sequestration potential. This will be an improvement over the no action alternative. As a result, the effects of the proposed action alternative on climate change will be less than significant.

3.1.8 Recreation

The recreation section of the Draft EIS (Section 3.12.2) sufficiently 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.

Alternative 1 – No Action. The no action alternative would have a less than significant effect on recreation since it would not cause 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 would continue to utilize the land as it has been thus not impacting recreation activities on the site.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action alternative will have no effects to recreation beyond those described in the no action alternative.

3.1.9 Traffic and Circulation

The Traffic and Circulation section of the DEIS (Section 3.7) and the FEIS (Section 3.5) sufficiently characterizes the regulatory setting for this resource.

Alternative 1 – No Action. Access to the mitigation site under the no action alternative would be via existing roads. Truck traffic would be minimal, with no more than five to 10 vehicles in total per day, which would have negligible impacts on local traffic. Therefore, the effects of the no action alternative on traffic and circulation would be less than significant.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. Access to the mitigation site under the proposed action alternative will be via existing roads. Truck traffic will be minimal, with no more than five to 10 vehicles in total per day, and coupled with the remote location, there will be negligible impacts on local traffic. Therefore, the effects of the no action alternative on traffic and circulation will be less than significant.

3.1.10 Air Quality

The Air Quality Section of the DEIS (Section 3.5), FEIS (Section 3.3) 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 Isabella DSM Project. It was determined within the 2012 FEIS air quality quantitative analysis that emissions related to the project would not cause exceedances of Federal, state, or local thresholds.

Alternative 1 – No Action. Air quality effects associated with the no action alternative were evaluated through identification of all potential air emission sources, evaluation of potential emissions, evaluation of existing requirements for their control, and determination of on-site measures to reduce effects to less than significant levels.

Implementation of the following mitigation measures would reduce air quality impacts associated with the no action alternative as described in the original 2012 FEIS, Final Coordination Act FWCA Report, and subsequent SEAs.

- Sufficiently water any necessary excavated or graded soil as needed to prevent excessive dust, with disturbed soil areas being completely covered. Water a minimum of twice daily on unpaved or untreated roads and on disturbed soil areas with active operations.
- Cease all clearing, grading, earth moving, and excavation during periods of winds greater than 20 miles per hour (averaged over one hour), when disturbed

material is easily windblown, or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property.

- Sufficiently water or securely cover all fine material transported off-site to prevent excessive dust.
- Minimize areas disturbed by clearing, earth moving, or excavation.
- Stabilize by watering or other appropriate method stockpiles of soil or other fine loose material to prevent windblown fugitive dust.
- Where acceptable to the fire department, control weeds by mowing instead of discing.
- Sufficiently water at least twice daily all active disturbed soil areas to prevent excessive dust.
- Limit on-site vehicle speed to 15 miles per hour.
- Keep streets next to the project site clean, and frequently remove project-related accumulated silt and debris.
- Access the main project work sites via an apron from adjoining surfaced roadways. Surface or treat the apron with dust palliatives. If equipment is operating on soils that cling to wheels, use a "grizzly" or other such device using rails, pipes, or grates to dislodge mud, dirt, and debris from the tires and undercarriage of vehicles on the road exiting the project site, immediately before the pavement, in order to remove most of the soil from vehicle tires.
- Maintain all equipment as recommended by manufacturers' manuals.
- Shut down equipment when not in use for extended periods.
- Substitute electric equipment whenever possible for diesel- or gasoline-powered equipment.
- Equip all construction vehicles with proper emissions control equipment and keep in good and proper running order to substantially reduce NOx emissions.
- Use diesel particulate filters on on-road and off-road diesel equipment, if they are permitted under manufacturers' guidelines.

With these measures in place, the effects of the no action alternative on air quality will be less than significant.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. Air quality effects associated with the proposed action were evaluated through identification of all potential air emission sources, evaluation of potential emissions, evaluation of existing requirements for their control, and determination of on-site measures to reduce effects to less than significant levels. The same mitigation measures described in the no action section above will be used under the proposed action to reduce impacts to air quality to less than significant.

3.1.11 Noise and Vibration

The Noise and Vibration Section for the Draft EIS (Section 3.8) sufficiently characterizes the regulatory setting for this resource. The Kern River Valley Specific Plan Noise Element establishes specific goals, policies, and implementation measures for noise within the Plan area, which includes Isabella Lake and vicinity.

Alternative 1 – No Action. Under the no action alternative, the following mitigation measures and BMPs would be implemented:

- A contractor-prepared *Construction Noise and Vibration Monitoring Plan* (CNVMP) before beginning work on the project. The plan would be prepared by an acoustical consultant recognized by Kern County. The CNVMP would include site-specific noise and vibration attenuation measures to ensure that maximum feasible noise and vibration attenuation is achieved. The CNVMP would include as many of the control strategies listed below as are feasible for this project. Project workers would be trained on the CNVMP before construction begins.
- Equip all equipment with noise control devices (*e.g.*, mufflers), in accordance with manufacturers' specifications.
- Inspect all equipment periodically to ensure proper maintenance and presence of noise control devices (*e.g.*, lubrication, mufflers that do not leak, and shrouding).
- Locate all stationary equipment as far as feasible from nearby residences and should be equipped with engine-housing enclosures, as feasible.
- Use portable noise barriers to shield stationary equipment, especially diesel- powered dewatering pumps. Identification and discussion of portable noise barrier type and placement would be included in the CNVMP.
- Use materials for temporary barriers sufficient to last through construction and maintain in good condition.
- Prevent equipment from idling more than five minutes.
- Designate a disturbance coordinator and conspicuously post a 24-hour contact number around the project site, and supply to nearby residents. The disturbance coordinator would receive all public complaints and be responsible for determining the cause of the complaint and implementing any feasible measures to alleviate the problem.
- Provide written notice of construction-related activities to nearby sensitive receptors identifying the type, duration, and frequency of activities and a mechanism to register complaints.
- Prevent trucks and bulldozers from operating within 60 feet of any sensitive structure. If operation of equipment closer than 60 feet is required, vibration monitoring would be conducted to ensure that levels do not exceed the allowable thresholds established in this study.
- Encourage the hauling of material along sensitive routes only from 8 AM to 5 PM (daytime hours).
- Discourage the use of engine braking ("jake brakes") along sensitive routes.
- Encourage truckers to reduce engine noise when shifting in noise sensitive areas and post these areas.

With these measures in place, the effects of the proposed no action alternative from noise and vibration would be less than significant.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The same mitigation measures described in the no action section above will be used under the proposed action to reduce impacts from noise and vibration to less than significant.

3.2 Vegetation and Wildlife

The Biological Resources section of the Draft EIS (Section 3.10) and Final EIS (Section 3.8) sufficiently characterizes the general affected environment for this resource, including descriptions of vegetation and habitat found within the proposed action area. A final FWCA Report (Appendix C of the Final EIS) provided the USFWS recommendations and vegetation compensation needs for wildlife habitats affected by construction of features associated with the Isabella Lake DSM Project.

3.2.1 Affected Environment

Isabella Lake is in the California Floristic Province (Hickman and Jepson 1993), which is the largest and most significant geographic unit in California (Hickman and Jepson 1993). Vegetation identified in the proposed project area include oak woodlands, pine woodlands, sagebrush-scrub upland, Valley grasslands, and ruderal or barren ground. Pine woodland is dominant with gray pine (*Pinus sabiniana*) or co-dominant in the tree canopy with California juniper (*Juniperus californica*), Western juniper (*Juniperus occidentalis*), Coutler pine (*Pinus coulteri*), Canyon line oak (*Quercus chrysolepis*) and Interior live oak (*Quercus wislizeni*). The tree canopy is open to intermittent, and shrubs can be common or infrequent. The herbaceous layer is sparse or grassy (CNPS 2022). Sagebrush-scrub upland is dominated by rubber rabbitbrush (*Ericameria nauseosa)* or co-dominant in the shrub canopy with Great Basin sagebrush (*Artemisia tridentata*), yellow rabbitbrush (*Chrysothamnus viscidiflorus*), *Ephedra* spp., California buckwheat (*Eriogonum fasciculatum*), California broomsage (*Lepidospartum squamatum*), and Bitterbrush (*Purshia tridentata*). Emergent trees may be present at low cover, including California juniper, Jeffery Pine (*Pinus jeffreyi*), Single-leaf pinyon (*Pinus monophyla*) or Joshua tree (*Yucca brevifolia*). The shrub canopy is generally less than three meters, open to continuous, and the herbaceous later is sparse or grassy (CNPS 2022a. Barren soil and numerous non-native and invasive plant species are found in the project area.

The diversity of habitats around Isabella Lake attracts a variety of wildlife species, including many residents and abundant migratory species. The extensive riparian areas found in the deltas of the North and South Fork Kern Rivers are the most substantial habitat for wildlife found in the vicinity of Isabella Lake, while the more arid upland areas also host a variety of wildlife.

Common birds include passerines such as flycatchers, warblers, kinglets, chickadees, thrushes, jays, blackbirds, sparrows, finches, towhees, wrens, nuthatches, and swallows. Other common birds are hummingbirds, woodpeckers, water birds, waders, and various raptors such as owls, buteos, and smaller accipiters (Audubon 2011). Wildlife species common in this area include mammals such as foxes (*Vulpes* spp.), coyote (*Canis latrans*), bobcat (*Lynx rufus*), striped skunk (*Mephitis mephitis*), spotted skunk (*Spilogale gracilis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), bats, and woodrats (*Neotoma* spp.). Reptiles and

amphibians that are relatively common include the Pacific chorus frog (*Pseudacris regilla*), western toad (*Anaxyrus boreas*), bullfrog (*Lithobates catesbeianus*), and valley garter snake (*Thamnophis sirtalis fitchi*) (Audubon 2011). Many invertebrates are also common in this area and provide the dietary basis for the high densities seen in some wildlife species.

Much of the upland habitat around Isabella Lake hosts species adapted to arid environments. Common reptiles include side-blotched lizard (*Uta stansburiana*), southern alligator lizard (*Elgaria multicarinata*), western fence lizard (*Sceloporus occidentalis*), California kingsnake (*Lampropeltis californiae*), Pacific gopher snake (*Pituophis catenifer catenifer*), and Northern Pacific rattlesnake (*Crotalus oreganus*) (Audubon 2011). Common upland bird species include California quail (*Callipepla californica*), scrub jay (*Aphelocoma* spp.), goldfinches (*Spinus* spp.), wrentit (*Chamaea fasciata*), and acorn woodpecker (*Melanerpes formicivorus*). Mammals that are expected to be in the area surrounding Lake Isabella include pocket gophers (*Thomomys* spp.), mice (*Peromyscus* spp.), tree and ground squirrels (*Ostospermophilus* spp.), mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and a diversity of bats. Isabella Lake and the Kern River host a variety of waterfowl, including migratory and resident waterfowl such as American coot (*Fulica americana*), grebes, cormorants (*Phalacrocorax* spp.), gulls, and waders (Audubon 2011).

3.2.2 Environmental Consequences

Basis of Significance. An alternative would be considered to have a significant effect on vegetation and wildlife if it would permanently remove or disturb sensitive native communities, or significantly reduce the amount of native vegetation and wildlife habitat in the project area.

Alternative 1 – No Action. Under the no action alternative, the Isabella DSM Project would not mitigate for habitat impacts from the new borrow site or haul route and would instead install the original 11.2 acres of mitigation at the MDCG location as described in the original 2012 FEIS, subsequent SEAs, and final FWCA Report. The Fay Ranch Road East location would remain heavily grazed by cattle and the habitat would remain the current ruderal vegetation or barren ground. No effects to vegetation and wildlife would take place at the Fay Ranch Road East location because no further updates would occur under the Isabella Lake DSM Project. However, there would be a negative effect on local habitat with the project area from the loss of pine woodland, sagebrush-scrub, and Valley grassland due to the new construction elements. This would represent a loss of approximately 2.4, 2.9, and 0.6 percent of the pine woodland, sagebrush-scrub, and Valley grassland habitat, respectively, within the project area, which is not a significant reduction. In addition, since these three plant communities are quite common within the area and are not considered sensitive (CDFW 2022), there would not be a significant effect on vegetation and wildlife. However, failure to mitigate for these impacts to wildlife habitat would be a violation of Corps policy (Engineer Regulation 1105-2-100).

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. There will be some short-term impacts due to the removal of a small amount of the existing weedy/non-native vegetation and some soil disturbance due to the drilling of planting holes. Native vegetation will be avoided, and any new native plants will be planted around existing native plants. Natural recruitment from the surrounding habitat will occur with time, along with the new plants, leading towards minor

long-term net benefits in the development of 14.98 acres of pine woodland, 3.00 acres of sagebrush scrub , and 0.57 acres of Valley grassland habitat. Thus, under the proposed action, there will be a beneficial, but less than significant, effect on vegetation and wildlife.

3.2.3 Mitigation

Possible mitigation coupled with the following BMPs will reduce impacts on wildlife and vegetation to less than significant:

- All off-road equipment and vehicles used for construction are required to be weed-free. All equipment and vehicles will be cleaned of all attached mud, dirt, and plant parts prior to arriving to the Project Area. This will be done at a vehicle washing station or steam cleaning facility (power or high-pressure cleaning) before the equipment and vehicles enter the Project Area.
- Weed infestations identified before construction that are within the Project Area will be treated with mechanical removal (e.g. hand-pulling or hand tools).
- Staging areas for equipment, materials, or crews will not be located in weed infested areas.
- Weed-free equipment, mulches, and seed sources will be used.
- The amount of ground and vegetation disturbance in the construction areas will be minimized. Reestablish vegetation on all disturbed bare ground with native forbs and grasses to minimize weed establishment and infestation, where not planted for the mitigation.
- Woody vegetation will not be removed; vegetation for the mitigation will be installed around mature shrubs, leaving them undisturbed.
- Planting will occur during the non-nesting season for migratory birds.
- If any work will occur during nesting season, impacts will be avoided to migratory birds nesting in trees/shrubs along the access routes and adjacent to the proposed mitigation site by conducting pre-construction surveys for active nests along proposed haul roads, staging areas, and construction sites. This will especially apply if construction began in spring or early summer. Work activity around active nests will be avoided until the young have fledged. If construction commences during nesting season, a nesting bird survey will be conducted a minimum of a week in advance. Additionally, a survey will be conducted 24 hours in advance of the construction, to ensure no active nests. If active nests are located, USFWS will be contacted for Migratory Bird Treaty Act coordination.
- Avoid future impacts to the site by ensuring that fill materials are free of contaminants, such as invasive weed species or toxic materials.
- Minimize project impacts by reseeding all disturbed areas, including staging areas, at the completion of construction with native forbs and grasses. Reseeding should be conducted just prior to the rainy season to enhance germination and plant establishment. The reseeding mix should include species used by and beneficial for native pollinators.
- Where construction activities result in the removal or disturbance of vegetation or disturbance of soils and are not replaced with planned restoration potted plants, the area will be seeded with native grass seed.

3.3 Special Status Species

The Biological Resources section of the Draft EIS (Section 3.10) and Final EIS (Section 3.8) characterizes the general regulatory setting and existing condition for this resource. The Isabella Lake DSM Project was found in full compliance with the Endangered Species Act (ESA), and a USFWS biological opinion (BO) was included in Appendix C of the Final EIS. Changes to the regulatory setting for this resource since release of the Final EIS are described below. Since release of the Final EIS, the affected environment has been updated with focus on the areas directly affected by the actions described in subsequent Supplemental EAs and relevant to the discussions of the affected environment. Updated lists of threatened, endangered, and candidate species for the alternative locations are included in Appendix A of this document.

There is no suitable habitat in the immediate vicinity of the proposed action that would support any of the special status species found on the Information for Planning and Consultation (IPaC) resource or the California Natural Diversity Database (CNDDB) lists (Appendix A). No critical habitat is located within the proposed project area. No federally listed or candidate species are known to occur, nor were observed during previous site investigations.

3.3.1 Affected Environment

Fisher. The USFWS listed the Southern Sierra Nevada Distinct Population Segment of fisher (*Pekania pennanti*) as endangered on June 15, 2020 (85 FR 29532). Fishers are regarded as habitat specialists in the western United States (Buskirk and Powell 1994), occurring only at mid to lower elevations in mature conifer and mixed conifer/hardwood forests characterized by dense canopies and abundant large trees, snags, and logs (Powell and Zielinski 1994)

The key aspects of fisher habitat are best expressed in forest stands with late-successional characteristics. Fishers use habitat with high canopy closure, large trees and snags, large woody debris, large hardwoods, multiple canopy layers, and avoidance of areas lacking overhead canopy cover (USFWS 2004). Fishers also occupy and reproduce in some managed forest landscapes and forest stands not classified as late-successional that provide some of the habitat elements important to fisher, such as relatively large trees, high canopy closure, large legacy trees, and large woody debris, in second-growth forest stands (Klug 1997; Simpson Resource Company 2003).

According to CNDDB, the closest fisher occurrence to the Fay Ranch Road East project location is over 12 miles away in a wooded canyon along Bodfish Creek from tracks spotted in 1955. No sightings within the area have been documented since (CDFW 2022).

California condor. The USFWS listed the California condor (*Gymnogyps californianus*) as endangered in 1967, with only a few dozen condors remaining in the wild. Critical habitat was designated in 1977. The condor's preferred habitat is rugged canyons, gorges, and forested mountains mainly between 300 – 2,700 meters elevation (DeGraaf, et al. 1991). Condors require fairly open terrain for foraging, because they need a long runway takeoff and approach, as well as for prey location. Condors roost in cliffs and trees and nest in extremely steep rugged terrain,

often in caves, crevices, or on ledges (USFS 2022). Critical habitat is located over 24 miles to the west of the Fay Ranch Road project location. While condors can cover hundreds of miles while foraging, the closest known recording in Kern County is over 60 miles to the southwest in 2013 (CDFW 2022). The probability of a condor occurring within or near the project area is extremely low, and in the long term, even if a condor does eventually utilize the local area, improved vegetation habitat would allow for better foraging and perhaps roosting for the bird.

Southwestern Willow Flycatcher. On January 3, 2013, USFWS designated revised critical habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) under the ESA (USFWS 2013b). The revised critical habitat designation for the Kern Management Unit includes a 14.6-mile portion of the South Fork Kern River (including the upper 0.6-mile portion of Isabella Lake) and a 1.0-mile segment of Canebrake Creek in Kern County, California. Along this segment of the South Fork Kern River, two pieces of private land that were woven within this segment, the privately owned and operated Hafenfeld Ranch (0.2-mile of stream on the south side of the river) and Audubon California's Sprague Ranch (2.5-mile of stream on the north side of the river) are excluded from the final designation. The Fay Ranch Road parcel is approximately 1 mile north of the critical habitat along the South Fork Kern River.

Western Yellow-Billed Cuckoo. On October 3, 2013, USFWS formally proposed that the Western Distinct Population Segment of the yellow-billed cuckoo (*Coccyzus americanus*) be listed as a federally threatened species and protected under the ESA (USFWS 2013a). On 03 October 2014, the proposed rule became effective and finalized the USFWS determination for listing the Western yellow-billed cuckoo but not its critical habitat (USFWS 2014). Western yellow-billed cuckoos are recognized as state endangered in California.

On August 5, 2014, the USFWS announced a proposal to designate critical habitat for the western distinct population segment of the Western yellow-billed cuckoo under the ESA. The proposed critical habitat proximity to Isabella Lake is similar to that designated for the southwestern willow flycatcher. The public comment period for this proposed rule was reopened on 12 November 2014 and closed on January 12, 2015. Critical habitat was designated on April 20, 2021. The Fay Ranch Road parcel is approximately 1.17 miles north of the critical habitat along the South Fork Kern River.

Least Bell's Vireo. The least Bell's vireo (*Vireo bellii pusillus*) was Federally listed as endangered in 1986. It is the western-most subspecies of Bell's vireo, breeding entirely within California and northern Baja California (Kus 2002). The loss of riparian habitat and susceptibility to cowbird nest parasitism reduced populations significantly until the species was extirpated from most of its range. Remaining populations in southern California have since begun expanding back into its historic range, one documented occurrence at the Kern River Preserve in 2015, about 2 miles from the Fay Ranch Road East location.

Monarch butterfly. The monarch butterfly (*Danaus plexippus*) became a candidate for listing under the ESA on December 17, 2020 (85 FR 81813). Monarchs, like all butterflies, have a different diet during their larval caterpillar phase than they do as winged adults. As caterpillars, monarchs feed exclusively on the leaves of milkweed, wildflowers in the genus *Asclepias*. North America has several dozen native milkweed species with which monarchs coevolved and upon

which they rely to complete their life cycle. During summer, western monarchs live in canyons or riparian areas of the West, Southwest, inland California, and the inland Northwest states up to British Columbia. A small number of monarchs can be found in the coastal Pacific Northwest during summer months. Instead of making the long journey to Mexico, western monarchs only migrate as far south as coastal areas of central and southern California (NWF 2022).

Alkali mariposa lily. Alkali mariposa lily (*Calochortus striatus*) is a small perennial herb that arises from an underground bulb and flowers in the spring, roughly from April to June. It occurs from 2,000 to 3,700 feet elevation and prefers springs and wet alkaline meadows. It is considered a facultative wetland (FACW) species according to USDA PLANTS database (NRCS 2022). FACW plant species usually occur in wetlands (estimated probability 67% to 99%), but occasionally are found in non-wetlands.

Alkali mariposa lily is listed as a USFS species of conservation concern (USFS 2016). NatureServe ranks this species as a state rare plant (rank of 1B.2), indicating it is fairly endangered in California though not yet listed. Additional global and state rankings of G3 and S3, respectively, indicate it is a plant of vulnerable status (Calflora 2022). It occurs on the north slope of the San Bernardino and San Gabriel Mountains in Los Angeles and San Bernardino counties. This plant also occurs in the vicinity of Lake Isabella, the base of the Piutes, the South Fork of the Kern River, and low elevations of the Scodies (USFS 2002; CNDDB 2022). This species also occurs in Nevada in one county (USFS 2002).

According the CNDDB, the lily could potentially occur in the southeast corner of the project area, with the last known occurrence noted in 1993. The is outside the area of active construction within the South Fork Wildlife Area. The plant is threatened by grazing and the property has been grazed annually by cattle since at least the 1980's. Currently, there has been no documented success in maintaining viability of an entire alkali mariposa lily population by transplant actions (KRVHF 2011; and Corps 2016). According to USFS guidelines, planning rules must consider the maintenance of viable populations of species of conservation concern (USFS 2002; 2016).

3.3.2 Environmental Consequences

Basis of Significance. An alternative would be considered to have a significant effect on special status species if it would result in the take of a federally or state-listed threatened or endangered species; adversely affect designated critical habitat, including degradation of its habitat to the degree of jeopardizing the continued existence of the species or critical habitat; substantially affect any other special status species; or if it affected a population of a non-listed species to the point where it became listed or a candidate for listing.

Alternative 1 – No Action. Under the no action alternative, the Isabella DSM Project would not mitigate for habitat impacts from the new borrow site or haul route and would instead install the original 11.2 acres of mitigation at the MDCG location as described in the original FEIS, subsequent SEAS, and final FWCA Report. The Fay Ranch Road East location would remain heavily grazed by cattle and the habitat would remain the current ruderal vegetation or barren ground. No effects to special status species would take place at the Fay Ranch Road East

location because no further updates would occur under the Isabella Lake DSM Project. Due to lack of appropriate habitat at the MDCG location, the effects to special status species would be less than significant. The mitigation measures described in Section 3.3.3 would help to further reduce effects.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. Since project area for this alternative lacks habitat for special status species, there will be no effect to the following special status species, including fisher, California condor, southwestern willow flycatcher, western yellow-billed cuckoo, or the least Bell's vireo. The probability of a fisher or condor occurring within or near the project area is extremely low, and in the long term, even if a fisher or condor does eventually utilize the local area, improved vegetation habitat will allow for better foraging and perhaps shelter/roosting for the animals. Although critical habitat for the southwestern willow flycatcher, Western yellow-billed cuckoo, and habitat for the least Bell's vireo are a few miles to the south of the project area, it is anticipated that the birds will not utilize the project footprint in their current state for foraging. Even in the long-term, the type of habitat being mitigated for in the project area will not benefit these birds.

Habitat for the alkali Mariposa lily occurs near the southeast corner of the project area and the monarch butterfly habitat can occur throughout the parcel, but particularly in the southeast corner. A Corps biologist conducted a ground survey in March 2022 to confirm that no lilies occur in the southeast corner of the Fay Ranch Road East parcel. Additionally, no milkweed, the host plant for the monarch butterfly, was located within the parcel, nor are there any known overwintering sites located within or near the proposed action area (CDFW 2022). However, in the long-term improved vegetation habitat and reduction of cattle grazing in the project footprint could allow for these plants to colonize the lower southeast corner of the parcel. Overall, there is no impact from construction of the proposed action on any sensitive species, but there will be long term benefits in the future with the development of ecologically sound vegetation habitat on site. If milkweed is found prior to construction, impacts to monarch habitat (milkweed) will be mitigated down to less than significant by following the measures in Section 3.3.3.

3.3.3 Mitigation

The alternatives will have no effect on special status species and will result in long term benefits for the identified species. However, all projects that occur within 100 feet of milkweed plants or 250 feet from occupied habitat (roosting and breeding sites) should implement the following measures to avoid or minimize disturbances and impacts to monarch butterflies. Where surveys for milkweed have not been conducted, either pre-project surveys or during-project surveys can be useful for identifying milkweed stands. Additionally, if milkweeds are identified within the project area, then surveys for adult and larval monarchs should be conducted both before and after the project.

1. All individuals conducting weed control activities within the buffer area (100 or 250 feet as defined above) will receive training by a Service-approved biologist on the identification of milkweed plants and a description of both adult and larval monarchs in order to identify and avoid milkweed and monarchs during all activities.

2. Milkweed numbers and species will be assessed in project areas where impacts to milkweed may occur due to activities such as ATV access.
3. The impacts of milkweed removal in known monarch breeding areas will be minimized by planting equivalent milkweed species at a 3:1 ratio. The impacts of milkweed removal in habitat not known to be used by monarchs will be minimized by planting milkweed at a 2:1 ratio.
4. Areas within or adjacent to occupied habitat (within 250 feet of a documented monarch breeding or roosting location), lacking extensive milkweed, where successful control of invasive species has been achieved, will be prioritized for planting.
5. All newly planted milkweed will be regionally native and preferably of the same species removed.
6. A 2-foot buffer will be maintained around extant milkweed plants during off-road vehicle access, restoration and habitat enhancement planting, and other ground-disturbing activities to protect breeding habitat.
7. Willows and other trees known to be, or with the potential to be, used as roosting sites (within occupied habitat) will be preserved.
8. 15 March through 31 October: No trimming of trees used by monarchs as roosting sites will occur during the active season.
9. Cattle or horse grazing is prohibited to prevent soil compaction and trampling of milkweeds.
10. Riparian areas and drainages with known habitat used by monarchs (e.g., milkweed stands and roosting sites) will be excluded from grazing.
11. 15 March through 31 October: No prescribed fire treatment will occur within 100 feet of habitat occupied by monarchs during the active monarch season.
12. Any areas within 250 feet of known monarch breeding habitat requiring reseeding will include species beneficial to monarchs, including native milkweed.
13. Mowing projects during the summer will be conducted during the morning to avoid injuring resting monarchs.
14. 15 March through 31 October: Generally, mowing will not be conducted within 100 feet of areas with suitable monarch habitat during the active season.
15. If mowing must be conducted (i.e., for habitat restoration projects benefiting monarchs or other listed species) and vehicle access must be allowed, all milkweed plants will be identified and avoided.
16. Additionally, if mowing occurs from March to June near areas where breeding occurs, mowing height will be set to a minimum of 10-12 inches to avoid cutting newly emerged plants.

Compliance with these minimization and mitigation measures will reduce impacts to Special Status Species to less than significant.

3.4 Water Resources and 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. The Corps regulates the discharge of dredged or fill material into all regulated waters of the U.S.,

including wetlands, under Section 404 of the Clean Water Act (CWA). The Corps and the EPA both have responsibilities in administering this program and typically issue permits for these regulated activities. Although the Corps does not issue itself permits for its own Civil Works projects, Corps regulations state that the Corps must apply the guidelines and substantive requirements of Section 404 to its activities. This is done through a 404(b)(1) evaluation.

3.4.1 Affected Environment

The Tulare Lake Hydrologic Region covers approximately 10.9 million acres. This region includes all of Kings and Tulare Counties and most of Fresno and Kern Counties. Four main rivers (Kings, Kern, Tule, and Kaweah) in the watershed originate from the western flanks of the southern Sierra Nevada, and one substantial creek (Los Gatos) enters from the Coast Range. The Kern River has the largest drainage basin area but produces the second highest runoff after the Kings River. It originates in the Inyo and Sequoia National Forests and Sequoia National Park and flows southward into Isabella Lake (California DWR 2009). Isabella Lake is in the Kern River Valley basin, which is in the southern Sierra Nevada, at elevations ranging from 2,500 to 4,500 feet. The drainage area of the Kern River at Isabella Dam is 2,074 square miles (Corps 2009). The southern portion of the basin is dominated by Isabella Lake, from which the Kern River flows southwest toward Bakersfield in the San Joaquin Valley. Average annual precipitation ranges from six to 14 inches in the eastern and western portions of the basin, respectively (California DWR 2004). The two principal reaches of the Kern River are the main stem of the Kern River (North Fork) and the South Fork. The North Fork makes up about 85 percent of the total flow into Isabella Lake. Approximately 90 percent of the runoff-producing precipitation falls from November through April. Approximately two-thirds of the annual runoff occurs from April through July when snowmelt dominates the system.

Isabella Lake is roughly Y-shaped, following the two upper forks of the Kern River upstream and the Lower Kern River downstream. The lake is surrounded by several communities, including Lake Isabella, Mountain Mesa, South Lake/Longview, Weldon, Keysville, Wofford Heights, and Kernville. The Auxiliary Dam Recreation Area alternative is located along the lake's southeastern shore. The other alternatives are located downstream of the auxiliary dam in Hot Springs Valley, which is east of the Lower Kern River. A small ridge runs between the river and the valley, roughly parallel to both. Hot Springs Valley contains the town of Lake Isabella and numerous hot springs and seeps surrounded by wetlands.

3.4.2 Environmental Consequences

Basis of Significance. 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.

Alternative 1 – No Action. The no action alternative would not mitigate for habitat impacts at the new borrow site or haul route and would instead install the original 11.2 acres mitigation at the MDCG location as described in the original 2012 FEIS, subsequent SEAs, and

final FWCA Report. The Fay Ranch Road East location would remain grazed by cattle and the habitat would remain the current ruderal vegetation or barren ground. A well would not be drilled, and the lack of vegetation could allow increased potential for surface erosion during storm events. No other effects to water resources and quality would take place because no further updates would occur under the Isabella Lake DSM Project.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The Fay Ranch Road project area is an undeveloped site that is located in the alluvial fan of the historic alignment of Fay Creek. There are no wetlands within the project footprint, but there is the potential for wetland vegetation just beyond the southeastern corner of the parcel. The boundary was drawn for the site to avoid impacts to any wetlands. A well will be drilled near the gate and staging area, towards the southwest corner of the project footprint. The new well will tap into the water table, but the minimal usage for the planned irrigation rates will mean that impact will be extremely low. The nearby well drilled across the street for the Sprague Ranch mitigation site (previous Isabella DSM Project vegetation mitigation site) provides a minimum of 75 gallons per minute and has a pressure of 70 PSI and a pumping rate of 150 gallons per minute. The assumption is that the new well on the Fay Ranch Road site will be similar in production. The pumping rate during the duration of the 4-year establishment period will be weekly from March 1 through October 31 of each establishment year at 10 gallons per week the 1st year, 15 gallons the 2nd year, 20 gallons the 3rd year, and 30 gallons per week the 4th year.

Irrigation will be via either micro-sprinklers or driplines. Irrigation will allow some percolation back into the ground, but there will be some loss due to plant intake and evaporation. There are about 5,000 acres of irrigated lands in the local valley, so irrigating the mitigation plans will add to that number. However, native plants use much less water than irrigated crops, such as alfalfa. The impact to water resources will be minimal.

3.4.3 Mitigation

For the proposed alternative that will result in the disturbance of more than one acre, the contactor will be required to prepare a National Pollutant Discharge Elimination System (NPDES) storm water permit (Section 402 of the CWA) from the Central Valley Regional Water Quality Control Board (RWQCB). The Construction NPDES 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 will be the responsibility of the contractor. The SWPPP will 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 will be responsible for implementing, maintaining, and monitoring BMPs during demolition.

The following standard BMPs will be expected to be implemented to avoid and minimize the potential effects on water quality, ensuring that construction of the proposed action will have less than significant effects on these resources:

- Appropriate erosion control measures will be incorporated into the SWPPP by the construction contractor to prevent sediment from entering waterways and to minimize temporary turbidity impacts. Examples include but are not limited to: straw bales/wattles, erosion blankets, silt fencing, silt curtains, mulching, revegetation, and temporary covers. Sediment and erosion control measures will always be maintained by the contractor during construction. Control measures will be inspected periodically by the construction contractor, particularly during and after significant rain events.
- The contractor will use a water truck or other appropriate measures to control fugitive dust on haul roads, construction areas, and stockpiles.
- A fuels spill management plan will be developed for the project by the construction contractor and will be implemented by the contractor.
- Construction equipment and vehicles will be fueled and maintained in specified staging areas only, which will be designed to capture potential spills. These areas cannot be near any ditch, stream, or other body of water or feature that may convey water to a nearby body of water.
- Fuels and hazardous materials will not be stored on site. Any spills of hazardous material will be cleaned up immediately by the construction contractor.
- Construction vehicles and equipment will be inspected frequently and appropriately maintained by the construction contractor to help prevent dripping of oil, lubricants, or any other fluids.
- Construction activities will be scheduled by the contractor to avoid as much of the wet season as practicable. Construction personnel will be trained in storm water pollution prevention practices by the construction contractor.
- In areas proposed for revegetation, initiation and completion of revegetation work will be done by the contractor in a timely manner to control erosion.

3.5 Cultural Resources

Cultural resources include buildings, structures, objects, sites, districts, and archeological resources associated with historic or prehistoric human activity. The cultural value of these resources may be of national, state, or local significance. On the Federal level, cultural resources that are listed in, or eligible for listing in, the National Register of Historic Places (NRHP) are known as historic properties. For a cultural resource to be determined eligible for listing in the NRHP, it must meet certain criteria. The resource must be at least 50 years old or exhibit exceptional importance and meet one or more of the following criteria as defined in 36 CFR 60.4. It must (1) be associated with events that have made a significant contribution to the broad patterns of our history; (2) be associated with the lives of persons significant in our past; (3) embody the distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or (4) have yielded, or be likely to yield, information important in prehistory or history.

The Corps uses effects determinations arrived at through compliance with Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) to assess effects to cultural resources under NEPA and to mitigate for adverse effects under both laws. The process for implementing Section 106 of the NHPA is described at 36 C.F.R. Part 800. For any Federal

action that has the potential to cause effects on historic properties, compliance with Section 106 of the NHPA requires a good faith effort by the responsible Federal agency to identify historic properties in the area of potential effects (APE) for the undertaking and to resolve of any adverse effects on such properties through a consultative process involving the agency, the State Historic Preservation Officer (SHPO), Native American Indian tribes, and other consulting parties.

The Corps executed a Programmatic Agreement (PA) in 2012 to guide Section 106 compliance for the Project. In 2015, the Corps completed a Historic Properties Treatment Plan (HPTP), tiering off the PA. The HPTP guides the process the Corps follows to identify historic properties and mitigate any adverse effects of the Project. The Corps, Sequoia National Forest, the Advisory Council on Historic Preservation, and the California State Historic Preservation Officer (SHPO) are signatories to the PA, and the Tübatulabal Tribe is a concurring party.

3.5.1 Affected Environment

The vegetation mitigation area is situated within the Kern River Valley, near the southeast end of Lake Isabella along the South Fork of the Kern River, near the town of Weldon, California. The Kern is a major river flowing south from the Sierra Nevada through the southern San Joaquin Valley. Generations of Native American people have the longest history in the region. The Tübatulabal have lived in the lower regions of the Southern Sierra Nevada near the North and South Forks of the Kern River for thousands of years (Tübatulabal 2021). To the south, the Kawaiisu inhabited surrounding areas through to the Tehachapi Mountains (Seetha 2021). A mining boom in nearby Kernville during the 1850s signaled the beginning of intensive non-Native settlement, followed by an emergence of ranching and agriculture in the 1870s (Polson and Montag 2015) From the 1900s to the 1980s, the Kern Valley was best known for ranching. Ranching heritage of the area included Tübatulabal, Kawaiisu, Chinese, Spanish, Mexican and Euro American communities who contributed to the growth of surrounding towns (Haslam and Rojas 1986).

The completion of the Isabella Dam in 1953 negatively impacted the existing ranching and agricultural industry in the Kern Valley. The Corps-built Isabella Dam was constructed as part of a larger plan to manage flooding in the Sacramento and San Joaquin Valleys. The dam on the Kern River created Isabella Lake, a manmade reservoir that flooded the original town site of Old Isabella, the neighboring town of Old Kernville and hundreds of acres of rangeland. By the 1980s, most of the ranches and farms had been sold and tourism became the leading economic engine in the Kern Valley. In the face of a changing economy and landscape, the property within the APE remained in use for ranching and agriculture. Most recently, the Fay Ranch Road East property was held by Sprague Ranches and Cyprus Real Estate, LLC., who sold the property to the National Audubon Society in 2005.

3.5.2 Environmental Consequences

Basis of Significance: An effect to a cultural resource under NEPA would be considered significant if it rose to the level of an adverse effect, as defined under Section 106 of the NHPA.

Alternative 1 – No Action. The no action alternative would not mitigate for habitat impacts at the new borrow site or haul route and would instead install the original 11.2 acres

mitigation at the MDCG location as described in the original 2012 FEIS, subsequent SEAs, and final FWCA Report. The Fay Ranch Road location would remain grazed by cattle, a well would not be drilled, and no irrigation system or fencing would be installed. The historic irrigation ditch identified as CA-KER-010406H, would remain largely undisturbed with the exception through possible erosion due to ongoing cattle grazing.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. In this SEA, the Fay Ranch Road East Vegetation Mitigation (Alternative 2) will entail the vegetation mitigation and associated infrastructure, including entrance gate, temporary and permanent internal and boundary fences, well, and irrigation piping. The project area will be encompassed by a boundary fence for management purposes. In an effort to identify historic properties in the Fay Ranch East Vegetation Mitigation project area, the Corps requested a records search from the Southern San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield for previously known or recorded cultural resources and studies within 1/4 mile of the area of potential effect (APE). The search, completed on August 31, 2021, identified one previously recorded cultural resource, a historic ditch (P-15-019039 CA-KER-010406H), within the APE. The historic irrigation ditch was determined eligible by the Corps with SHPO concurrence in 2015. Corps Senior Archaeologist Geneva Kraus, MA, RPA, performed a pedestrian survey of the APE on August 18, 2021. These identification efforts confirmed the presence of CA-KER-010406H, the historic irrigation ditch. No other resources were revealed.

Potential effects to cultural resources will result from two types of construction related actions: (1) effects to the integrity of the visual and physical setting of historic properties; and (2) effects from clearing, grubbing, and follow-on planting. Throughout the course of the project, the Corps has proposed to maintain a 5-meter buffer on either side of the CA-KER-010406H ditch alignment. An above-ground irrigation mainline measuring approximately 4 inches in diameter will cross the ditch, and a small bridge will support the line over the irrigation ditch. The bridge and mainline will be removable, resulting in no physical damage to CA-KER-010406H. Visual impacts to the setting will be minimal and reversable. In accordance with the PA, the Corps initiated consultation on the project with the SHPO, Native American Tribes and Sequoia National Forest on March 18, 2022. SHPO concurrence is anticipated in the Corps finding that the current project will have no effect on this historic property. As no historic properties will be affected by Alternative 2, impacts to cultural resources will be less than significant.

3.5.3 Mitigation

The Corps has determined that it will avoid CA-KER-010406H and therefore no mitigation measures are necessary. Should construction plans change, the Corps will reevaluate the potential effect of those changes and reopen consultation with the SHPO and Native American Tribes as stipulated in the PA.

4.0 CUMULATIVE EFFECTS

Cumulative effects are the impacts on the environment that result from the incremental impacts of the proposed action or alternatives when added to the impacts of other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or

entity undertakes such other actions (40 CFR 1508.1(g)). These impacts can result from individually minor but collectively significant actions taking place over time.

The cumulative impact analysis captures the effects that result from the no action and proposed action alternative in combination with the effects of other actions in the same geographic area within the timeframe of the action. This EA considers the past, present, and reasonably foreseeable short-term and long-term effects of implementing the alternative. As analyzed in chapter 3.0, there are potential direct and indirect environmental effects of the no action and proposed action alternatives. These effects are assessed in terms of their potential to combine with similar environmental effects of the local projects listed below, resulting in cumulative impacts. Based on a record search of local, county, state, and Federal projects, only two Federal projects relating to restoration or habitat management are currently occurring or planned in the near future within Kern County. This analysis is focused on considering the potential for those impacts identified in Chapter 3.0 combined with the following Federal projects to create a considerable contribution which would result in significant adverse cumulative effects.

Keyesville Hazard Fuels Reduction Project. This Bureau of Land Management project is located near Keyesville, CA, about 13 miles southwest of the proposed action. The Bureau of Land Management will conduct hazard fuel reduction, as part of their wildland fire management program, to create defensible space surrounding structures including the Keyes Mine, Walker Cabin, Pennsylvania Mine, and Keysville Cemetery.

Castle Fire Ecological Restoration Project. The USFS will restore and promote a healthy forest ecosystem and increase resilient forest conditions by establishing and maintaining low surface- and ladder-fuel conditions. This project will occur within the 2020 Castle Fire footprint in mostly within Tulare County but with a small portion in Kern County, about 45 miles northwest of the proposed action. Work will occur outside of wilderness areas, adjacent to Highway 190, Mountain Home State Park, local communities, and Giant Sequoia National Monument lands beginning in October 2022.

Alternative 1 – No Action. Under this alternative, the Isabella DSM Project would not mitigate for the 7.35 acres of additional habitat impacts from the new borrow site and haul route and would instead install the original 11.2 acres mitigation at the MDCG location as described in the 2012 FEIS and Final Coordination Act Report. The Fay Ranch Road East location would remain heavily grazed by cattle and the habitat would remain the current ruderal vegetation or barren ground. No effects to vegetation and wildlife would take place at the Fay Ranch Road East location because no further updates would occur under the Isabella Lake DSM Project.

The 11.2 acres of mitigation under the no action alternative is an individually minor action compared to the quantity of publicly management land within Kern County. According to the California Department of Forestry and Fire Protection land ownership database, as of August 17, 2022, there are approximately 2,500,000 acres of publicly managed land in Kern County. The no action alternative represents less than one-thousandth of a percent of this total area. Based on the 2019 National Landcover Database, there are approximately 3,400,000 acres of woodland, shrub scrub, and grassland within the county. Therefore, the no action alternative is

impacting only a minor component of the county's existing total vegetation cover. Furthermore, given the few current and planned restoration projects in the area, the chances of significant cumulative effects from the no action alternative and other current and planned projects are discountable. Even if there are unknown future projects in the area by other entities, the relatively small size and short duration of the no action alternative greatly reduces the chances of significant cumulative effects.

The cumulative effects analysis only details those resources with the potential to have a cumulative effect. Significance of cumulative effects is determined by meeting federal and state mandates as well as specified criteria identified in this document for affected resources (see Section 3.0). The no action alternative would likely have no adverse cumulative effects on land use; socioeconomics and environmental justice; aesthetics and visual resources; geology, soils, and seismicity; hazardous, toxic, and radiological waste; climate change; recreation; traffic and circulation; air quality; noise and vibration; special status species; water resources and quality; or cultural resources. The effects of the no action alternative would result in a minor cumulative net loss vegetation and wildlife. However, due to the small size of the habitat loss in comparison to overall habitat in the region, these cumulative effects would be less than significant.

Alternative 2 – Fay Ranch Road East Vegetation Mitigation. The proposed action involves restoring 18.55 acres of pine woodland, sagebrush scrub, and Valley grassland at the Fay Ranch Road East location to meet habitat mitigation requirements for the Lake Isabella DSM Project. This is an individually minor action compared to the quantity of publicly management land within Kern County. According to the California Department of Forestry and Fire Protection land ownership database, as of August 17, 2022, there are approximately 2,500,000 acres of publicly managed land in Kern County. The proposed action represents less than one-thousandth of a percent of this total area. Based on the 2019 National Landcover Database, there are approximately 3,400,000 acres of woodland, shrub scrub, and grassland within the county. Therefore, the proposed action is impacting only a minor component of the county's existing total vegetation cover. Furthermore, given the few current and planned restoration projects in the area, the chances of significant cumulative effects from the proposed action and other current and planned projects are discountable. Even if there are unknown future projects in the area by other entities, the relatively small size and short duration of the proposed action greatly reduces the chances of significant cumulative effects.

The cumulative effects analysis only details those resources with the potential to have a cumulative effect. Significance of cumulative effects is determined by meeting Federal and state mandates as well as specified criteria identified in this document for affected resources (see Section 3.0). The proposed action will likely have no adverse cumulative effects on land use; socioeconomics and environmental justice; aesthetics and visual resources; geology, soils, and seismicity; hazardous, toxic, and radiological waste; climate change; recreation; traffic and circulation; air quality; noise and vibration; special status species; water resources and quality; or cultural resources as analyzed in the sections above. The effects of the proposed action will result in minor, beneficial cumulative impacts to vegetation and wildlife. However, due to the small size of the habitat mitigation in comparison to overall habitat in the region, these beneficial cumulative effects will be less than significant and simply serve to mitigate impacts from the Isabella DSM Project.

5.0 COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Clean Air Act of 1972, as amended, 42 U.S.C. 7401, et seq. *Full Compliance*. The proposed action is not expected to violate any Federal air quality standards, exceed the EPA's general conformity *de minimis* threshold, or hinder the attainment of air quality objectives in the local air basin. Thus, the Corps has determined that the proposed project will have no significant effects on the future air quality of the area.

Clean Water Act of 1972, as amended, 33 U.S.C. 1251, et seq. *Partial Compliance*. The CWA is the primary Federal law governing water pollution. It established the basic structure for regulating discharges of pollutants into waters of the U.S. and gives the U.S. EPA the authority to implement pollution control programs, such as setting wastewater standards for industries. In some states, such as California, the EPA has delegated authority to regulate the CWA to state agencies.

Section 401 of the CWA regulates the water quality for any activity that may result in any in-water work or discharge into navigable waters. These actions must not violate Federal water quality standards. The Central Valley Regional Water Quality Control Board (RWQCB) administers Section 401 of the CWA in California, and either issues or denies water quality certifications. Water quality certifications typically include project-specific requirements established by the RWQCB to ensure attainment of water quality standards.

Section 404 of the CWA requires that a permit be obtained from the Corps when an action will result in the discharge of dredged or fill material into jurisdictional wetlands and waters of the U.S. Under Section 404, the Corps regulates such discharges and issues individual and/or general permits for these activities. Before the Corps can issue a permit under Section 404, it must determine that the project is in compliance with the CWA Section 404(b)(1) guidelines. The 404(b)(1) guidelines specify that "no discharge of dredged or fill material shall be permitted if there were a practical alternative to the proposed discharge which will have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences" (40 C.F.R. § 230.10[a]).

When conducting its own civil works projects, the Corps does not issue permits to itself. Rather, the Corps complies with the guidelines and substantive requirements of the Clean Water Act, including Section 404 and Section 401. There are no jurisdictional wetlands or other waters of the U.S. at the Fay Ranch Road Mitigation site.

The construction area is greater than one acre for the Proposed Alternative. Therefore, the contractor will be required to obtain a NPDES permit and prepare a Stormwater Pollution Prevention Plan. Full compliance will occur when the contractor has procured their General Construction Permit for NPDES Section 402, as applicable.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531, et seq. *Full Compliance.* In accordance with Section 7(c), the Corps obtained a list from USFWS and from CNDDB of Federally listed and proposed species likely to occur in the project area on February

09, 2022, via the USFWS website Information for Planning and Consultation. This project will have no effect on the Federally listed fisher, southwestern willow flycatcher, California condor, Least Bell's vireo, Western yellow-billed cuckoo, the alkali Mariposa lily, or the Monarch butterfly.

Executive Order 11990, Protection of Wetlands. *Full Compliance*. This order directs all federal agencies to provide leadership and take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in implementing civil works. Each agency, to the extent permitted by law, must avoid undertaking or providing assistance to new construction located in wetlands unless the head of the agency finds: there is no practical alternative to such construction and the proposed action includes all practical measures to minimize harm to wetlands that may result from such use. While there is some wetland vegetation in the southeast corner of the parcel, there are no hydric soils or hydrology confirming the presence of wetlands (confirmed during March 2022 survey). There are no impacts to wetland habitat with the implementation of Alternative 2.

Executive Order 11312, Noxious Weeds. *Full Compliance.* This order directs all federal agencies to prevent the introduction of invasive species; provide for their control; and minimize the economic, ecological, and human health effects of invasive species. Prior to mobilization, all project-related vehicles and equipment will be cleaned of soils, seeds, vegetative matter, or other debris that could contain or hold non-native invasive and noxious weed seeds. During construction, vehicles and equipment will also be cleaned, as needed, as they leave or enter staging areas and work sites. As a result, the project will not be expected to introduce any invasive species into either the staging area or work sites.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. *Full Compliance*. This order directs all Federal agencies to identify and address adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Any impacts caused by construction activities will not disproportionately affect minority or low-income populations.

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. *Full Compliance*. This order directs all Federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children. There are no schools or other facilities near the project area. The project will not have adverse or disproportionate impacts on children.

Farmland Protection Policy Act, 7 U.S.C. 4201, et seq. *Full Compliance*. This Act requires a Federal agency to consider the effects of its actions and programs on the Nation's farmlands. The proposed action will not result in any effects on prime or other important farmland.

Fish and Wildlife Coordination Act of 1958, as amended, 16 U.S.C. 661, et seq. *Partial Compliance*. The FWCA ensures that fish and wildlife receive consideration equal to that of other project features from projects that are constructed, licensed, or permitted by Federal agencies. The FWCA requires federal agencies that construct water resource development projects to consult with USFWS, and the applicable state fish and wildlife agency (CDFW)

regarding the project's impacts on fish and wildlife and measures to mitigate those impacts. The USFWS and CDFW have participated in evaluating the Isabella Lake DSM Project, of which this proposed action is a subset. Consultation with USFWS has been completed for the DSM Project, and correspondence regarding special status species is included in Appendix C of the 2012 FEIS.

Migratory Bird Treaty Act (15 U.S.C 701-18h). *Full Compliance.* No migratory birds, nests, or habitat are impacted by the proposed action. Construction will be timed to avoid physical destruction of active bird nests or young of birds that breed in the area. The Corps surveyed for presence of migratory birds and bald and golden eagles in the action area and will do so again prior to construction. If nesting birds are detected, the Corps will coordinate with the USFWS to develop appropriate avoidance and minimization measures. With the completion of these surveys and implementation of any required measures, the project is in full compliance with this Act.

National Environmental Policy Act of 1969, as amended, 42 U.S.C. 4321, et seq. *Full Compliance.* Under NEPA, Federal agencies prepare an EA to determine whether a proposed action would significantly affect the environment. If the effects could be significant, then an EIS is prepared. If the proposed action would not result in significant impacts, then the Federal agency issues a FONSI. The FONSI may address measures that the lead agency will take to reduce (mitigate) potentially significant impacts. Due to mitigation, no significant impacts are expected for the proposed action and a FONSI will be signed. Per Engineer Regulation 200-2-2, section 11, since the action is not a feasibility, continuing authority or special planning report, nor is it an operation and maintenance activity involving discharge of dredged or fill material, a draft SEA was not circulated for public comment. Rather, a notice of availability of the FONSI will be sent to concerned agencies, organizations, and the interested public.

National Historic Preservation Act of 1966, as amended, 54 U.S.C. 306101 et seq. *Full 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. The Corps is complying with this Act through the use of a PA, executed in 2012, and an HPTP, executed in 2017. Adherence to the provisions of these documents confer full Section 106 compliance.

Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.). *Full Compliance*. This act was enacted to preserve selected rivers or sections of rivers in their free-flowing condition in order to protect the quality of river waters and to fulfill other national conservation purposes. Portions of the Kern River are designated as Wild and/or Scenic. The proposed alternative will have no adverse effect on the river.

6.0 COORDINATION AND REVIEW OF THE SEA

According to ER 200-2-2, section 11, since the action is not a feasibility, continuing authority, a special planning report, nor is it an operation and maintenance activity involving discharge of dredged or fill material, a draft SEA was not circulated for public comment. Rather,

a notice of availability of the SEA and FONSI will be sent to concerned agencies, organizations, and the interested public.

7.0 FINDINGS

This SEA evaluated the environmental effects of the proposed project. Potential adverse effects to the following resources were evaluated in detail due to any potential significance: vegetation and wildlife, special status species, water resources and quality, and cultural resources.

Based on this evaluation, the proposed action meets the definition of a FONSI as described in 40 CFR 1508.13. A FONSI may be prepared when an action would not have a significant effect on the human environment and for which an environmental impact statement would not be prepared. As such, the Corps Sacramento District Commander will sign the FONSI as appropriate.

8.0 LIST OF PREPARERS

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Appendix A

U.S. Fish and Wildlife IPaC and California Natural Diversity Database Lists

Scientific Name	Common Name	Fed List	Cal List	Rare Plant Rank	Other Status
Amphibian					
Rana boylii	foothill yellow-legged frog	None	Endangered		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened | USFS_S-Sensitive
Birds					
Accipiter cooperii	Cooper's hawk	None	None		CDFW_WL-Watch List | IUCN_LC-Least Concern
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered		IUCN_NT-Near Threatened | NABCI_YWL-Yellow Watch List
Empidonax traillii extimus	southwestern willow flycatcher	Endangered	Endangered		NABCI_RWL-Red Watch List
Agelaius tricolor	tricolored blackbird	None	Threatened		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | NABCI_RWL-Red Watch List | USFWS_BCC-Birds of Conservation Concern
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened	Endangered		BLM_S-Sensitive | NABCI_RWL-Red Watch List | USFS_S-Sensitive | USFWS_BCC-Birds of Conservation Concern
Setophaga petechia	yellow warbler	None	None		CDFW_SSC-Species of Special Concern | USFWS_BCC-Birds of Conservation Concern
Icteria virens	yellow-breasted chat	None	None		CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern
Plants					
Diplacus pictus	calico monkeyflower	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
Calochortus striatus	alkali mariposa-lily	None	None	1B.2	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive
Cryptantha clokeyi	Clokey's cryptantha	None	None	1B.2	
Erythranthe shevockii	Kelso Creek monkeyflower	None	None	1B.1	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | USFS_S-Sensitive
Clarkia xantiana ssp. *parviflora*	Kern Canyon clarkia	None	None	4.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
Camissonia integrifolia	Kern River evening-primrose	None	None	1B.3	
Stylocline masonii	Mason's neststraw	None	None	1B.1	USFS_S-Sensitive

Eriogonum breedlovei var. *shevockii*	Needles buckwheat	None	None	4.3	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
Galium angustifolium ssp. *onycense*	Onyx Peak bedstraw	None	None	1B.3	BLM_S-Sensitive | SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
Delphinium purpusii	rose-flowered larkspur	None	None	1B.3	BLM_S-Sensitive | USFS_S-Sensitive
Bombus crotchii	Crotch bumble bee	None	None		
Plebulina emigdionis	San Emigdio blue butterfly	None	None		USFS_S-Sensitive
Mammals					
Antrozous pallidus	pallid bat	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority
Perognathus inornatus	San Joaquin pocket mouse	None	None		BLM_S-Sensitive | IUCN_LC-Least Concern
Corynorhinus townsendii	Townsend's big-eared bat	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFS_S-Sensitive | WBWG_H-High Priority
Onychomys torridus tularensis	Tulare grasshopper mouse	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern
Reptiles					
Anniella spp.	California legless lizard	None	None		CDFW_SSC-Species of Special Concern
Anniella campi	Southern Sierra legless lizard	None	None		CDFW_SSC-Species of Special Concern | USFS_S-Sensitive
Emys marmorata	western pond turtle	None	None		BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive
Other					
Great Valley Cottonwood Riparian Forest	Great Valley Cottonwood Riparian Forest	None	None		

IPaC

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

3.6 Location

Kern County, California

3.7 Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

5.0 ENDANGERED SPECIES

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

3.8 Mammals

NAME	STATUS
Fisher *Pekania pennanti*	Endangered

There is proposed critical habitat for this species.
The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/3651

3.9 Birds

NAME	STATUS
California Condor *Gymnogyps californianus*	Endangered

There is final critical habitat for this species. The location of the critical habitat is not available.

NAME	STATUS
Least Bell's Vireo *Vireo bellii pusillus*	Endan

Wherever found
There is final critical habitat for this species. The location of the critical habitat is not available.

NAME	STATUS
Southwestern Willow Flycatcher *Empidonax traillii extimus*	Endan

Wherever found
There is final critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/6749

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus*	Threa

There is final critical habitat for this species. Your location overlaps the critical habitat.
https://ecos.fws.gov/ecp/species/3911

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

Wherever found
There is final critical habitat for this species.
The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/321

3.10 Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus Candidate

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/9743

3.11 Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Southwestern Willow Flycatcher Empidonax traillii extimus https://ecos.fws.gov/ecp/species/6749#crithab	Final
Yellow-billed Cuckoo Coccyzus americanus https://ecos.fws.gov/ecp/species/3911#crithab	Final

6.0 MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/ birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/ conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES

INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

California Spotted Owl Strix occidentalis occidentalis — Breeds Mar 10 to Jun 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/7266

California Thrasher Toxostoma redivivum — Breeds Jan 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cassin's Finch Carpodacus cassinii — Breeds May 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9462

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Le Conte's Thrasher toxostoma lecontei — Breeds Feb 15 to Jun 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8969

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi Breeds May 20 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Pinyon Jay Gymnorhinus cyanocephalus Breeds Feb 15 to Jul 15

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9420

Tricolored Blackbird Agelaius tricolor Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Wrentit Chamaea fasciata Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

3.12 Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

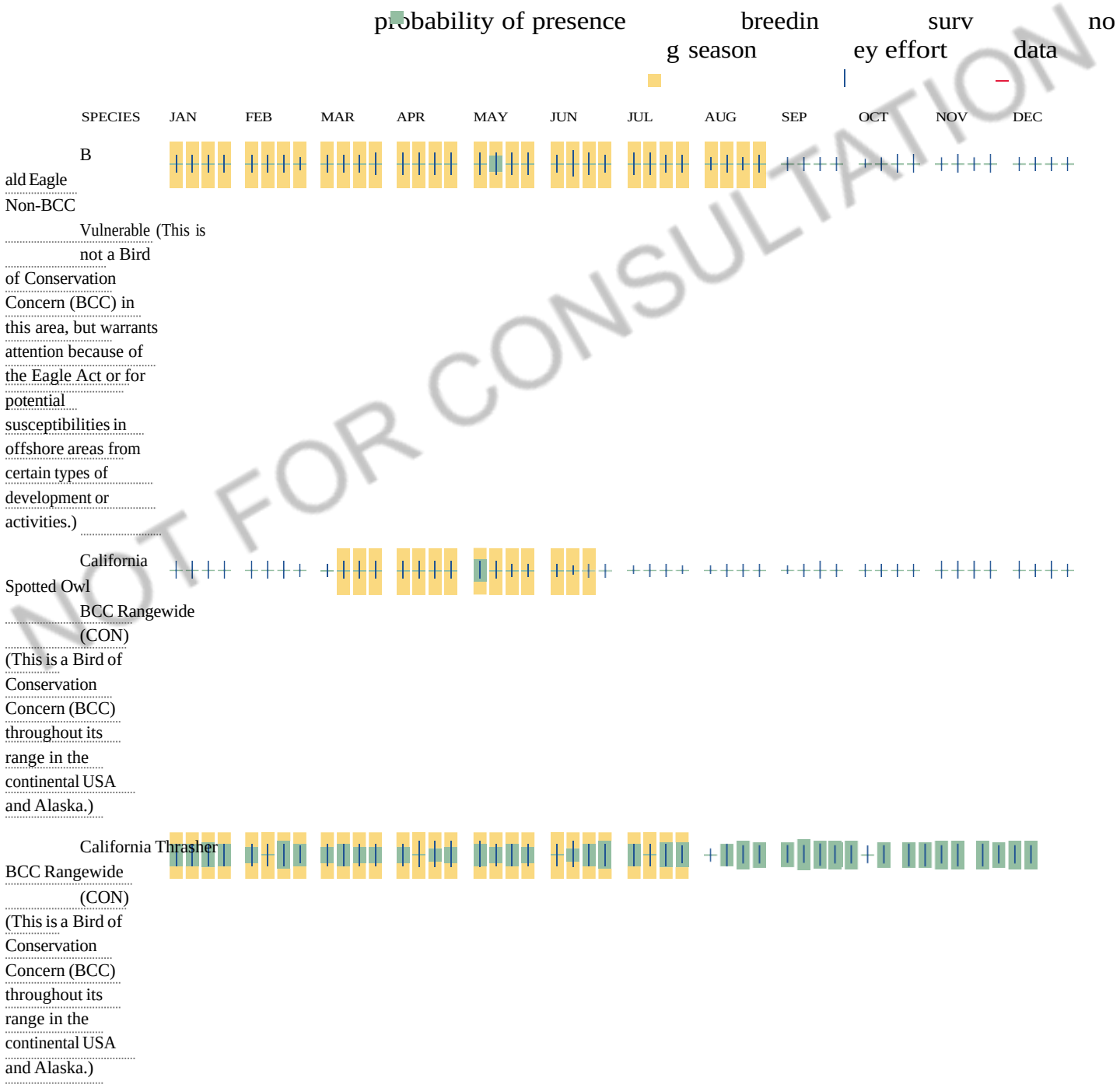
To see a bar's survey effort range, simply hover your mouse cursor over the bar. No Data

( )

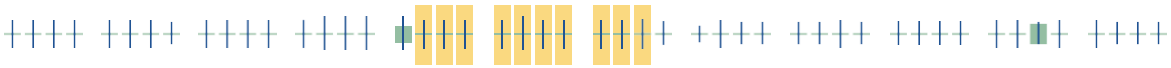
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

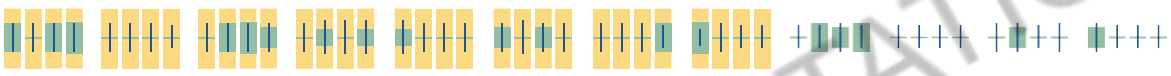


Cassin's Finch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

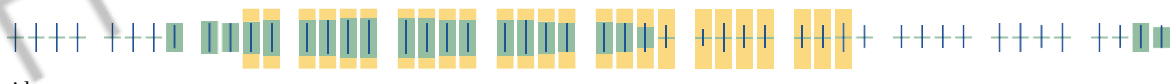


Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lawrence's Goldfinch BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



L
e Conte's Thrasher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

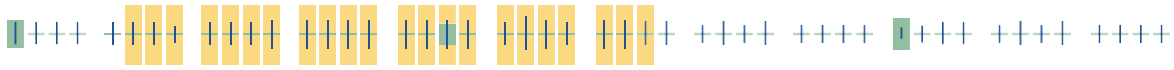
Long-eared Owl BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

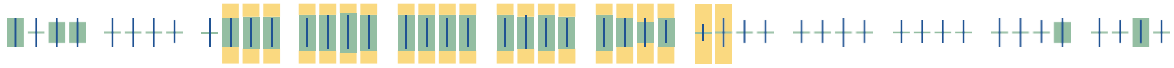
Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Olive-sided Flycatcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

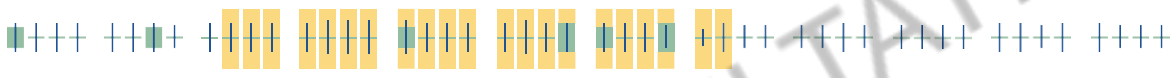
SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



Pinyon Jay BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds

reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed.

To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

7.0 FACILITIES

3.13 National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

3.14 Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

8.0 WETLANDS IN THE NATIONAL WETLANDS INVENTORY

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted.

Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.