

## Reptiles tell story about wash



his hunt is certainly not for sport.

Capturing reptiles is something you may not normally think of as part of Las Vegas Wash restoration efforts. But twice a month, Las Vegas Wash Project Team members check for reptiles in various traps they have strategically placed near the wash.

Why monitor reptiles? Scientists know wildlife, including reptiles, can help gauge the vitality of an area such as the Las Vegas Wash. Plant and wildlife growth, habitat changes, erosion rates and wetlands growth are all measures of vitality. Member agencies of the Las Vegas Wash Coordination Committee have established several programs to monitor environmental conditions surrounding the wetlands.

According to Las Vegas Wash Environmental Biologist Liz Bickmore, reptiles are not the only wildlife being monitored.

“We are currently involved in a similar survey of birds in the wash,” said Bickmore. “These surveys are just one way to get a feel for the quality of the existing habitat.”

Reptile-monitoring programs were recommended by the coordination committee in the management plan created for the wash. By monitoring wildlife, scientists and the committee also can measure the success of ongoing restoration efforts.

No one has conducted a reptile survey of this kind in the wash for

about three decades. Through the survey, project-team members will attempt to bridge the 30-year gap in information about the reptiles living within the Clark County Wetlands Park located at the wash.

Pitfall traps, funnel traps, drift fences and other devices lure the reptiles. Small-diameter PVC piping in the traps provides cover for the reptiles while they are detained. After scientists inspect and document the reptiles, they are released.

“Our intent is to be as careful with the habitat in the wash as possible,” said Bickmore. “We capture, identify and release the reptiles as quickly as possible.”



*A western whiptail lizard, common to the desert, was located through the wash reptile-monitoring program.*

## Archaeology plays role in wash restoration



Historians know it's important to explore the events of the past to understand the future. That's why surveying the archaeology and history of the Las Vegas Wash is vital to its successful restoration.

Wash Project Team members have worked in cooperation with other Las Vegas Wash Coordination Committee organizations to conduct detailed field surveys of the area's archaeological and historical resources.

"These studies comprise the first comprehensive picture of the archaeological resources of the Las Vegas Wash and help us comply with the National Historic Preservation Act for current and future projects," said Lisa Luptowitz, environmental planner for the wash.

Archaeological studies will help ensure that design and construction of erosion-control features in the wash will avoid and—if possible—protect sensitive archaeological and historical sites. Research also reveals details about early wash-area inhabitants and visitors as well as the wash's environment during prehistoric and early historic times. Staff submit final reports that document archaeological sites and artifacts to the Nevada State Historic Preservation Office.

It's likely the wash has been popular with human residents for the last 2,000 years or more, thanks to its water, plant and animal resources. The recent discovery of a fluted spear point—also called a Clovis point—lying on a terrace north of the Las Vegas Wash offers tantalizing evidence that human use of the area may date back as far as 12,000 years.

Scientists say the Clovis point is the first evidence of the Paleo-Indian tradition (10,000-5,500 B.C.) in Clark County. Prehistoric man would have tied the point to a thrusting spear to hunt and kill now-extinct large mammals, including mammoths, horses and bison.

"The Clovis point is evidence that the Las Vegas Wash has been an important regional resource for many thousands of years," said Luptowitz.



*Prehistoric man probably used this Clovis point to hunt in the wash area dating back as far as 12,000 years ago.*

### WASH FACTS



Volunteer efforts in recent years have rid the wash of more than a half-million pounds of garbage.



Re-vegetation efforts in the wash have introduced thousands of trees to the area including nearly 10,000 new trees and shrubs planted in one day by volunteers earlier this year.



Elevations in the Las Vegas Valley range from 11,918 feet at Charleston Peak in the Spring Mountains to about 1,500 feet at the eastern edge of the valley where the Las Vegas Wash begins. The wash receives flows from these high elevations.

# PROJECT UPDATES

## Floating wetlands flourish in Las Vegas Bay



If the Japanese can successfully use floating wetlands on a large scale, why not do the same in Southern Nevada?

Less than a year ago, a group of environmental biologists and botanists from the Bureau of Reclamation and the Las Vegas Wash Project Team collaborated to try something that had never been done before in the valley.

Led by Reclamation Research Botanist John Boutwell, the group attached pallets of young sprouting plants to a floating dock in Las Vegas Bay where the Las Vegas Wash meets Lake Mead. Their hope was that the tiny cattail and bulrush would eventually flourish into a thriving island of greenery.

Just as floating wetlands in Japan are used to polish water, the group hopes their endeavor will progress into a large-scale effort to help polish water entering Lake Mead, Southern Nevada's primary drinking-water source.

Today, scientists are encouraged by the progress of their floating plants. In some areas, plants have grown as high as 5 feet tall. After two rounds of planting, some of the support framework is now barely visible through the growth of the wetland foliage.

*Continued on page 4*

## Scientists monitor wash tributaries



To learn about the health of a plant, you want to study its roots. A similar analogy may be made for studying the tributaries that help form the "roots" of the Las Vegas Wash. Scientists recently kicked off an ongoing monitoring program of tributaries feeding into the wash from the Las Vegas Valley.

Since the wash serves as the main drainage channel for the entire 1,600-square-mile Las Vegas Valley, environmental scientists from the Las Vegas Wash Project Team will monitor five main tributaries that join the wash before entering Lake Mead. These tributaries are: Las Vegas Creek, Flamingo Wash, Sloan Channel, Monson Drain and Duck Creek.

"Investigating the contents of these tributaries is important, since they eventually join the wash flows heading toward Lake Mead," said Las Vegas Wash Coordination Committee Project Hydrologist Xiaoping Zhou. "These tributaries carry water from the urban areas of the valley."

Scientists know the makeup of the treated wastewater that enters the wash. But the precise composition of the urban runoff that also enters the wash through tributaries hasn't been monitored extensively to date.

Scientists analyze water samples quarterly as well as during rain events for the tributary monitoring program. Scientists also are sampling two shallow groundwater seeps.

Water samples from the tributaries are analyzed for rate of flow, water temperature, perchlorate, plant nutrients (such as nitrogen and phosphorus), organics (such as pesticides and herbicides), fecal coliforms and E.coli bacteria. Data from these samples will help experts recommend any additional steps for monitoring urban runoff into the wash.



*Floating wetlands thrive where the Las Vegas Wash meets Lake Mead.*

**Continued from page 3**

“We’re thrilled to see that these floating plants have thrived in this environment,” said Las Vegas Wash Coordination Committee Project Manager Kim Zikmund. “The next step will be to test their effect on water entering Lake Mead as they grow.”

According to Boutwell, U.S. Geological Survey scientists will test the plants’ polishing effectiveness with a real-time water quality monitoring station placed immediately downstream from the floating wetlands.

“This project is definitely showing promise, and I think everyone is anxious to see what testing will reveal,” said Zikmund. “But, regardless of the test results, this project has been a model for interagency cooperation in managing the well-being of the Las Vegas Wash.”



# Reptile Round-Up

## Leapin’ lizards!

Can you identify these reptiles recently found in the Las Vegas Wash area?

(Answers are below.)



**Answers:**

- 1. Desert iguana
- 2. Horned lizard (“horny toad”)
- 3. Long-nosed leopard lizard

## Las Vegas Wash



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