

Making A Difference

Agencies are continuing to conduct spring egg mass and summer adult frog surveys. The results of these annual surveys will be used to track population trends, assess threats, and determine the effectiveness of habitat restoration projects.

Since 2004, conservation efforts have been focused on completing a long-term monitoring plan, coordinating the monitoring surveys, completing a species management plan, and implementing habitat restoration actions.



In 2004, 22 new open water ponds were built to enhance vital habitat to better withstand drought conditions in middle and lower Indian Valley in Nye County. A variety of designs were used in this habitat restoration project to create breeding, rearing, and overwintering habitat.

Frogs And Our Environment

Scientists have known for years that frogs are indicators of the health of the environment. They are very sensitive to changes in air and water quality. If a frog population is in decline, there is probably a decline in the health of the environment. Their role as environmental indicators makes them an important species to monitor and protect.

A 1998 international workshop determined that since the 1970s, there have been significant and unusual declines in both population sizes and numbers of populations of amphibians worldwide. Four factors appear to be the cause of these declines: 1) habitat destruction, 2) invasive species, 3) disease, and 4) environmental degradation from man-made, toxic chemicals. Throughout the world, researchers are working to determine how best to address these factors and stop the decline in amphibian populations.



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U.S. Fish and Wildlife
Nevada Fish and Wildlife Office

Preserving the biological diversity of the Great
Basin, Eastern Sierra & Mojave Desert

Columbia Spotted Frog

(*Rana luteiventris*)



The Columbia spotted frog belongs to the Ranidae family and is native to Nevada. This frog is a candidate for listing under the Endangered Species Act.

Length:	Males- 3 Inches Females- 4 Inches
Weight:	Males- 1.6 oz Females- 3.6 oz
Lifespan:	Up to 12 years
Food:	Terrestrial and aquatic Insects

Columbia Spotted Frog



Columbia spotted frogs are found in three distinct locations in Nevada: the Toiyabe range (Nye County); the Ruby Mountain and Jarbidge-Independence Ranges (Elko County); and on the Utah border in the Deep Creek drainage (White Pine County).

Columbia spotted frogs belong to the Ranidae family of frogs, and are one of only four ranid frogs native to Nevada. The other three frogs are the northern leopard (*Rana pipiens*), relict leopard (*Rana onca*), and mountain yellow-legged (*Rana muscosa*).

Columbia spotted frogs are typically slim-wasted, long-legged, smooth-skinned jumpers with webbed hind feet and a pair of glandular folds that extend from behind the eyes to the lower back. Adults measure between three and four inches, with females being larger than males. Their back color is generally gray or brown, while the belly varies from yellow to salmon. Females generally lay eggs once a year,

between April and May. Successful egg production is dependent upon temperature, water depth, pH of water, and predators (fish and bull frogs). Eggs hatch 8 to 22 days after being deposited. Tadpoles develop into frogs by mid summer to late fall and during this time are highly susceptible to predators.



Working Together to Conserve the Columbia Spotted Frog

A conservation agreement and strategy is a tool that identifies actions that will be taken to reduce threats to a species and will help a species recover. In September 2003, a conservation agreement and strategy for Columbia spotted frogs was signed by the Bureau of Land Management, Nevada Department of Wildlife, Nevada Natural Heritage Program, U.S. Fish and Wildlife Service, U.S. Forest Service, Nye County, and the University of Nevada Cooperative Extension, for the northeast and central Nevada populations of the Columbia spotted frog.



These partners agreed to conduct inventories to determine the distribution and abundance of the frog, and assess current threats facing the frog. They also agreed to implement the conservation actions identified in the agreement, conduct research to support conservation of the species, and work to increase public awareness and appreciation for the Columbia spotted frog. If successful, these actions have the potential to reduce the likelihood of placing a species on the Endangered Species List.

While directly improving Columbia spotted frog habitat, these actions will also benefit other aquatic species and the environment. Improving hydrological functions has indirect impacts such as reduced downstream flooding, and the potential to expanded recreational opportunities.

