Flycatcher Status Update 2015

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SWCA®
ENVIRONMENTAL CONSULTANTS

Lower Colorado River
Multi-Species Conservation Program

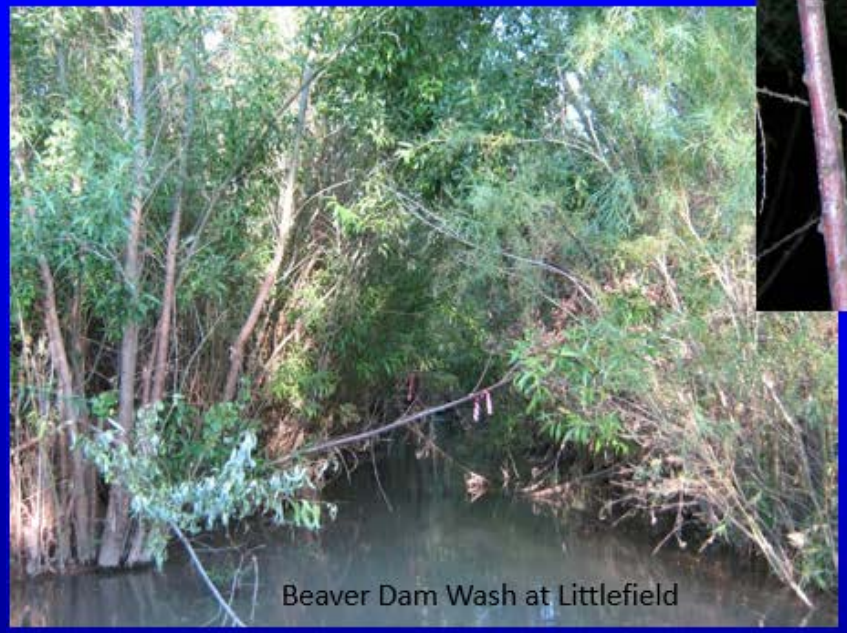
Southwestern willow flycatcher
(*Empidonax traillii extimus*)

- Endangered subspecies of willow flycatcher
- Breed in AZ, NM, and adjacent portions of neighboring states
- Late migrants; arrive May—June

Empidonax traillii extimus

- Breed in dense, wet riparian habitats; strong affinity for surface water
  - Select nest sites that are cool, humid, dense
  - Use both native vegetation and tamarisk

Along Virgin River at Mesquite


Beaver Dam Wash at Littlefield

Study Components

Broadcast Surveys

- site occupancy
- “on” year for triennial surveys

Territory / nest monitoring

- nest success rates
- causes of failure

Banding/ resighting

- survival
- site fidelity
- dispersal

Tamarisk beetle monitoring

- beetle numbers
- veg conditions
- temp/humidity
- light levels

Lower Colorado River Southwestern
Willow Flycatcher Study 2015

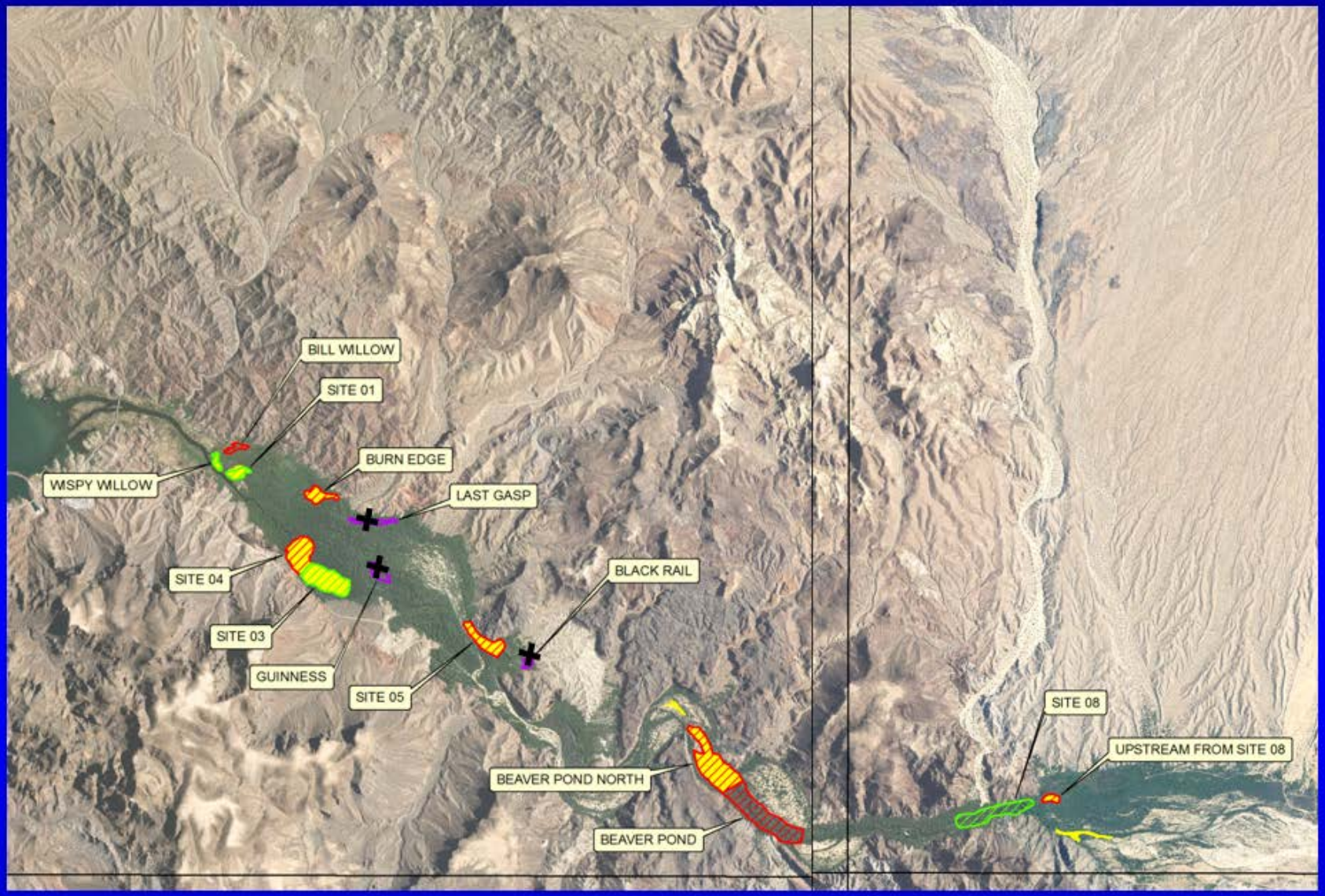
- SNWA Study Area
- Reclamation Study Area
- NDOW/Reclamation Study Area
- City/Town
- Highway
- River

0 25 50 Mi

0 50 100 Km

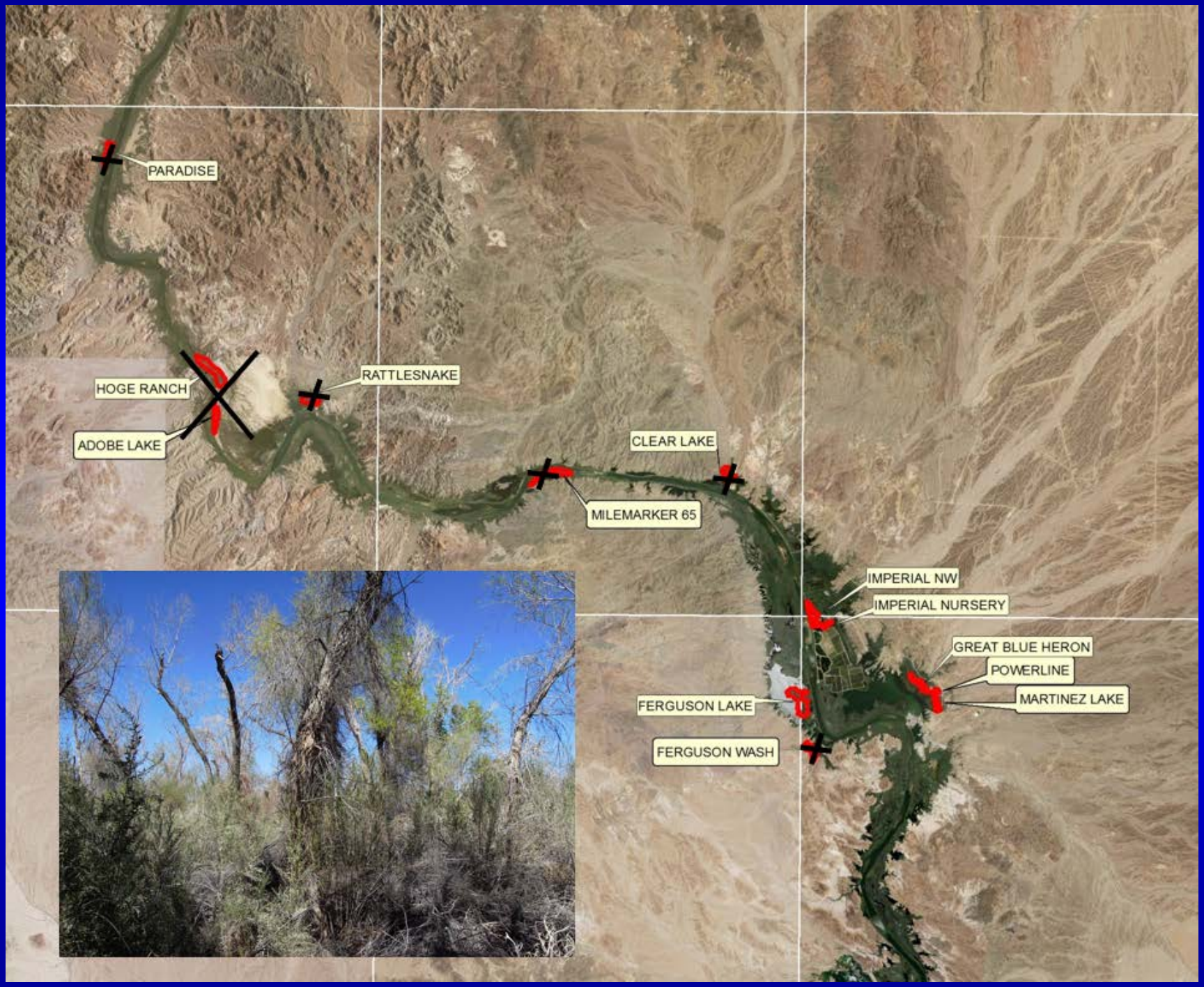
1:3,300,000

N

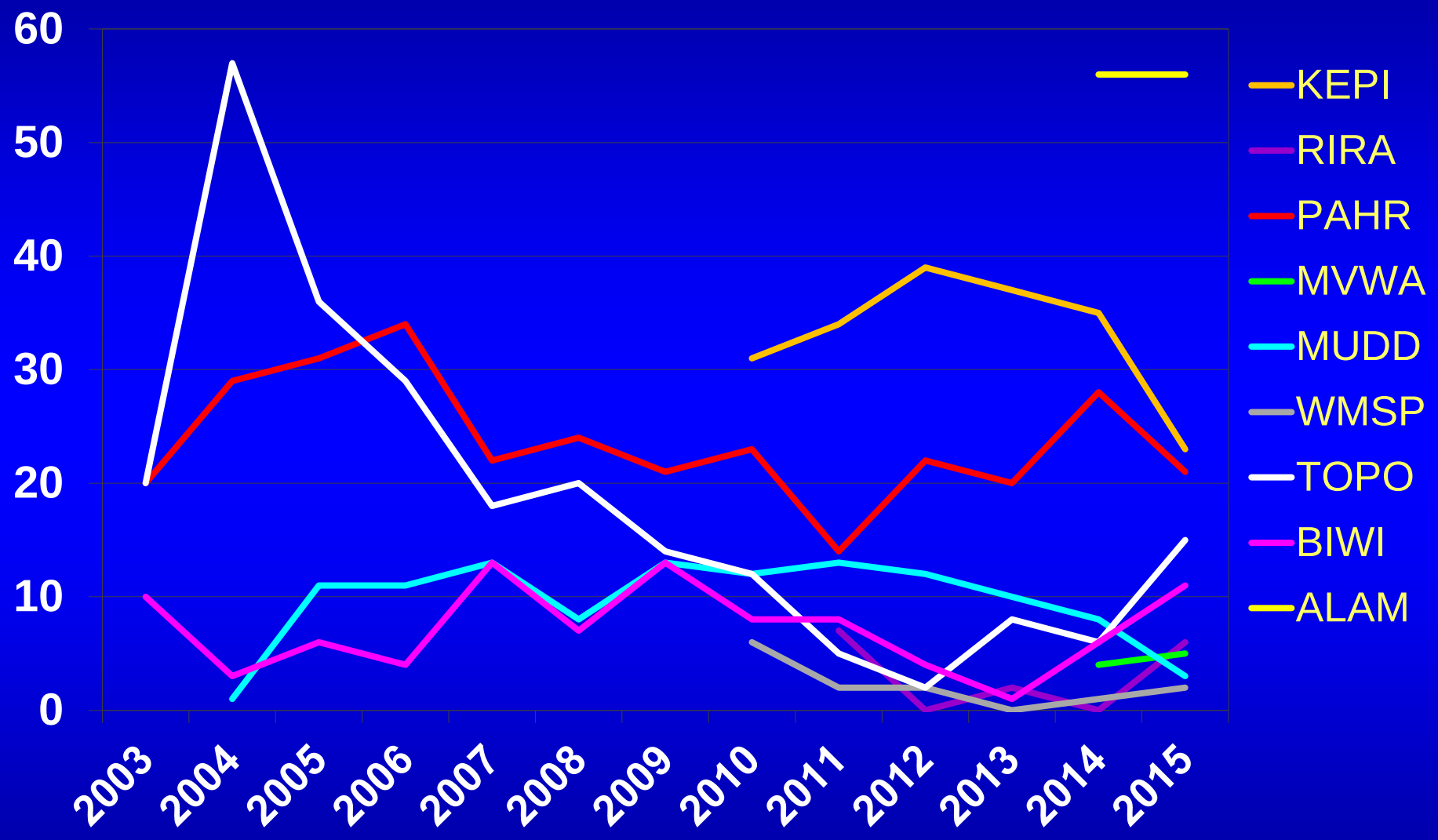


Historically Occupied
2015 Surveyed/Not Occupied
2015 Surveyed/Occupied
Discontinued for the Season

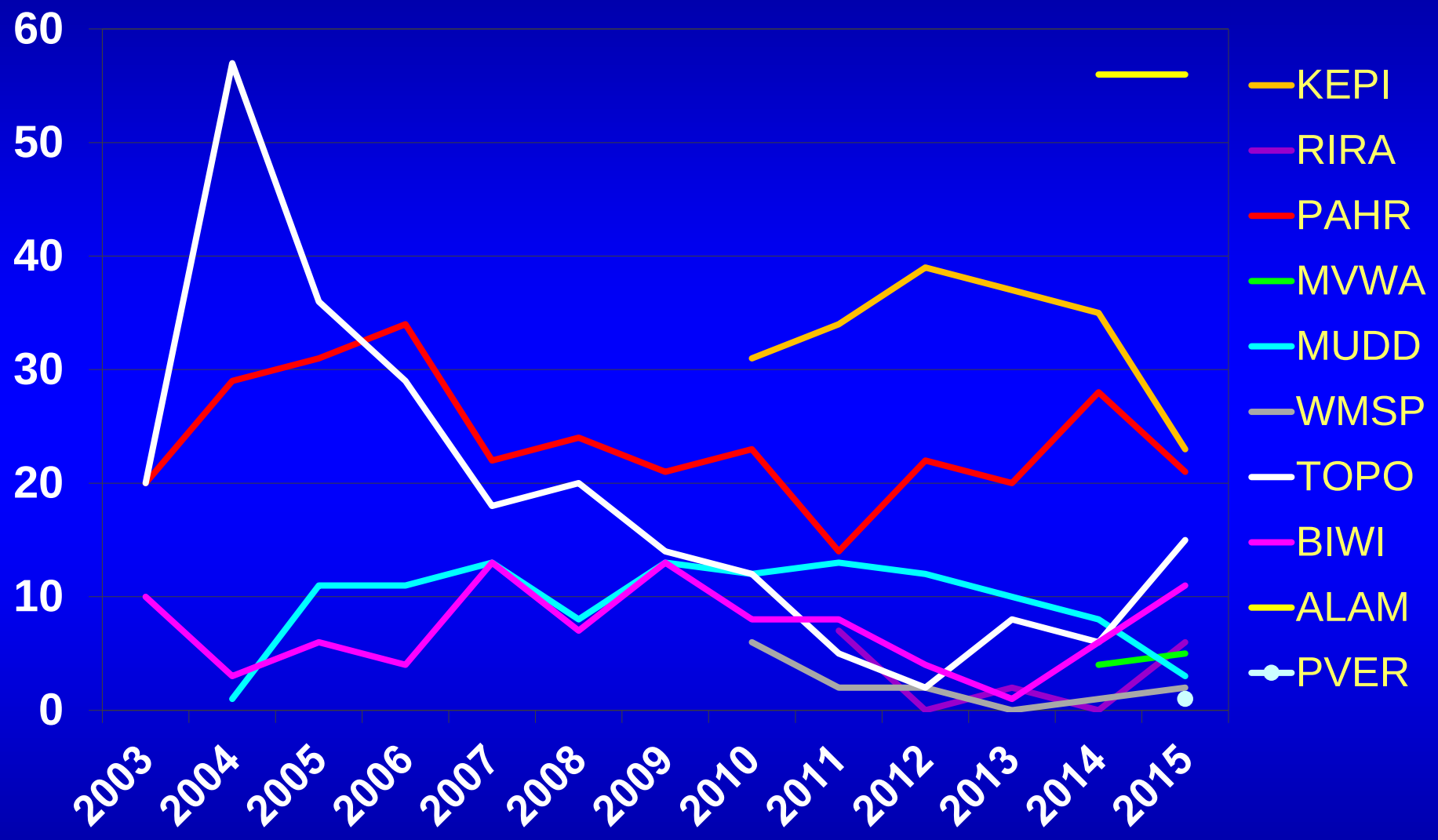
CVCA PHASE 01
CVCA PHASE 03
CVCA PHASE 02
NATURE TRAIL
C2729
CIBOLA SITE 02
CIBOLA SITE 01
CIBOLA LAKE EAST
CIBOLA LAKE NORTH
CIBOLA LAKE WEST
WALKER LAKE


PARADISE
HOGE RANCH
ADOBE LAKE
RATTLESNAKE
CLEAR LAKE
MILEMARKER 65
IMPERIAL NW
IMPERIAL NURSERY
GREAT BLUE HERON
POWERLINE
MARTINEZ LAKE
FERGUSON LAKE
FERGUSON WASH

Resident Adult Flycatchers

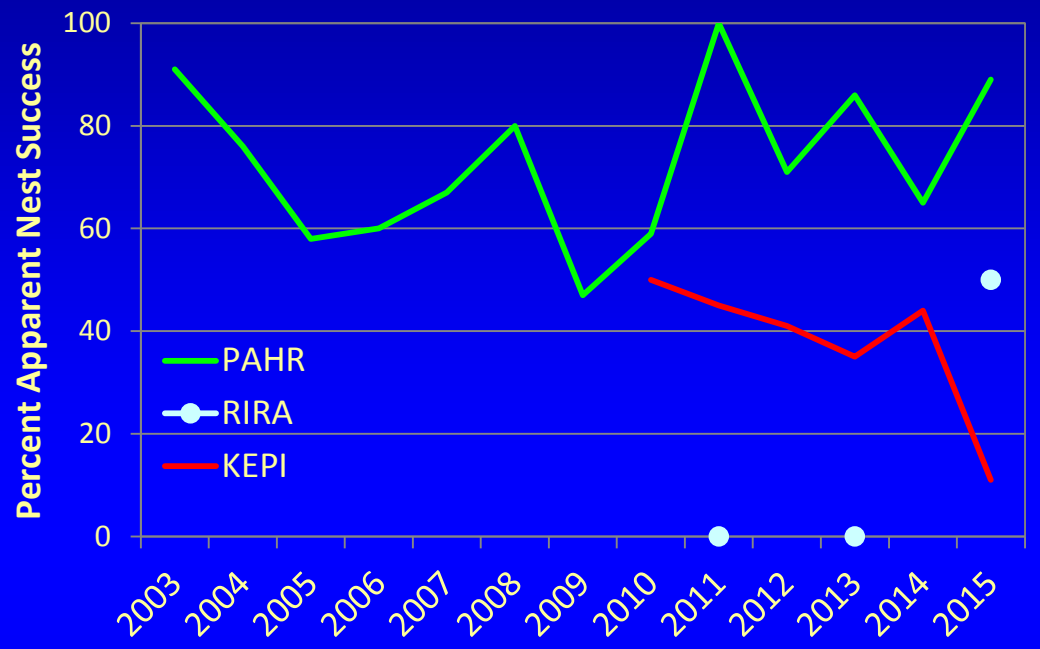


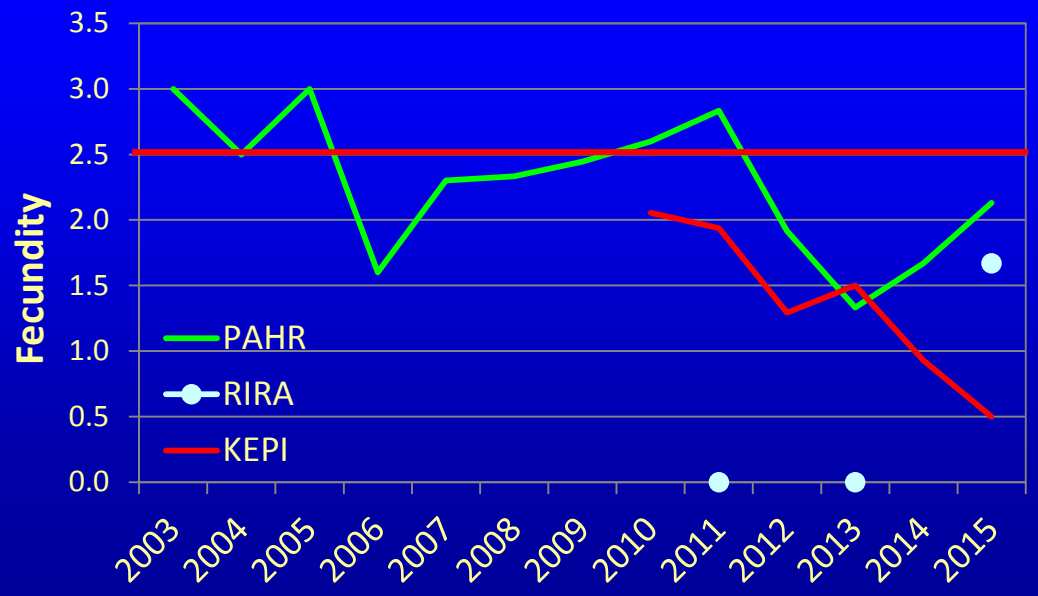
Resident Adult Flycatchers



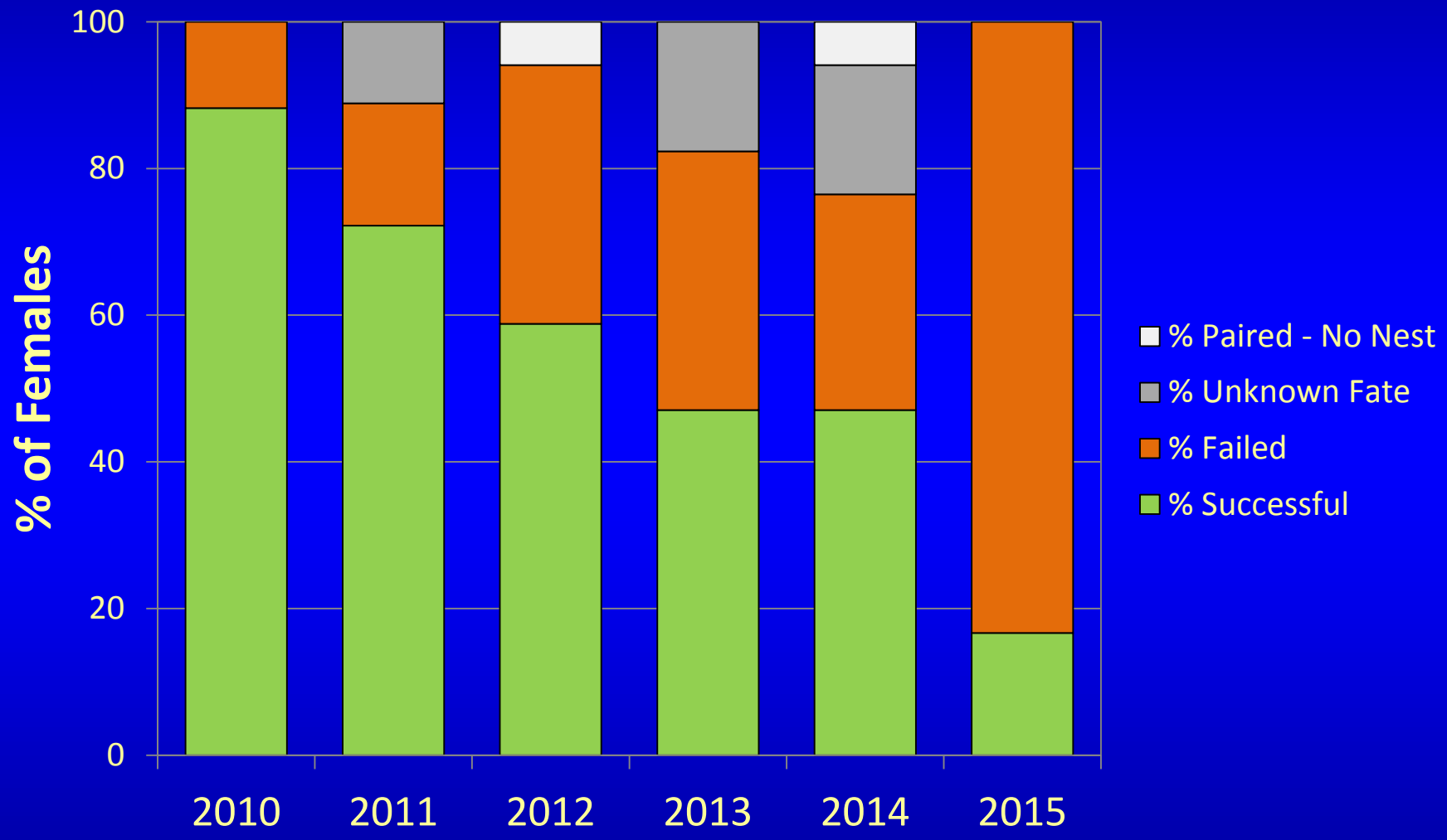
No resident willow flycatchers recorded south of PVER

Pahranagat Valley

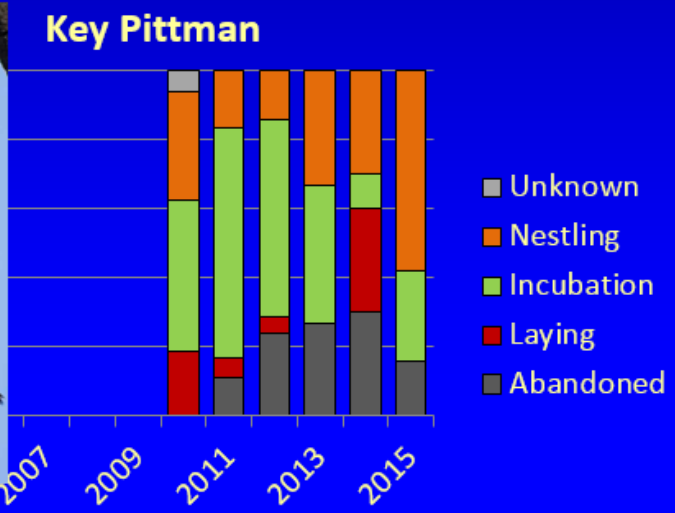




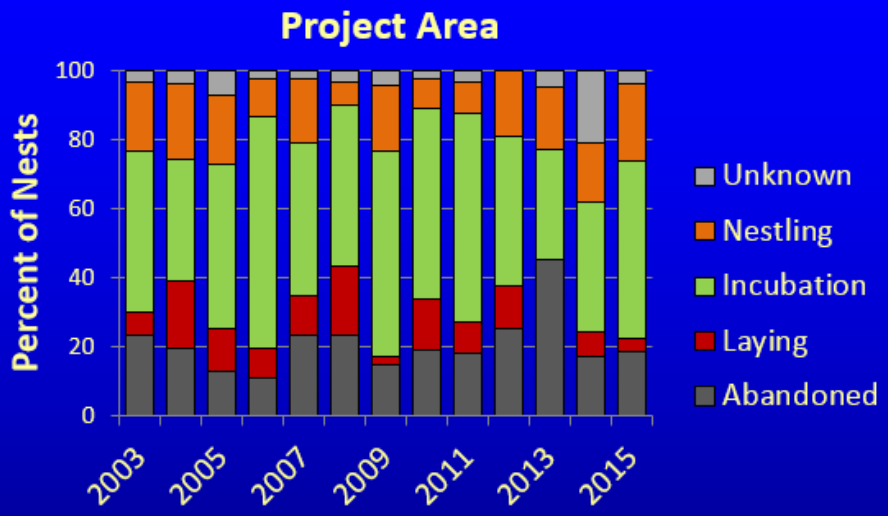
Key Pittman


100
80
60
40
20
0
% of Females
2010
2011
2012
2013
2014
2015
% Paired - No Nest
% Unknown Fate
% Failed
% Successful

Key Pittman



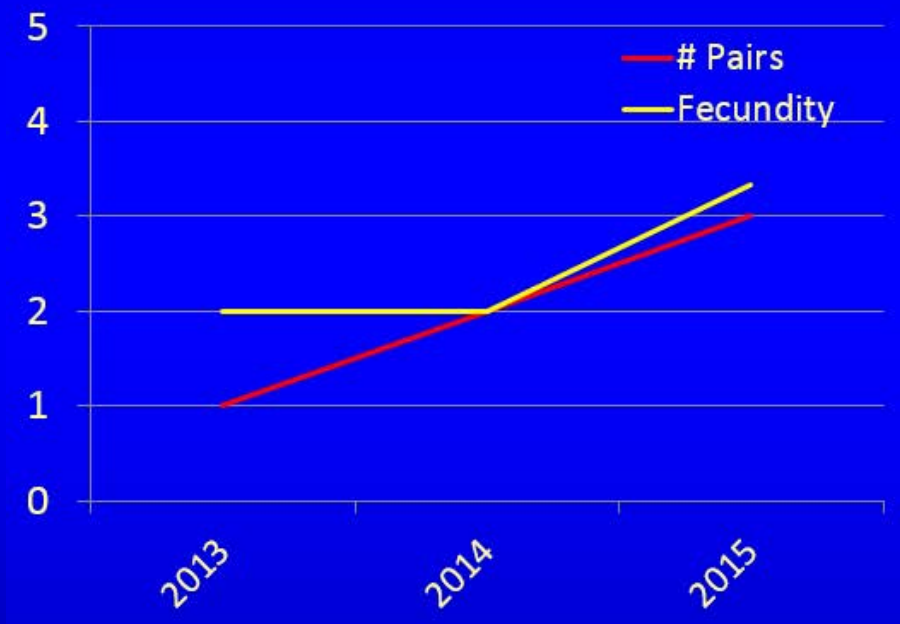
14 – 58% failure during nestling phase



7 – 22% failure during nestling phase

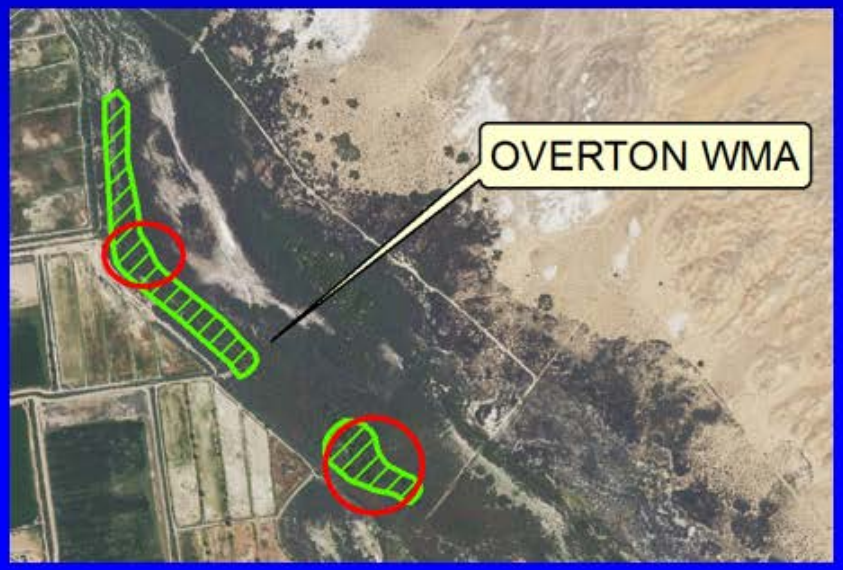
Meadow Valley Wash

- Site developed starting in 2010 (NDOW)
- Flycatchers detected 2013
  - Formal monitoring 2014 & 2015



- Site continuing to mature – possible it will hold more flycatchers in future

Muddy River



- Changes in water patterns – southern patch
- Tamarisk beetles – northern patch

Muddy River

Muddy River

Warm Springs NA

- Nesting in Muddy Stringer 01 – first time after 2010 fire

Warm Springs NA

- Nest built in inflorescence of palm

Topock Marsh

- Four breeding pairs (most since 2008)
- 20% nest success (1 fledge)
- Nest success would likely have been 40% without fire
- Breeding in four sites (both formerly and recently occupied)
- Fire burned 8 of 16 survey sites, including 2 occupied in 2015

Topock Marsh

Topock Marsh

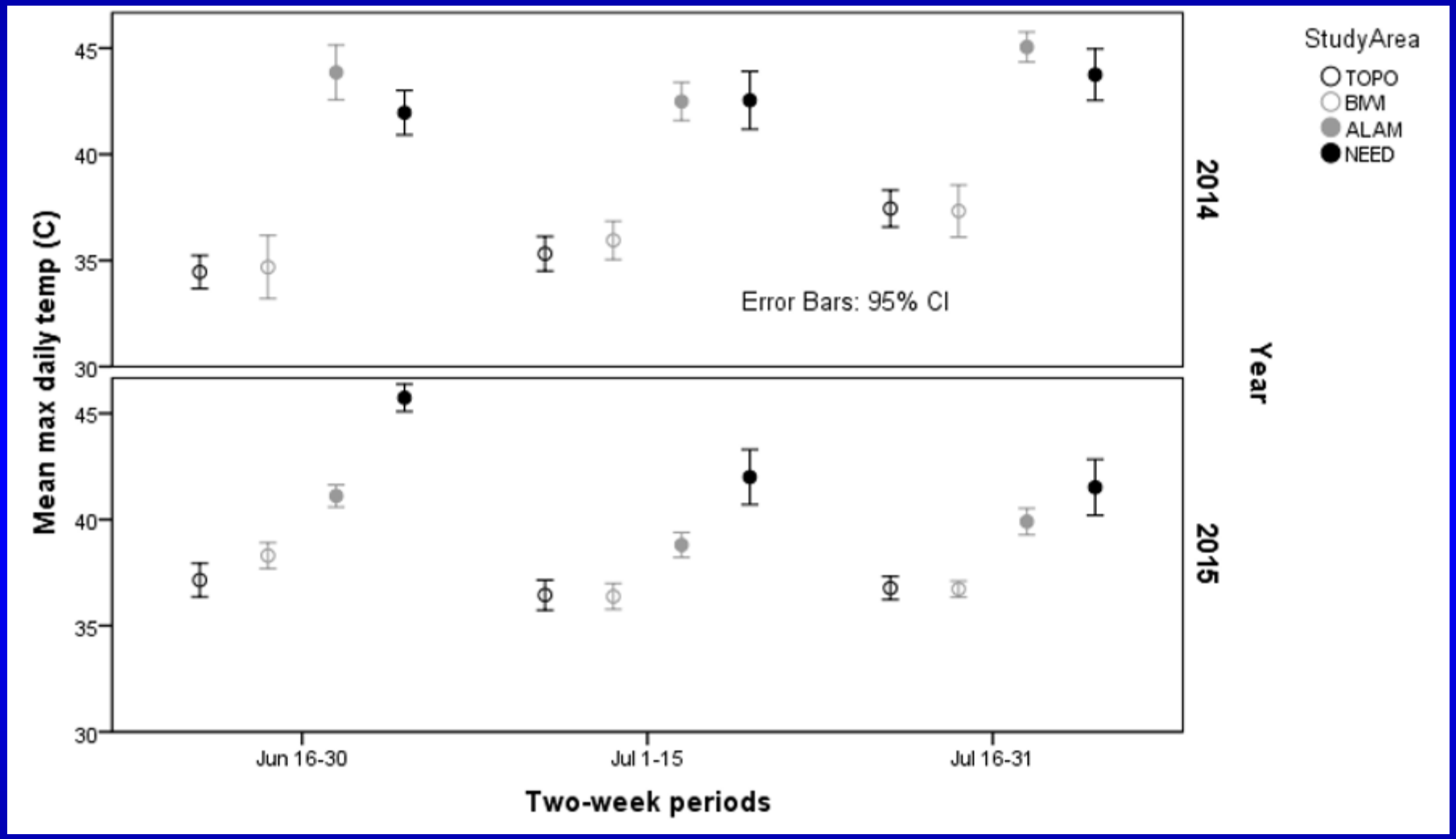
Bill Williams River NWR

- 6 breeding pairs (most in any year 2003-2014, except 2007)
- Nest success 50% (6 fledglings)
- 3 of 6 pairs in relatively new coyote willow habitat near river delta
- Breeding documented for first time in Site 01 and Site 08
- One female a returning juvenile from Alamo Lake (2014)

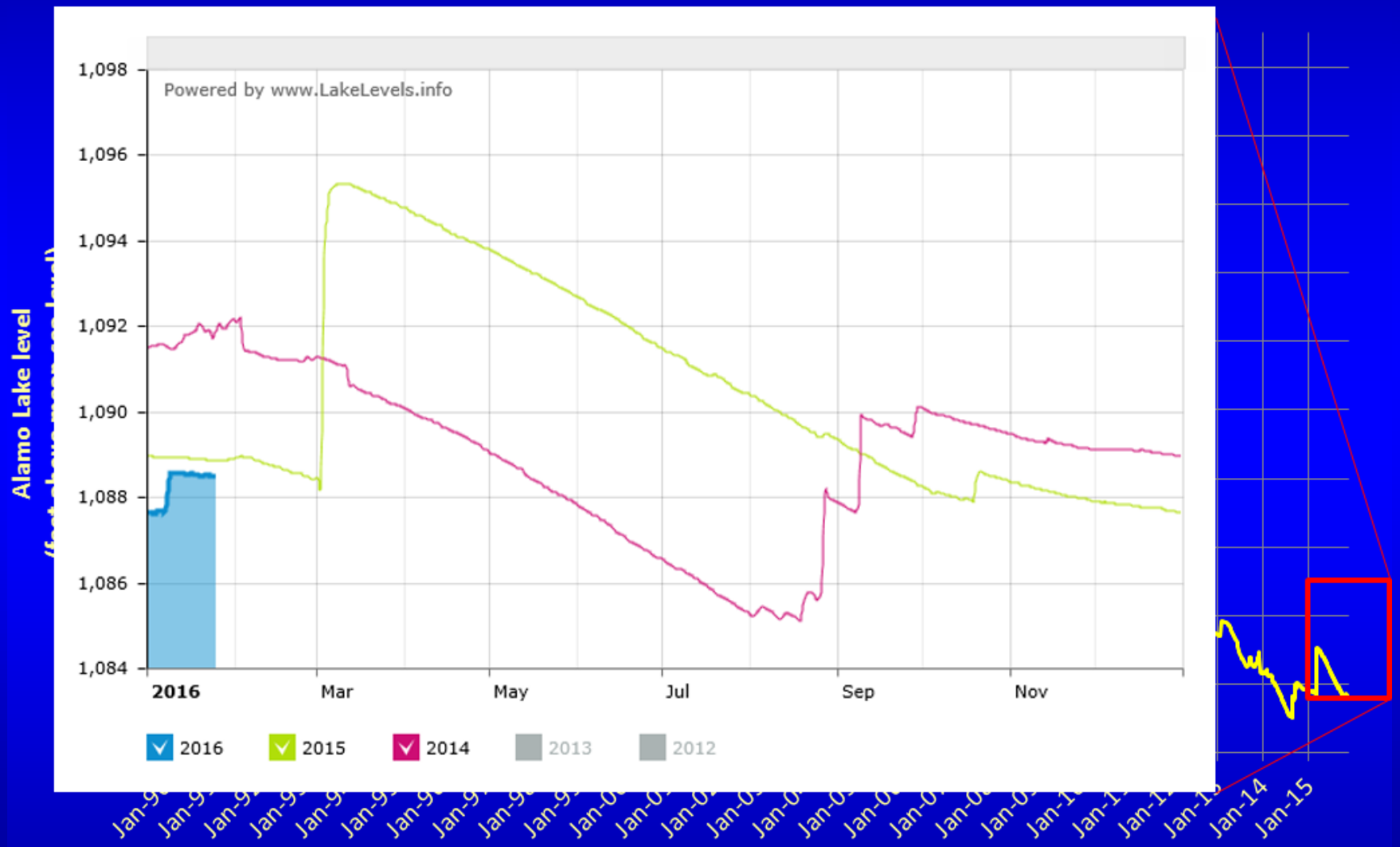
Alamo Lake

- Large number of resident flycatchers (56)
- Improved nest success (62%) from 2014 (25%)
- Improved fecundity (1.55 fledglings / female) from 2014 (0.42 fledglings / female)
- Driest study area with breeding flycatchers in 2015
- Microclimate cooler and more humid than in 2014

Alamo Lake


StudyArea
TOPO
BMI
ALAM
NEED
Mean max daily temp (C)
45
40
35
30
Error Bars: 95% CI
2014
2015
Year
Jun 16-30
Jul 1-15
Jul 16-31
Two-week periods

Alamo Lake


Powered by www.LakeLevels.info
Alamo Lake level
1,098
1,096
1,094
1,092
1,090
1,088
1,086
1,084
2016
Mar
May
Jul
Sep
Nov
2016
2015
2014
2013
2012
Jan-14
Jan-15

Alamo Lake

Tamarisk Beetle Monitoring

- Patchy defoliation at Muddy River
- Beetles and obvious defoliation at Big Bend in late July
- No beetles at Topock Marsh or Bill Williams River NWR
- Fire consumed all beetle monitoring points at Topock Marsh

- Formal monitoring discontinued

Questions?