



Questions and Answers: Chiricahua Leopard Frog Critical Habitat and Listing Final Rule

Arizona Ecological Services Field Office

www.fws.gov/southwest/es/arizona/

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1. What is the Chiricahua leopard frog?

The Chiricahua leopard frog is a medium-to-large sized frog with a stocky body that can grow up to 4.3 inches long. The frog is often green and has a leopard-like patterning, small pale raised spots on the rear thighs, and a raised fold of skin running down each side of the back. The Chiricahua leopard frog was listed under the Endangered Species Act (ESA) as a threatened species on June 13, 2002. When the Service listed the Chiricahua leopard frog in 2002, the Ramsey Canyon leopard frog, found on the eastern slopes of the Huachuca Mountains in Cochise County, was thought to be a unique species. Scientists have since determined that the Ramsey Canyon leopard frog is taxonomically the Chiricahua leopard frog.

2. Where is the Chiricahua leopard found?

The Chiricahua leopard frog is a habitat generalist that historically was found in a variety of aquatic habitat types: montane and river valley cienegas, springs, pools, cattle tanks, lakes, reservoirs, streams, and rivers. The Chiricahua leopard frog requires permanent or semi-permanent pools for breeding and water characterized by low levels of contaminants and moderate pH. Although one of the most aquatic of southwestern leopard frogs, Chiricahua leopard frogs are known to move among aquatic sites, and such movements are crucial for conserving metapopulations. A metapopulation is a set of local populations (subpopulations) that interact via individuals moving between local populations. Generally, Chiricahua leopard frogs need aquatic breeding and overwintering sites, both in the context of metapopulations and as isolated populations. The Chiricahua leopard frog occurs at elevations of 3,281 to 8,890 feet in central and southeastern Arizona, west-central and southwestern New Mexico, and the sky islands and Sierra Madre Occidental of northeastern Sonora and western Chihuahua, Mexico. Northern populations of the species in the Mogollon Rim region of east-central Arizona east to the eastern bajada of the Black Range in New Mexico are physically separated from populations to the south. Previous work had suggested these two separate divisions might be distinct; however, more recent work provides no evidence of multiple taxa within what is now considered to be the Chiricahua leopard frog.

3. What aquatic habitats is the Chiricahua leopard frog found in today?

The Chiricahua leopard frog has declined or been extirpated from a majority of surveyed historical localities. The species is currently a habitat specialist in the sense that its breeding habitat now falls within a narrow portion of the continuum from small, shallow, ephemeral, and unpredictable waters to large, deep, predictable, and perennial waters. The species is now limited primarily to headwater streams and springs, and livestock tanks into which there are few or no nonnative predators (e.g. American bullfrogs, fish, salamanders, and crayfish). The frog may also be excluded or exhibit periodic die-offs in areas where a pathogenic chytridiomycete fungus is present. An aggressive recovery program is underway in the U.S. that is showing considerable results on the ground. The reestablishment of populations, creation of refugial populations, and enhancement and development of habitat have helped stabilize or improve the status of the species in some areas.

The current known distribution for Chiricahua leopard frog includes seven of eight major drainages of historical occurrence in Arizona (Salt, Verde, Gila, San Pedro, Santa Cruz, Yaqui/Bavispe, and Magdalena river drainages), and three major drainages of historical occurrence in New Mexico (Gila, Mimbres, and Rio Grande river drainages).

4. What was the historical range of the Chiricahua leopard frog?

The Chiricahua leopard frog is known historically from central and southeastern Arizona; west-central and southwestern New Mexico; and in Mexico, northern Sonora and the Sierra Madre Occidental of western Chihuahua and perhaps south to Durango. Historical records for the species in the United States exist for Pima, Santa Cruz, Cochise, Graham, Apache, Greenlee, Gila, Coconino, Navajo, and Yavapai counties, Arizona; and Catron, Grant, Hidalgo, Luna, Socorro, and Sierra counties, New Mexico. The Chiricahua leopard frog is known or suspected to have been historically present, and at least in some cases, very abundant in each major southeastern Arizona valley bottom cienega¹ complex.

CRITICAL HABITAT

5. What is critical habitat?

Critical habitat is a term in the ESA. It identifies geographic areas that contain features essential for the conservation of a threatened or endangered species and that may require special management considerations. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve or other conservation area. Critical habitat designation does not impose restrictions on private lands unless federal funds, permits or activities are involved. Federal agencies that undertake, fund, or permit activities that may affect critical habitat are required to consult with the Service to ensure that such actions do not adversely modify or destroy designated critical habitat.

6. How would critical habitat designation affect my private land?

Requirements for consultation on critical habitat do not apply to entirely private actions on private lands. Critical habitat designations only apply to federal lands, or federally funded or permitted activities on non-federal lands. Activities on private or State lands that are funded, permitted or carried out by a Federal agency, such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act, will be subject to the section 7 consultation process with the Service if those actions may affect critical habitat or a listed species. Through this consultation, the Service will advise federal agencies whether the permitted actions would likely jeopardize the continued existence of the species or adversely modify critical habitat. Federal actions not affecting critical habitat or not otherwise affecting the Chiricahua leopard frog or its habitat (e.g., suitable habitat outside of critical habitat), and actions on non-Federal lands that are not federally funded, permitted or carried out, will not require section 7 consultations.

7. What sort of actions would continue to be allowed within areas designated as critical habitat?

We believe, based on the best available information, that the following actions will not result in a violation of the ESA:

- Actions that may affect the Chiricahua leopard frog that are authorized, funded, or carried out by a Federal agency when the action is conducted in accordance with an *incidental take statement* issued under section 7 of the ESA, or for which such action will not result in take;
- Actions that may result in take of the Chiricahua leopard frog when the action is conducted in accordance with a permit under section 10 of the ESA (*Habitat Conservation Plan, Safe Harbor Agreement, etc.*);
- Recreational activities such as hiking, off-road vehicle use, camping, and hunting in the vicinity of occupied Chiricahua leopard frog habitat that do not destroy or significantly degrade their habitats and involve the take of a listed species; or
- Operation and maintenance of livestock tanks on non-Federal lands that are exempt from the section 9

¹ Wetland communities often surrounded by relatively arid environments.

take prohibitions of the ESA under a special rule included in the original listing of the species.

8. Will livestock grazing be affected by critical habitat designation?

Livestock grazing is not necessarily incompatible with maintaining critical habitat for the Chiricahua leopard frog, provided that habitat is maintained in good condition. Formal consultation under the ESA is required only when federally permitted grazing may adversely affect critical habitat. Federal land-management agencies are required to evaluate the effect grazing has on federally managed critical habitat areas.

9. What areas are being designated as critical habitat for the Chiricahua leopard frog?

Approximately 10,346 acres (4,187 hectares) in central and southeastern Arizona, west-central and southwestern New Mexico are being designated critical habitat. Areas designated as critical habitat for the Chiricahua leopard frog are those essential to the conservation of the species and include cienegas, springs, pools, cattle tanks, lakes, reservoirs, rivers, streams, ephemeral drainages, and overland connections. Forty critical habitat units are in Apache, Cochise, Gila, Graham, Greenlee, Pima, Santa Cruz, and Yavapai counties in Arizona; and Catron, Hidalgo, Grant, Sierra, and Socorro counties in New Mexico.

10. How did the Service determine what areas should be included in the critical habitat designation for the Chiricahua leopard frog?

Under the ESA, the Service is directed to consider for critical habitat: the specific areas within the geographical area occupied by a species at the time it is listed (in this case, 2002), on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and specific areas outside the geographical area occupied by a species at the time it is listed if such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the ESA is no longer necessary (recovery). Areas designated critical habitat were chosen in accordance with the strategy outlined in the Chiricahua leopard frog recovery plan and the vigorous recovery program currently underway for the species. In determining areas that contain features essential to the conservation of Chiricahua leopard frog, we used the best scientific data available including studies of the frog's habitat, ecology and life history. We generally propose those feature elements to be:

- Space for individual and population growth and for normal behavior;
- Food, water, air, light, minerals, or other nutritional or physiological requirements;
- Cover or shelter;
- Sites for breeding, reproduction, or rearing (or development) of offspring;
- Dispersal corridors that provide routes for connectivity and gene flow; and
- Habitats that are protected from disturbance or are representative of the historical, geographical, and ecological distributions of a species

When determining critical habitat boundaries, we made every effort to avoid including structures such as buildings, pavement or other structures which lack suitable physical and biological features for the Chiricahua leopard frog.

11. What is the land ownership of the areas designated as critical habitat?

Most of the critical habitat occurs on federal lands (59%) with the remaining areas under state (4%), and private (37%) land ownership. None of the critical habitat occurs on tribal lands.

12. Have areas that are presently unoccupied by the Chiricahua leopard frog been designated critical habitat?

Yes. The Service has concluded that there are areas that are unoccupied but meet our definition of critical habitat in that they contain one or more features essential to the conservation of the species and require special management. We only included unoccupied areas if they:

- serve as an extension of habitat within an identified critical habitat unit;
- expand the geographic distribution across the species' range; and

- connect to other occupied areas.

Because of their reduced distribution and numbers, the ability of Chiricahua leopard frogs to repopulate areas where they are depleted or extirpated is vital to their recovery.

13. Have dry stream reaches and upland areas been designated critical habitat?

Yes, the Service identified dispersal corridors based on reasonable dispersal distances along perennial and ephemeral or intermittent drainages, or via overland routes. Chiricahua leopard frogs are known to move among aquatic sites, and such movements are crucial for conserving metapopulations. Dispersal most likely occurs within favorable habitat, making the maintenance of corridors that connect disjunct populations possibly critical to conserving populations of frogs. The corridors proposed for critical habitat were selected as the most likely routes for dispersal of frogs among subpopulations within a metapopulation. Selection of routes assumes perennial drainages are better dispersal corridors than ephemeral or intermittent drainages, and the ephemeral or intermittent drainages are better dispersal corridors than overland routes.

14. Did the Service consider economic impacts before designating critical habitat?

Yes. We are required to take into consideration the economic impact, and any other relevant impact, of designating particular areas as critical habitat. We may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species. We prepared an economic analysis of the critical habitat that is available to the public on our web site at <http://www.fws.gov/southwest/es/arizona/CLF.htm>.

15. How wide are the critical habitat areas?

The perimeter (“lateral extent” or width) of the critical habitat areas varies depending on whether the area is a pond, stream reach, or upland serving as a dispersal corridor. In ponds, most of which are impoundments for watering livestock, critical habitat extends for 20 feet (6.1 m) beyond the high water line or to the boundary of the riparian and upland vegetation edge, whichever is greatest. In addition, critical habitat extends upstream from ponds from the extent of the boundary for 328 feet (100 m) from the high water line. Critical habitat extends to 328 feet upstream because there is often a riparian drainage coming into the tank, and the frogs likely move along those drainages. The lateral extent or width of the perennial, ephemeral, and intermittent stream reaches of the critical habitat is “bankfull width” of the stream plus 328 feet on either side of the banks except where bounded by canyon walls. This width recognizes the naturally dynamic nature of riverine systems, recognizes that floodplains are an integral part of the stream ecosystem, and contains the features essential to the conservation of the species. Finally, where dispersal corridors cross uplands, critical habitat is 328 feet wide in the upland, the centerline of which is the line delineated on our critical habitat maps and legal descriptions.

LISTING STATUS

18. Isn't the Chiricahua leopard frog already listed as threatened?

Yes. We published a final rule listing the species as threatened on June 13, 2002, that included a special rule to exempt operation and maintenance of livestock tanks on non-Federal lands from the section 9 take prohibitions of the ESA. When the Service listed the Chiricahua leopard frog in 2002, the Ramsey Canyon leopard frog, found on the eastern slopes of the Huachuca Mountains in Cochise County, was thought to be a unique species. Scientists have since determined that the Ramsey Canyon leopard frog is taxonomically the Chiricahua leopard frog. In a 90-day finding on 192 species from a petition to list 475 species published on December 16, 2009, the Service noted that Ramsey Canyon leopard frog is synonymous with the Chiricahua leopard frog, and therefore is part of the listed entity. Because of this taxonomic revision of the Chiricahua leopard frog, the Service reassessed the status of and threats to the currently described species *Lithobates chiricahuensis* and is listing the currently described species as threatened.

The final rule, economic analysis, and the environmental assessment are available at <http://www.fws.gov/southwest/es/arizona/CLF.htm>.