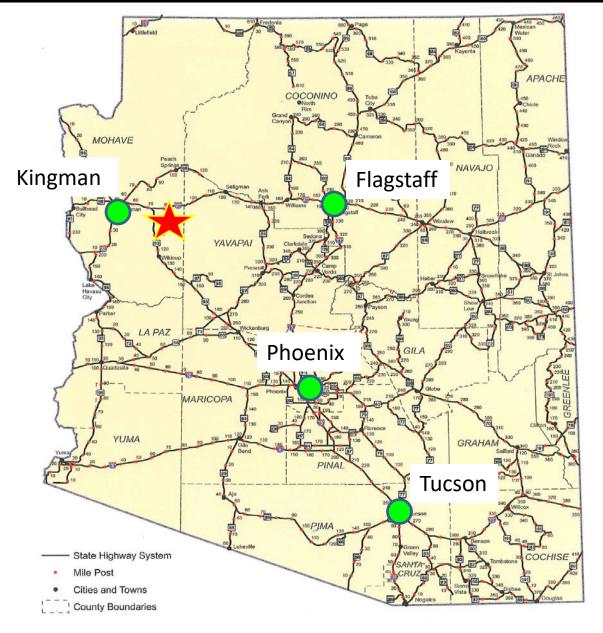
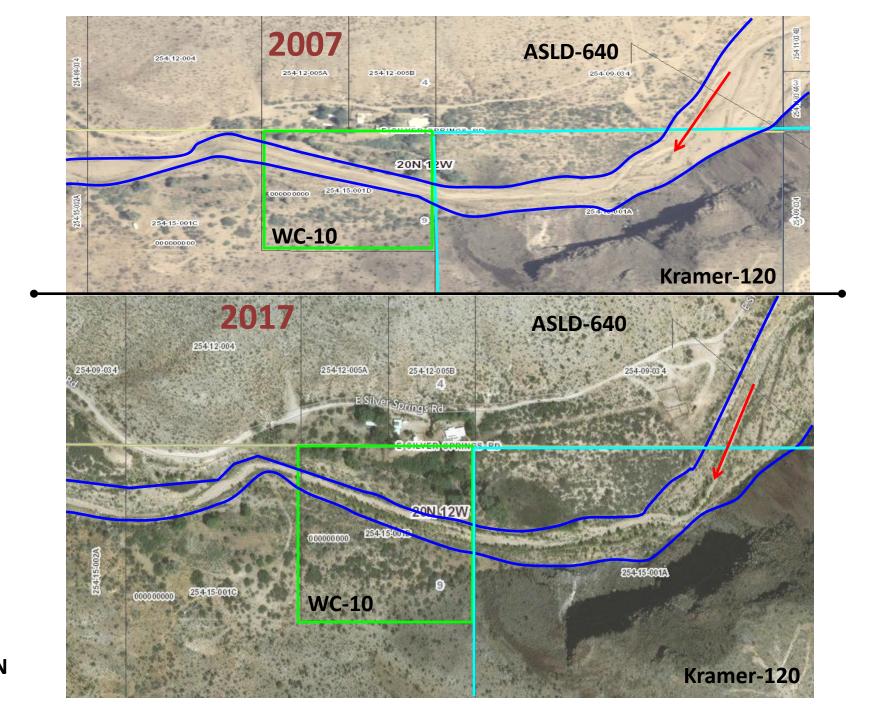
LONG-TERM PASSIVE AND ACTIVE MANAGEMENT, DATA COLLECTION AND TRENDS, OF A HIGH DESERT RIPARIAN AND UPLAND PRESERVE IN NORTHWESTERN



Flagstaff - 3 Feb 2018







INTRODUCTION AND TIME LINE:

- ➤ 10-Acres on Willow Creek surrounded by other Private Parcels and Arizona State Lands U.S. Army Corps of Engineers (USACE) Jurisdictional Waters flowing to the Colorado River via Big Sandy River to Bill Williams River
- Established in 2007 Original intent as a Riparian Mitigation Bank with USACE

INTRODUCTION AND TIME LINE:

Fenced in October of 2008 to include adjacent 120 acre Kramer parcel east to Arizona State Lands



- Initiated Discussions and Mitigation Bank Prospectus with USACE in 2010
- Denied Mitigation Bank status by USACE in 2012 Due to Lack of Staff and Training in AZ —
 "Work with AZ Game and Fish Department" Can only mitigate through Clean Water Act "In-Lieu Fee" Program

SO, WHAT DO WE DO NOW?

HABITATS:

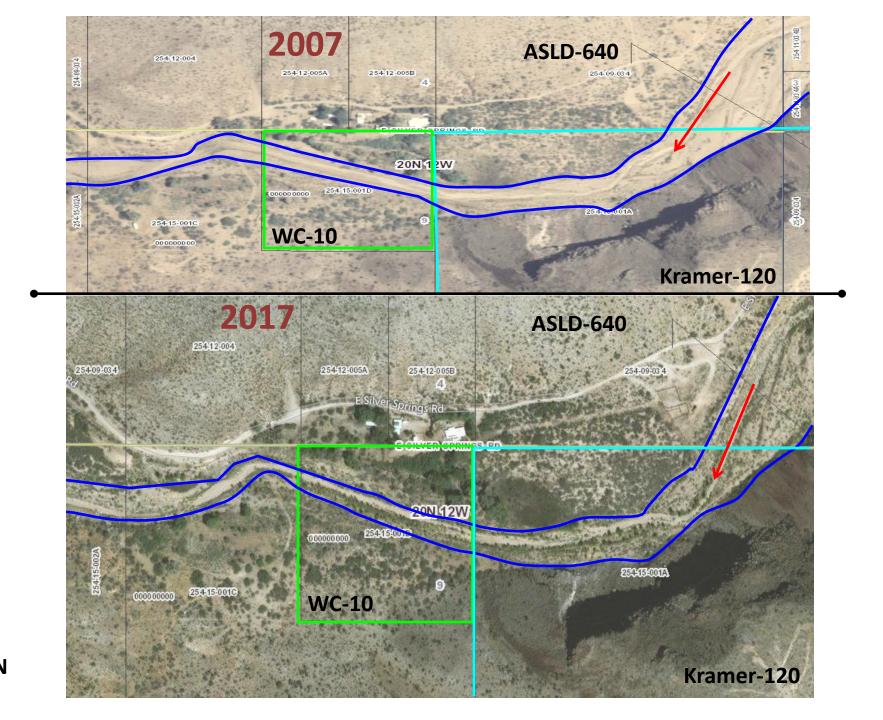
10-Acre Willow Creek Riparian Preserve

- 3.5-acres of Cottonwood-Willow Forest
 - (Arizona ash with seep willow understory)
- **6.5-acres of Desert Scrub** (mesquite dominant with native grasses, cactus, crucifixion thorn tree, creosote, and junipers)

120-Acre Kramer Property

- 4.2-acres of Cottonwood-Willow Forest
- 6-acres of Cliff Face
- 109.8-acres of Desert Scrub



















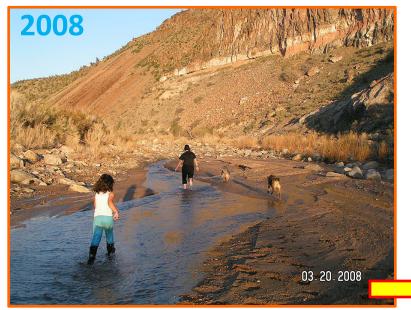




Q: HOW DID WE GO FROM THIS TO THIS?









A: MINIMAL MANAGEMENT!



FENCING AND MAINT.



TAMARISK REMOVAL



BIG LEAF MISTLETOE REMOVAL



WEED REMOVAL

Willow Creek Riparian Preserve WILDLIFE – Current Count

REPTILES = 20 Species

(11 Lizards [includes Gila Monster] and 9 Snakes)



AMPHIBIANS = 7 Species

(Includes Lowland Leopard Frog)

MAMMALS = 39 (Includes 17 Bats)

BIRDS = 117

INSECTS = Unknown!











Willow Creek Riparian Preserve WILDLIFE Trends - REPTILES

Stable (?) -



Banded Gila Monster

Lesser Earless Lizard

Gopher Snake

Rattlesnakes (All)

Zohra tailad Liz

Zebra-tailed Lizard

Desert Spiny Lizard

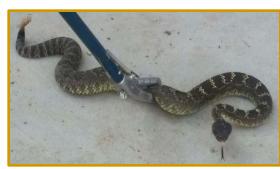
Red Racer

Black-necked Garter Snake

Declining (?) - Unknown Increasing (?) -

Western Patch-nosed Snake
Desert Striped Whipsnake





Range Extension or Rare – AZ Black Rattlesnake

Willow Creek Riparian Preserve WILDLIFE Trends - AMPHIBIANS

Stable (?) –

AZ Arroyo Toad*

Lowland Leopard Frog

Declining (?) –

Woodhouse's Toad*

Spadefoot*

Increasing (?) – Canyon Tree Frog

Range Extension or Rare (?) - Unk



Willow Creek Riparian Preserve WILDLIFE Trends - MAMMALS

Stable (?) –

Mule Deer Brush Rabbit Gray Fox

Coyote Bats Sonoran Deer Mouse

Striped Skunk Harris' Ground Squirrel

Declining (?) - Unknown

Increasing (?) –

Javelina Black-tailed Jackrabbit

Mountain Lion Cotton-tailed Rabbit

Merriam's Kangaroo Rat

Range Extension or Rare — Hog-nosed Skunk







Willow Creek Riparian Preserve Small Mammal Trapping

NULL HYPOTHESIS:

"The Quality of the Habitat has No Effect on the Density or Diversity of Small Mammals"



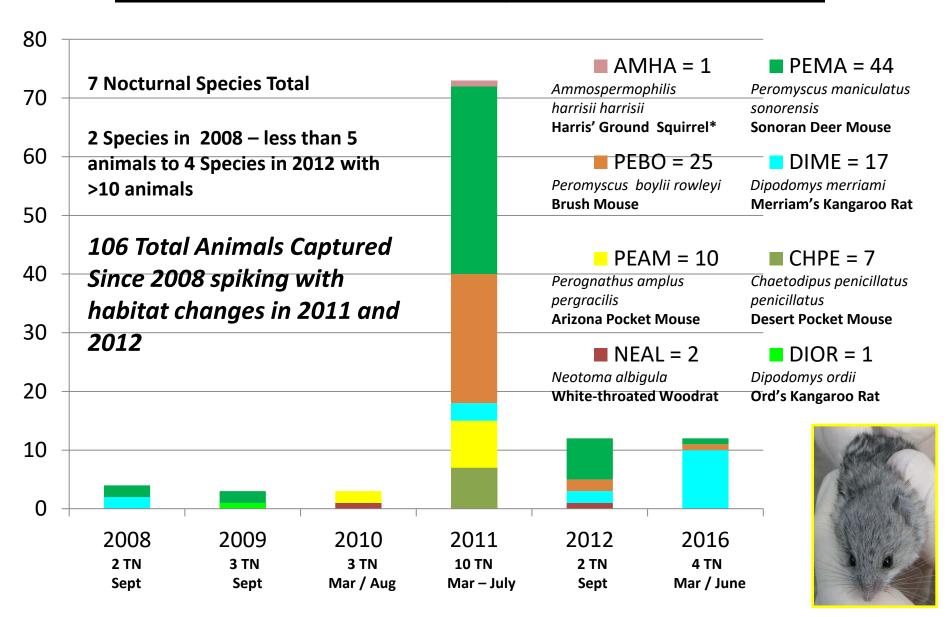








Willow Creek Riparian Preserve Small Mammal Trapping Results (raw data)



Willow Creek Riparian Preserve WILDLIFE Trends - BIRDS



DLIFE HEHUS - DINDS

NULL HYPOTHESIS:



"The Quality of the Habitat has No Effect on the Density or Diversity of Avian Species"





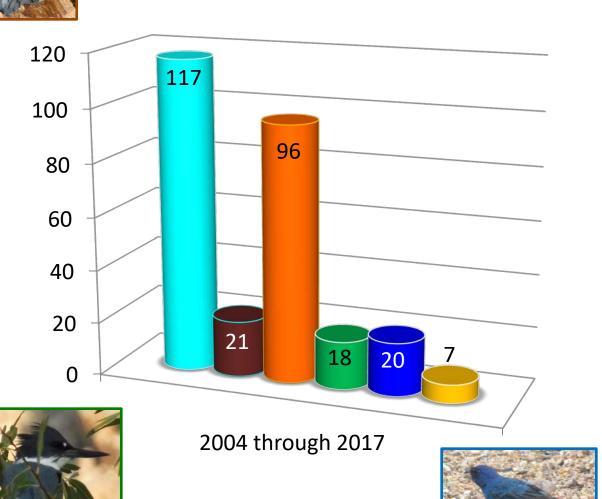






Willow Creek Riparian Preserve WILDLIFE Trends - BIRDS





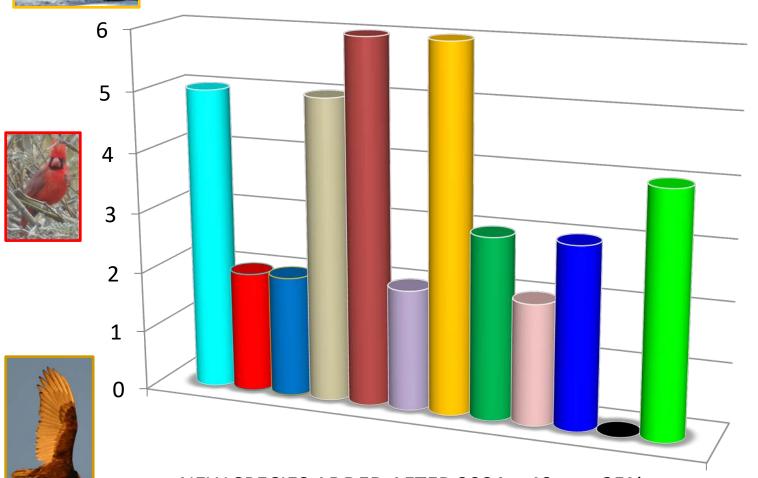
- Total # Bird Species
- Resident Species
- Migratory Species
- Accidental
- Infrequent
- Range Ext or Outside of Migratory Path





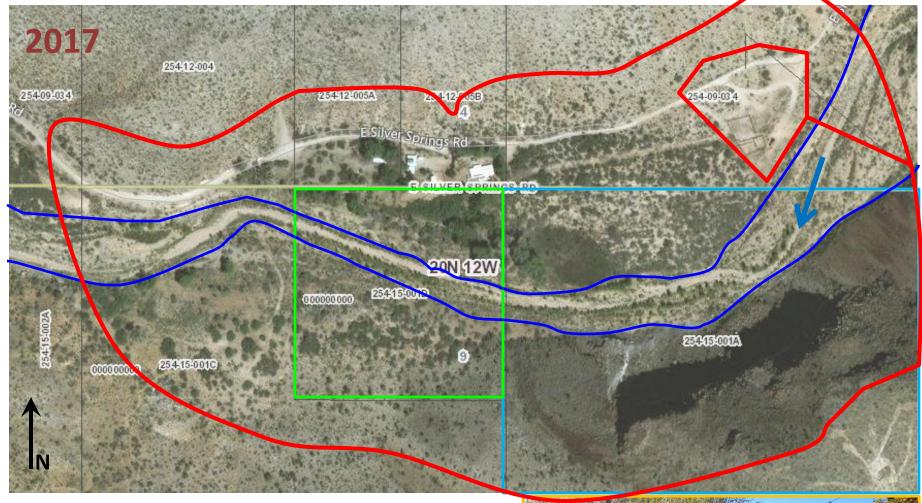
Willow Creek Riparian Preserve WILDLIFE Trends - BIRDS







NEW SPECIES ADDED AFTER 2004 = 40 or a 35% Increase over 12 Years



ZONE OF INFLUENCE = 80⁺ ACRES

40-acres of Fenced Preserve/Cliff Face + 40+ Acres Outside of the Preserve

Contact:

Robert Faught or Julie Alpert
Willow Creek Environmental Consulting, LLC
928-692-6501

E-mail: jalpert@willowcreekenviro.com

To VOLUNTEER

CONDUCT SCIENTIFIC STUDIES

GAIN EXPERIENCE IN FIELD DATA COLLECTION