



- LCR MSCP -



**Southwestern Willow Flycatcher
Demography and Ecology Studies
along the Lower Colorado River and Tributaries
2008**



SWCA[®]
ENVIRONMENTAL CONSULTANTS

Study components

- Broadcast surveys



- Territory/nest monitoring



- Banding/resighting

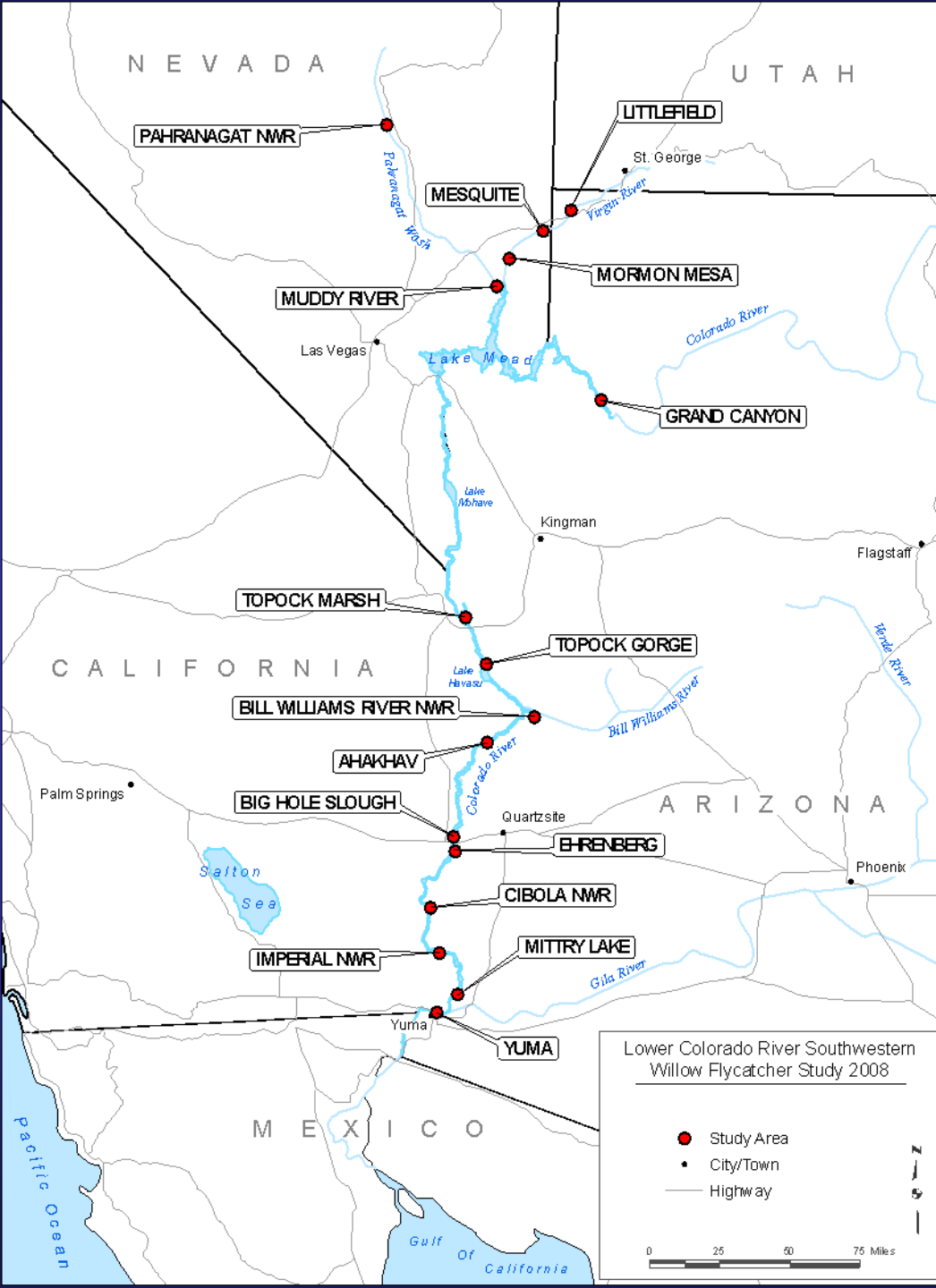


- Microclimate/vegetation



- Cowbird trapping





Study Area:

Approx. 100 survey sites



Sites chosen by field recon via helicopter, boat, and on foot

Changes to survey protocol

- 5 surveys
- Biennial surveys
 - No resident flycatchers detected in 10 years
 - No wet or damp soils within the site and/or
 - Little dense vegetation

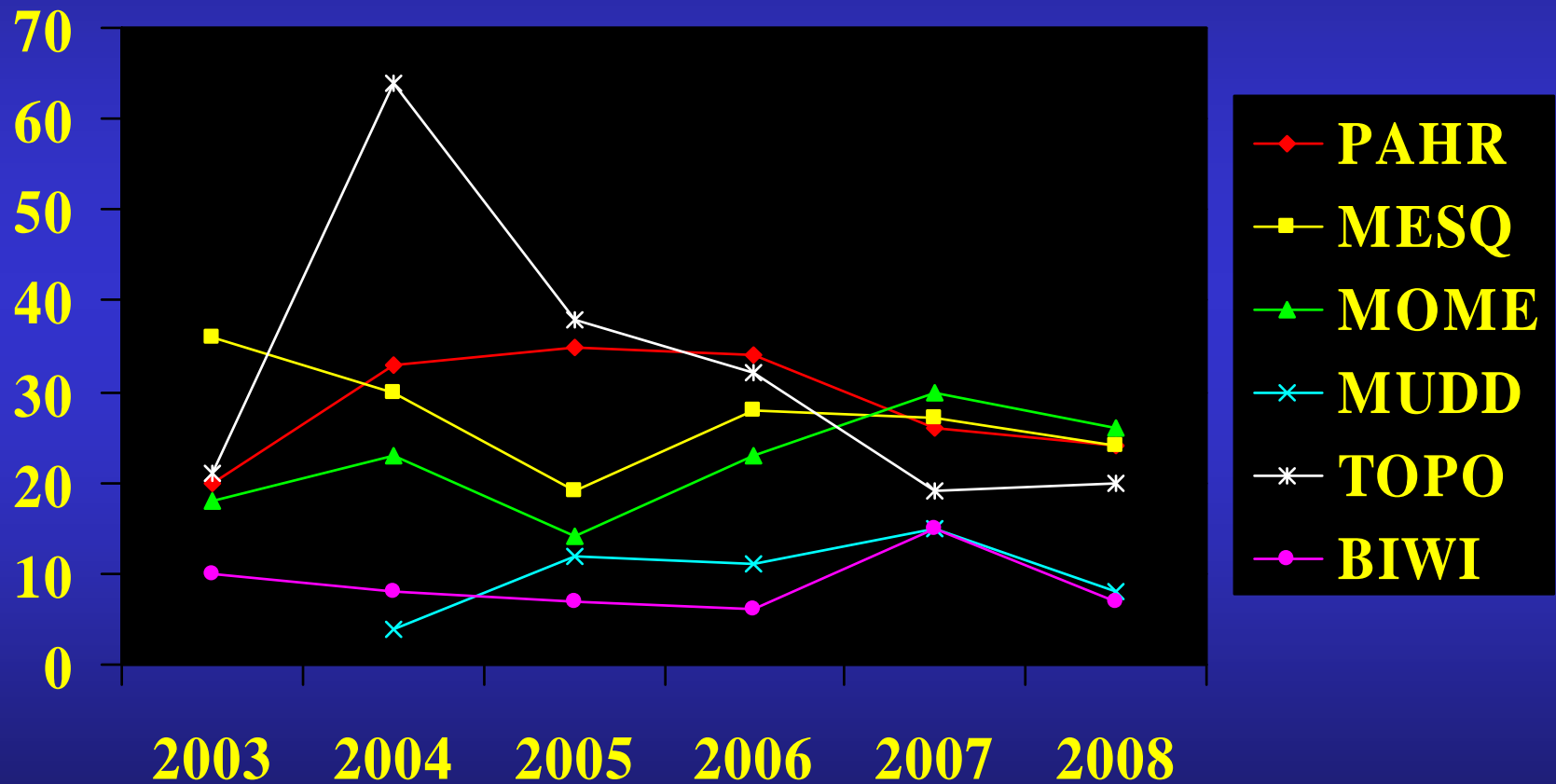


Breeding sites

- Pahrnagat – native
- Mesquite – mixed-native
- Mormon Mesa – mixed-exotic
- Muddy River – mixed-exotic
- Topock – exotic
- Bill Williams – mixed-native
- Grand Canyon – mixed-exotic
- Ahakhav – mixed-native



Resident Adult Flycatchers



Habitat changes 2008

Pahranagat

Grand Canyon

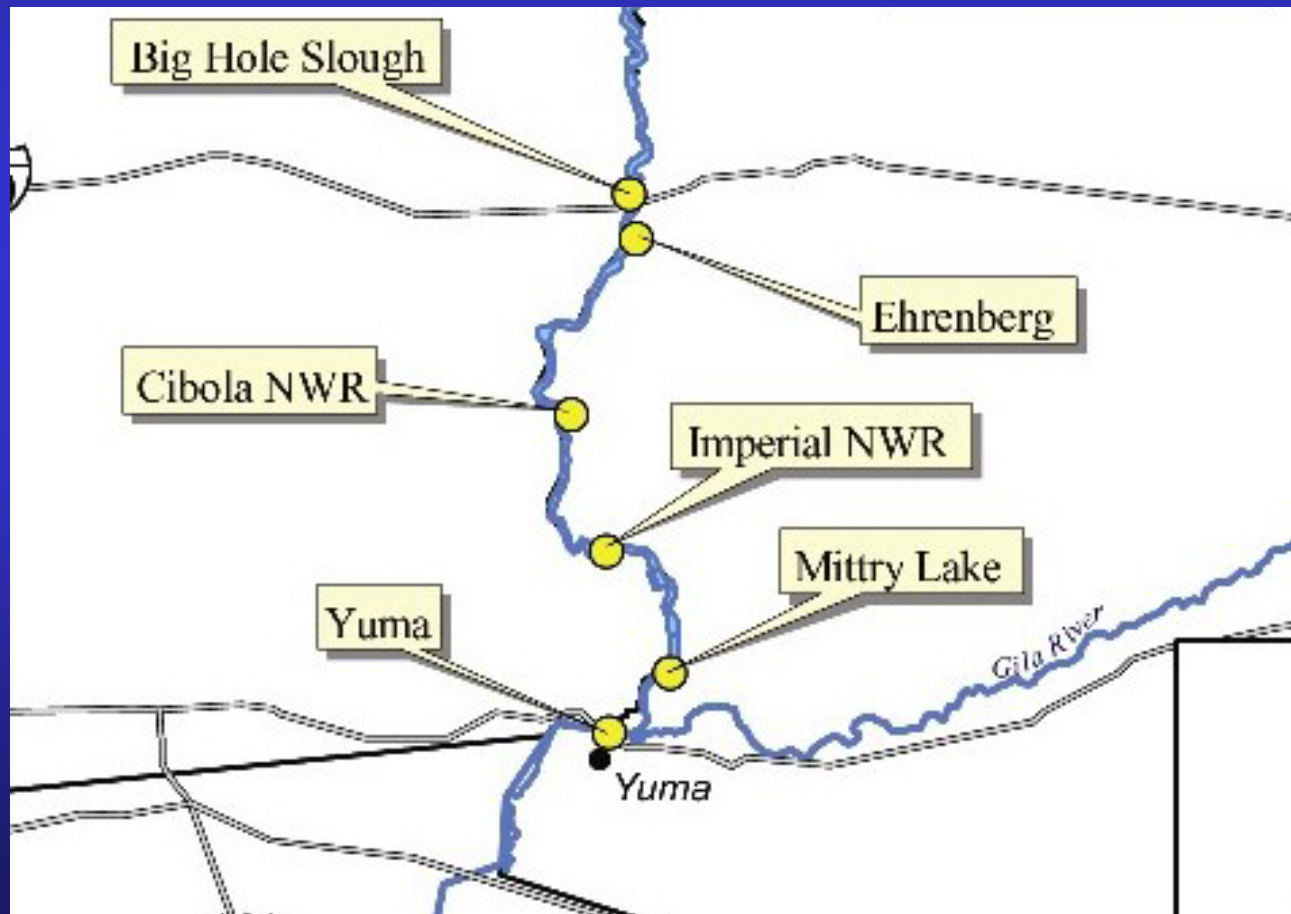
Muddy River



Flycatchers on Southern LCR

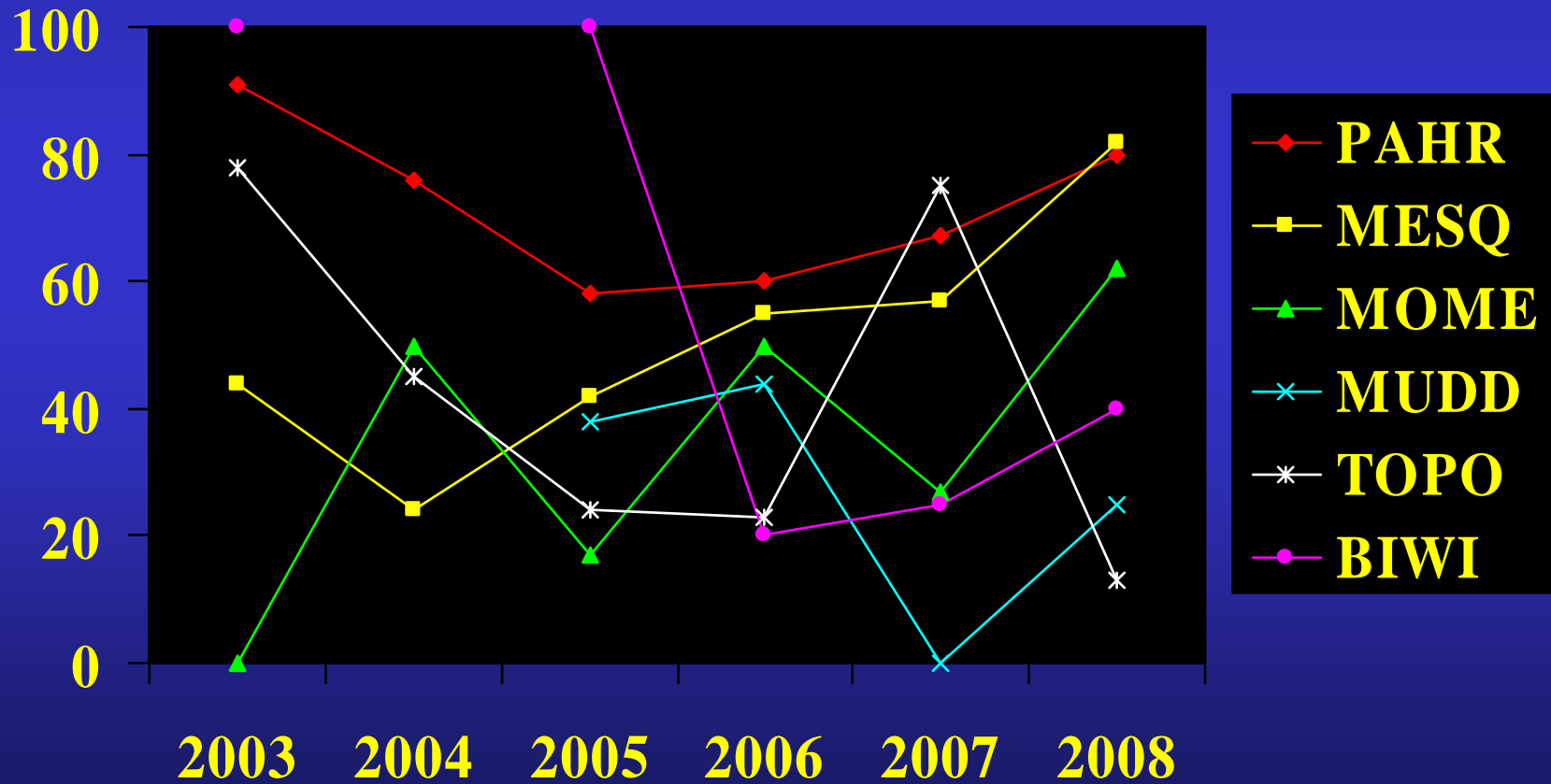
No resident willow flycatchers recorded in stretch from Big Hole Slough to Yuma

Many migrants detected



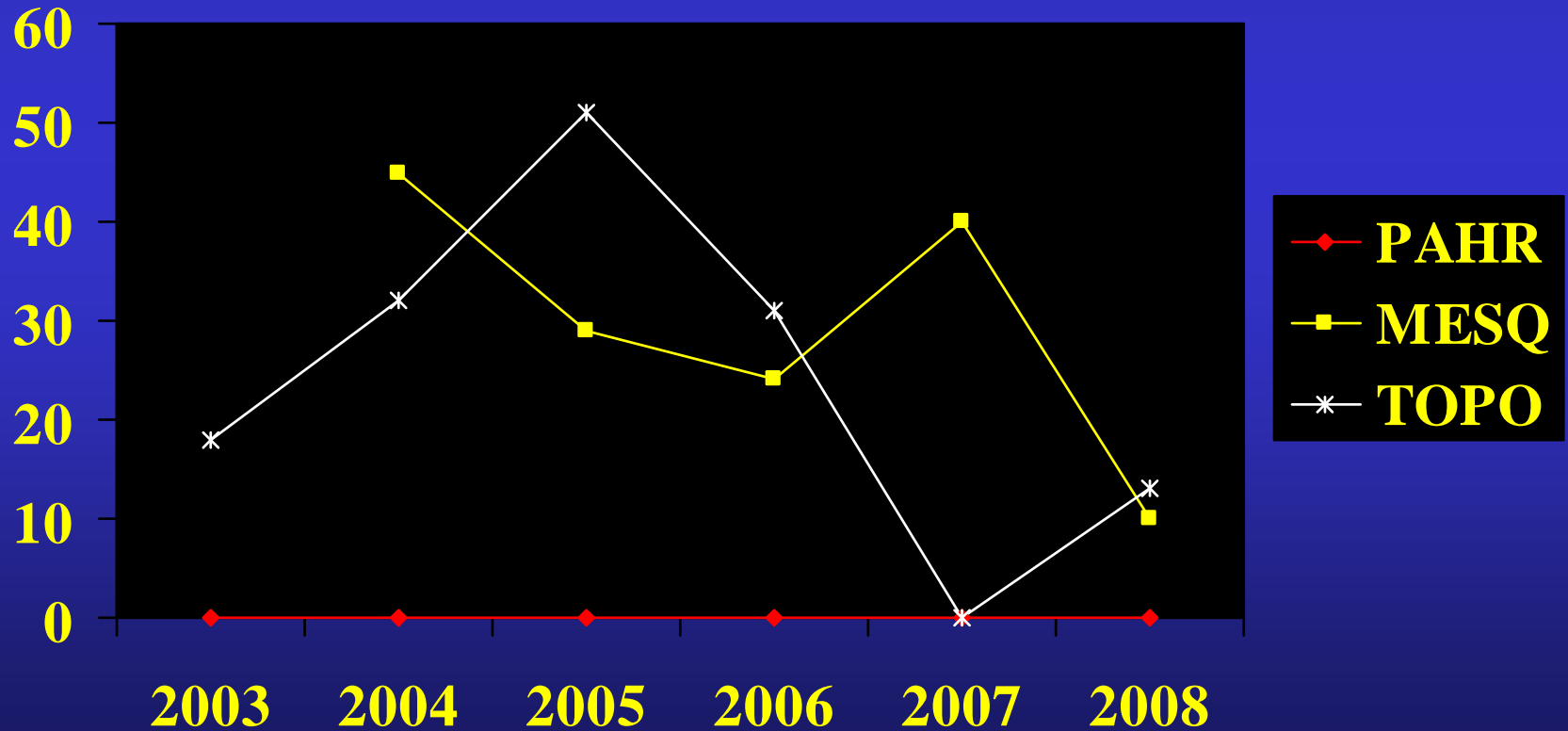


Percent Nest Success





Percent Brood Parasitism



Microclimate and Vegetation Study Design

Within active territories

- 20 m from territory center
- T/RH logger as soon as territory identified
- Vegetation at end of season

Provide description of occupied habitat in various vegetation types

- Combine with data collected within territories in previous years

Microclimate and Vegetation Study Design

Temporal changes in habitat

- Identified portions of study areas that were occupied in previous years but not 2008
- Relocated old nests
- Hung T/RH data logger at the old nest
- Completed veg plot at end of season
- Compared results to data collected when nest was active

Temporal Changes

Mesquite (n = 15)

- Area affected by 2004-2005 flood
- Decreased canopy cover
- Increase in dead stems 2.5-8 cm dbh
- Decrease in live foliage below, at, and above nest height
- Decrease in percent native
- Higher temperature
- Lower soil moisture
- Lower humidity

Temporal Changes

Mormon Mesa (n = 8)

- Area affected by 2004-2005 flood
- Decreased canopy cover
- Decrease in foliage density at and above nest
- Higher temperature

Temporal Changes

Muddy River (n = 11)

- Area bracketed by dredging activities
- Decrease in # live stems < 2.5 cm dbh
- Increase in dead foliage at nest
- Decrease in percent native
- Trend toward higher temperature, lower humidity

Topock (n = 10)

- Areas occupied in 2004 and/or 2005
- Decrease in # live stems 2.5-8 cm dbh
- Decrease in dead foliage below nest height
- No microclimate differences

Banding and Resighting

Continued banding and resighting efforts at all study areas

Change in banding protocol:

Put full color combos on nestlings

Breeding population in St. George

- monitored by Utah DNR in 2008
- two banded birds
- possible source for unbanded individuals along Virgin River



Acknowledgements

- Bureau of Reclamation – Theresa Olson and John Swett
- USFWS Regions 1 and 2
- Federal Bird Banding Laboratory
- Arizona Game and Fish Dept.
- Nevada Division of Wildlife
- California Dept. of Fish and Game
- Utah Division of Wildlife Resources
- Refuges:

Pahrnagat NWR
Havasu NWR
Bill Williams River NWR
Cibola NWR
Imperial NWR

- Grand Canyon National Park
- Hualapai Tribe
- Colorado River Indian Tribes
- Lake Mead NRA
- Bureau of Land Management
- Key Pittman WMA
- Overton WMA
- Private landowners

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our field crews.**