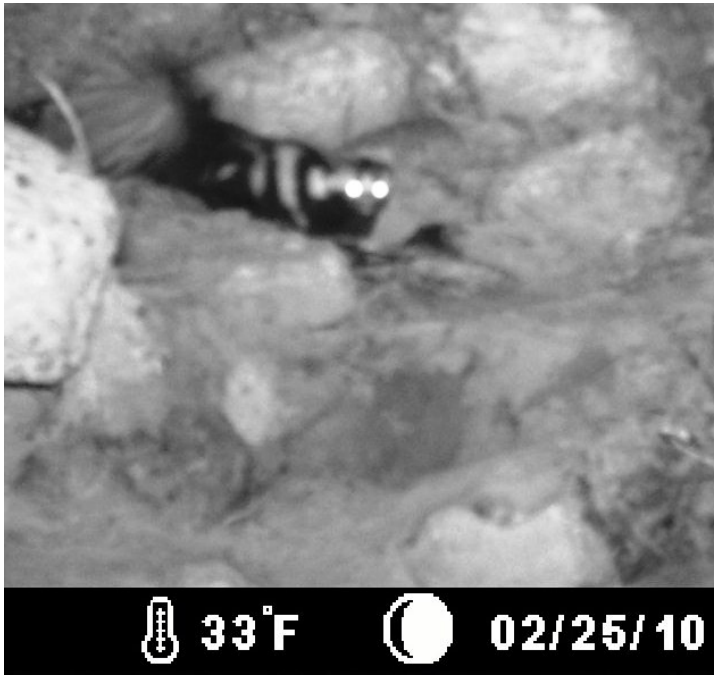
Changes in Large and Medium-Sized Mammals Associated with Riparian Revegetation Activities Along the Las Vegas Wash, Nevada

January 28th, 2020



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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

Las Vegas Wash

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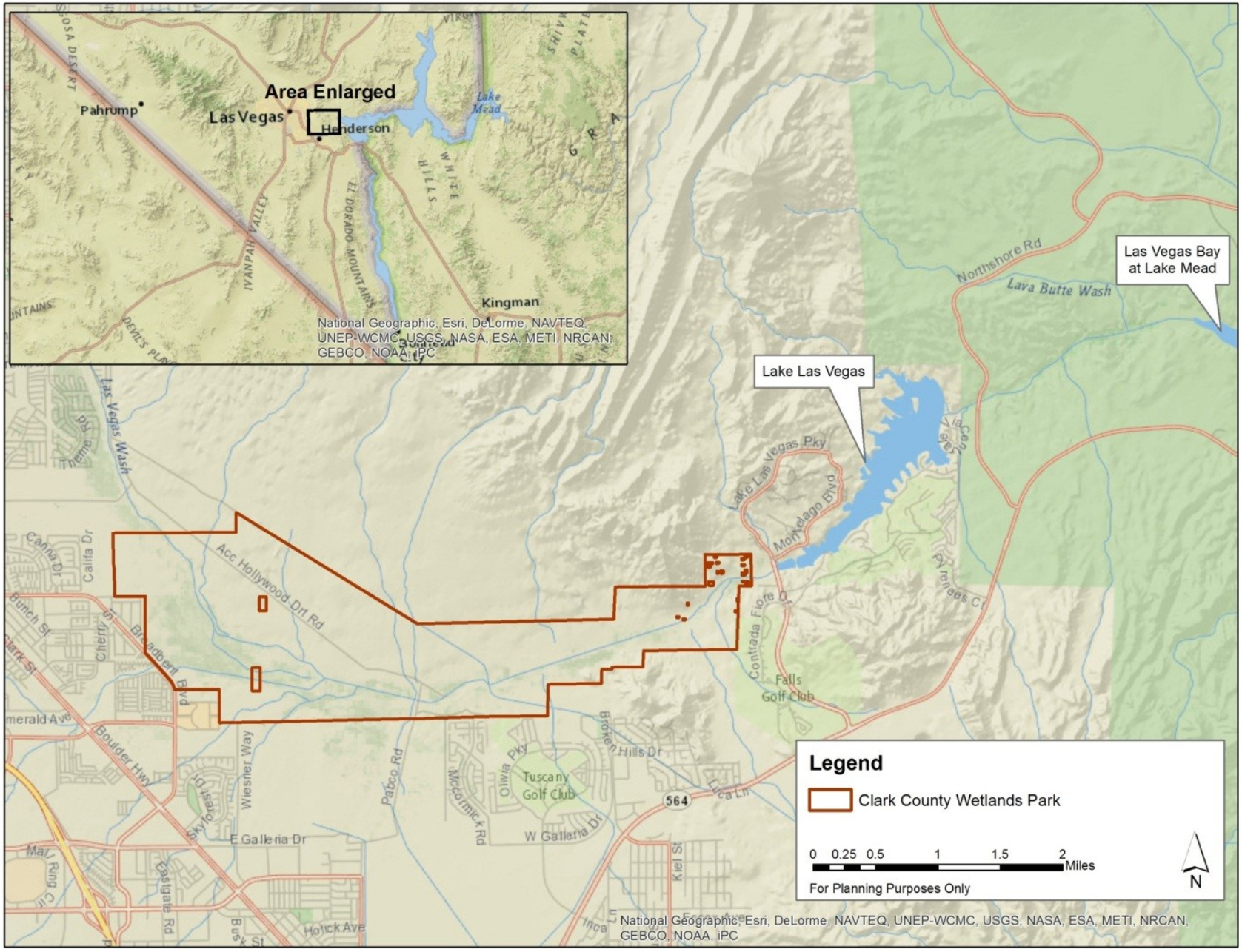
Clark County Wetlands Park



Las Vegas Wash Mammal Surveys

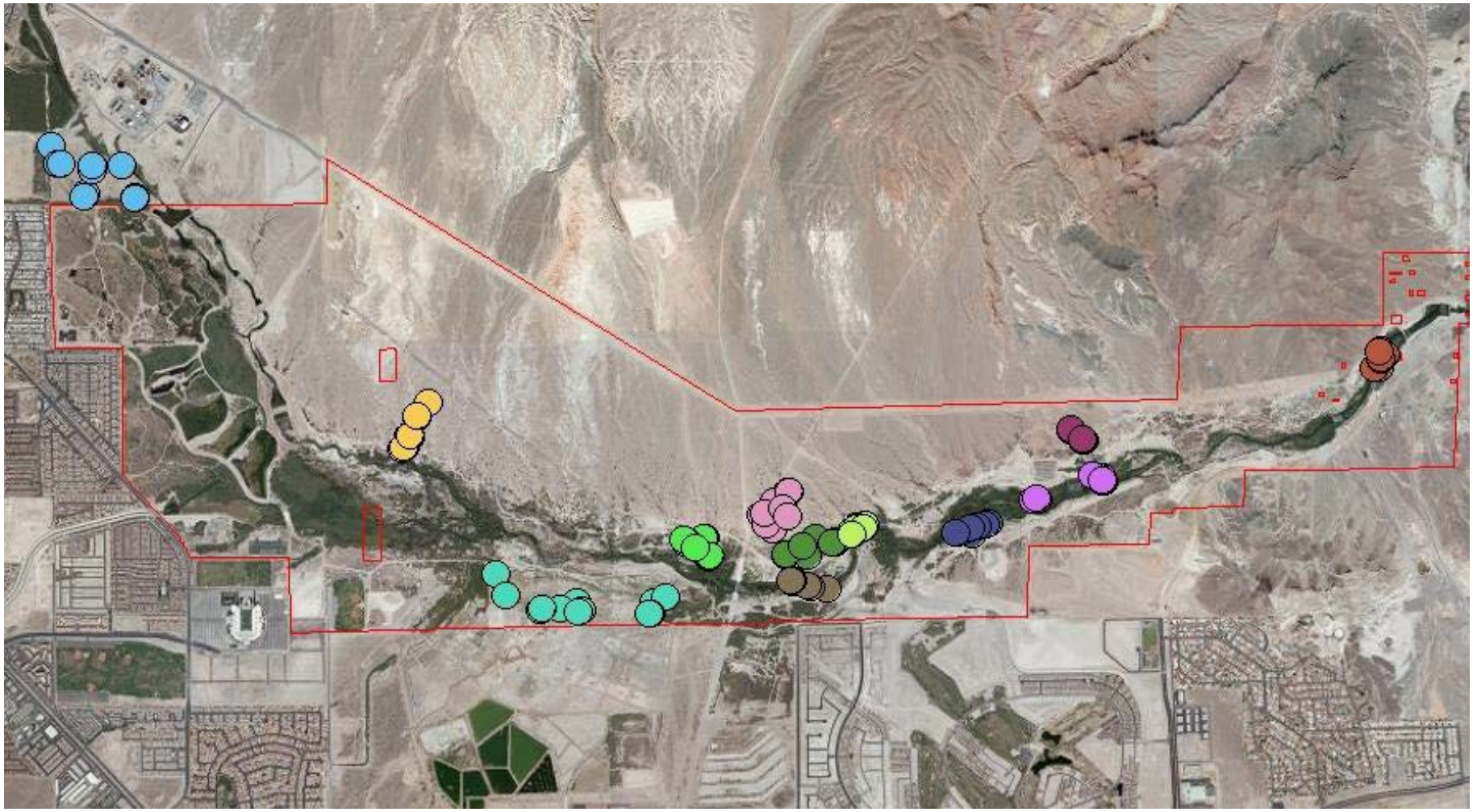
- Baseline surveys for mammals were conducted by Bradley and Niles in 1972 (Bradley and Niles 1973)
- Small mammals were studied by students at UNLV in 2002 – primarily upland areas
- Prior to 2009, large mammal activity was surveyed through casual observations, tracks and sign

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

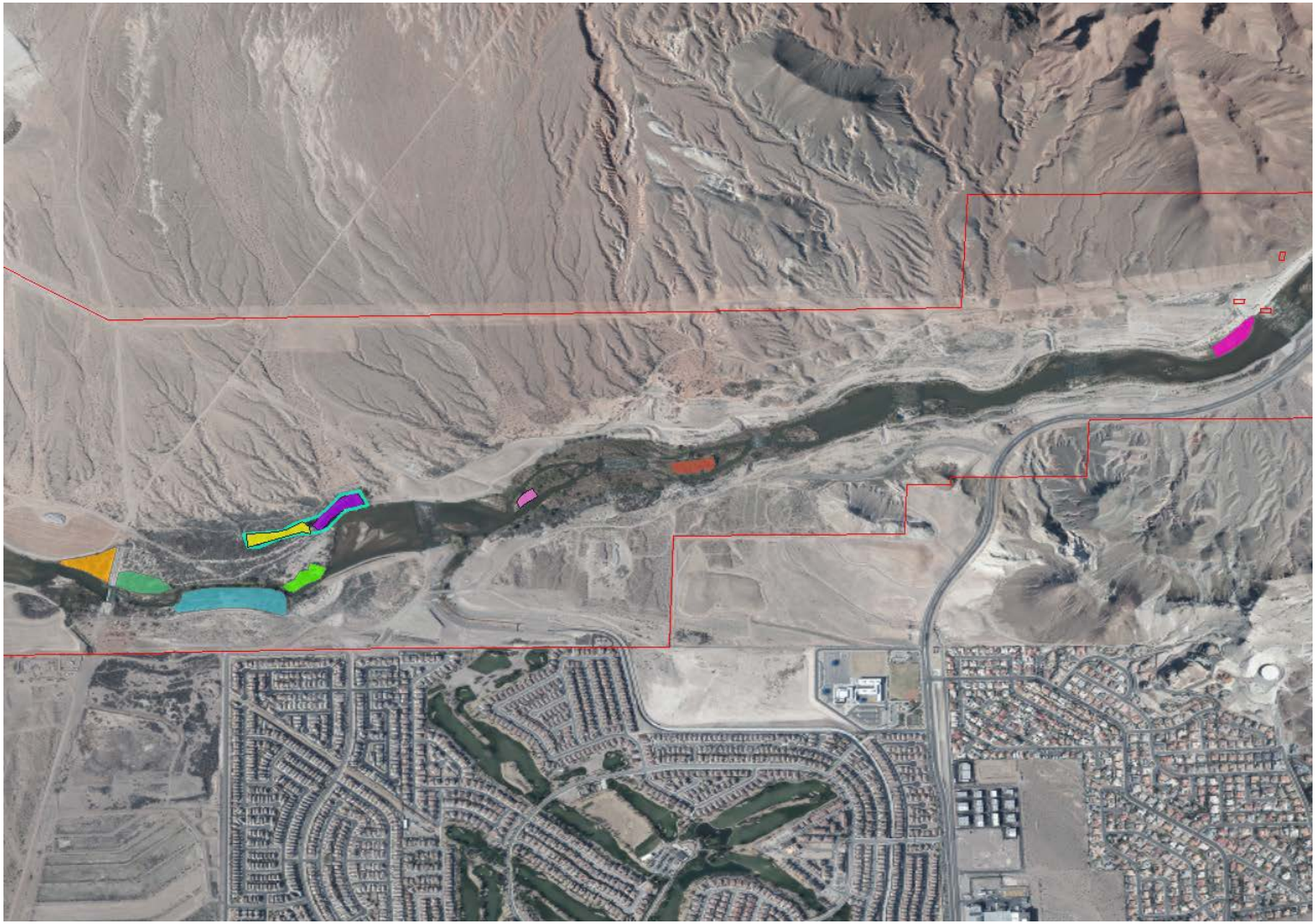
- 12 sites along the Wash
  - 6 riparian, 6 upland
- Three camera traps in a single site for one week each
  - Repeated each season
- Camera locations were baited with food, scent or combination
- Locations selected to avoid human disturbance
- Cameras took both photos and video



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.

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

Coyote

Northern Racoon

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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