

4.1.10 ESA-Listed Riparian Bird Species, Southwestern Willow Flycatcher, Least Bell's Vireo, and Yellow-billed Cuckoo Riparian Habitat Evaluations Study¹

4.1.10.1 Project Nexus

Continued Project O&M and Project-related recreation activities may have an effect on southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), and the western DPS of yellow-billed cuckoo (*Coccyzus americanus*). These are riparian-breeding birds listed as threatened under the federal ESA.

4.1.10.2 Existing Information and Need for Additional Information

Existing, relevant, and reasonably available information regarding southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo within the proposed Project boundary is provided in Section 4.8 of the Licensees' PAD. In summary, all three species are closely associated with dense riparian habitats (especially during nesting), but with differences in structure and composition as detailed below.

Least Bell's vireo breeding habitat is typically dominated by willows (*Salix* spp.), with dense cover within 3-6 feet of the ground, and a structurally diverse, dense canopy (USFWS 1998). Nests are often in openings or near habitat edges in understory shrubs, including wild rose (*Rosa californica*) and mulefat (*Baccharis salicifolia*) beneath willows and cottonwoods (*Populus* spp.) (USFWS 1998). Home ranges of least Bell's vireo during the nesting season may also include adjacent non-riparian habitats such as chaparral and coastal scrub (Kus and Minor 1989).

Southwestern willow flycatcher's breeding habitat requires the presence of dense vegetation cover, usually willows or tamarisk, which is dense from the ground to 9.8 feet or more in height, and may occur as shrub stands or broadleaf trees with a dense shrub layer 6.5 to 16.4 feet in height. Habitats may be associated with either low gradient streams or lentic habitat. Other characteristic species include boxelder (*Acer negundo*), Russian olive (*Elaeagnus angustifolia*), cottonwood, ash (*Fraxinus* spp.), alder (*Alnus* spp.), and buttonbush (*Cephalanathus occidentalis*). Breeding territories may be as small as 0.25-acre, but most are at least 0.5-acre.

The western DPS yellow-billed cuckoo nests in low- to moderate-elevation, riparian woodlands, mostly comprised of native broadleaf trees and shrubs of various species in patches that are 50 acres or more in extent within arid to semiarid landscapes. Breeding habitat in California occurs mostly in patches of Fremont cottonwood (*P. fremontii*) and willows greater than 200 acres in size, reflecting the large home ranges characteristic of this species. As summarized by Halterman et al. (2016), nesting has not been

¹ Appendix A of FERC's June 14, 2017 Study Plan Determination indicates FERC modified the *ESA-Listed Riparian Bird Species, Southwestern Willow Flycatcher, Least Bell's Vireo, and Yellow-billed Cuckoo Riparian Habitat Evaluations Study*. However, the text in Appendix B indicates FERC did not adopt the requested modifications. This plan is consistent with the Licensees' May 15, 2017 Revised Study Plan.

documented in small, isolated riparian patches of 2 acres or less, and linear patches less than 30 feet in width, although smaller patches may be used as stop-over habitat during migration. CDFW (2016) summarizes the general habitat for this species as “broad, lower flood-bottoms of larger river systems” and micro-habitats as “riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.” Yellow-billed cuckoo, western DPS was not included in the PAD as a species potentially affected by the Project because of the apparent limited extent and small patch size of riparian habitats in the proposed Project boundary. However, more information is needed on the structure and composition of riparian habitat in the proposed Project boundary to validate this conclusion.

The Licensees found no existing, recent information regarding the presence of these species within the proposed Project boundary, where the most recent known surveys were performed in 2002 and 2003 for southwestern willow flycatcher and least Bell's vireo. No surveys are known to have been conducted for yellow-billed cuckoo. The nearest known occurrences of each species are a record of least Bell's vireos in the Castaic Lagoon Recreation Area approximately 4 miles south of Elderberry Forebay (multiple years, most recently in 2005); a breeding pair of least Bell's vireos in San Francisquito Canyon in 2015 (L.R. Welsh, Forest Service, personal communication); non-breeding, migrating willow flycatchers (sub-species not determined) on Liebre Gulch north of Pyramid Lake; and a sighting of a single yellow-billed cuckoo approximately 19 miles south of Pyramid Lake along the Santa Clara River, 3 to 4 miles east of the town of Piru in 1979. No yellow-billed cuckoos were detected at the latter location in subsequent surveys between 1999 and 2006 (CDFW 2015). All of these locations are outside the proposed Project boundary. Additional information, which will be provided by this *ESA-listed Riparian Bird Species Study*, is needed to determine locations of suitable habitat for each of the three species and whether the species occur there during the breeding season.

4.1.10.3 Study Goals and Objectives

The goals of this *ESA-listed Riparian Bird Species Study* are to: (1) identify the location of any suitable habitat for southwestern willow flycatcher, least Bell's vireo, or yellow-billed cuckoo western DPS in the study area for the *ESA-listed Riparian Bird Species Study*; (2) document the presence/absence of each of these species by surveys in suitable habitat within the study area for the *ESA-listed Riparian Bird Species Study* during their breeding seasons; and (3) incidental to the presence/absence surveys, document any incidental observations of breeding activities or nest locations of the three species in the study area for the *ESA-listed Riparian Bird Species Study*.

The objective of this *ESA-listed Riparian Bird Species Study* is to gather sufficient data necessary to fill recognized gaps in the information available about habitat suitability and the species' likely presence or absence.

4.1.10.4 Study Methods

Study Area

The study area for the *ESA-listed Riparian Bird Species Study* consists of the area within the proposed Project boundary that includes suitable habitat for the three species of ESA-listed birds, excluding lands overlying the Angeles Tunnel on which the Licensees do not perform any Project O&M activities. The study area for the *ESA-listed Riparian Bird Species Study* is shown in Figure 4.1-15.

General Concepts and Procedures

- Personal safety is the most important consideration of each fieldwork team. Fieldwork will only occur in safely accessible areas and under conditions deemed safe by the field crews. Locations within the study area that cannot be accessed in a safe manner (e.g., locations containing dense vegetation or unsafe slopes) and areas inundated when the surveys are performed, will not be surveyed; these areas will be identified in the data summary and an explanation for survey exclusion will be provided.
- The *ESA-listed Riparian Bird Species Study* will begin after FERC issues its Study Plan Determination.
- The *ESA-listed Riparian Bird Species Study* does not include the development of requirements for the new license, which will be addressed outside the study.
- This *ESA-listed Riparian Bird Species Study* focuses on ESA-listed bird species, specifically the southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo western DPS within the proposed Project boundary, but the study area for the *ESA-listed Riparian Bird Species Study* is specific to the locations providing suitable habitat for each of those species.
- If required for the performance of the *ESA-listed Riparian Bird Species Study*, the Licensees will make a good faith effort to obtain permission to access private property well in advance of initiating the study. The Licensees will only enter private property if permission has been provided by the landowner.
- The Licensees will acquire all necessary agency permits and approvals prior to beginning fieldwork for the *ESA-listed Riparian Bird Species Study*.
- Field crews may make variances to the *ESA-listed Riparian Bird Species Study* in the field to accommodate actual field conditions and unforeseen problems. Any variances from the *ESA-listed Riparian Bird Species Study* will be noted in the data and final report resulting from this study.

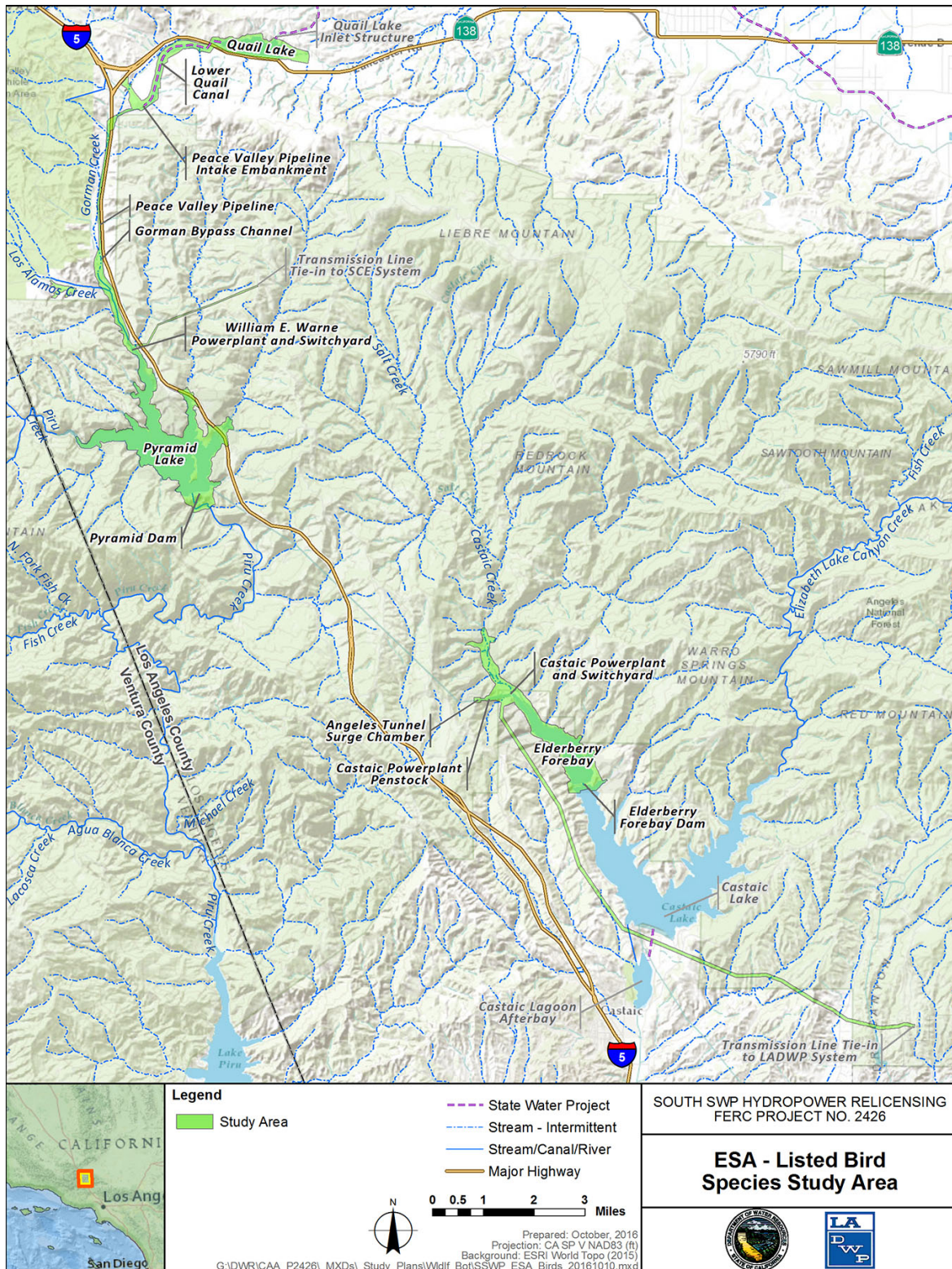


Figure 4.1-15. ESA-listed Riparian Bird Species, Southwestern Willow Flycatcher, Least Bell's Vireo, and Yellow-billed Cuckoo Study Area

Methods

The *ESA-listed Riparian Bird Species Study* will focus on areas containing appropriate habitat, as identified in vegetation mapping for the Project in the PAD, the CWHR studies and the riparian component of the Licensees' relicensing *Botanical Resources Study*. As described below, the lead biologists performing the surveys for southwestern willow flycatcher and yellow-billed cuckoo for this Study will possess the necessary USFWS Section 10(a)(1)(A) species recovery permits for these species allowing the use of pre-recorded willow flycatcher and yellow-billed cuckoo vocalizations. Call-playbacks will not be used for the least Bell's vireo surveys and will not require a USFWS permit. The lead biologists will be qualified to identify each of the three species by sight and sound. The *ESA-listed Riparian Bird Species Study* will consist of three steps: (1) identify survey areas; (2) conduct field surveys; and (3) prepare data. These steps are described below.

Step 1 – Identify Survey Areas. The Licensees will use maps and descriptive habitat information from the *Botanical Resources Study* associated with riparian habitat areas to identify specific areas where southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo, western DPS could occur in the study area for the *ESA-listed Riparian Bird Species Study*. Using this information, new maps will be created to guide the field teams during the assessments.

Step 2 – Conduct Field Surveys. The Licensees will visit identified potentially suitable riparian habitat within the study area for the *ESA-listed Riparian Bird Species Study* and evaluate its suitability for each of the target species based on vegetation species composition, habitat structure, and patch size. Based on this evaluation, locations for presence/absence surveys will be determined. Where possible, the results from the Licensees' relicensing *ESA-listed Terrestrial Wildlife – California Wildlife Habitat Relationships Study* will be incorporated into the evaluation.

The Licensees will perform presence/absence surveys for the three target species within suitable riparian habitat. A minimum patch size of 2 acres will be used to define potential habitat for yellow-billed cuckoo that merits presence/absence surveys. These surveys are not intended to locate territories or nests, or to obtain precise information on the number of birds present. Surveys will follow protocols accepted by USFWS for southwestern willow flycatcher (Sogge 2010), least Bell's vireo (USFWS 2001), and yellow-billed cuckoo, western DPS (Halterman et al. 2016).

Southwestern Willow Flycatcher

Prior to the start of surveys, lead survey staff will familiarize themselves with each site. Southwestern willow flycatcher surveys rely on a call-playback technique in which certain pre-recorded vocalizations (i.e., the "fitz-bew" song and the "whitt" alarm call) are broadcast to elicit a song response from the target species. Determining "presence" of territorial southwestern willow flycatchers requires hearing the "fitz-bew" song during the

non-migrant period (generally between June 15 to July 20), which may be supported by signs of breeding activity (e.g., observations of willow flycatchers carrying nesting material). Recordings of these and other vocalizations are available online from the USGS Colorado Plateau Research Station (<http://sbsc.wr.usgs.gov/cprs/research/projects/swwf/wiflvocl.asp>). Surveyor teams will include biologists or scientists that are qualified to identify each of the target species and the methodologies to survey for them. Qualifications to lead the southwestern willow flycatcher surveys include a USFWS Section 10(a) species recovery permit allowing for use of call-playback. In addition, the lead surveyor will be familiar with identification of other bird species likely to occur in the study area for the *ESA-listed Riparian Bird Species Study* with similar calls and songs, and capable of visually identifying species that could be confused with the southwestern willow flycatcher. Surveys will be distributed across three survey periods related to nesting phenology, with one survey in period 1 (May 15-31), two surveys in period 2 (June 1-24), and two surveys in period 3 (June 25 to July 17). During the third survey period, any southwestern willow flycatchers detected are likely to be territorial.

Least Bell's Vireo

The presence/absence surveys for least Bell's vireo will follow the USFWS (2001) survey protocols for least Bell's vireo, which are based on visual and auditory detection. The surveys will not include call-playbacks and will not require a USFWS species recovery permit. Minimum qualifications of the lead surveyors include familiarity with the characteristic vocalizations and visual identification features of the species, and related demonstrated experience and skills performing bird surveys, particularly surveys of least Bell's vireo. Surveys will be distributed across the April 10 to July 31 survey season with a total of eight surveys, conducted at least 10 days apart. Surveyors will note the location and status of each detection (e.g., age, sex and pairing of birds encountered; and foraging or calling).

Yellow-billed Cuckoo

The presence/absence surveys for yellow-billed cuckoo will follow the USFWS survey protocols (Halterman et al. 2016), which are based on broadcasting a prerecorded yellow-billed cuckoo contact call to elicit a response. Qualifications to lead the surveys include a USFWS Section 10(a) species recovery permit allowing for use of call-playback and attendance at a yellow-billed cuckoo protocol workshop, which will also provide the contact call recordings. The lead surveyor will be familiar with identification of other bird species likely to occur in the study area for the *ESA-listed Riparian Bird Species Study* with similar calls and songs, and capable of visually identifying species that could be confused with the yellow-billed cuckoo.

Prior to the start of surveys, lead survey staff will familiarize themselves with each site. The number and timing of surveys will be distributed across three survey periods: period 1 (June 15 – June 30), a minimum of one survey; period 2 (July 1 – July 31), a minimum

of 2 surveys; and period 3 (August 1 – August 15). This survey frequency has been shown to have a 95 percent probability of detecting the species if present (Haltermann 2016). Yellow-billed cuckoos detected during survey period 2 are likely to be breeders, whereas detections at other times could be breeders or migrants. Surveys will be separated by 12-15 days and will be performed independently of surveys for southwestern willow-flycatcher. The surveyors will record the locations of any yellow-billed cuckoo detections and complete a Yellow-billed Cuckoo Survey Seasonal Form (Haltermann et al. 2016).

Survey detections of southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo will be reported to CDFW and USFWS. Surveyors will also note any presence and general distribution of brown-headed cowbirds (*Molothrus ater*) in the study area for the *ESA-listed Riparian Bird Species Study*.

Step 3 – Prepare Data. Following the surveys, the Licensees will develop summary text from field notes describing habitat evaluation and survey results, GIS maps of survey locations, southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo occurrences, and any breeding activities. The summary will also include Project facilities, features, and specific Project-related activities (e.g., recreation trails) in the area where southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoos are observed and will identify where suitable habitat for any of the three species is located.

Quality Assurance and Quality Control

Field data will be collected in a manner that promotes high quality results, and will be subject to appropriate QA/QC procedures, including spot-checks of transcription and comparison of GIS maps with field notes to verify locations of southwestern willow flycatcher, least Bell's vireo and yellow-billed cuckoo occurrences.

Analysis

If any suitable habitat for the three species and/or locations of southwestern willow flycatcher, least Bell's vireo, or yellow-billed cuckoo are determined, the Licensees will describe potential Project-related disturbances, including continued Project O&M and Project-related recreation activities.

Reporting

ESA-listed Riparian Bird Species Study methods and results will be prepared and included, to the extent completed and ready for inclusion, in the Licensees' ISR, and all results will be reported in the USR, DLA, and FLA. If any occurrences of southwestern willow flycatcher, least Bell's vireo, or yellow-billed cuckoo western DPS are found, the report will be considered "Privileged," and will be provided to FERC, USFWS, and CDFW. If any occurrences of southwestern willow flycatcher, least Bell's vireo or yellow-

billed cuckoo western DPS are found on NFS lands, the privileged report will also be provided to the USFS.

4.1.10.5 Consistency of Methodology with Generally Accepted Scientific Practices

This *ESA-listed Riparian Bird Species Study* follows survey protocols that are recommended by USFWS and CDFW. Therefore, this *ESA-listed Riparian Bird Species Study* is consistent with standard methods accepted by the scientific community and regulatory agencies for evaluating habitat and assessing the presence and breeding activities of southwestern willow flycatcher, least Bell's vireo, and yellow-billed cuckoo, western DPS.

4.1.10.6 Schedule

The *ESA-listed Riparian Bird Species Study* will begin after FERC issues its Study Plan Determination. The Licensees anticipate the schedule below will be followed to complete the *ESA-listed Riparian Bird Species Study*.

Fieldwork Preparation	October 2017 – November 2017
Fieldwork	April 2018 – August 2018
Data QA/QC	August 2018 – September 2018
Data Analysis and Reporting	September 2018 – June 2019

4.1.10.7 Level of Effort and Cost

Based on the work effort described above, the Licensees estimate the current cost to complete this *ESA-listed Riparian Bird Species Study* will range between \$238,000 and \$299,000.

4.1.10.8 References

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