



**The Las Vegas Wash:
Synthetic system with
authentic experiences for
undergraduate students**

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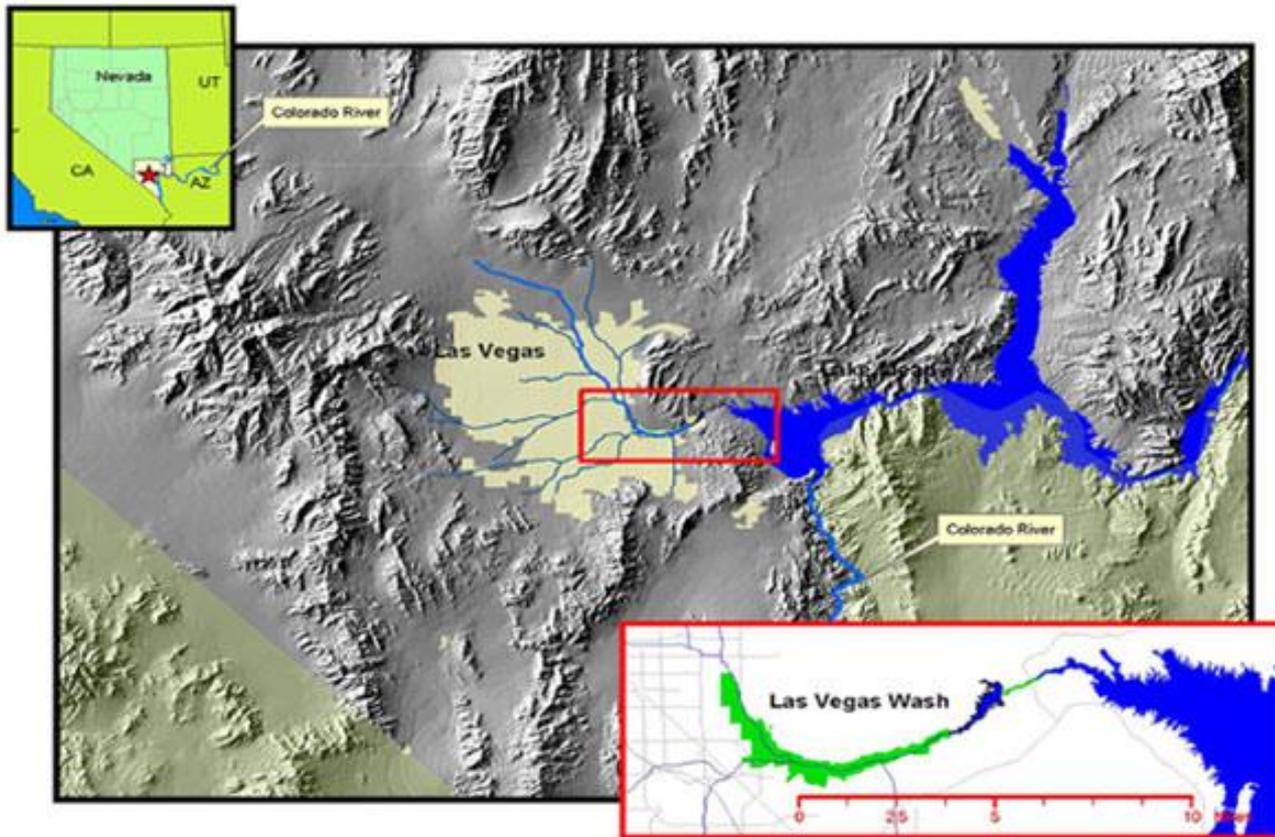
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School of Environmental and Public Affairs
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...A Brief Overview

- Where and what is the Las Vegas Wash?
 - And what *isn't* it?
- Why the Wash?
- Student involvement
 - Examples of class projects
 - Future work and possibilities

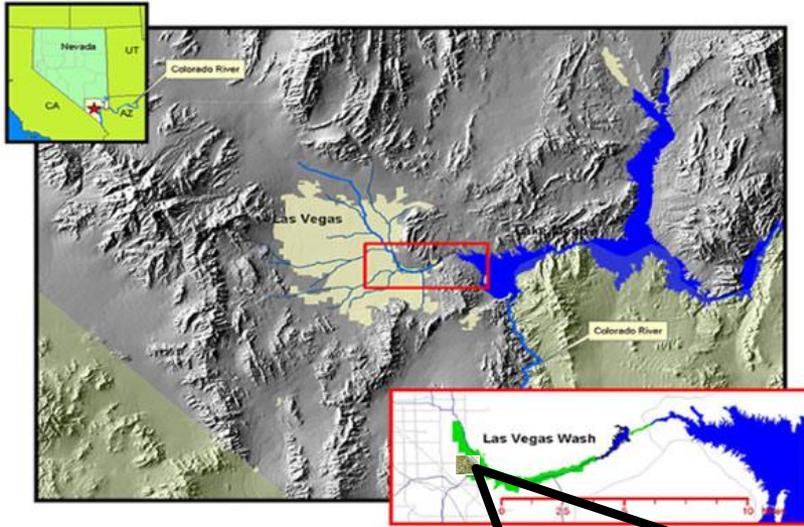


Where is the Wash?



What is the Wash?

- Functions as the **receiving stream** for treated wastewater, urban runoff, shallow groundwater and storm water throughout the Las Vegas Valley (~150 MGD)
- Terminal delivery to **Lake Mead**
- Supports wetlands at the **Clark County Wetlands Park** (~2900 acres) and enclosed **Nature Preserve (WPNP)** (~210 acres)



Clark County Wetlands Park Nature Preserve



What *isn't* the Wash?

- A “natural” system
- A typical wadeable stream



- **But**, its volume, permanence, arid landscape features, uniqueness and proximity to campus make it an ideal natural classroom/laboratory
- *Novice students are always surprised by its apparent attractiveness!*

Why the Wash?

- Presents a unique opportunity for students to examine an arid environment with:
 - Terrestrial ecosystems
 - Wetland and riparian ecosystems
 - Aquatic ecosystems
- Demonstrates the **integration** of human water use across the valley as it culminates in this distinctive urban desert stream system

Student Involvement: Class

- ENV 360 (Environmental Assessment Methods) students have worked with SNWA on:
 - ***Evaluation of revegetation ('Green-Up') efforts***
 - ***Analysis of the Las Vegas Wash cottonwood revegetation area***



Student Involvement: Class

- ENV 360 (Environmental Assessment Methods) students as small group/class projects:
 - ***Qualitative site assessment of terrestrial and wetland sites at the WPNP***
 - ***Evaluation of soils and hydrology at WPNP***



Students Want to Know:



Stacie Vance:
"Which invasive species are of the greatest concern and what are their impacts?"

Jeremy Lutzenberger:
"To what extent do wetlands mitigate Wash water quality?"



Joey Posada:
"What is the role of decomposition in stream organic matter loss?"

Kelsey Lupo:
"How do storm events impact aquatic insect populations?"



Student Involvement: Future Projects

- Topics for further experimental or observational exploration:
 - Microbial community and decomposition dynamics
 - Aquatic invertebrate dynamics
 - Mammal activity
 - Invasive species management and impacts
 - Nutrient use and transport to Lake Mead

Today's Take-Home

- The ENV program at UNLV has undergraduate students that are eager for:
 - *Mentored projects with local agencies and organizations*
 - *Field and lab experiences in natural sciences*
 - *Deeper involvement with their community*
 - *Exposure to professional scientific endeavors (e.g. Lake Mead Science Symposium)*

Today's Take-Home

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Thank You!



*ENV 360 Spring 2014
Spring Mountains field trip*

UNLV