APPENDIX A - 2016 U.S. FISH AND WILDLIFE SERVICE BIOLOGICAL OPINION UPDATE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

In Reply Refer to
08ESMF00-
2012-I-0671-2

JUN 17 2016

JUN 06 2016

Alicia E. Kirchner
Chief, Planning Division
Corps of Engineers, Sacramento District
1325 J Street
Sacramento, California 95825-2922

Subject: Informal Consultation on the Proposed Isabella Lake Dam Safety Modification Project, Kern County, California.

Dear Ms. Kirchner:

This letter is in response to the U.S. Army Corps of Engineers' (Corps) April 04, 2016, request for re-initiation of consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Isabella Lake Dam Safety Modification Project (proposed project), in Kern County. Your request was received by the Service on April 12, 2016. In your re-initiation letter the Corps requests: (1) concurrence from the Service to remove the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle) and conditions related to the beetle which were identified in the Service issued biological opinion dated October 10, 2012 (08ESMF00-2012-F-0671-1); (2) to initiate consultation on the recently federally-listed western distinct population segment (DPS) of the yellow-billed cuckoo (*Coccyzus americanus*) (cuckoo) and its proposed critical habitat; and (3) to add new project information for the proposed project. Your request included a summary of the changes to the project's proposed habitat compensation activities and potential project effects to federally-listed species. The Corps has determined that the proposed project may affect, but is not likely to adversely affect, the federally-listed as threatened cuckoo and its proposed critical habitat, the federally-listed as endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and its designated critical habitat, and the federally-listed as endangered least Bell's vireo (*Vireo bellii pusillus*).

Your re-initiation letter and the accompanying new project information present an evaluation of the proposed project's effects on species federally-listed under the Act of 1973, as amended (16 U.S.C. §1531 *et seq.*).

The federal action we are consulting on is the remediation of seismic, seepage, and hydrologic deficiencies at the Lake Isabella Dam (consisting of a Main Dam, Auxiliary Dam and Spillway). Implementing the proposed project represents a large and complex modification project that involves altering the Lake Isabella Dams and Spillway, constructing new structures and facilities, and performing numerous associated support actions over an anticipated multi-year construction period. The Corps will also restore and enhance approximately 154 acres of habitat to compensate for permanent impacts to three habitat types associated with the proposed project's impacts. This response is provided under the authority of the Act, and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The Service previously issued the biological opinion referenced above, and concurred with the Corps determination that the proposed project may affect, and is likely to adversely affect the beetle. Therefore, the biological opinion appended the proposed project to the *Programmatic Formal Consultation Permitting Projects with Relatively Small Effects on the Valley Elderberry Longhorn Beetle within the Jurisdiction of the Sacramento Field Office, California* (1-1-96-F-66). Since issuance of the biological opinion, the Service has determined that Kern County is no longer within the range of the beetle. Based on new information regarding the revised range of the beetle, the Service has concluded that the beetle does not occur in the action area evaluated in the biological opinion. The new information on which this determination is based is contained in the Service's September 17, 2014, withdrawal (79 FR 55874)[1] of the October 2, 2012, proposed rule to delist the beetle (77 FR 60238)[2] under the Act of 1973, as amended (16 U.S.C. §1531 *et seq.*). The Service's September 17, 2014, final rule determined that the range of the beetle does not include Kern County, and therefore does not include the action area considered under the biological opinion referenced above. Given the revised range of the beetle, the referenced biological opinion is no longer valid and in force and the Service is now rescinding the biological opinion (08ESMF00-2012-F-0671-1). Therefore, there is no obligation for the Corps to implement the conservation measures identified for the beetle in the referenced biological opinion.

In considering your request, we based our evaluation on the following: (1) your April 04, 2016, letter re-initiating consultation and the accompanying attachment identifying new project information and potential effects to federally-listed species within the proposed project area; (2) the *Final Isabella Lake Dam Safety Modification Project, Environmental Impact Statement;* (3) the *Final Isabella lake Dam Safely Modification Project, Supplemental Environmental Assessment Phase III Real Estate Easement Acquisition of Boreal Canal at Isabella Lake Auxiliary Dam without Replacement*; and (4) other information available to the Service.

Project Description

The project is proposed by the Corps, in cooperation with the U.S. Department of Agriculture-Forest Service, to implement risk reduction measures to minimize the potential for, and consequences of, a catastrophic downstream flooding event. The Corps has determined that the Isabella Dam facilities require structural improvements in order to safely meet authorized project purposes and to reduce risk to the public and property from dam safety issues posed by floods, earthquakes, and seepage. The Corps proposes to remediate the significant seismic, hydrologic, and seepage deficiencies at the Isabella Main Dam, Auxiliary Dam, and spillway for safe and effective functioning at the authorized capacity (Enclosure A). This will support the ultimate goal of having a safe facility that meets Corps risk reduction guidelines for existing dams and allows the proposed project to provide the benefits for which it was authorized. As an interim risk reduction measure (IRRM), an emergency deviation from the Reservoir Regulation Manual (Water Control Plan) was implemented in September 2006. Under the current IRRM, elevations are not to exceed 2,589.26 feet (North American Vertical Datum (NAVD88)) from March 20 to September 20. As an additional IRRM, the Corps constructed the Auxiliary Dam Left Abutment Project in the fall of 2010, the purpose of which was to restore the

---

[1] 79 FR 55874. September 17, 2014. Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule to Remove the Valley Elderberry Longhorn Beetle from the Federal List of Endangered and Threatened Wildlife. Proposed rule; withdrawal. U.S. Fish and Wildlife Service, Department of the Interior.

[2] 77 FR 60238. October 2, 2012. Endangered and Threatened Wildlife and Plants; Removal of the Valley Elderberry Longhorn Beetle from the Federal List of Endangered and Threatened Wildlife, Proposed Rule. U.S. Fish and Wildlife Service, Department of the Interior.

height of the Isabella Auxiliary Dam at its junction with the left abutment that had been lowered during the work on State Route 178. This involved raising the area to design height, which will provide the level of flood protection intended in the original dam design (Corps 2012).

The Corps initiated a multi-phased process in 2010 to develop and evaluate alternative risk management plans and select a Preferred Alternative for the proposed project. In March 2012, the Corps released the Draft Environmental Impact Statement (DEIS), and subsequently released the October 2012 Final Environmental Statement (FEIS) for the proposed project which documented the analysis of the No Action Alternative and four final risk Management plan alternatives resulting from this process (Corps 2012). The Corps has selected Alternative Plan 4 from the DEIS and the FEIS as the Preferred Alternative (proposed project).

The proposed project will consist of remediating seismic, seepage, and hydrologic deficiencies at the Main Dam, Spillway, and Auxiliary Dam. Implementing the proposed project involves altering the Isabella Dams and spillway, constructing new structures and facilities, and performing numerous associated support actions over an anticipated multi-year construction period. Under this alternative, the Corps will remediate all of the dam safety deficiencies that are significant contributors to the risk of dam failure.

Main Dam

The Corps has determined that the deficiencies associated with the Main Dam could lead to potential differential settlement and seepage following a seismic event and/or overtopping during an extreme storm event, such as the Probable Maximum Flood (PMF). The Corps plans to remediate these deficiencies by constructing a full height filter and drain on the downstream slope of the dam to accommodate a crest raise (expected to be 16-feet), and constructing a toe filter/drain system to capture and collect seepage. The Main Dam control tower and access to the existing facility will be raised 16 feet to accommodate the increase in the crest elevation. Access to the raised tower will be provided by retaining walls and backfill material from the Main Dam.

Existing Spillway

Remediation of the deficiencies identified for the existing spillway include: (1) select concrete placement and surface treatment of the existing spillway chute to guard against erosion undermining of the right wall; (2) addition of anchors along the existing spillway wall and ogee crest for additional head during operation and to increase seismic stability; and (3) construction of an approximate 16-foot-high retaining wall added to the crest along the right and left walls (closest to the Main Dam) to protect against potential erosion of the Main Dam during high outflows and to accommodate the crest raise. The concrete needed for all remediation measures on the existing spillway will be supplied by the ready-mix plant located in the South Lake area along State Route 178.

Emergency Spillway

The Corps has determined that the existing spillway along the east side of the Main Dam cannot safely pass an extreme storm event (such as the PMF). Therefore, the proposed project includes the construction of a new "Emergency Spillway", approximately 300 feet wide, which will be located about 100 feet east of the existing spillway. The additional spillway will be required to remediate the hydrologic deficiency (undersized capacity of the existing spillway) that could lead to overtopping and/or failure of one or both dams. This Emergency Spillway will function independently from the existing spillway, and will begin to function around elevation 2,637.26 feet, which is 28 feet higher than existing spillway. The new spillway will have a labyrinth type weir with v-shaped concrete baffles and a concrete apron. It will be designed to dissipate energy and control the rate of outflow through the spillway channel. The Emergency Spillway will function independently from the existing spillway.

The crest elevation for the Main and Auxiliary Dams will be raised approximately 16 feet in order to provide for passage of the PMF without overtopping and minimize the increased incremental downstream consequences from passing additional flows. The 16-foot raise will also provide approximately 4 feet of freeboard under the PMF event. Only in the most extreme storms could the reservoir rise to an elevation at which the Emergency Spillway will operate, with the annual probability of reaching this elevation being about 1 in 4,700.

The Corps has determined that construction of the Emergency Spillway will require controlled blasting during excavation to break up the rock-outcrops located in the proposed channel. It is anticipated that a *Controlled Blasting Management Plan* will be developed by the Corps or the designated contractor prior to the start of construction. The excavated materials from the proposed Emergency Spillway will be used as the primary borrow material source to construct the modification features of the proposed project, and will likely be crushed, screened, and washed to generate the various sands, gravels, and rock required. Material processing will most likely be located at an approved on-site location, possibly in the vicinity of the proposed Emergency Spillway and adjacent to the Auxiliary Dam. The materials will be either temporarily stockpiled on-site in the staging area or delivered to the appropriate construction areas as needed. Excess material will be disposed of on Engineers Point. The concrete needed to construct the baffles and apron of the Labyrinth Weir will be produced by a concrete batch plant set up on-site in the vicinity of the Emergency Spillway. Cement and fly ash will be supplied from an off-site source.

Auxiliary Dam

The Corps has determined that the seismic, seepage, and hydrologic deficiencies associated with the Auxiliary Dam pose an unacceptably high probability of failure of the dam. Under the proposed project, the Auxiliary Dam will be remediated to withstand anticipated seismic events (including fault rupture), manage expected seepage, and survive extreme flood events. These remediation measures will include the following activities:

- Adding an 80-foot wide downstream buttress to the dam with a more gradual downstream slope (5:1) to increase stability of the dam, and a moderate-sized sand filter and drain rock system built into the downstream slope to better manage seepage and potential fault rupture.
- Removing the upper 25 to 30 feet of the liquefiable alluvial layer under the downstream slope of the dam and replace it with re-compacted soil to reduce the potential for liquefaction during a seismic event.
- Constructing a crest raise to be able to safely pass an extreme storm event without overtopping. The height of the raise is expected to be approximately 16-feet high, but may vary depending on final design.

The majority of the rock materials needed to complete the downstream buttress on the Auxiliary Dam will come from the excavation of the proposed Emergency Spillway. The sand material required to construct the filter on the downstream slope of the Auxiliary Dam is expected to come from the spillway excavation, but, if necessary, will come from the Auxiliary Dam Recreation Area. The concrete needed for Auxiliary Dam remediation measures will be supplied from the ready-mix plant on State Route 178.

Borel Canal

The Corps has determined that some of the problems associated with the Auxiliary Dam can be attributed to the existing Borel Canal conduit that passes perpendicular through the embankment of the Auxiliary Dam. The Borel Canal existed, in its present alignment from the North Fork Kern

River, before the Auxiliary Dam was constructed. The Auxiliary Dam was built on top of the Borel Canal, which has the first water rights to the flows out of the North Fork Kern River. Since the early 1900s, the canal has been supplying water via the canal to the Southern California Edison power plant approximately 6 miles downstream of the Auxiliary Dam. The Southern California Edison has a water right to receive the first 605 cubic feet per second of the North Fork Kern River flows into Lake Isabella (lake) through the Borel Canal. Under the proposed project, the existing Borel Canal conduit through the Auxiliary Dam and control tower will be taken out of operation and abandoned.

The Corps has determined that the lake level will have to be lowered to an approximate elevation of 2,543 feet for a period of up to 4 months during fall and winter 2020, to allow time to tie in the relocated canal and tunnel-conduit into the existing canal upstream of the Auxiliary Dam. This is the portion of the proposed realignment that will be located east of Engineers Point ridge, and therefore will be subject to lake level fluctuations on the Auxiliary Dam side. The work required during this time includes excavation for, and construction of, the upstream approach channel. Also required during this lowered construction pool will be the demolition of the existing Borel Canal between the new upstream tie-in and the Auxiliary Dam. Scheduling these actions during the fall and winter will take advantage of the naturally occurring lower lake levels, and will be outside the summer high recreation season on the lake. Concrete needed for the upstream portal, the tunnel lining, the downstream portal, and the connection to the existing Borel Canal will be supplied from the ready-mix plant on State Route 178.

Proposed Habitat Compensation

The Corps is proposing to compensate for permanent impacts to three habitat types (sagebrush-scrub upland, emergent wetland and pine-oak woodland) associated with construction of the proposed project. The U.S. Department of Agriculture, Forest Service, Sequoia National Forest and Audubon, California Kern River Preserve (KRP) are cooperating partners and title holders to the proposed compensation areas. The Corps will design and contract work to construct the conservation areas. Implementation of the proposed project features includes drilling wells for irrigation, installing drip irrigation systems, securing and installing native plants and trees, installing browse guards, and maintaining the site for a 5 year period, including a 4 year establishment period. Establishment and maintenance tasks include planting, watering, weeding, mowing, storm water sampling, testing and reporting, replacing dead plants, and cleanup. No herbicide application is proposed in conjunction with habitat compensation activities. At the end of the 5 year contract, the cooperating partners and title holders to the conservation areas will be responsible to "preserve and protect" the sites in perpetuity.

New Project Information

Since the issuance of the referenced October 10, 2012, Service biological opinion, the Corps has identified an alternative location for one of the three proposed conservation areas to offset project effects and habitat loss resulting from impacts to three habitat types (sagebrush-scrub upland, emergent wetland and pine-oak woodland). The following identifies new project information for the project, and includes a summary of the changes to the project's proposed habitat compensation activities and potential project effects to the cuckoo and its proposed critical habitat, the southwestern willow flycatcher and its designated critical habitat, and the least Bell's vireo. Specific information on each of the three proposed conservation areas is also provided below.

Description of the Proposed Conservation Areas

Main Dam Campground

Originally, the 10.7-acre Black Gulch South Site located southwest of the lake along the Lower Kern River was going to be implemented as one of the three conservation areas; however, 10.7 acres at the Main Dam Campground site will be used instead. The Main Campground is located below the Main Dam at the lake. There are currently 82 developed campsites with fire-grills, picnic tables, drinking water, and flush toilets. Located at the toe of the Main Dam, this site provides habitat to a number native plant species such as cottonwood *(Populus fremontil),* black willow *(Salix nigra),* blue oak *(Quercus douglasit),* interior live oak *(Quercus wislizenit),* canyon live oak *(Quercus chrysolepis),* gray pine *(Pinus sabiniana),* yellow rabbitbrush *(hrysothamnus viscidiflorus),* California buckwheat *(Eriogonum fascicilatum),* mule fat *(Baccharis viminea),* beavertail *(Opuntia basilaris),* buckthorn *(Ceanthus cuneatus),* and Parry's beargrass *(Nolina parryi).* Aleppo pine *(Pinus halapensis)* is a non-native plant that occupies the area. Larger, container boxes of plants and trees will be planted, along with a temporary deer fence, temporary irrigation system, and water well. The Main Dam Campground will require 3 years of maintenance to establish new vegetation. There is no proposed or designated critical habitat for any listed species in this proposed compensation area.

South Fork Wildlife Area

This 64-acre site is a single parcel located on Sequoia National Forest System land and within the boundaries of the 1,316-acre South Fork Wildlife Area, east of the lake. The site itself is located 12 miles northeast of the town of Lake Isabella along State Route 178 (Enclosure B). The South Fork Wildlife Area is known as one of the most extensive riparian woodlands remaining in California. The proposed conservation area lies above the maximum pool of the lake in an area currently without any tree canopy. This site is located on relatively flat land dominated by native and non-native annual grasses and perennial shrubs including Alkali ryegrass *(Leymus tritocoides), Bromus* species, *Rumex* species, California broom *(Lotus scoparius),* rubber rabbitbrush (*Chrysothamnus nauseous)* and mulefat. Most of this area was irrigated crop land prior to acquisition for the Isabella Dam Project in the 1940s and 1950s. Nearly 100 percent of the proposed conservation area within the South Fork Wildlife Area was affected by the Cove Fire in 2011. Implementation of the proposed habitat conservation activities at the proposed conservation area will assist in restoring the native vegetative characteristics of this area following the Cove Fire. Habitat compensation activities are expected to increase habitat suitability for the cuckoo and improve habitat conditions of the proposed critical habitat for the cuckoo located within this proposed conservation area.

Sprague Ranch

The proposed 80-acre conservation area located at the Sprague Ranch is a component of the Audubon California's KRP located 3 miles northeast of the lake (Enclosure B). The proposed site borders Fay Ranch Road to the west off State Route 178. Audubon holds title to 1,640 acres of the Sprague Ranch, which more than doubled the size of the KRP. The proposed 80-acre Sprague Ranch site is located on relatively flat land and was previously disturbed by agriculture. Dominant plant species include native and non-native annual grasses and perennial shrubs including *Bromus* species, *Rumex* species, broadleaf *(Erodium Botrys)* and redstem *(Erodium cicutarium)* filaree, salt grass *(Distichlis spicata),* wild cucumber *(Marah macrocarpa),* and a few medium stature Fremont cottonwood *(Populus fremonfit).* The Sprague Ranch holds certain historic water rights to the Cottonwood Ditch on the South Fork Kern River, which may be managed to improve habitat on the proposed conservation area.

The Corps has determined that the proposed project including compensatory mitigation measures for non-listed species, may affect, but is not likely to adversely affect, the cuckoo, and its proposed critical habitat, the southwestern willow flycatcher and its designated critical habitat, and the least Bell's vireo.

Western Yellow-Billed Cuckoo

The earliest spring arrival date for the cuckoo in California is April 23 (Laymon 1998). While there are regularly a few arrivals in May, although not every year, most breeding pairs arrive from June to early July (Laymon and Halterman 1989). Nesting habitat classified for the cuckoo is in dense lowland riparian forest characterized by a dense subcanopy or shrub layer (regeneration canopy trees, willows, or other riparian shrubs) within 333 feet of water. Overstory in these habitats may be either large gallery-forming trees 33 to 90 feet, or developing trees 10 to 33 feet, usually cottonwoods (Service 1982). Riparian habitat is critical for breeding, wintering, migration stopovers, and as corridors for juvenile dispersal. Territory size at the South Fork Kern River ranges from 8 to 100 acres (Laymon and Halterman 1985).

The peak of the breeding season for the cuckoo at the South Fork Kern River is in the first half of July, though nests have been started as early as June and as late as early August (Laymon 1998). The period of incubation to the point when nestlings leave the nest is typically 16 to 20 days, and while typically only one brood is raised per year (Laymon 1998) at the South Fork Kern River, in years of abundant food resources, two and even three broods have been successfully fledged (Laymon et al. 1997). While nests are almost always placed in willows, cottonwoods are extremely important for foraging. They are considered a riparian obligate species, especially in large tracts dominated by cottonwood and willow stands. The humid shady environment creates a microclimate that protects the nesting birds, eggs, and fledglings from the dry heat of late summer in the western U.S. (Service 1982).

The cuckoo nests almost exclusively in patches of contiguous riparian habitat covering 50 acres or more (Hughes 1999), and although the proposed project supports riparian vegetation at a much smaller scale, it is located within the South Kern River which contains large expanses of riparian habitat. According to the California Natural Diversity Database (CNDDB), the closest occurrence of the cuckoo is reported as a single pair seen on August 13, 2008 in an indistinct area on the South Fork Kern River within the Audubon's KRP (CNDDB 2008).

Southwestern Willow Flycatcher

The southwestern willow flycatcher departs by mid-September for their wintering grounds in Mexico, Central America, and possibly northern South America, and migrate back to their breeding areas in North America, typically arriving in early May. The southwestern willow flycatcher breeds in different types of dense riparian habitats. Adults build their nests, breed, incubate and hatch eggs through July, with juveniles fledging through mid-August (Service 2002). During a survey conducted from May 24 - August 10, 2010, 18 adults and 10 juvenile southwestern willow flycatcher were reported as occurring within the KRP (CNDDB 2010).

Least Bell's Vireo

The least Bell's vireo nests in dense shrubs and small trees along rivers and streams beginning in April (Service 2016), and usually lay an average of four eggs per brood. Juveniles fledge after approximately 10-12 days after hatching. Breeding pairs will commonly have more than one brood, and may have up to four broods per year. Least Bell's vireo begin their migration in September to over-winter in Southern Mexico and return to North America in March (Service 2016). A single least Bell's vireo was reported within the KRP on May 27, 2014 (ebird 2014).

These CNDDB and ebird documented occurrences for the cuckoo, southwestern willow flycatcher and least Bell's vireo are all located at the KRP, approximately 5 miles from the proposed project at the Lake Isabella Dam. However, the proposed conservation areas for the project may overlap with the area where the sightings were documented at the KRP. The proposed restoration activities at the conservation areas are scheduled to be completed during the fall and winter months when the cuckoo, southwestern willow flycatcher and least Bell's vireo will not be present, thus these activities will not impact these species.

Currently, the proposed project area located at the Lake Isabella Dam and the proposed conservation areas for the project contain little to no tree canopy. The proposed restoration activities will result in a net increase of riparian habitat available for the cuckoo, southwestern willow flycatcher and least Bell's vireo which may indirectly benefit these species. Cuckoos and other bird species have been documented utilizing fast-growing restoration habitat that was less than a year old for foraging, and less than 2 years old for nesting (McNeil et al. 2013). Furthermore, as the riparian habitat matures within the proposed conservation areas, it is expected that the restoration activities will improve habitat conditions within the proposed critical habitat for the cuckoo and designated critical habitat for the southwestern willow flycatcher.

After reviewing all the available information, we concur with your determination that the proposed project is not likely to adversely affect the cuckoo and its proposed critical habitat, the southwestern willow flycatcher and its designated critical habitat, and the least Bell's vireo. The proposed project reached the 'may affect' level due to the fact that (1) the proposed project occurs within proposed critical habitat for the cuckoo and is designated critical habitat for the southwestern willow flycatcher; (2) the cuckoo, southwestern willow flycatcher and least Bell's vireo are known to occur within the proposed conservation areas for the proposed project; (3) riparian habitat occurs within the proposed conservation areas; and (4) there are known observations of the cuckoo, southwestern willow flycatcher and least Bell's vireo within the vicinity proposed project. Because the proposed project (1) will not result in permanent impacts to riparian habitat; (2) construction and the proposed compensation activities are scheduled to avoid the nesting seasons for the cuckoo, southwestern willow flycatcher and least Bell's vireo and will take place when these bird species will not be present; and (3) compensation activities will result in an increase of riparian habitat available for foraging and nesting; the Service believes that any potential affects to the cuckoo, southwestern willow flycatcher and least Bell's vireo from the proposed project will be discountable, and in the long-term will benefit these species due to a net increase of suitable riparian habitat.

If you have any questions regarding the proposed Isabella Lake Dam Safety Modification Project, please contact Julie Wolford (Julie_Wolford@fws.gov), Fish and Wildlife Biologist, at (916) 414-6612, or Doug Weinrich, Assistant Field Supervisor, at (916) 414-6563.

Sincerely,

Doug Weinrich

Doug Weinrich
Assistant Field Supervisor

Enclosure

LITERATURE CITED

California Natural Diversity Database (CNDDB). 2010. Biogeographic Data Branch, Department of Fish and Wildlife. Sacramento, California. Accessed on May 21, 2016.

eBird. 2014. eBird: An online database of bird distribution and abundance (web application). eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: http://www.ebird.org. Accessed on May 21, 2016.

Hughes, J.M. 1999. Yellow-billed Cuckoo (*Coccyzus americanus*). In The Birds of North America, No. 148 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA. 28 pp.

Laymon, S. A., and M. D. Halterman. 1985. Yellow-billed cuckoos in the Kern River Valley: 1985 population, habitat use, and management recommendations. California Department of Fish and Game, Nongame Bird and Mammal Section Rep. 85.06.

Laymon and Halterman. 1989. A Proposed Habitat Management Plan for Yellow-billed Cuckoos in California. USDA Forest Service Gen. Tech. Rep. PSW-110, pp. 272-277.

Laymon, S. A., P. L. Williams, and M. D. Halterman. 1997. Breeding status of the Yellow-billed cuckoo in the South Fork Kern River Valley, Kern County, California: Summary report 1985-1996. Administrative Rep. USDA Forest Service, Sequoia National Forest, Cannell Meadow Ranger District, Challenge Cost-Share Grant #92-5-13.

McNeil, S.E., D. Tracy, J.R. Stanek, and J.E. Stanek. 2013. Yellow-billed cuckoo distribution, abundance and habitat use on the lower Colorado River and tributaries, 2008-2012 summary report. Bureau of Reclamation, Multi-Species Conservation Program, Boulder City NV.

United States Army Corps of Engineers (Corps). 2012. Final Isabella Lake Dam Safety Modification Project, Environmental Impact Statement, Isabella Lake, Kern County, California. Sacramento. October, 2012.

_____. 2016. Final Isabella Lake Dam Safety Modification Project, Supplemental Environmental Assessment, Phase III Real Estate Easement Acquisition of Borel Canal at Isabella Lake Auxiliary Dam without Replacement, Isabella Lake, Kern County, California. Sacramento. April, 22, 2016.

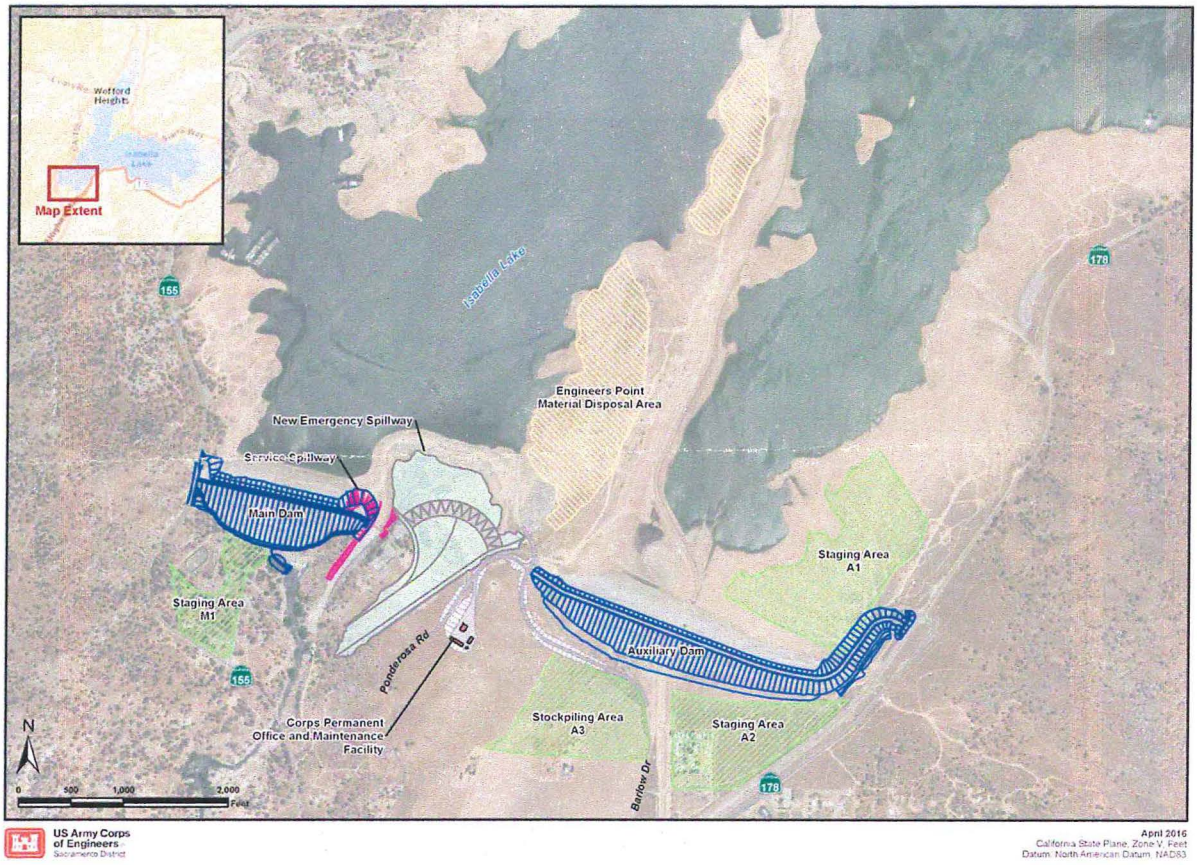
[Service] U.S. Fish and Wildlife Service. 1982. Review of Vertebrate Wildlife for Listing as Endangered or Threatened Species. 47 FR 58454 58460. December 30, 1982.

_____. 2002. Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared By Southwestern Willow Flycatcher Recovery Team Technical Subgroup For Region 2 U.S. Fish and Wildlife Service, Albuquerque, New Mexico. August 2002.

_____. 2014. Withdrawal of the Proposed Rule To Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife. Federal Register 79:55874-55917. September 17, 2014.

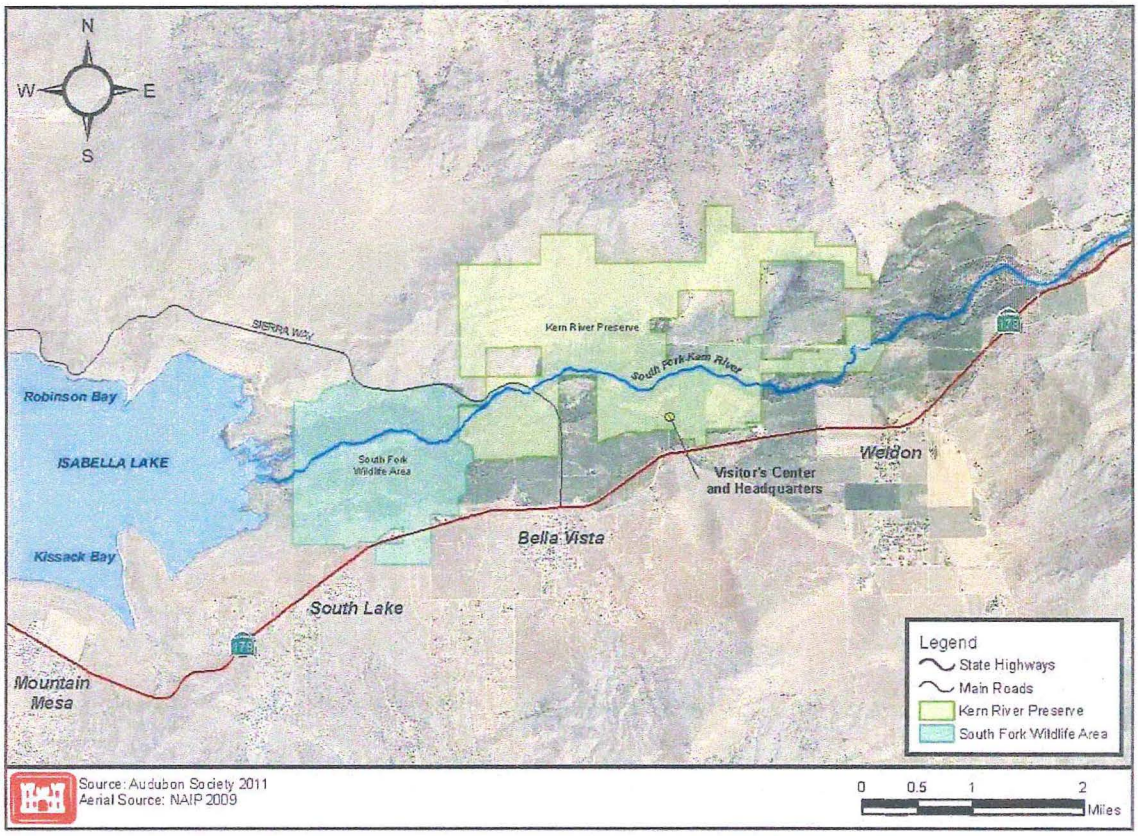
_____.2016. Species Information. U.S. Fish and Wildlife Service, Sacramento Fish and Wildlife Office, Species Account Least Bell's Vireo (*Vireo bellii pusillus*). Sacramento Fish and Wildlife Field Office, Sacramento, California. May 4, 2016. 4 pp.

Enclosure A



Enclosure A: Proposed Isabella Lake Dam Safety Modification Project area map depicting the Main Dam, Spillway, and Auxiliary Dam, Borel Canal and disposal and staging areas.

Enclosure B



Enclosure B: Proposed conservation areas (South Fork Wildlife Area and Sprague Ranch at the KRP) as part of the compensation for the proposed project impacts to three habitats types. The proposed Main Dam Campground conservation area is not shown here; it is located just south of the Main Dam depicted in Enclosure A.