

## Appendix O

# Special-Status Species Accounts

*New information has been added to this appendix in response to public comments received on the Draft EIS/EIR (Jones & Stokes 2003). The new information presented in this appendix does not require recirculation for public comment. However, Reclamation and the State Water Board have deemed that the new information presented in this appendix supports significant new information presented in this Draft SEIS/REIR. As a result, the lead agencies have included this appendix here for public comment. The complete revised appendix will be presented in the Final EIS/EIR.*

# Appendix O

## Special-Status Species Accounts

This appendix describes the legal status, distribution, habitat association, and reasons for decline of special-status species that are evaluated in the Battle Creek Action Specific Implementation Plan (ASIP) (Jones & Stokes 2004) and the Environmental Impact Statement/Environmental Impact Report (EIS/EIR). For this Draft Supplemental EIS/Revised EIR, only those species that were not included in the Draft EIS/EIR (Jones & Stokes 2003) are presented in this appendix—California red-legged frog and California black rail.

### California Red-Legged Frog

#### Legal Status

California red-legged frog is one of two subspecies of red-legged frog (*Rana aurora*) found on the Pacific coast. The U.S. Fish and Wildlife Service (USFWS) designated California red-legged frog as a threatened subspecies on June 24, 1996 (61 FR 25813). California red-legged frog has also been designated as a California species of special concern by the California Department of Fish and Game (DFG).

#### Description

California red-legged frog ranges in length from 1¾ to 5¼ inches (4.4 to 13.3 cm). California red-legged frogs have a reddish coloration on the lower abdomen and undersides of the hind legs. Key characteristics of California red-legged frogs are the dark face mask bordered by a whitish jaw stripe and prominent dorsolateral folds. Depending on the location, California red-legged frogs breed from late November to January through April. They have a distinctive call that is a series of guttural notes except for the last note, which resembles a growl or a groan (Stebbins 2003).

## Distribution

The historical range of the California red-legged frog extended coastally from the vicinity of Point Reyes National Seashore, Marin County, California, and inland from the vicinity of Redding, California southward to northwestern Baja California, Mexico (Hayes and Krempels 1986; Jennings and Hayes 1985; Storer 1925). Its current range consists of isolated locations in the Sierra Nevada, northern coast, and northern Transverse Ranges. It is relatively common in the San Francisco Bay area and along the central coast and is still present in Baja California, Mexico. Red-legged frogs have been found at elevations that range from sea level to about 5,000 feet (1,524 m) in the Sierra Nevada (USFWS 2002).

## Habitat Association

Red-legged frogs use a variety of habitat types, including various aquatic systems and riparian and upland habitats (USFWS 2002). However, they may complete their entire life cycle in a pond or other aquatic site that is suitable for all life stages (66 FR 14626). Red-legged frogs require cool water habitats such as pools, streams, and ponds, with emergent and submergent vegetation (Stebbins 1972; Storer 1925). The highest densities of frogs are found in habitats with deepwater pools (at least 2.5 feet deep [0.8 m]) with dense stands of overhanging willows (*Salix* sp.) and a fringe of tules (*Scirpus* spp.) or cattails (*Typha* spp.) (Jennings and Hayes 1994; Jennings 1988; Hayes and Jennings 1986). Juvenile frogs seem to favor open, shallow aquatic habitats with dense submergent vegetation. Although red-legged frogs can inhabit either ephemeral or permanent streams or ponds, populations probably cannot be maintained in ephemeral streams in which all surface water disappears (Jennings and Hayes 1994).

As adults, red-legged frogs are highly aquatic when active but depend less on permanent water bodies than do other frog species (Brode and Bury 1984). Adults may take refuge during dry periods in rodent holes or leaf litter in riparian habitats. Although red-legged frogs typically remain near streams or ponds, marked and radio-tagged frogs have been observed to move more than 2 miles (3.2 km) through upland habitat. These movements are typically made during wet weather and at night (USFWS 2002).

## Reasons for Decline

The primary factors that have led to declining populations of California red-legged frogs are loss, degradation, and fragmentation of habitat (USFWS 2002). In addition, several studies provide evidence that bullfrogs may play a role in the decline of California red-legged frog populations (Lawler et al. 1999; Kiesecker and Blaustein 1998; Fisher and Shaffer 1996). Pesticide drift has recently been

implicated as a potential cause of declining populations of four species of ranids in California, including California red-legged frogs (Davidson et al. 2002).

## Occurrence in the Restoration Project Area

Potential California red-legged frog habitat at the Asbury Diversion Dam project site consists of Baldwin Creek. A large ponded area immediately upstream of the Asbury Diversion Dam and portions of Baldwin Creek downstream of the dam provide suitable breeding habitat for California red-legged frogs. Suitable refuge and dispersal habitat is also present in Baldwin Creek downstream of the dam. Baldwin Creek upstream of the ponded area does not provide suitable habitat for California red-legged frogs because of the unsuitable substrate and lack of pooled areas and emergent vegetation.

Several areas provide suitable breeding and refuge habitat for California red-legged frog at the Jeffcoat mitigation site, including two ponds, two forebays, and Juniper Gulch. An unnamed creek at the southwest end of the site may provide suitable refuge and dispersal habitat for California red-legged frogs. Eagle Canyon Canal does not provide suitable breeding, refuge, or dispersal habitat because of the steep banks and moderately swift flow of the water.

A pond and an unnamed creek at the Willow Springs mitigation site provide suitable habitat for California red-legged frog. The pond is located northwest of the trout farm access road and appears to provide suitable breeding and refuge habitat for California red-legged frog. An unnamed creek flows from the fish-rearing facility in the northwestern corner of the project site. Although the creek provides suitable dispersal and refuge habitat for California red-legged frogs, the lack of deeper pooled areas probably precludes its use as breeding habitat.

There are no records of sightings of California red-legged frogs within a 5-mile (8-km) radius of the project sites. The closest record of a California red-legged frog is approximately 48 miles (77 km) southwest of the project sites in Tehama County (CNDDDB 2004). One adult frog was observed at this location in 1986.

## California Black Rail

### Legal Status

The California black rail is state-listed as threatened under the California Endangered Species Act (CESA) and is currently fully protected under the California Fish and Game Code.

## Description

A small bird about the size of a sparrow, the black rail is extremely secretive in dense emergent marsh vegetation. The adult male is mostly black with spots, and the female has more gray and brown tones in its plumage.

## Distribution

California black rail populations in California are limited to the San Francisco Bay Area, Bolinas Lagoon, Tomales Bay, Morro Bay, Suisun Bay, the Delta region, White Slough in San Joaquin County, the Salton Sea area, the Lower Colorado River Valley (Garrett and Dunn 1981; Eddleman et al. 1994; Evens et al. 1991; Manolis 1978), and the recently discovered (in 1994) population in the foothills of the western Sierra Nevada in Butte, Yuba, and Nevada Counties (Tecklin 1999; Aigner et al. 1995). Black rail populations have been extirpated from Ventura County south to San Diego County (Garrett and Dunn 1981). The severe decline of 95% of marshes in the San Francisco Bay Area likely affected rail populations substantially (Evens et al. 1991). Populations along the lower Colorado River declined about 30% from 1973 to 1989 (Evens et al. 1991).

## Habitat Association

Black rails in the Sierra Nevada foothills are found primarily in marshes dominated by *Scirpus acutus* and/or cattails (*Typha latifolia*) (Tecklin 1999; Aigner et al. 1995) and require water depths less than 3 cm (1.2 in) for breeding (Eddleman et al. 1994). Black rails forage on invertebrates, including snails, beetles, earwigs, grasshoppers, and ants, and seeds from bulrushes (*Scirpus* spp.) and cattails (*Typha* spp.) (Eddleman et al. 1994). There is no specific information on the diet of the Sierra Nevada foothill population. Black rails in California are mostly resident, although there is some local movement from San Pablo Bay south to the southern San Francisco Bay (Evens et al. 1991). It is likely that the Sierra Nevada foothill population is resident throughout the year.

## Reasons for Decline

The primary population threat comes from destruction or degradation of marsh habitats, and, to a lesser extent, from potential increases in predation pressures from domestic cats, herons, egrets, and other predators, and from pollution carried by runoff into occupied marshes (Eddleman et al. 1994).

## Occurrence in the Restoration Project Area

Three areas have been identified as supporting suitable habitat for black rail at the Willow Springs mitigation site. Each area consists of emergent wetland habitat dominated by cattails and bulrush. Two of the areas are portions of larger wetland complexes. The third area includes the edges along the Mount Lassen Trout Farm raceways used for raising trout. No known records of California black rail in Tehama and Shasta Counties exist, although breeding populations are currently known in nearby Butte County. Surveys for black rails have not been conducted in the foothills of Tehama and Shasta Counties, so there may be undiscovered populations in the emergent marshes in this region.

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