

Biologists explore things that go bump in the night

Along the Las Vegas Wash, biologists with the Southern Nevada Water Authority are working the night shift to determine what types of bats and frogs inhabit or visit the Las Vegas Wash.

Identifying which bat and frog species use the wash will contribute to a growing body of knowledge used to develop long-term management plans for fish and wildlife in this unique wetland environment.

In addition to benefiting the Las Vegas Wash Coordination Committee and its efforts to protect the wash's inhabitants, information gathered from these studies supports work by the Clark County Multiple Species Habitat Conservation Plan Implementation and Monitoring Committee, and may help to conserve many of the rare species found in Southern Nevada.


Bats are nocturnal, and are therefore active predominantly at night. Until recently, nets were the most commonly used tool to catch and identify these animals. However, this method was

imprecise and posed a health risk to the bat. Biologists are now turning to innovative technologies such as acoustic monitoring to detect these animals in much greater numbers than ever before. Because bats use echolocation calls (high-pitched ultrasonic sounds made by their vocal chords) to "see" with their ears, biologists are able to record these calls and later identify the species from it. There are three acoustic monitoring stations along the wash that collect continuous nightly data. Ten species have been identified to date: Townsend's big-eared bat, western red bat, California myotis, western yellow bat, Brazilian free-tailed bat, pallid bat, Yuma myotis, hoary bat, western pipistrelle bat, and big brown bat.

Frogs and toads can easily be detected at night either by listening to their calls or using flashlights to spot them. Biologists have been searching for amphibians along the wash for approximately three nights each month using high-powered



Monitoring stations like this one are posted along the Las Vegas Wash to record bat calls and migratory patterns.

flashlights and headlamps. So far, they have found two species: Bullfrog and Woodhouse's toad. The bullfrog, which is not native to Southern Nevada, is a voracious predator known to eat frogs, mice, birds, and even snakes. Other types of frogs have little chance of competing with the bullfrog, demonstrating that sometimes identifying what "is" there also helps to explain what "isn't" there. 

Las Vegas Wash progress report details notable achievements

The Las Vegas Wash, once left unstudied for more than 30 years, has proven to be a treasure trove of biological insights as well as an important resource for water quality, according to a recently published year-end report.

Among the most profound changes in the Las Vegas Wash is found in the water itself which, thanks to the construction of several erosion control structures and other stabilization activities, contains far less sediment than before the Las Vegas Wash project team began its work. The concentration of total suspended solids, a measure of the amount of silt carried in the current, is down by approximately 60 percent. This means significantly less erosion is occurring, which makes conditions in the wash more conducive to the growth of vegetation.

Environmental biologists also have made significant progress in evaluating the health of the ecosystem by studying



the entire food chain, from insects to large mammals. By conducting this research, experts can gauge the wash's current health, establish a baseline by which the impact of changes in the wash on wildlife can be measured and develop a long-term management plan.

"The 2003 year-end report is an opportunity to check our compass

heading, mark our progress and make sure we're on the right course," explained wash Project Team Supervisor Keiba Crear. "The Las Vegas Wash Coordination Committee (LVWCC) and the citizens who contributed to the wash's management plan went to a lot of effort to set a specific direction. They penciled out 44 specific action items that would benefit the wash and, in turn, Lake Mead. It's our responsibility to make sure that all the work undertaken is consistent with their intent."

One of the primary reasons the LVWCC was formed was to foster coordination and improve the flow of information among the many organizations vested in the wash. With an array of online tools and a water quality database now at the disposal of collaborators, the speed and efficiency with which projects can be undertaken has increased dramatically. 