



San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

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SPECIES SUMMARY

California red legged frog

Rana aurora draytoni

The California red legged frog is a pond dwelling species of the Coast Ranges and west side of the Sierra Nevada. Although apparently recorded from the Central Valley as well, it now is apparently extirpated from the lower elevations (Stebbins 1985).

The habitat of the California red legged frog is permanent ponds and streamsides in grasslands, woodlands and forests with emergent vegetation that provides cover and which have still water. Red-legged frogs require cool water. Intermittent streams must retain surface water in pools year-round in order for frogs to survive (Jennings et. al. 1993). In the Central Valley drainage area, Hayes and Jennings (1988) found red-legged frogs about twice as frequently in intermittent aquatic habitats, probably due to their exclusion from permanent aquatic habitats occupied by bullfrogs and non-native fish (Hayes and Jennings 1988). Deep pools are necessary for many aspects of the frog's life cycle. In a study of the Central Valley drainage area, Hayes and Jennings (1988) found California red-legged frogs almost exclusively (99%) at sites with some water at least 70 centimeters deep. The predator response behavior of northern red-legged frogs is to flee directly into the water and swim to the deepest part of the channel or pool (Gregory 1979), a pattern also observed in California red-legged frogs (Jennings, personal communication).

Adult red-legged frogs require dense riparian vegetation that is in contact with, or close to, water 0.7 meter or greater in depth (Hayes and Jennings 1988). Vegetation structures are important for escape cover from predators and possibly also as shading to maintain cool water temperature (Hayes and Jennings 1988). Vegetation often includes, but is not limited to, cattails (*Typha* spp.), bulrushes (*Scirpus* spp.), and willows (*Salix* spp.). At sites with adult California red-legged frogs, vegetation typically shades a substantial portion of water surface area with a dense matrix right at or near water level (Hayes and Jennings 1988). Vegetation is often sufficiently dense to prevent the entry of predators such as birds and raccoons.

Telemetry studies indicate that the California red-legged frog leaves riparian zones during the non-breeding season and move into adjacent upland forests or aquatic habitats between breeding and foraging sites (Jennings et al. 1993).

California red-legged frogs have a highly variable diet, probably taking any prey they can subdue that is not distasteful (Hayes and Tennant 1985). Other amphibians and small mammals may form a significant portion of their diet (Hayes and Tennant 1985).

The frogs breed from late November to early April (Jennings and Hayes 1989). Timing is probably to ensure that water is cool enough for embryonic survival and that sufficient water exists for larval growth and metamorphosis. Egg masses are typically attached to emergent vegetation with a vertical orientation. Wading birds, particularly bitterns (*Botaurus lentiginosus*) and black-crowned night herons (*Nycticorax nycticorax*) are likely significant predators on adult California red-legged frogs (Jennings and Hayes 1989). Juveniles, which are more active during the day than adults, are probably preyed upon by garter snakes (*Thamnophis atratus*, *T. elegans*, *T. hammondi*, and *T. sirtalis tetrataenia*) (Fitch 1940; Fox 1951, 1952; and Barry 1978).

This species has been much reduced by water developments, agriculture, urbanization, and competition with the introduced bullfrog. There are 14 records in the SJMSCP GIS Database for the California red legged frog in San Joaquin County, all of which define occupied habitat. This species persists in the extreme western part of San Joaquin County, and suitable habitat also exists in the eastern and northeastern portions of the County.

Foothill yellow legged frog

Rana boylei

The foothill yellow legged frog is a species of streams and rivers. It is known from the Coast Ranges and west side of the Sierra Nevada northward through the central Cascades. There are four records for this species from San Joaquin County, three of which define occupied habitat. The foothill yellow legged frog was recorded from the Corral Hollow area as recently as 1977, although the population appeared to be on the decline (Ed Ely, personal communication with Byron Wilson). Because the land use has not changed, these three records are used to define occupied habitat. The present status of this species in western San Joaquin County is unknown. Likewise, its presence in eastern San Joaquin County, where suitable habitat does exist, is also unknown.

INCIDENTAL TAKE MINIMIZATION MEASURES

5.2.4.7 Red Legged Frogs and Foothill Yellow Legged Frogs

Red legged frogs and foothill yellow legged frogs occur in the creeks and wetlands in foothill areas. Red legged frogs and foothill yellow legged frogs do not occur on the valley floor. Therefore, the following Incidental Take Minimization Measures apply to the eastern foothills (primarily in the Vernal Pool Zone) and the Southwest Zone only where new development is proposed on parcels with creeks, rivers or wetlands, especially ponds:

A. A 300 foot setback, incorporating both riparian vegetation and uplands, shall be provided on both sides of creeks and on all sides of wetlands (for a total of 600 feet in setbacks) occupied by red legged frogs or yellow legged frogs identified through pre construction surveys conducted by the JPA or documented in the SJMSCP GIS Database. These 300' setbacks shall be measured horizontally from the top of the bank and shall extend the entire length of the stream (or other linear wetlands) within the boundaries of the project site. These setbacks may be reduced by the TAC with the concurrence of the Permitting Agencies' representative on the TAC if the reduction: 1) does not affect habitat (e.g., the stream becomes piped and travels underground) or 2) the reduction will not result in an adverse impact to the species or reduction in the biological values of the habitat. Setbacks shall maintain existing vegetation free of disturbance and be free of new construction, new wells, storage or parking of equipment or materials, and other activities which compact or disturb soils or vegetation or which could introduce contaminants into the aquatic habitat. Setbacks shall be delineated by flagging or brightly colored temporary fencing during the construction process. Setbacks shall be indicated on final maps and include a map note referencing prohibitions within the setbacks. For entitlements which do not include a map, the condition shall be enforced through the recordation of an easement referencing prohibitions within the setback. The JPA may approve alternative methods of enforcing the provisions of the setback with the concurrence of the Permitting Agency representatives on the TAC.

B. Water quality within creeks and wetlands inhabited by red legged frogs or foothill yellow legged frogs shall be maintained through implementation of appropriate erosion control measures to reduce siltation and contaminated runoff from project sites (e.g., by maintaining vegetation within buffers and/or through the use of hay bales, filter fences, vegetative buffer strips, or other accepted equivalents).

C. Construction and other ground disturbances shall be prohibited within established setbacks. The use of insecticides, herbicides, rodenticides and pesticides within established setbacks shall occur in accordance with U.S. Environmental Protection Agency guidelines (Appendix A) addressing the use of these materials in occupied California red-legged frog habitat and, if applicable, any additional requirements as established by the San Joaquin County Agricultural Commissioner.

D. All on-site construction personnel shall be given instruction regarding the presence of listed species and the importance of avoiding impacts to these species and their habitats.

E. Setbacks shall be marked by brightly colored fencing or flagging throughout the construction process.

F. Setbacks shall be permanently preserved as recorded easements. Easements shall be indicated on recorded maps, whenever projects involve parcel or subdivision maps.

Proposals by Project Proponents to implement either of the following Incidental Take Minimization Measures requires the review and approval of the JPA with the concurrence of the Permitting Agencies' representatives on the TAC:

G. If a proposed project intends to eliminate aquatic habitat including wetlands, ponds, springs and other standing water sources, and create a new, on site habitat, then the newly created habitat shall be created and filled with water prior to dewatering and destroying the pre-existing habitat. Dewatering and relocation of aquatic habitats should occur outside of the breeding season for red legged frogs (approximately January through May) and foothill yellow legged frogs (approximately March through May) when this schedule can be accommodated without resulting in project delays.

H. If a proposed project intends to eliminate aquatic habitat including wetlands, ponds, springs and other standing water sources, and will not create a new, on site habitat, then dewatering should occur prior to commencement of construction and other Site Disturbing Activities. Dewatering and relocation of aquatic habitats should occur outside of the breeding season for red legged frogs (approximately January through May) and foothill yellow legged frogs (approximately March through May) when this schedule can be accommodated without resulting in project delays.

Pursuant to Section 5.5.5, SJMSCP Preserve lands acquired to offset impacts to the red-legged frog or yellow-legged frog must have occupied habitat for the red-legged frog or yellow-legged frog of at least equal habitat value as determined by the JPA with the concurrence of the Permitting Agencies' representatives on the TAC.