

TERR-11 RIPARIAN-NESTING SONGBIRDS

1.0 EXECUTIVE SUMMARY

During 2001 and 2002, the literature review, agency consultation, and habitat mapping were completed, and incidental sightings were recorded. There are three species of riparian-nesting songbirds: yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia brewsteri*), and willow flycatcher (*Empidonax traillii brewsteri*) with the potential to occur in the Project area (i.e., within the Project boundaries). Willow flycatcher is a California endangered species, Forest Service Sensitive species, and Sierra National Forest Management Indicator Species, while yellow-breasted chat and yellow warbler are California species of special concern. Known occurrences were mapped and incorporated into a GIS database.

Appropriate habitat was determined to be riparian below 8,000 feet in elevation for yellow-breasted chat and yellow warbler and dense thickets of riparian below 8,000 feet elevation for willow flycatcher. The only incidental sighting of a riparian-nesting songbird was an auditory detection of a yellow warbler at the campground along Mono Creek near Vermilion Valley Dam in 2001. There were no willow flycatcher, yellow-breasted chat, or brown-headed cowbirds detected during field surveys for the ALP.

2.0 STUDY OBJECTIVES

- Determine if riparian-nesting songbirds (e.g., yellow-breasted chat, yellow warbler, and willow flycatcher), or appropriate habitat to support them is present near Project facilities and bypass and flow-augmented reaches.

3.0 STUDY IMPLEMENTATION

3.1 STUDY ELEMENTS COMPLETED

- Compiled information on riparian-nesting songbirds in conjunction with the literature review for common and special-status wildlife species. Mapped known occurrences of riparian-nesting songbirds and incorporated them into a GIS database.
- Identified, mapped, and incorporated into a GIS database appropriate habitat for riparian-nesting songbirds in the study area. Recorded incidental observations of riparian-nesting songbirds and their potential nest parasites (i.e., brown-headed cowbird (*Molothrus ater*)) during all field surveys for the ALP.

3.2 OUTSTANDING STUDY ELEMENTS

- There are no outstanding study elements.

4.0 STUDY METHODOLOGY

4.1 REVIEW OF EXISTING INFORMATION

Information on riparian-nesting songbirds was compiled from literature review and agency consultation during 2001 and 2002. This included review of: (1) the *California Natural Diversity Database* (CDFG 2003); (2) *Wildlife Habitat Relationships System* (CDFG 2002); (3) *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988); (4) U.S. Forest Service's (USDA-FS) *Threatened, Endangered, and Forest Service Sensitive Species Database for the Terrestrial Species of the Sierra National Forest* (USDA-FS 2001); and (5) other documents that are referenced as appropriate in this report. Information on known occurrences of riparian-nesting songbirds near Project facilities and bypass and flow-augmented reaches was mapped and incorporated into a GIS database.

4.2 HABITAT MAPPING

Vegetation Communities and wildlife habitats were mapped as part of TERR-1, Vegetation Communities, during the fall and winter of 2001/2002. Refer to TERR-1, Vegetation Communities, for a detailed description of methodology. Appropriate habitat for riparian-nesting songbirds was determined to be riparian through literature review, particularly Mayer and Laudenslayer (1988) and Zeiner et al. (1988-1990). A GIS layer was created to indicate all riparian below 8,000 feet in elevation in the Big Creek ALP Project area as appropriate yellow-breasted chat and yellow warbler habitat (Figure TERR-11-1). A GIS layer was created to indicate all extensive areas of foothill or montane riparian below 8,000 feet in elevation in the Big Creek ALP study area as potential willow flycatcher habitat (Figure TERR-11-1). This map is preliminary until the riparian study is conducted next year (Refer to CAWG-11, Riparian). Additional locations of riparian were added to the GIS layer based on initiation of CAWG-11, Riparian. Riparian was mapped during ground and helicopter riparian surveys in the fall of 2001. Refer to CAWG-11, Riparian, for a detailed description of this methodology.

The map for willow flycatcher that was created identifies potential habitat based on the aerial photography interpretation of vegetation community mapping. However, there are specific additional components that must be present in order to support this species. These components are described below.

4.3 INCIDENTAL SIGHTINGS

Incidental sightings of riparian-nesting songbirds and their nest parasites (i.e., brown-headed cowbirds) were recorded during all other field surveys completed as part of the Big Creek ALP.

5.0 STUDY RESULTS AND ANALYSIS

5.1 REVIEW OF EXISTING INFORMATION

Three special-status riparian-nesting songbirds could potentially occur in the Project area: yellow-breasted chat (*Icteria virens*), yellow warbler (*Dendroica petechia brewsteri*), and willow flycatcher (*Empidonax traillii brewsteri*). The willow flycatcher is a California endangered species, Forest Service Sensitive Species, Sierra National Forest Management Indication Species, and federal species of special concern; while the other two species are California species of special concern. The life history, habitat requirements, and potential for occurrence for these species are described briefly below.

5.1.1 STATE ENDANGERED

Willow Flycatcher (*Empidonax traillii brewsteri*; California Endangered, Forest Service Sensitive, Sierra National Forest Management Indicator Species, and Federal Species of Concern, nesting). There is another subspecies of willow flycatcher (*E. traillii extimus*) in California that is federally listed, but this subspecies is not expected to occur in the Project area because it is outside of the subspecies' known range. The willow flycatcher is a rare to locally uncommon, summer resident in wet meadow and foothill and montane riparian habitats from 2,000 to 8,000 feet in the Sierra Nevada and Cascade Range. It occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows. Dense willow thickets are required for nesting and roosting. This species is most abundant in areas where extensive thickets of low, dense willows border wet meadows, ponds, or backwaters. It may still nest elsewhere in lowland California, as in San Diego County. It is a common spring (mid-May to early June) and fall (mid-August to early September) migrant at lower elevations, primarily in riparian habitats throughout the state exclusive of the North Coast. An open cup nest is placed in an upright fork of a willow or other shrub, or occasionally on a horizontal limb, at a height of 1.5 to 10 feet. The species is monogamous. Peak egg laying occurs in June, incubation lasts 12 to 13 days, and clutch size averages 3 to 4 eggs. It is probably single-brooded. Both sexes care for altricial young. Fledging age is 13 to 14 days.

There were no incidental observations and no focused surveys were conducted for this species. There were several willow flycatcher records from the CNDDDB. CNDDDB records were located at Lost, Markwood, Dinkey, and Poison meadows, all outside of the Project area southeast of Shaver Lake, as recently as 1992 (CDFG 2003). Another record was at Bearsore Meadow, 10 miles north of Bass Lake, outside of the Project area, in 1982 (CDFG 2003). The last CNDDDB record was at Poison Meadow near the South Fork San Joaquin River, within the study area, in 1984, where a pair nested, but the nest was destroyed by cattle (CDFG 2003). There are several USDA-FS records of willow flycatcher to the southeast of Shaver Lake, outside of the Project area (Figure TERR-11-1; USDA-FS 2001). There is also one sighting at Shaver Dam and one sighting near the South Fork

San Joaquin River (Figure TERR-11-1; USDA-FS 2001). Appropriate nesting and foraging habitat is present in dense stands of riparian habitat in the Project area.

5.1.2 STATE SPECIES OF SPECIAL CONCERN

Yellow Warbler (*Dendroica petechia brewsteri*; California Species of Special Concern, nesting). The yellow warbler is an uncommon to common summer resident in the north, a locally common resident in the south, and a rare but regular visitor in winter in the south. It breeds and forages in riparian woodlands, montane chaparral, open ponderosa pine, and mixed conifer habitats with substantial brush, from coastal and desert lowlands up to 8,000 feet in the Sierra Nevada. It also breeds in montane chaparral, in open ponderosa pine, and mixed conifer habitats with substantial amounts of brush. It is now rare to uncommon in many lowland areas where it was formerly common. The species is usually found in riparian deciduous habitats in summer in cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodland. The nest is an open cup placed 2 to 16 feet above ground in a deciduous sapling or shrub. The territory often includes tall trees for singing and foraging and a heavy brush understory for nesting. Breeding occurs from mid-April into early August with peak activity in June. The pair breeds solitarily and lays 3 to 6 eggs, which are incubated by the female for 11 days. Altricial young are tended by both parents until fledging at 9 to 12 days.

There are no CNDDDB or USDA-FS occurrences for this species (CDFG 2003; USDA-FS 2001). No focused surveys were conducted for this species. Appropriate nesting and foraging habitat is present in riparian, chaparral, and coniferous forest in the Project area.

Yellow-breasted Chat (*Icteria virens*; CSC nesting). The yellow-breasted chat is an uncommon summer resident and migrant in coastal California and in the foothills of the Sierra Nevada up to 4,800 feet in valley foothill riparian and up to 6,500 feet east of the Sierra Nevada in desert riparian habitats. It is uncommon along the coast of northern California and occurs only locally south of Mendocino County. In southern California, it breeds locally on the coast and locally inland. During migration, it may be found in lower elevations of mountains in riparian habitat. This species requires dense, brushy thickets and tangles near water, and thick understory in riparian woodland. The nest is usually 2 to 8 feet above ground in dense shrubs along a stream or river. Breeding occurs from early May into early August with peak activity in June. The species is monogamous and lays 3 to 6 eggs. Incubation lasts 11 to 15 days, and chicks apparently fledge in 8 to 11 days. Altricial young are tended by both parents until fledging.

There are no CNDDDB or USDA-FS occurrences for this species (CDFG 2003; USDA-FS 2001). There were no incidental observations and no focused surveys were conducted for this species. Appropriate nesting and foraging habitat is present in riparian in the Project area.

5.2 HABITAT MAPPING

Known occurrences of riparian-nesting songbirds and potential habitat in the study area were mapped (Figure TERR-11-1 and TERR-11-2). Potential habitat for riparian-nesting songbirds was determined to be foothill and montane riparian below 8,000 feet in elevation. This map identifies potential habitat based on the vegetation community mapping. However, there are specific additional components that must be present in order to support willow flycatcher. These additional components are described above.

5.3 INCIDENTAL SIGHTINGS

The only incidental sighting of a riparian-nesting songbird was an auditory detection of a yellow warbler at the campground along Mono Creek near Vermilion Valley Dam in 2001 (Figure TERR-11-2). There were no willow flycatcher, yellow-breasted chat, or brown-headed cowbirds detected.

6.0 LITERATURE CITED

- California Department of Fish and Game (CDFG). 2002. Wildlife Habitat Relationships System. Sacramento, California.
- California Department of Fish and Game (CDFG). 2003. Rarefind II. California Natural Diversity Database. Electronic database. Updated April 2003. Sacramento, California.
- Mayer, K.E., and W.F. Laudenslayer. 1988. A Guide to Wildlife Habitats of California. California Department of Fish and Game, Sacramento, California.
- U.S. Forest Service. 2001. Threatened, Endangered, and Forest Service Sensitive Species Database for the Terrestrial Species of the Sierra National Forest. Electronic database. Updated 2001.
- Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife Volumes I, II, and III. California Department of Fish and Game, Sacramento, California.

FIGURES

Placeholder for Figures

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