U. S. Fish & Wildlife Service

Nevada Fish and Wildlife Office

Conserving the biological diversity of the Great Basin, Eastern Sierra, and Mojave Desert

New Technology Used To Monitor Frogs

Chad Mellison (right) and Allen Taylor install an antenna to track the movement of Columbia spotted frogs in the upper Reese River Basin. Columbia spotted frog (below)

To gain a better understanding of a population of Columbia spotted frogs, a team of Nevada Fish and Wildlife Office (Service) biologists began using a tracking method traditionally used to track movements of fish. Using passive integrated transponders, commonly referred to as PIT tags, biologists are now able to track movements of tagged frogs year-around in a remote area in the upper Reese River Basin.

PIT tags are tiny internal electronic markers. Each PIT tag contains a unique alphanumeric code that transmits its information when it is activated by a reader or antenna, similar to scanning a bar code in a grocery store. As tagged spotted frogs pass through specially designed antennas, biologists can track their movement through stream channels.

By using this technology, biologists will soon have a better understanding of when and where the frogs move, growth rates, population estimates and survival. They will now be able to answer questions such as: are frogs only moving in spring during high water to get to breeding grounds; do they move over the course of the summer as certain habitats dry and become unsuitable; what sex is most likely to move; and is a certain age group more likely to move than another?