

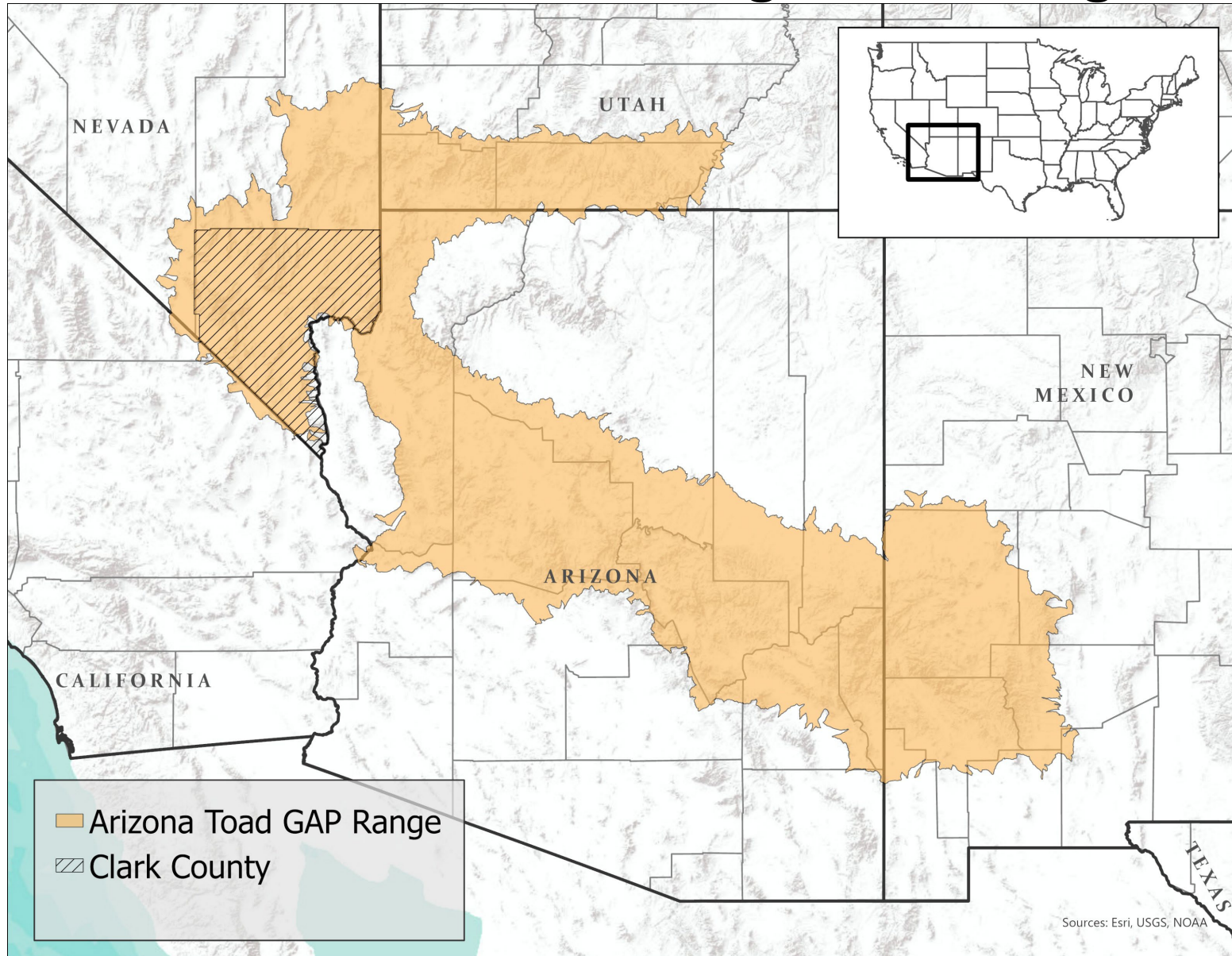
Distribution and Threats to the Arizona Toad (*Anaxyrus microscaphus*) in Clark County

Kenzi Stemp and Blake Hossack

U.S. Geological Survey Northern Rocky Mountain Science Center



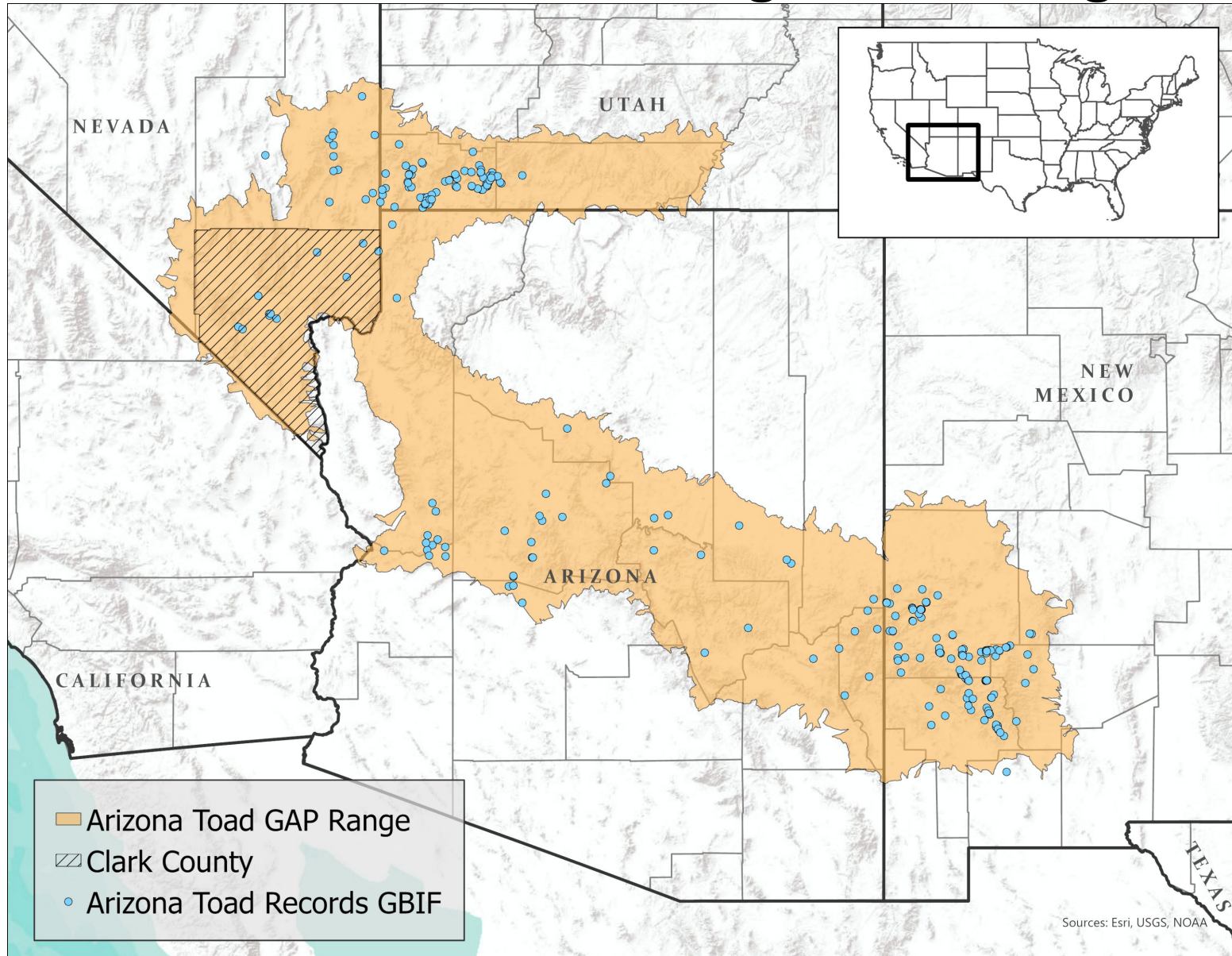
Background: Range



- Petitioned for ESA listing
- SSA underway



Background: Range



- Petitioned for ESA listing
- SSA underway



Background: Habitat



- Riparian specialist
 - Perennial flow
 - Shallow backwaters
 - Sandy/rocky substrate

Threats: Hybridization

Journal of Herpetology, Vol. 20, No. 1, pp. 11-21, 1986
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Hybridization Between the Toads *Bufo microscaphus* and *Bufo woodhousei* in Arizona: Morphological Variation

BRIAN K. SULLIVAN¹

Journal of Herpetology, Vol. 49, No. 1, 150-156, 2015
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Thirty Years of Hybridization between Toads along the Agua Fria River in Arizona: I. Evidence from Morphology and mtDNA

BRIAN K. SULLIVAN,^{1,2} JESSICA WOOTEN,³ TERRY D. SCHWANER,⁴ KEITH O. SULLIVAN,¹ AND MIZUKI TAKAHASHI⁵

Herpetological Conservation and Biology 4(2):198-206
Submitted: 1 December 2008; Accepted: 10 February 2009

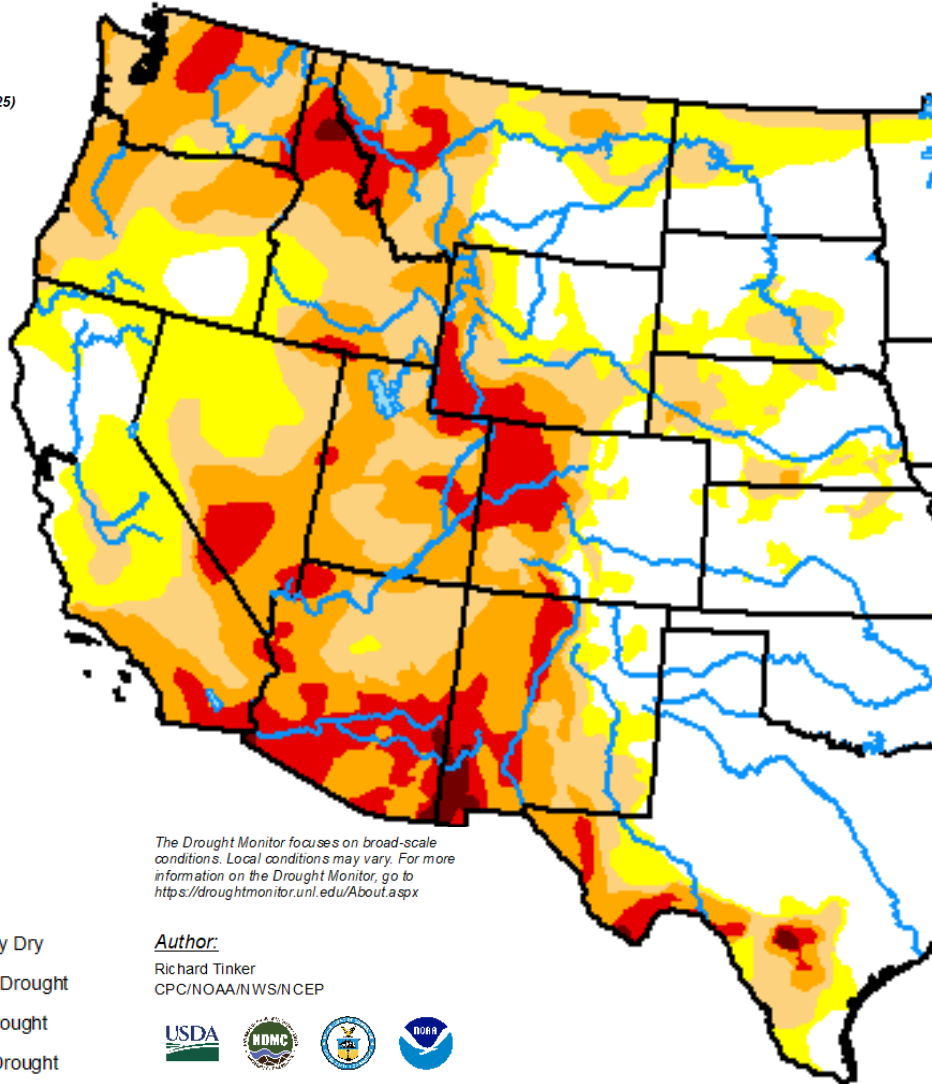
FIFTY YEARS OF HYBRIDIZATION: INTROGRESSION BETWEEN THE ARIZONA TOAD (*BUFO MICROSCAPHUS*) AND WOODHOUSE'S TOAD (*B. WOODHOUSII*) ALONG BEAVER DAM WASH IN UTAH

TERRY D. SCHWANER¹ AND BRIAN K. SULLIVAN²



Threats: Drought & Impoundments

August 5, 2025
(Released Thursday, Aug. 7, 2025)
Valid 8 a.m. EDT



Intensity:

-  None
-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Richard Tinker
CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

Data available from <https://droughtmonitor.unl.edu>



Project Goals

- Species status in Clark County (presence/absence)
- Collecting data for SSA
- Habitat suitability map to identify suitable habitat
- Assess hybridization threats

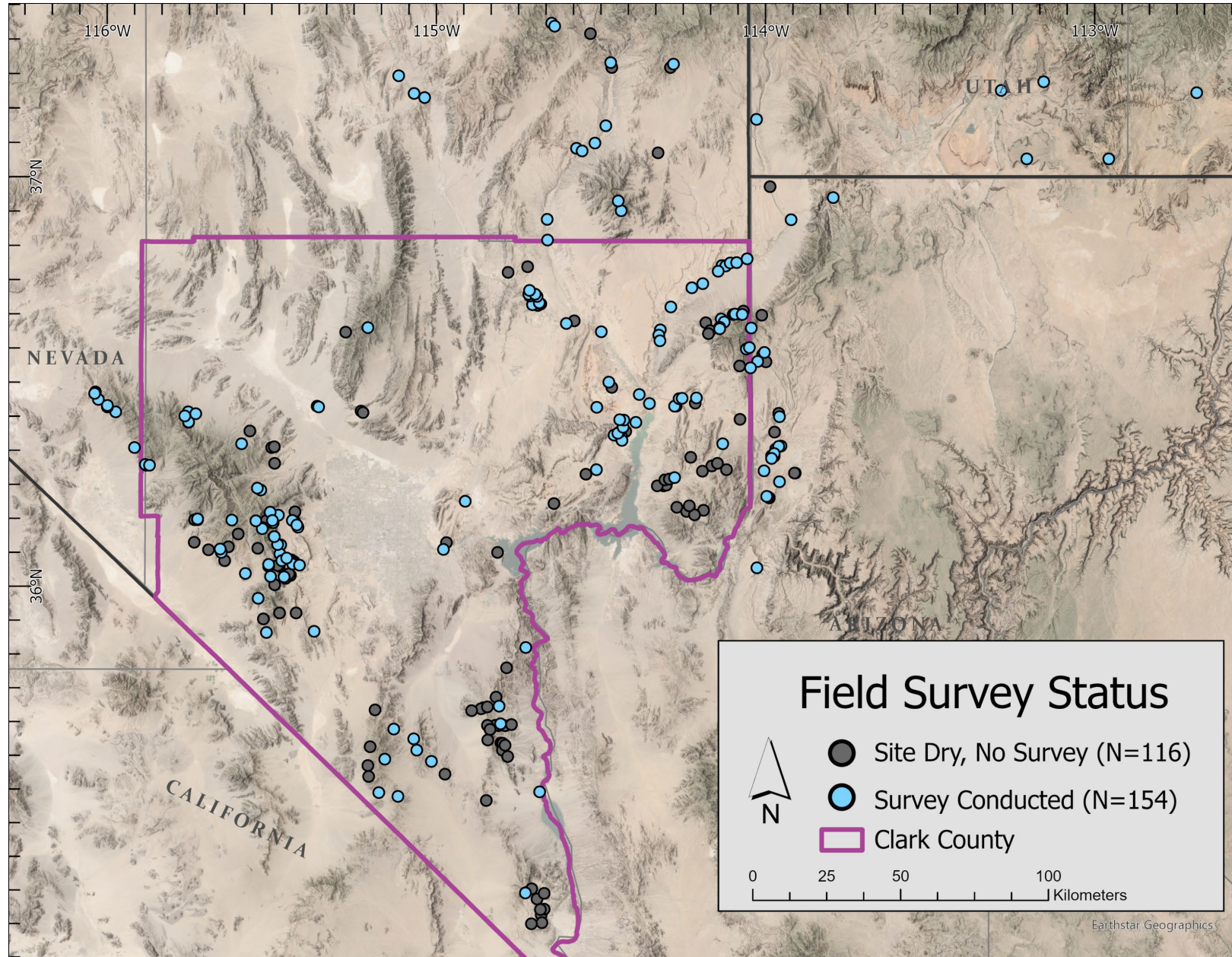


Sampling Methods

- Diurnal and nocturnal surveys
- eDNA
- Hybrid assessment



Sampling Locations: 2024-2025



- Museum records
- Clark Co. Riparian Reserves
- 2024 results
- Previous herptile surveys
- Suitable habitat

- 198 surveys, 154 sites
 - 139 diurnal
 - 59 nocturnal
- 295 eDNA filters

**Preliminary information subject to revision.
Not for citation or distribution.**

Potential Habitat in Clark County



- Gold Butte, Red Bluff Spring



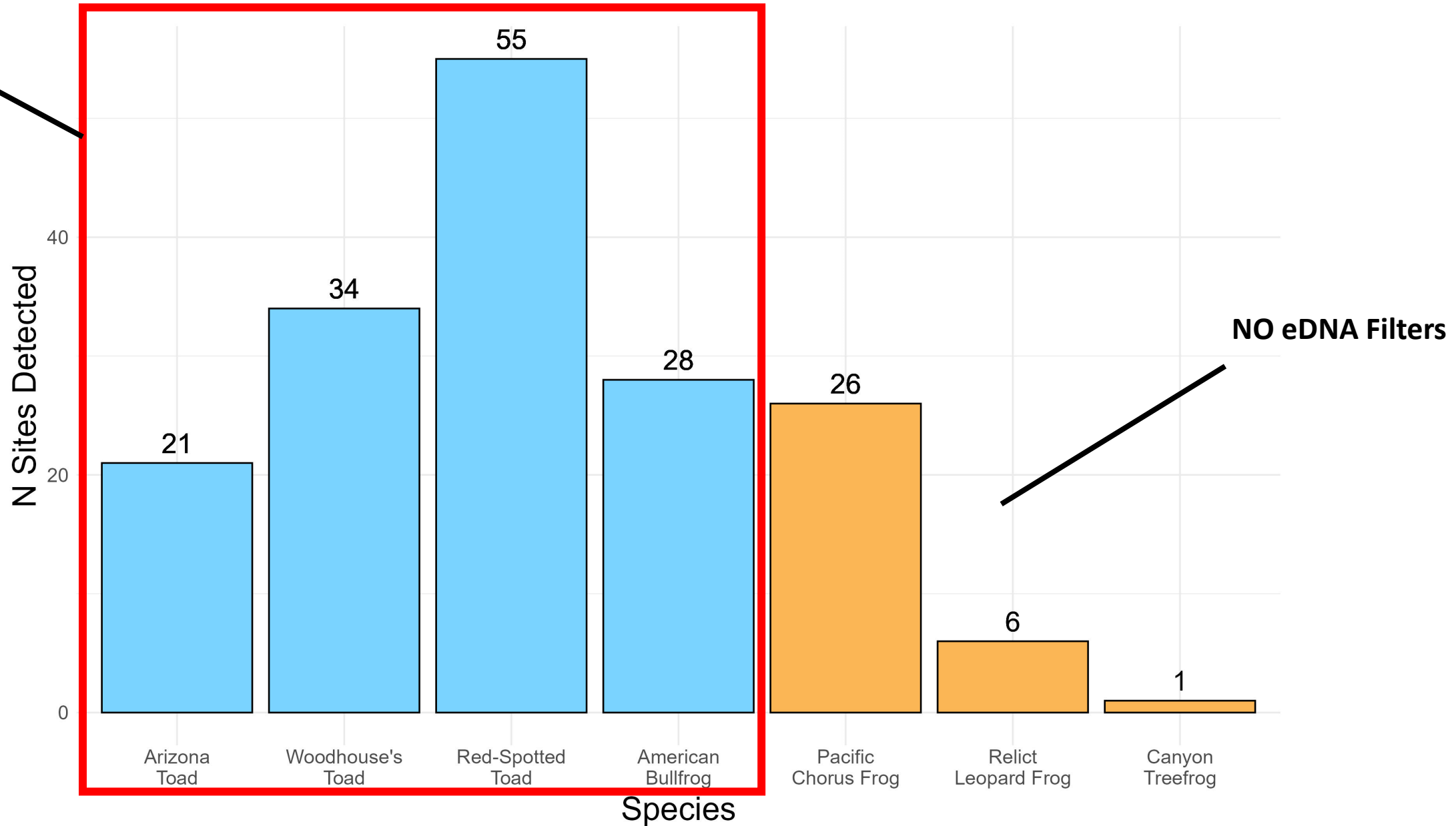
- Lake Mead, Valley of Fire Wash



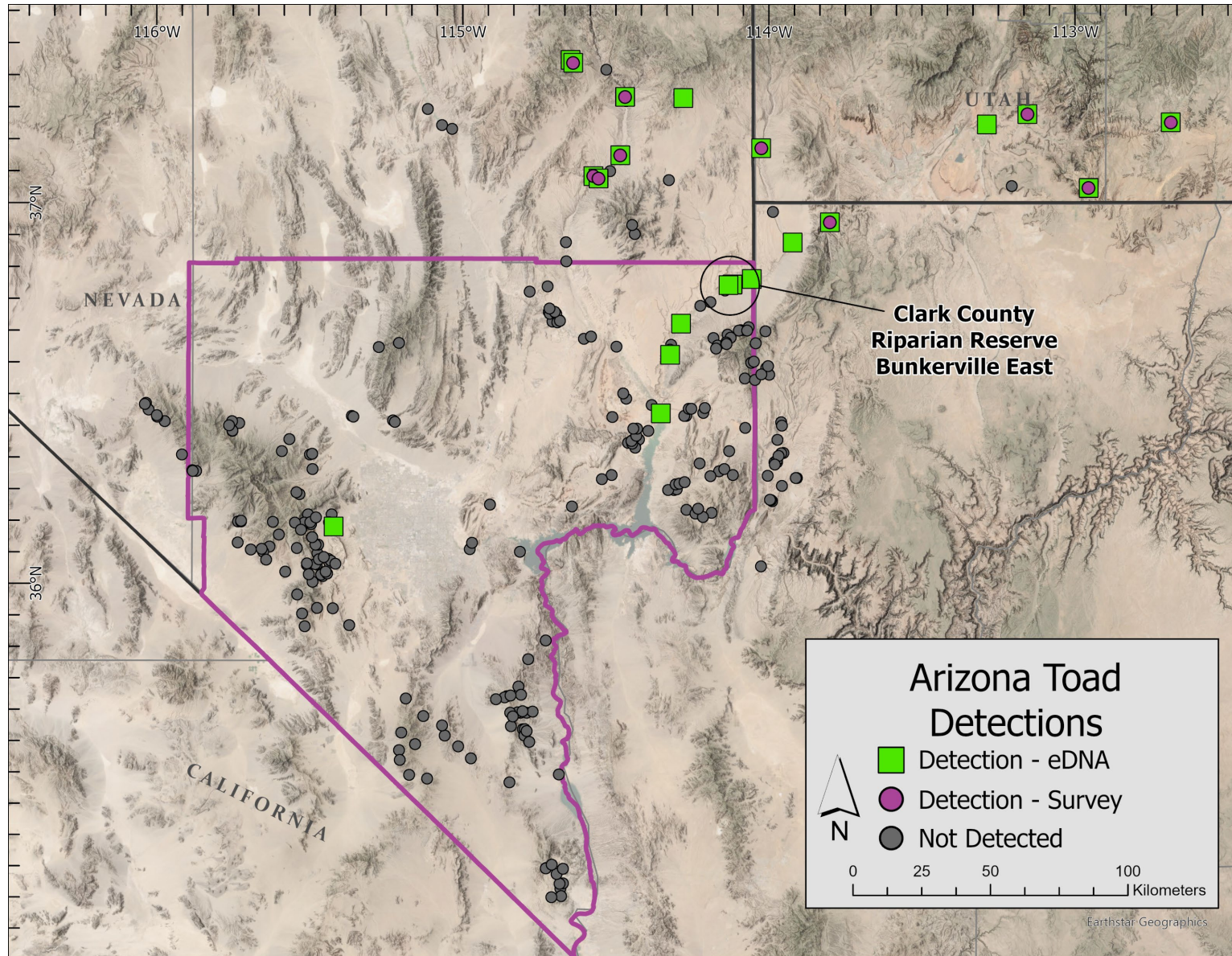
- Moapa Valley, Apcar Property Spring

Results: Amphibian Detections

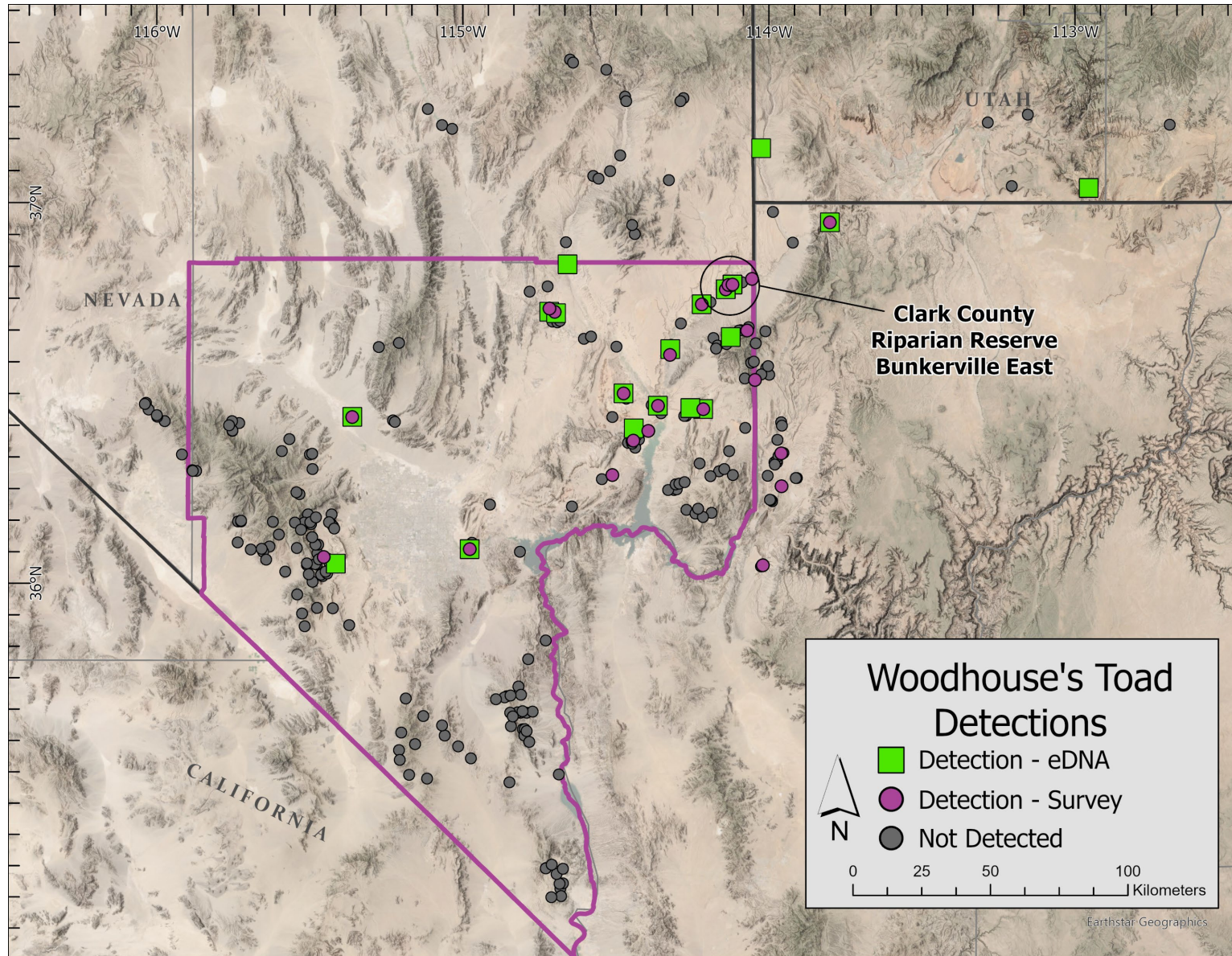
eDNA Filters



Results: Arizona Toad Detections



Results: Woodhouse's Toad Detections



Results: Hybrid Scores

Woodhouse's Toad

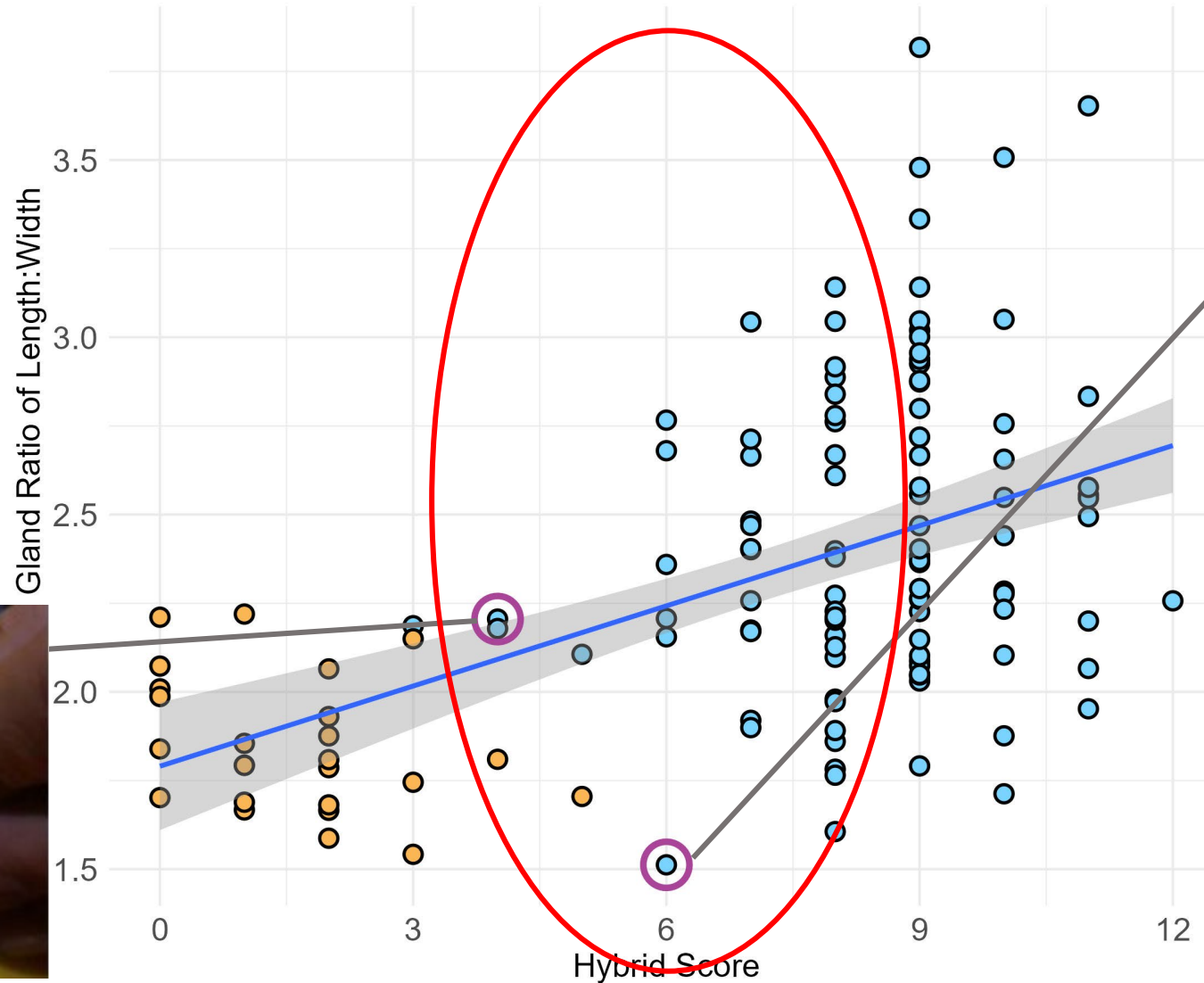


Arizona Toad



- Hybrid Score Traits
 - Cranial crests
 - Mid-dorsal stripe
 - Pale eyelid bar
 - Ventral spotting
- Gland shape
 - Ratio of length:width

Results: Hybrid Scores



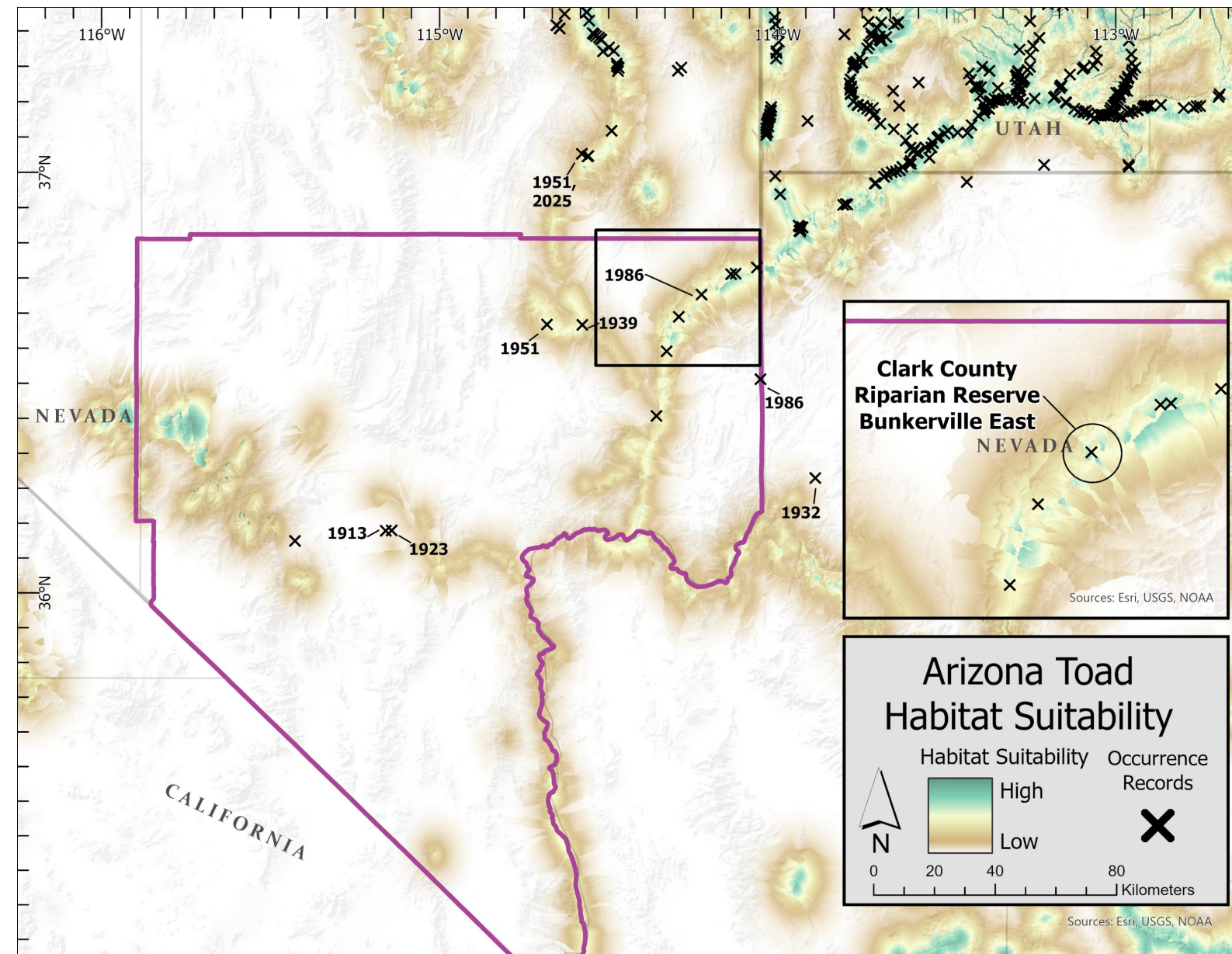
Species

- Arizona Toad, N = 29
- Woodhouse's Toad, N = 104



Preliminary information subject to revision.
Not for citation or distribution.

Results: Habitat Suitability



- Riparian canopy (45%)
- Distance to streams (31%)
- Actual Evapotranspiration (9%)

Conclusions

- Arizona Toad hits in Clark Co!
- Woodhouse's and Red-spotted Toads are abundant
- Pockets of suitable habitat exist in Clark County
- Hybridization is likely



Acknowledgements

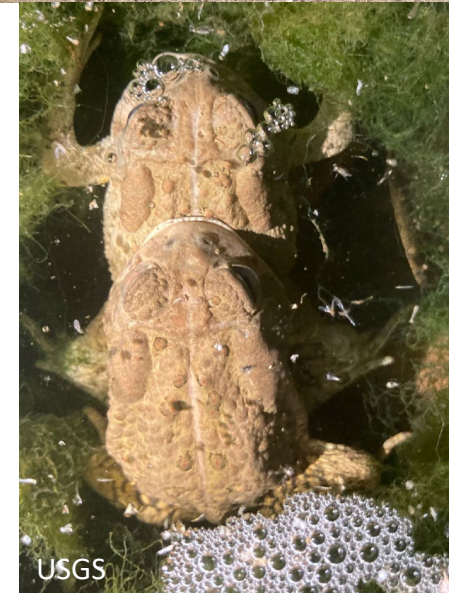
For more information: Blake_Hossack@usgs.gov or stempkm@gmail.com

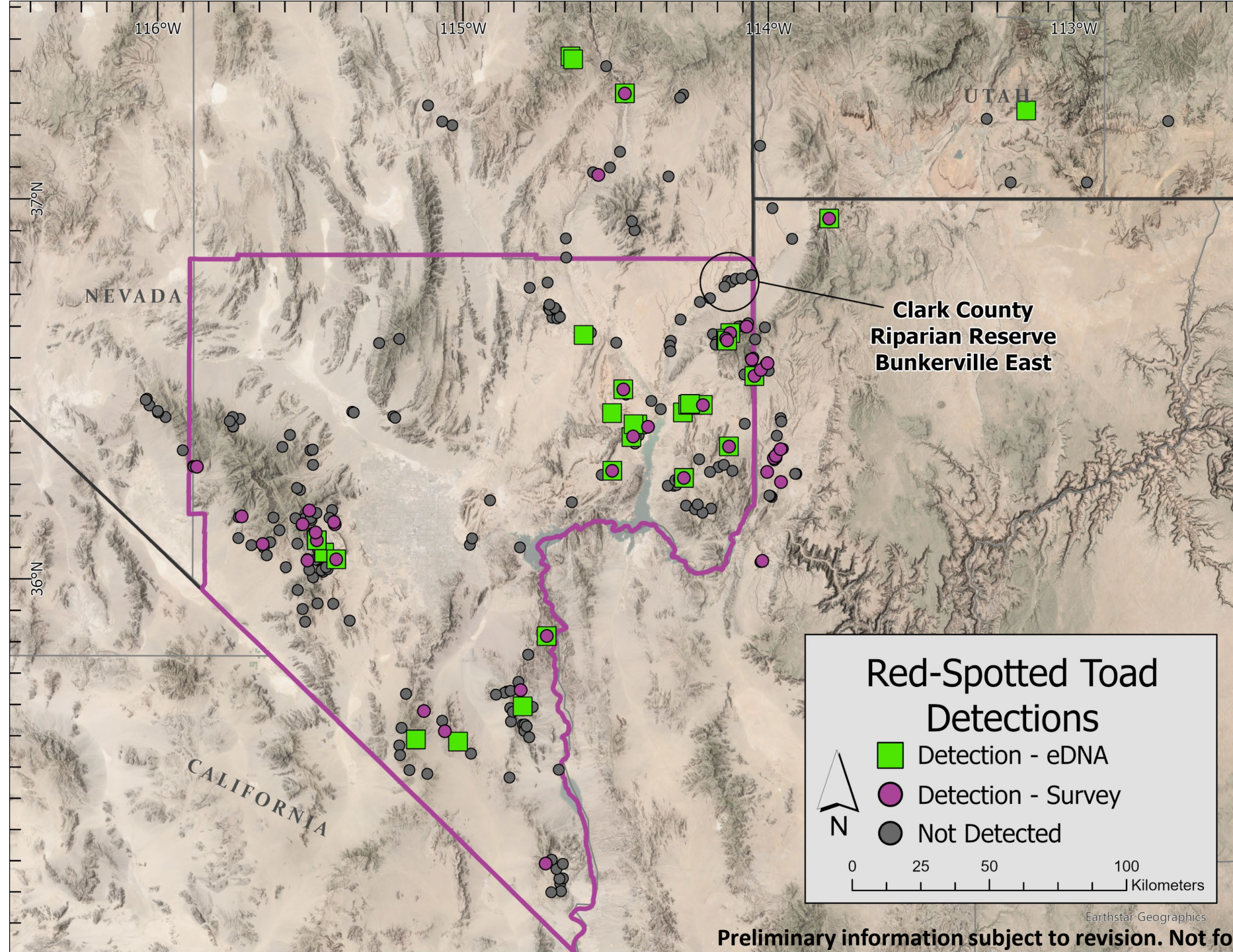
Funding provided by Clark County Desert Conservation Program

Thanks for office and field support: B. Moyer, B. Stevens, D. Chon, T. Esque, F. Chen, C. Kallstrom, M. Dowalter-Miracle, A. Ambos, D. Sayzak, R. Rackliff, A. Santero, D. Low, M. Ryan, K. Wheeler, K. Guadalupe and many others!

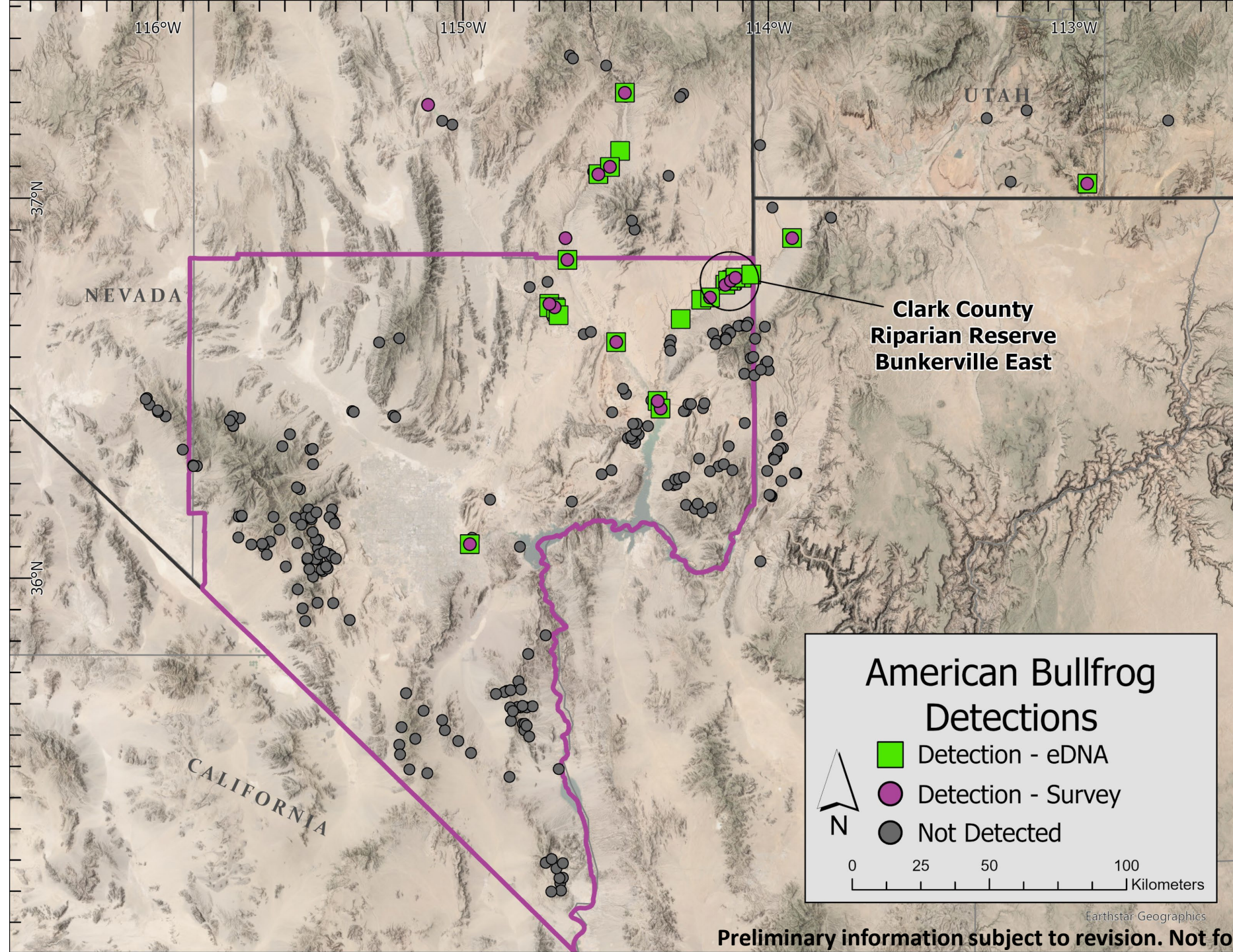


desert conservation
PROGRAM

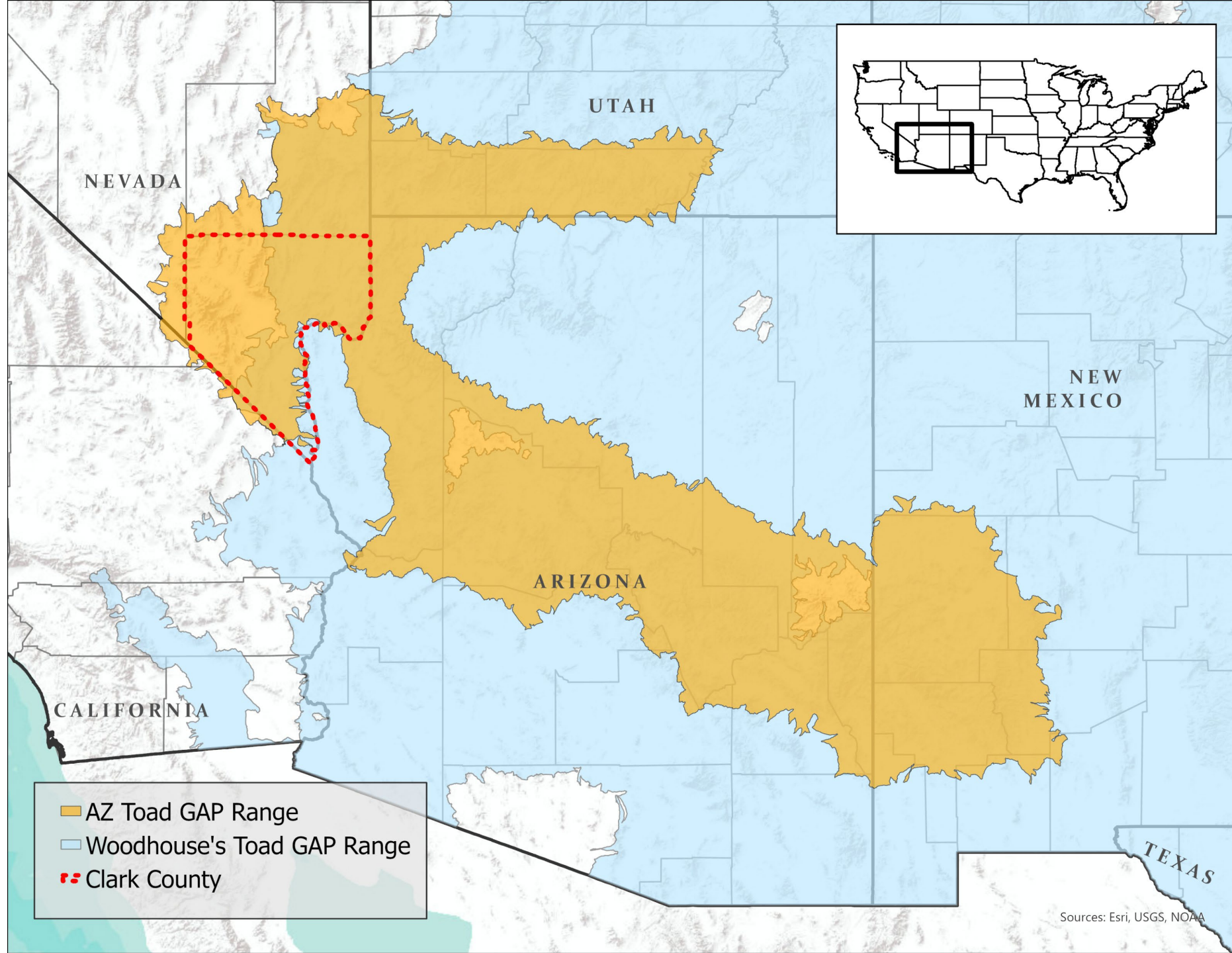




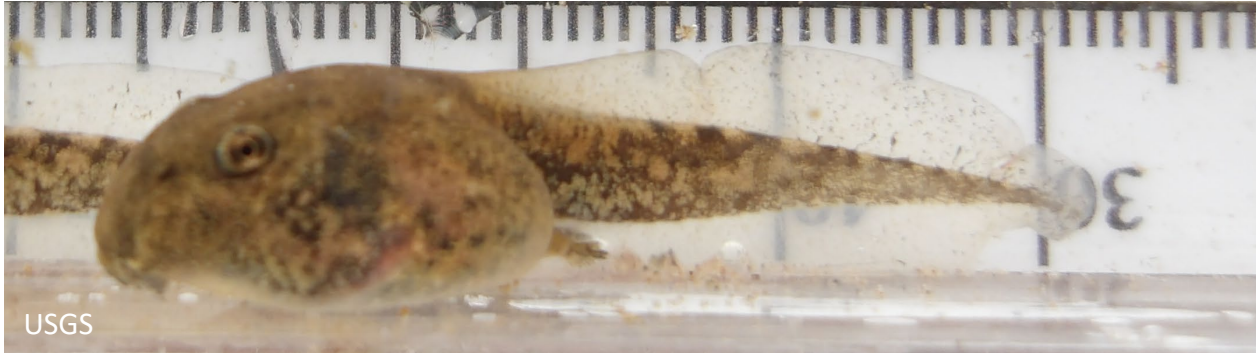
Preliminary information subject to revision. Not for citation or distribution



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Tadpole ID Challenges



- Arizona Toad?



- Woodhouse's Toad?



- Red-spotted Toad?