

Floating wetlands project



Science has proven that certain plants can actually have a polishing effect on water that passes through them. The Bureau of Reclamation (BOR), along with other entities including the Southern Nevada Water Authority, recently started a project in Las Vegas Bay that will test that science.

“We’re in the process of creating a man-made, floating wetlands island between the Las Vegas Wash and Lake Mead,” said

BOR

Research

Botanist John

Boutwell. “We

hope that this

new floating

wetland will

serve as a

natural

polishing filter

for flows

entering Lake

Mead from the

wash, the

primary source

of water for the

Las Vegas

Valley.”

The framework for the structure, which is nothing more than a floating dock, is complete and only awaits the addition of the wetlands vegetation that will be attached to the structure to form the floating island.

After assembling the structure onshore near the Las Vegas Bay Marina, Idaho-based

contractor Harrison Dock Builders towed the floating island to Las Vegas Bay where it was anchored with eight 2,000 lb. concrete blocks. The structure contains 28 dock slips that eventually will house the floating wetland pallets.

According to Boutwell, the plants will be attached to the dock this winter and should begin to work their magic by next spring.

Until then, the plants are growing in a culture pond located at the Clark County Sanitation District. These plants are cultivated in a growth medium consisting of coconut husk fibers. When ready, they will be transported



on pallets to the floating dock structure, where they will begin to grow into a miniature floating island.

“This project demonstrates progress and interagency cooperation toward implementing the management plan for the Las Vegas Wash,” said Las Vegas Wash Coordination Committee Project Manager Kim Zikmund.



Bird surveys will help gauge wildlife impacts of Las Vegas Wash management plan



The Southern Nevada Water Authority has partnered with the Red Rock Audubon Society to survey the diversity of the bird population in the Las Vegas Wash area. The surveys are being conducted to help gauge the effect of restoration activities being conducted at the wash.

Bird populations can help gauge the success of re-vegetation efforts in the area, which are also expected to increase wildlife habitat of visiting or nesting birds in the wash.

Located on the North American flyway, the Las Vegas Wash once provided habitat to more than 200 bird species. Today, the 12-mile tributary that carries flows from the Las Vegas Valley to the Las Vegas Bay at Lake Mead has seen a dramatic decrease in the amount of wildlife in the area.

The information gathered from the survey will help provide baseline data for the avian population in the Las Vegas Wash and demonstrate the changes in bird species abundance and diversity.

As directed by the recommendations from the Las Vegas Wash Comprehensive Adaptive Management Plan, the Las Vegas Wash Coordination Committee is working to restore the wash. One element of the management plan is designed to facilitate the re-vegetation of native wetland and riparian species in the area by constructing 18-22 erosion control structures.



WASH FACTS



The wash is estimated to be at least 14,000 years old and was originally formed from a series of natural springs once active throughout the valley.



The Las Vegas Wash Coordination Committee received the 2000 EPA Region 9 Earth Day Award, which acknowledges those who have demonstrated commitment and significant contributions to the environment in California, Arizona, Nevada and tribal lands.



Remnants of the recently imploded El Rancho Hotel will soon be reborn as part of a structure designed to decrease erosion in the Las Vegas Wash.

PROJECT UPDATES

SNWA assists aspiring future scientists



Mabel Hoggard Elementary School students are getting real-life learning experience, thanks to the Southern Nevada Water Authority. A special water resources science project has been developed for fifth grade students of the Hoggard Math/Science Magnet School. The students learn about water quality and the significance of the Las Vegas Wash in the valley's water cycle through hands-on experience collecting water samples and performing water quality analysis.

As part of the program, students learn about the source of their drinking water as well as the process it goes through before it reaches the tap. By touring the Alfred Merritt Smith Water Treatment Facility, the students learn that intake pipes at Saddle Island collect water from Lake Mead and pump it through the water treatment process at the treatment facility. Additionally, they learn the significance of the treatment facility that is responsible for providing drinking water for all of Clark County.

- Program goals include helping students to:
- Gain an understanding of where drinking water comes from.

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Engineering Update



There are many issues relating to the Las Vegas Wash, and erosion is one of the most important issues, since it causes instability in the wash banks. One



way to deal with erosion is by placing grade control structures throughout the wash, which are designed to lessen bank cutting by stormwater flows. After an in-depth study, several types of grade control structures have been identified for bank and channel stabilization efforts in the Wash. In total, 22 structures will be required to stabilize the Wash. Two structures were recently completed, and another is currently under construction.

The conditions of increasing and variable daily flows, highly erodable soils, water quality concerns, the need to protect wildlife habitat and other environmental concerns present formidable challenges to controlling erosion in the Las Vegas Wash. However, efforts are currently underway to promote channel stabilization by reducing stream bank erosion, armoring the channel with vegetation, balancing sediment transport and restoring a lost ecosystem.

With the installation of three erosion control structures, the individual components of the erosion control system, design, construction and operational activities are currently being monitored, documented, reviewed and incorporated into future plans.




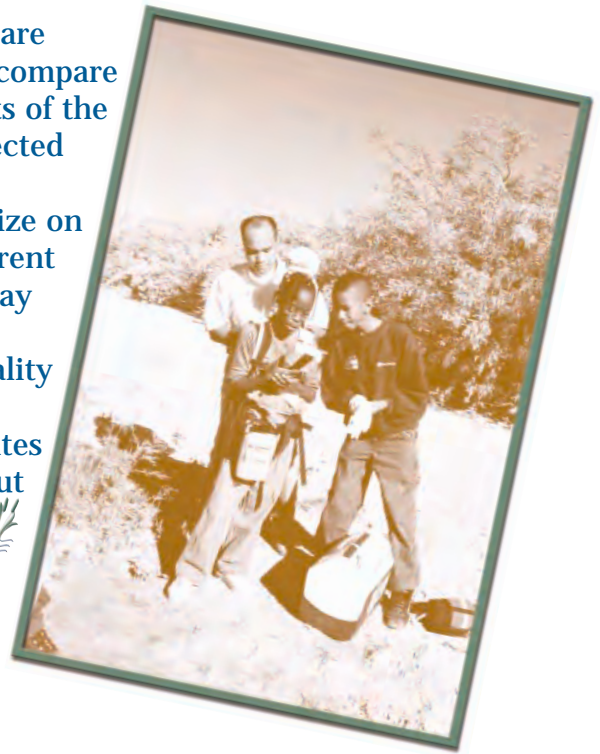
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- Understand the relationship of the Las Vegas Wash to Clark County drinking water
- Learn the importance of proper sampling techniques and be able to decipher the results.

Students collect water samples and perform water quality tests at several sites along the wash and at the water treatment facility. The aspiring scientists learn to measure pH, temperature and conductivity at each site before sending the samples to the treatment facility for bacteria analysis.

After all that, students compare testing results among different sites and gain an understanding of changes in water quality as it moves through the wash as well as the differences between raw and finished water at the treatment facility.

Students are asked to compare the results of the data collected and hypothesize on how different factors may affect the water quality at the various sites throughout the year. 



Las Vegas Wash

Coordination
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