

Conservation Practices for Amphibians in Nevada

The Amargosa toad (*Bufo nelsoni*) is found only in Oasis Valley in Nye County, Nevada. The historic range of the species appears to be limited to a 10-mile reach of the Amargosa River and its associated riparian corridor and nearby springs and wetland systems in the region.

Much of the habitat used by the toad occurs on private lands in Oasis Valley, and through cooperative efforts with landowners, the Nevada Department of Wildlife, Natural Resources Conservation Service, Nevada Natural Heritage Program, Beatty Habitat Committee, Amargosa Toad Working Group, U. S. Fish and Wildlife Service, Bureau of Land Management, The Nature Conservancy and other partners we can assure the continued survival of this Oasis Valley native.

Amargosa toads use a variety of habitats in Oasis Valley. Most important are wet areas near springs, along the Amargosa River, and yard and garden areas. These moist areas provide valuable feeding habitat and are critical for re-hydration in this desert environment. This habitat is common in Oasis Valley early in the spring after winter rains have created small pools and puddles. As temperatures rise in early as January or February, Amargosa toads converge on these pools to lay eggs. Egg laying will continue into June and as late as July or August if there is rain. In typical years, most breeding activity is concluded by the end of April or the beginning of May.

Outside the breeding season, Amargosa toads do not need much water. Interestingly, toads don't "drink" water; instead, they absorb it through their seat! A thirsty toad will absorb the necessary water through their "seat patch" located on their lower belly.

Toads prefer to lay eggs in water that is approximately 1/2 inch to 9 inches deep, with little to no water flow. Calm water is chosen for egg-laying because eggs will not be swept downstream to an area that may not be safe from predators, and calm water usually has fine-grained materials like silt and/or sand, which has been shown to harbor the greatest amount of the food and nutrients that the tadpoles need for development. These areas tend to have warmer water which helps the eggs and tadpoles develop more quickly. An additional advantage of shallow water is that it dries up quickly which makes for inhospitable conditions for introduced predators like crayfish and bullfrogs which are known to prey upon the toads. These two predators cause greater concern than native predators because they are very recent introductions to the Oasis Valley. The toads have not had time to evolve and adapt natural defenses against them, thus making them susceptible to increased predation. Unless they're desperate, native wildlife and even dogs and cats will avoid adult toads because of the horrible taste from the toxin that the toads excrete from their skin. Crayfish and bullfrogs, on the other hand, don't seem to be bothered as evidenced by toads that have been seen with missing feet or broken legs and toads that have been found in the stomachs of bullfrogs.

Upland habitat is also vital for the toad. This dry upland habitat occurs near the wetlands (usually within 50 yards) offers shelter and serves as corridors for movement. Upland

habitat has small animal burrows that the toads use as shelter throughout the year to protect themselves from extreme heat and cold. Though infrequent, some toads do move to other wet habitats and when they do, they travel over upland habitats. Toads have been observed as far as 1/4 mile from surface water. It is important that toads be able to move between sites to preserve, maintain, and increase the size of the population throughout the valley.



Recommended Conservation Practices

- ◆ Protect springs and wetlands from excessive water development or vegetation removal
- ◆ Remove excessive and decadent vegetation which clogs waterways
- ◆ Reduce inappropriate or harmful recreational use, trampling by livestock, or vandalism
- ◆ Control nonnative aquatic species such as crayfish, bullfrog, mosquito fish, and black bullhead
- ◆ Minimize use of pesticides and herbicides; insure safe application procedures when applied
- ◆ Control nonnative vegetation such as Russian olive and tamarisk that have altered native riparian vegetation communities
- ◆ Work collaboratively with agencies and organizations to improve and preserve habitat in Oasis Valley to prevent future listing of the species

Conservation Action Ideas

- ◆ Install livestock watering devices away from riparian areas
- ◆ Install temporary fencing to facilitate recovery of riparian vegetation and stream banks
- ◆ Rotate livestock use to maintain vegetation
- ◆ Remove non-native species
- ◆ Rehabilitate and restore overused sites through revegetation, structural repair, or managed grazing
- ◆ Participate with agencies to design habitats that will discourage nonnative species such as crayfish and bullfrog
- ◆ Assist agencies in tracking distribution and health of toads, eggs, and toadlets
- ◆ Consider participating in a Conservation or Agricultural easements

WHERE TO GET ASSISTANCE AND MORE INFORMATION

This fact sheet covers some of the basic considerations and conservation practices that will benefit Amargosa toad and related species. We recommend you seek the advice of a biologist, conservationist, or resource planner to help you meet your objectives. The Nevada Department of Wildlife, Natural Resources Conservation Service, or your local conservation district can provide this assistance.

SOURCES OF COST-SHARE ASSISTANCE FOR WILDLIFE HABITAT IMPROVEMENT

USDA Natural Resources Conservation Service

Farm Bill Programs

Mojave Special Projects Office

Las Vegas, NV. (702) 262-9047

Nevada Department of Wildlife

Landowner Incentive Program (775) 777-2300

US Fish and Wildlife Service (USFWS)

Partners for Wildlife (775) 861-6346