

# Changes in Large and Medium-Sized Mammals Associated with Riparian Revegetation Activities Along the Las Vegas Wash, Nevada

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**Southern Nevada Water Authority**



[www.lvwash.org](http://www.lvwash.org)



# Las Vegas Wash

- **The Las Vegas Wash is a formerly ephemeral, now perennial, stream that carries treated wastewater, storm flows, groundwater and urban run-off to Lake Mead from the Las Vegas Valley**
- **Flows from the Las Vegas Wash makes up about 2% of the water flowing into Lake Mead**
- **Erosion along the Wash's banks caused significant reduction in wetland and riparian habitats from over 2000 acres in the 1950s to less than 200 acres in the 1990s**



# Las Vegas Wash Coordination Committee History

- **The Las Vegas Wash Coordination Committee (LVWCC) was established in 1998**
  - **Consists of 30 stakeholders**
- **In 2000 the committee finalized the Las Vegas Wash Comprehensive Adaptive Management Plan (CAMP)**
  - **Includes a long-term fish and wildlife management plan**
- **The Wildlife Management Plan (WMP) was finalized by the committee in 2008**
  - **Includes the recommendation to conduct baseline wildlife surveys and to continue regular monitoring**



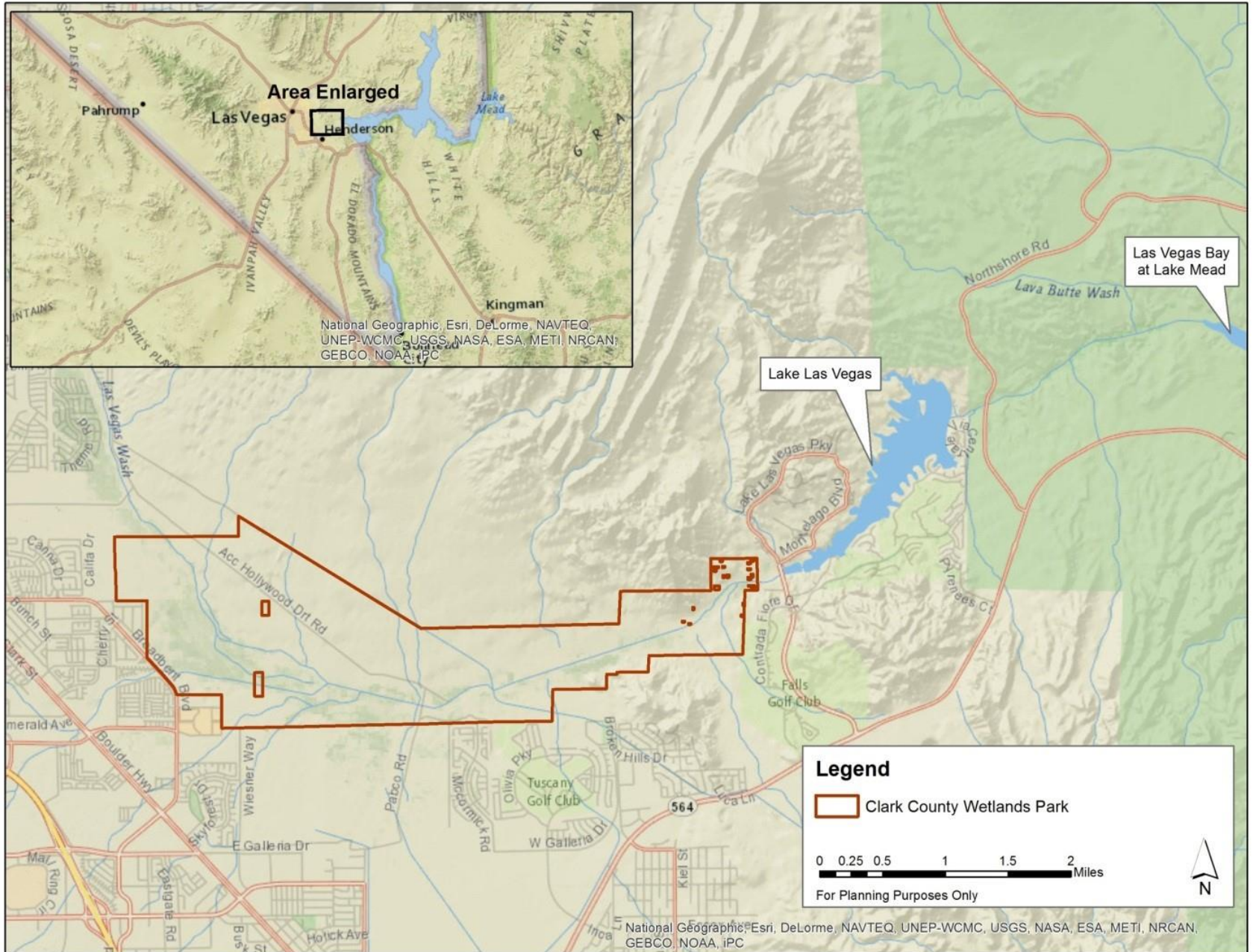


# Las Vegas Wash Restoration

- **Over 525 acres have been restored along the Wash**
- **21 erosion control structures have been constructed**
- **13 miles of bank protection installed**
- **Over 1000 species of wildlife identified**



# Clark County Wetlands Park





# Las Vegas Wash Mammal Surveys

- **Baseline surveys for mammals were conducted by Bradley and Niles in 1972 (Bradley and Niles 1973)**
- **Small mammals were studied by students at UNLV in 2002 – primarily upland areas**
- **Prior to 2009, large mammal activity was surveyed through casual observations, tracks and sign**



# Las Vegas Wash Mammal Surveys

- **The first camera trap survey of mammals along the Wash was conducted from November 2009 – January 2011**
- **A second survey was conducted from April 2018 – June 2019**
- **Prior to the 09-11 survey, there were 61.4 acres of riparian and wetland habitat along the Wash**
- **An additional 72.7 acres were created before the 18-19 survey began**

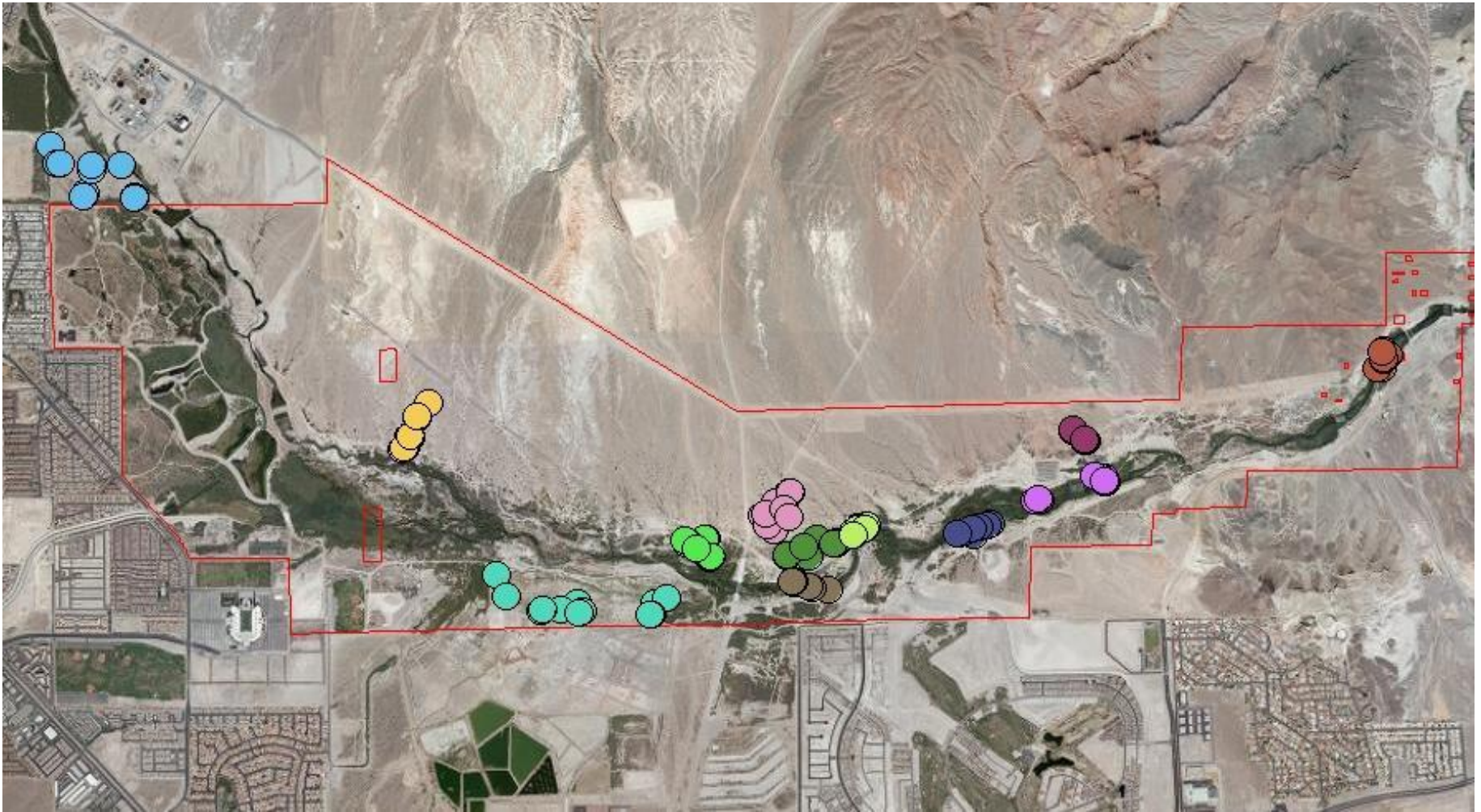


# 2009-2011 Mammal Survey

- **12 sites along the Wash**
  - 6 riparian, 6 upland
- **Three camera traps in a single site for one week each**
  - Repeated each season
- **Camera locations were baited with food, scent or combination**
- **Locations selected to avoid human disturbance**
- **Cameras took both photos and video**







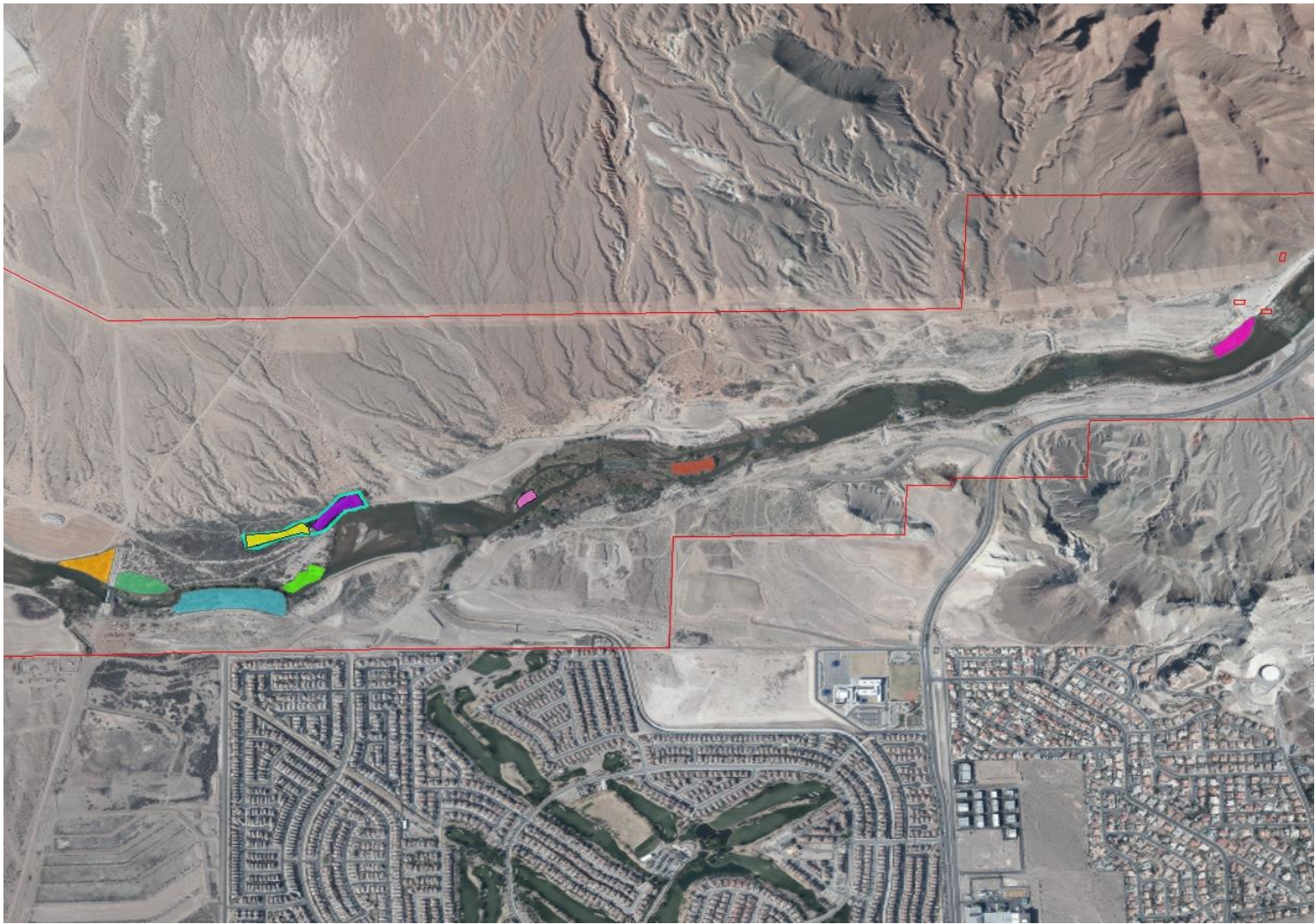
2009-2011 - Mammal  
Capture Locations

# 2018-2019 Mammal Survey

- **Focused on riparian areas**
- **4 primary sites along the Wash**
  - **Well established riparian habitat**
- **6 additional supplemental sites**
- **Four camera traps in a single site for one week each**
  - **Repeated each season**
- **Camera locations were not baited**
- **Locations selected to avoid human disturbance**
- **Cameras took only videos**







2018-2019 - Mammal  
Capture Locations



# Comparison of Capture Results

Common Name	2009-2011	2018-2019
Coyote	X	X
Gray fox		X
Bobcat		X
Striped skunk	X	
Spotted skunk	X	
American beaver	X	X
Ring-tailed cat	X	
Northern raccoon	X	X
Black-tailed jackrabbit	X	X
Desert cottontail	X	X
Black rat		X

# Comparison of Capture Results cont.

**Coyote**



- **Common species found in both 09-11 and 18-19 surveys**

**Northern Raccoon**



**Desert Cottontail**



**Black-tailed Jackrabbit**



**American Beaver**



# Comparison of Capture Results cont.

- **Species found in 09-11 survey but not in 18-19**
- **All three species found in a single cottonwood dominated restoration site**
- **Construction occurred nearby during 18-19 survey**

**Ring-tailed cat**



**Western spotted skunk**



**Striped skunk**





# Comparison of Capture Results cont.

- Species found in 18-19 survey but not in 09-11
- First gray fox seen along the Wash since early 1970s

**Gray Fox**



**Black Rat**



**Bobcat**



# Other Mammals Found at the Wash

- **Other mammals documented along the Wash outside of these surveys.**
  - **Muskrat is unconfirmed**
  - **Badger has not been seen since the 1970s**

**Muskrat**



**American Badger**



**Bighorn Sheep**



**Kit Fox**





# Conclusions

- 
- **Restoration efforts that began in 1999 have produced habitat for a wide variety of mammals**
  - **Continued plant growth and restoration efforts have increased the attractiveness of riparian habitat**
  - **Construction and recreational components of the Wetlands Park may negatively impact mammal habitat**
  - **Wildlife Management Plan calls for another round of surveys in 2025-2026**





# QUESTIONS?



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