



# **Pinal County Wildlife Habitat and Movement Corridors: Riparian Model Validation**

Kelly Wolff : Habitat, Evaluation and Lands Program Manager

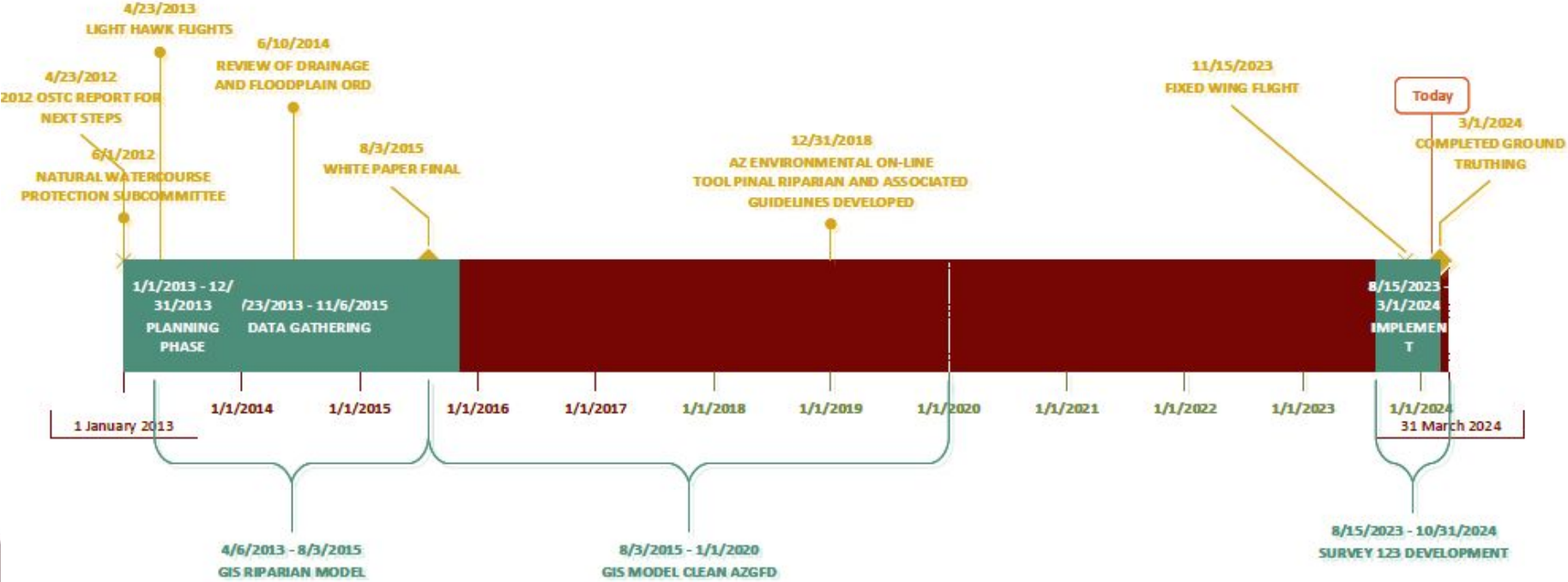


# Overview

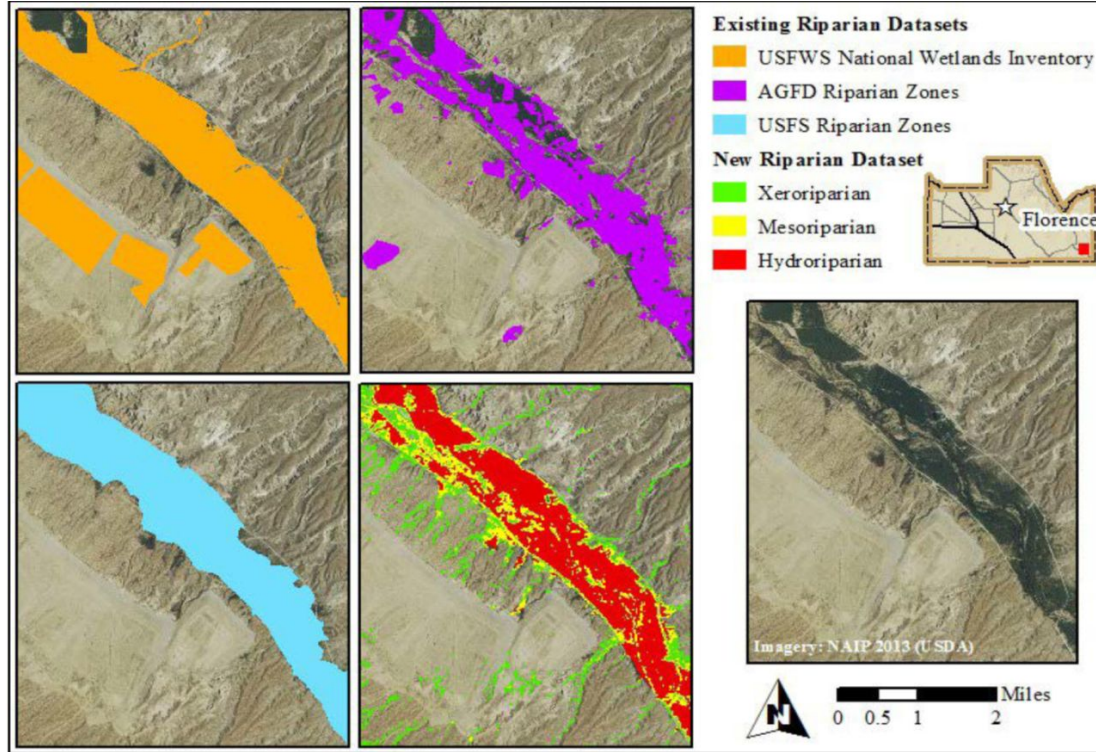
- Background on riparian model
- Current projects
- Preliminary results
- Next steps



# Background



# Original Model



Utilized 1 meter resolution data in conjunction with remote sensing classification techniques and a valley bottom model

Density analysis of annual and perennial vegetation

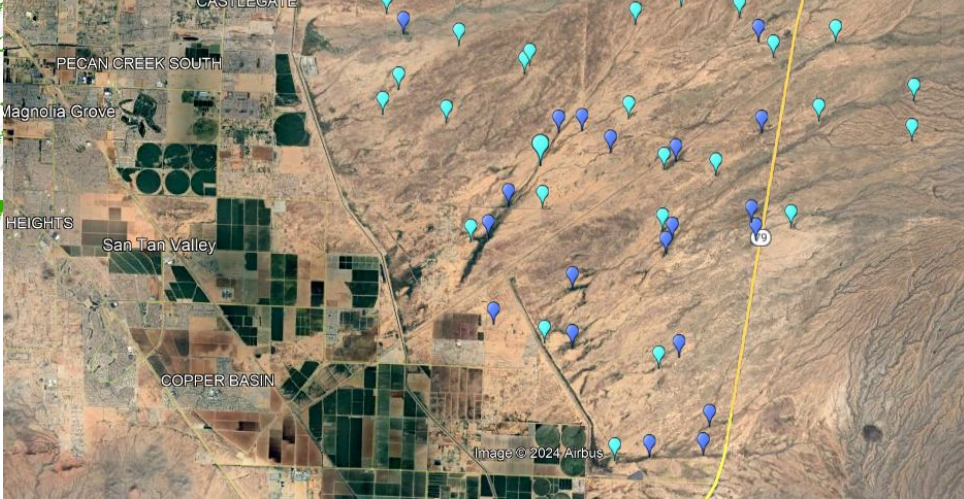
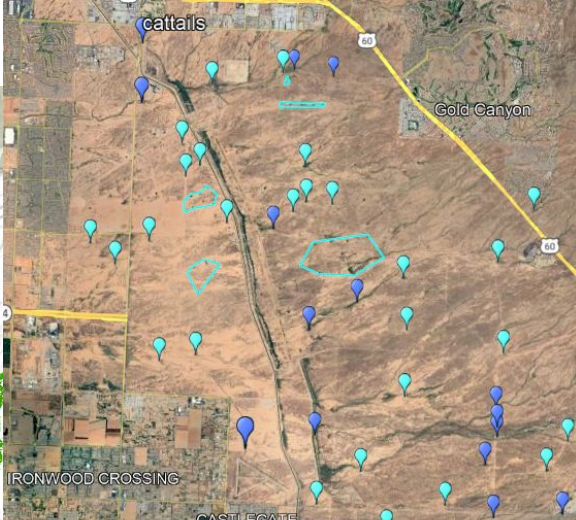
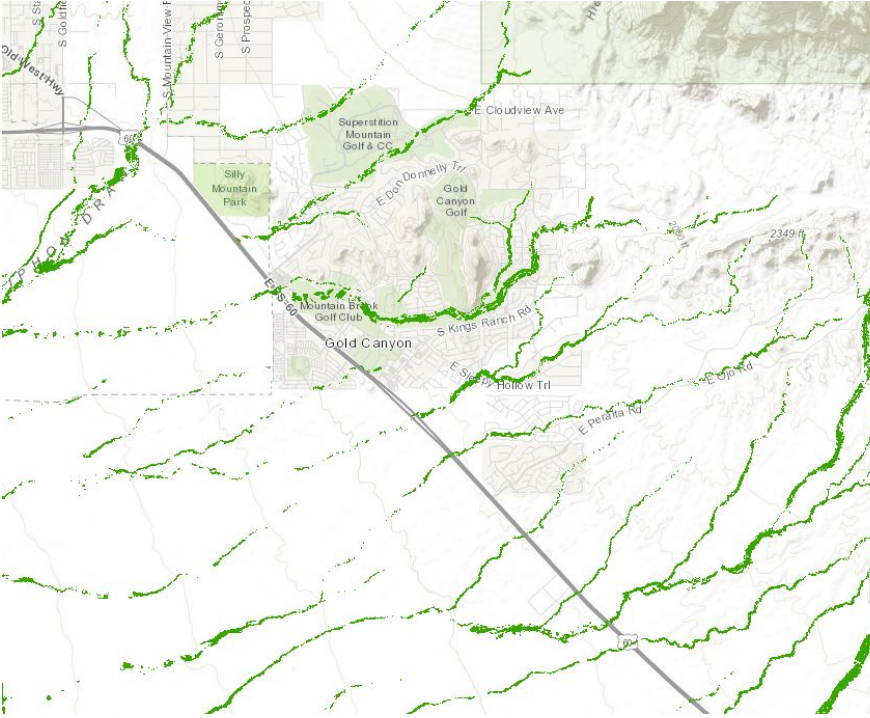
Model produced a comprehensive map of hydroriparian, mesoriparian and xeroriparian.

## Limitations:

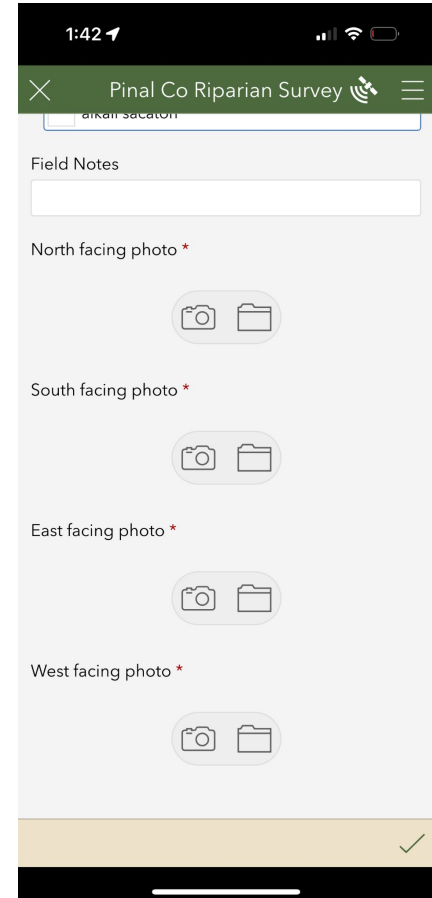
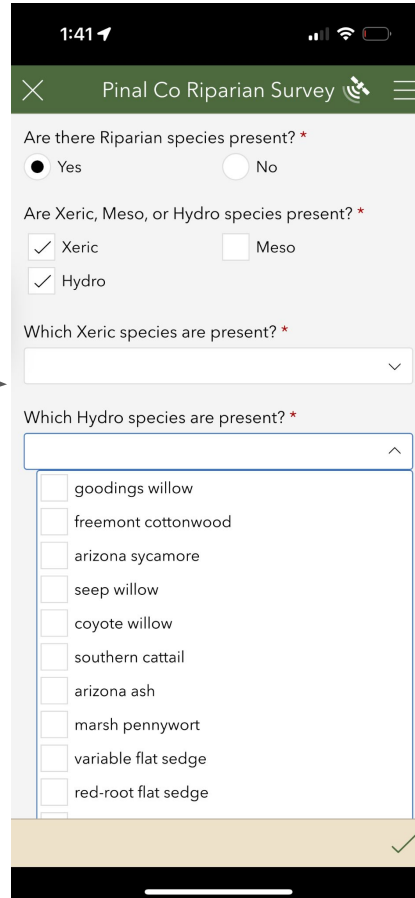
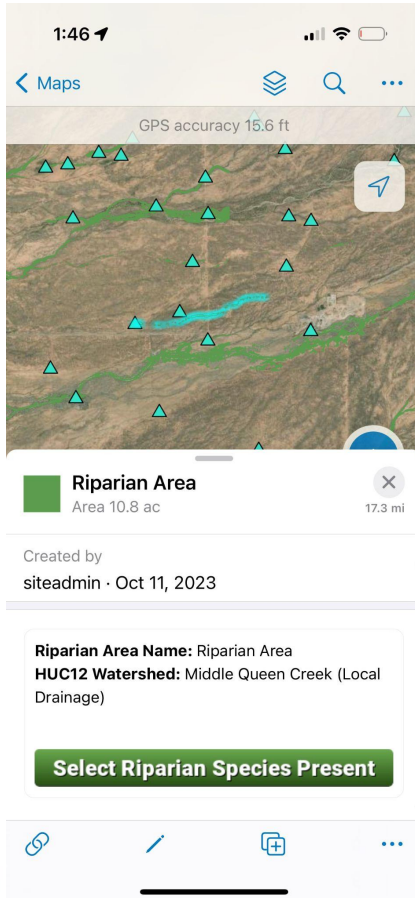
- Prioritization
- Regulatory measures
- Ground truth
- Xeroriparian under represented



# Model at Work

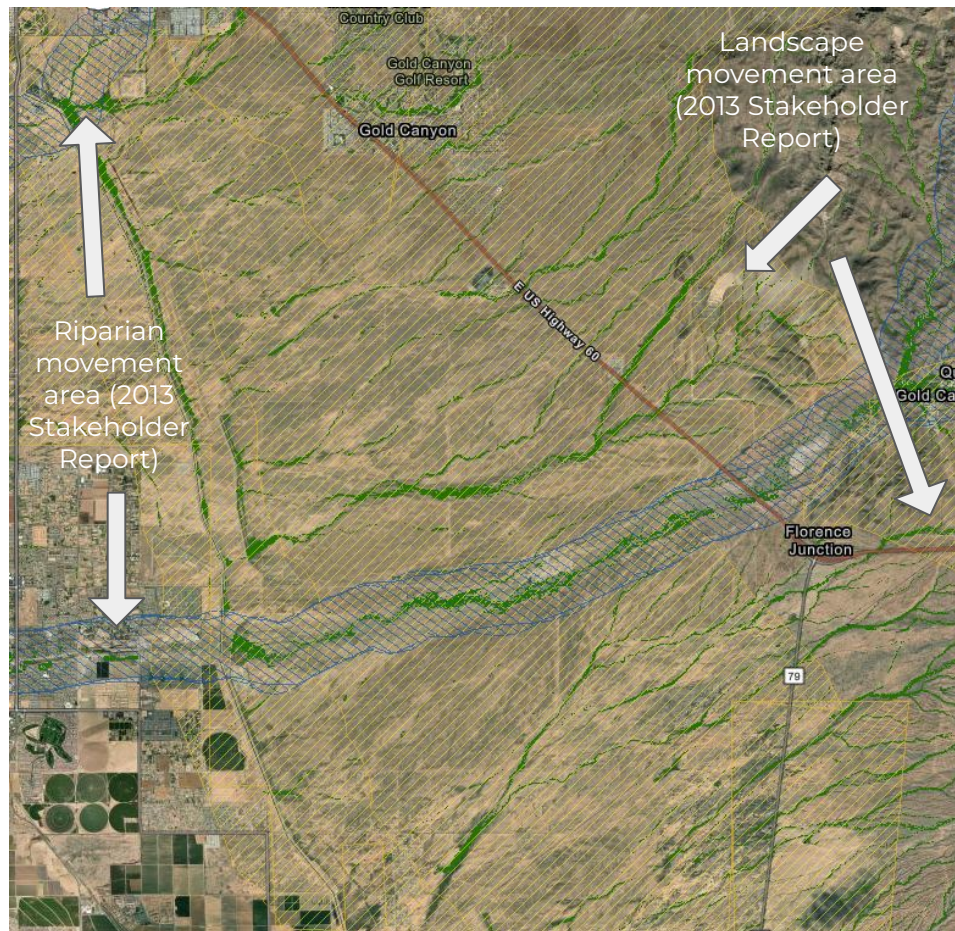
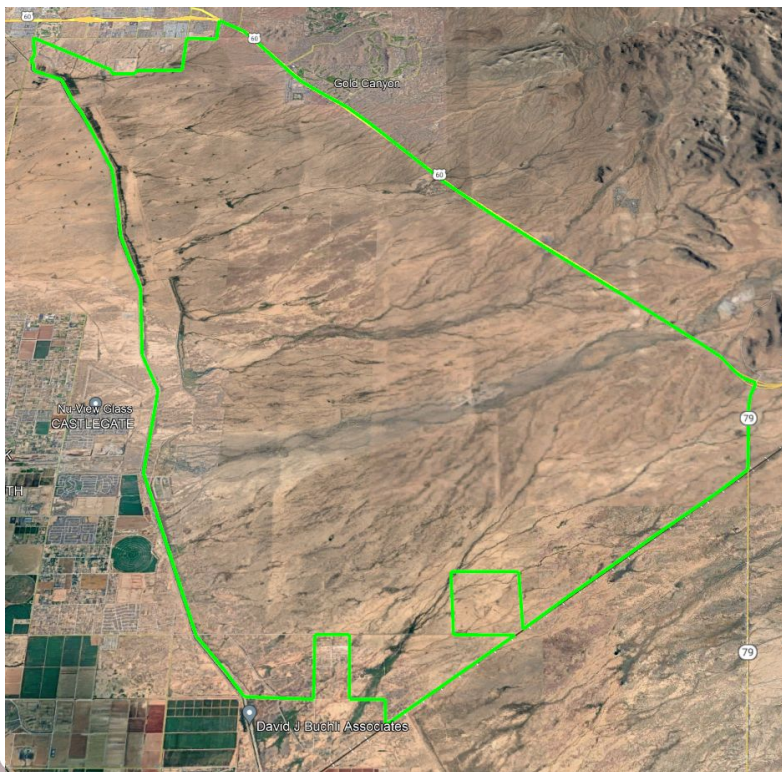


# Survey 123 Entry Example

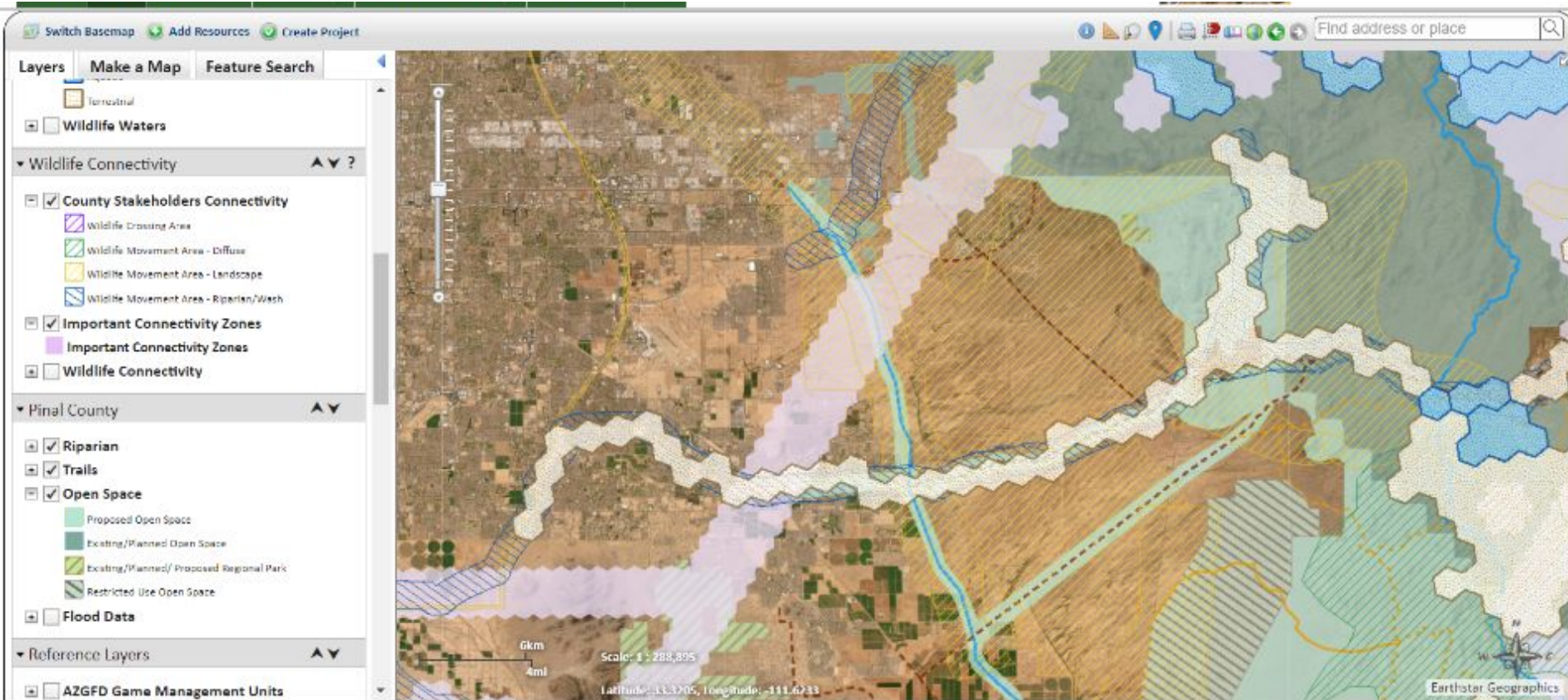




# Wildlife Monitoring and Movement Corridors

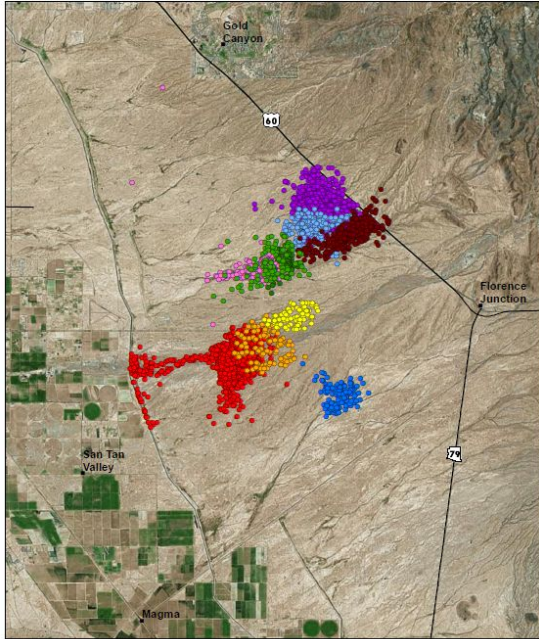






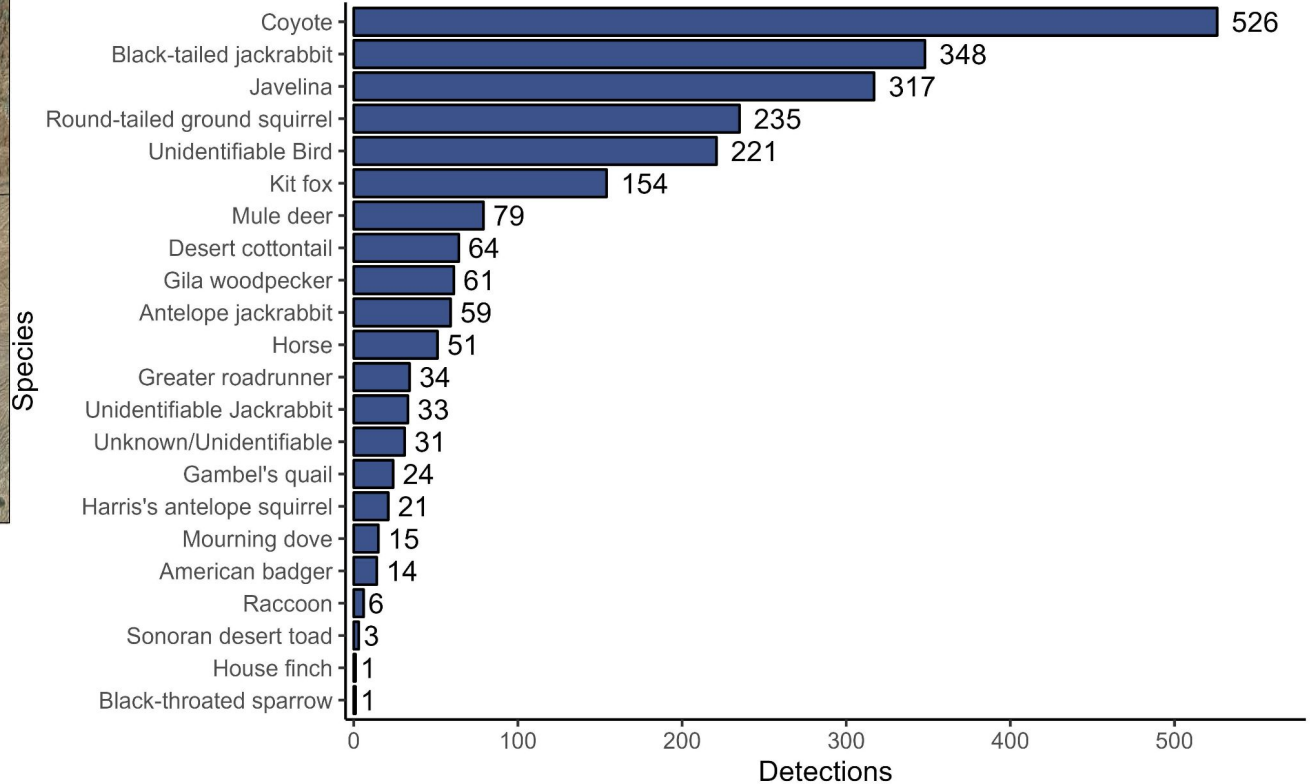


# Kit Fox Study



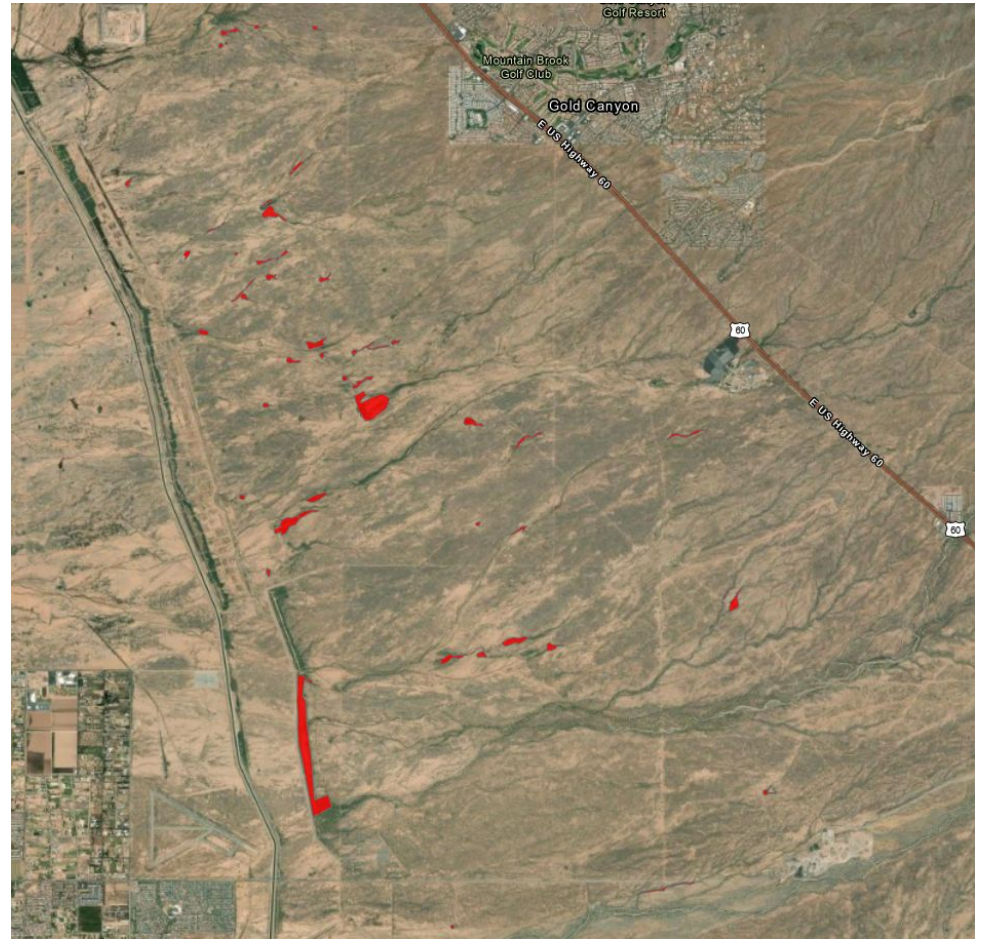
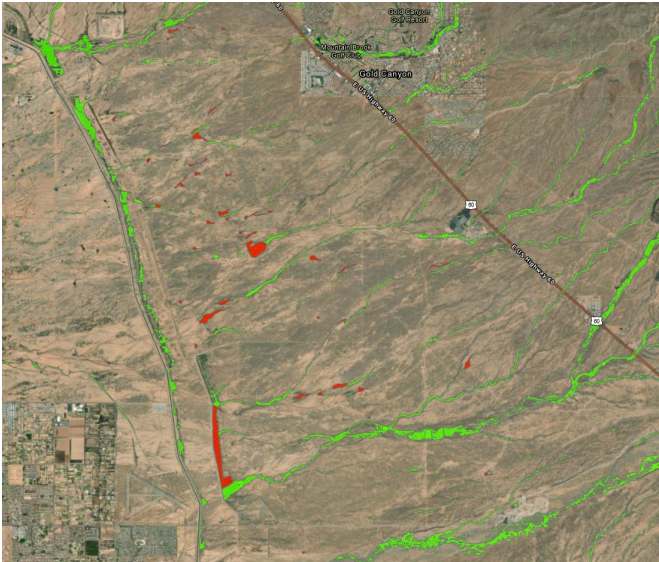
## Wildlife species detections August to October at North-South Corridor

Cameras: 40 Deployment Days (Average): 57 Species: 22 Total Detections: 2298



# Results

- Validated a portion of the previous model
- Mapped an additional 254-acres of riparian directly into the model
- Documented areas of perennial water, water tanks and wildlife sign (i.e. sightings, tracks, scat)





# Other Studies

- Desert tortoise 2010
- Tucson Shovel-nosed snake 2014
- OHV Kit Fox 2016
- North South Alignment Analysis 2019

## Desert Tortoise Microhabitat Selection on the Florence Military Reservation, South-Central Arizona

DAVID D. GRANDMAISON,<sup>1,2</sup> MICHAEL F. INGRALDI,<sup>1</sup> AND FRANCES R. PECK<sup>3</sup>

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<sup>3</sup>Arizona Department of Emergency and Military Affairs, Arizona Army National Guard, 5636 East McDowell Road, Phoenix, Arizona 85008 USA

### Research Article

## Off-Highway Vehicle Road Networks and Kit Fox Space Use

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ESTHER S. RUBIN, Arizona Game and Fish Department, 5000 W. Carefree Highway, Phoenix, AZ 85086, USA

## Tucson Shovel-nosed Snake (*Chionactis annulata klauberi*) Surveys on the Tucson Electric Power Company Pinal Central to Tortolita Substation Transmission Corridor

Prepared by:

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# Next Steps

- Prioritization of these areas for informing the avoidance
- Buffer and/or setback criteria
- Design recommendations for development and transportation projects
- Fencing design to allow for permeability for wildlife movement
- Develop drainage ordinances and/or policies to maintain natural and beneficial floodplains and ecological services
- Inform planning for stormwater runoff
- Inform mitigation and/or compensation for impacts
- Develop lighting recommendations
- Recommendations for the drainage master plan and informing the hydrologic model
- Guidance document for development working with the natural values on the landscape
- Planning and zoning work session
- Informing implementation of the open space and trails master plan





# Contacts

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