Bonytail and razorback sucker downstream of Palo Verde Dam

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MARSH & ASSOCIATES, LLC

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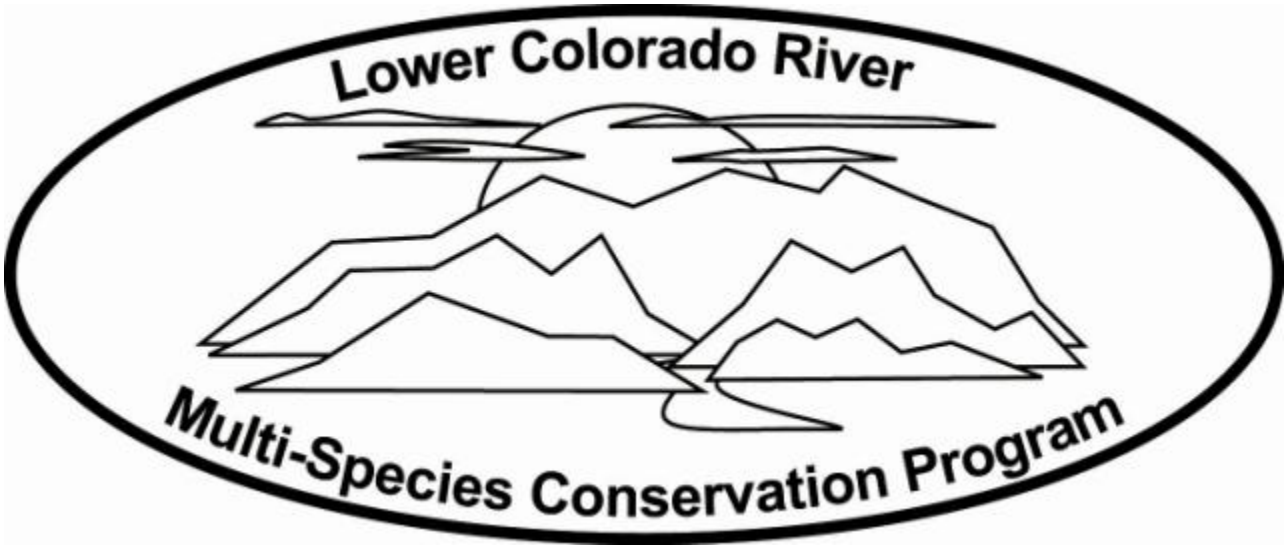
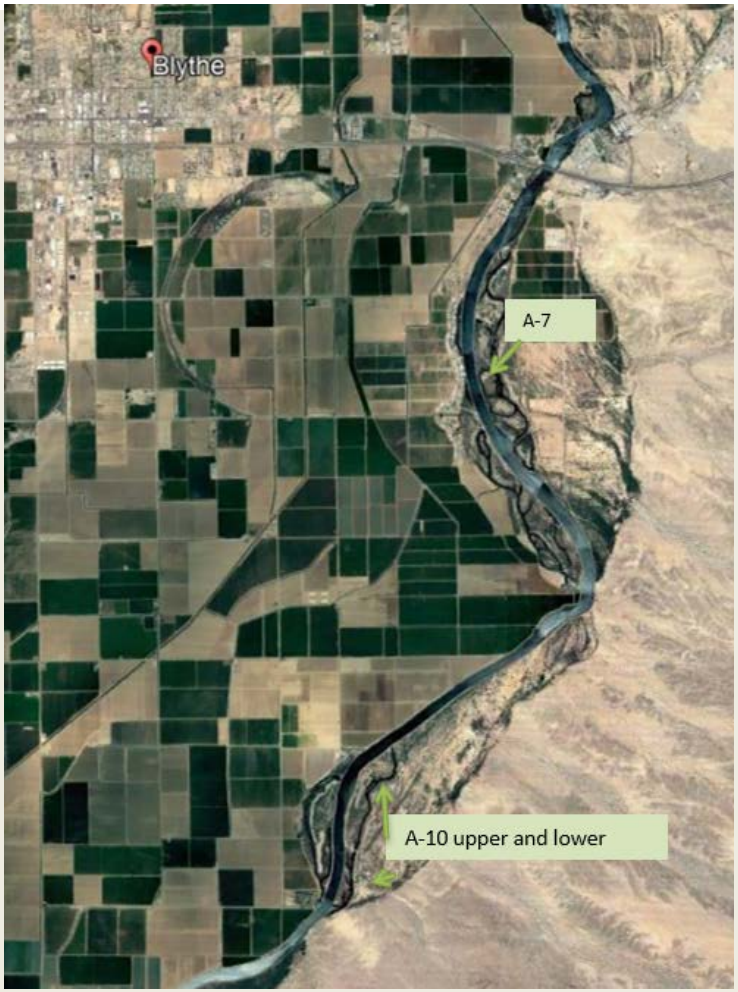


Background

- MSCP Reach 4-5
  - From Parker Dam, south to southern border of Cibola National Wildlife Refuge.
  - River miles 85.9-192.3
  - Reach includes numerous backwater habitats; our study focuses on 5 of these:
    - A-10 upper, A-10 Lower, A-7 upper, C-7, and C10
  - Study is focused on razorback sucker and bonytail.

C-7


Blythe
A-7
A-10 upper and lower

Methods

- 1 Five day trip a month, October-January. 2 Five day trips February and March.
- 20 4 ft. x 2 ft. PIT tag scanning antennas deployed throughout the trip. A minimum of two per backwater, with the rest put in suitable habitat in the river.
- Both species are stocked in the backwaters throughout the year.
- Select fish are surgically implanted with ultrasonic tags
- Currently 17 Submersible Ultrasonic Receivers deployed throughout the backwaters and river.
- Manual tracking

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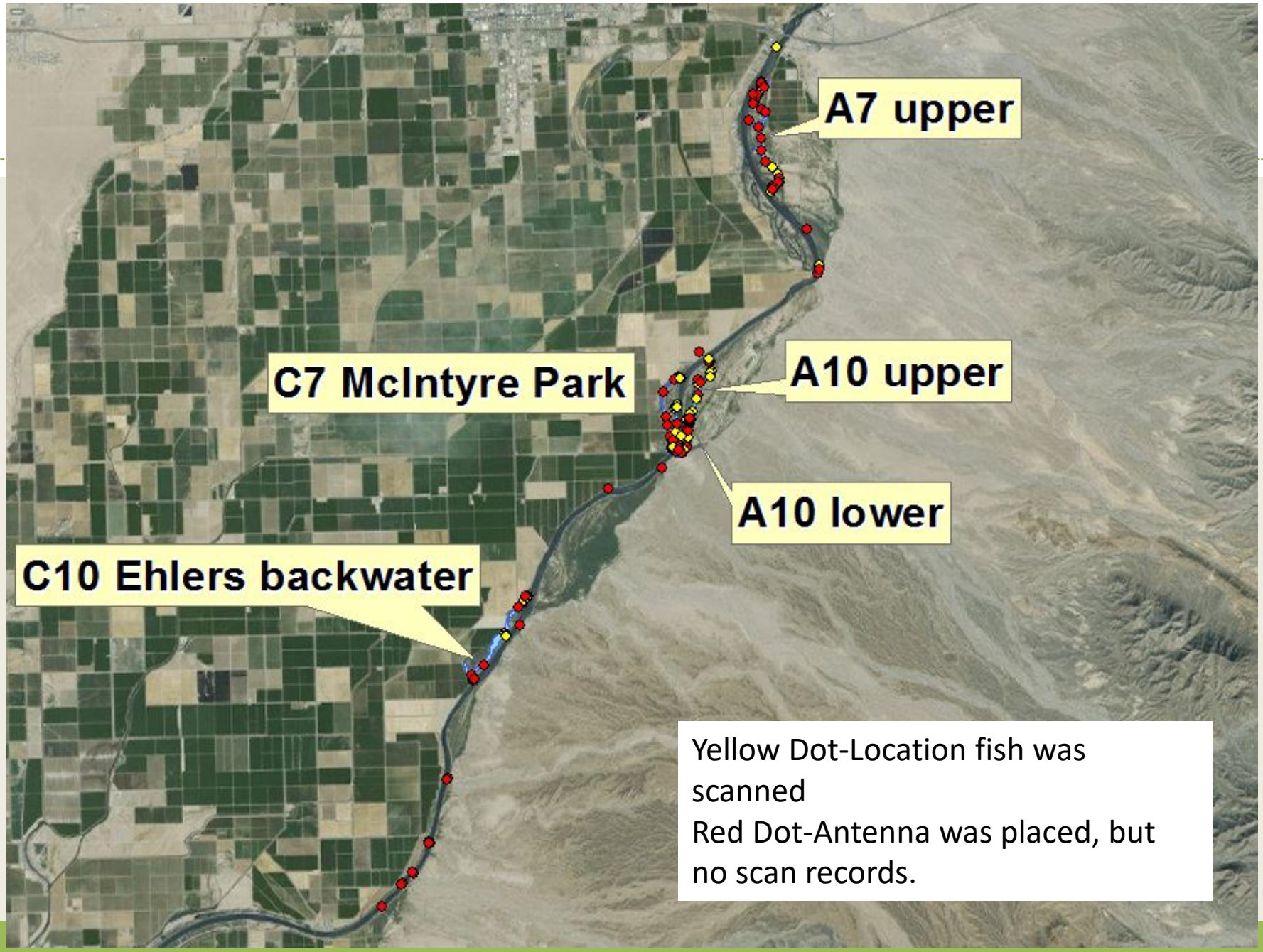
River And Backwater Scanning Quick Statistics

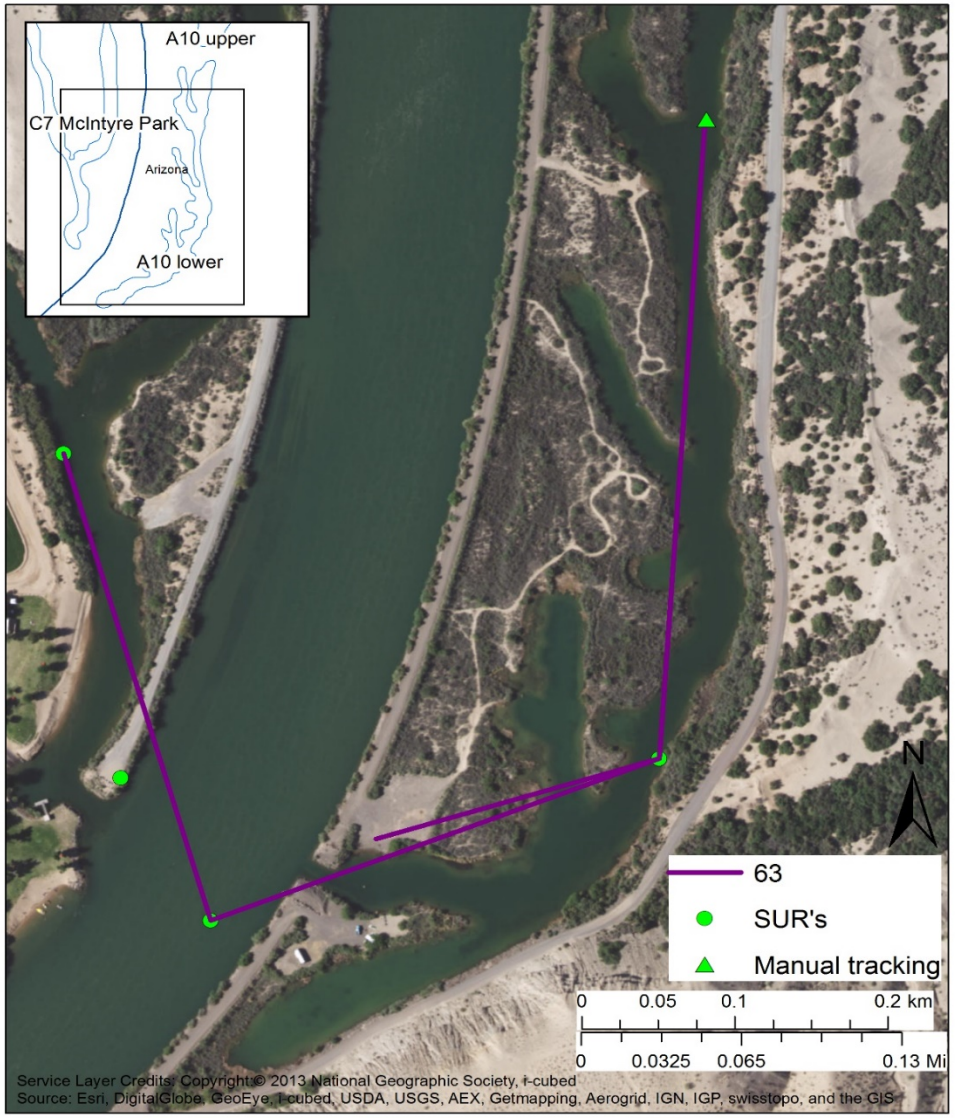
- 2016-2017 Study year statistics. (October-April)
  - 14,011.5 hours scanned total (4,628.8 thus far this year)
  - Stocking totals: 2007-May 2017
    - 11,696 bonytail
    - 15,795 razorback sucker
  - 671 unique contacts
    - 277 bonytail
    - 383 razorback sucker
  - Days at large
    - Longest for bonytail - 548
    - Longest for razorback sucker - 3,500


A7 upper
C7 McIntyre Park
A10 upper
A10 lower
C10 Ehlers backwater
Yellow Dot-Location fish was scanned
Red Dot-Antenna was placed, but no scan records.

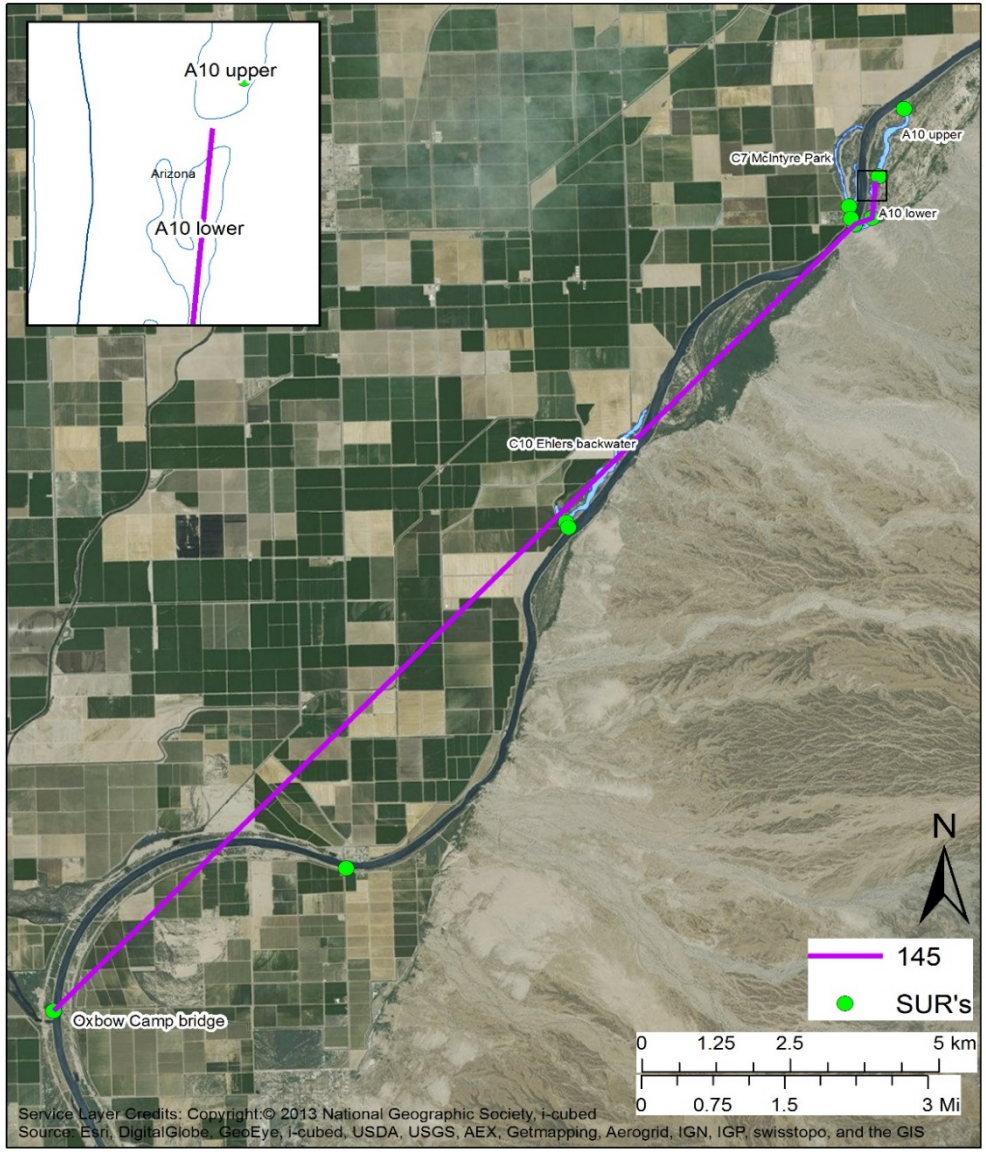
SUR Statistics

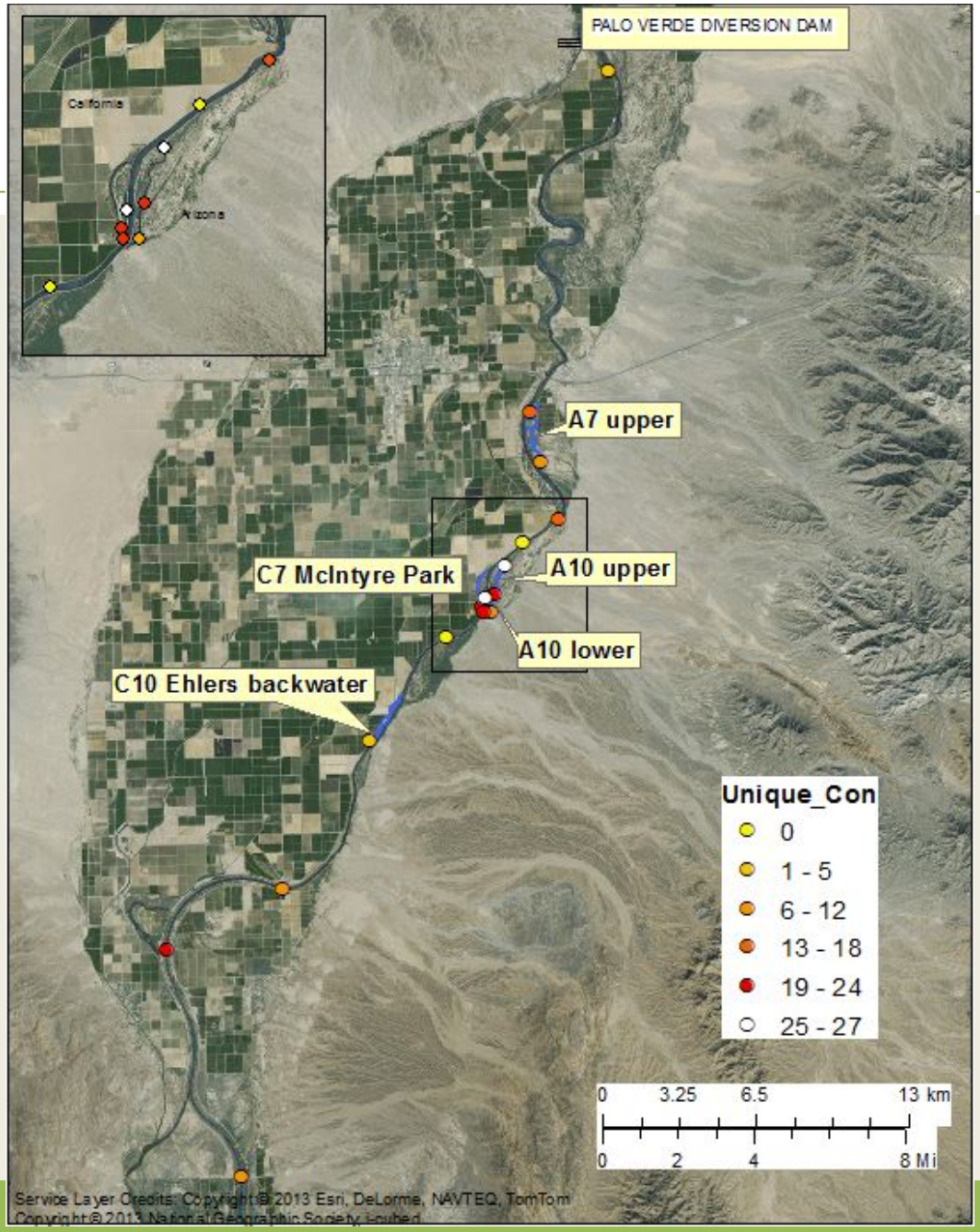
- 12 SUR's were set in December of 2016
- 17 SUR's are currently deployed at these locations.

Dispersal of sub-adult bonytail in Reach 4



Dispersal of adult razorback sucker in Reach 4




PALO VERDE DIVERSION DAM
California
Arizona
A7 upper
A10 upper
C7 McIntyre Park
A10 lower
C10 Ehlers backwater
Unique_Con
0
1 - 5
6 - 12
13 - 18
19 - 24
25 - 27
0 3.25 6.5 13 km
0 2 4 8 Mi
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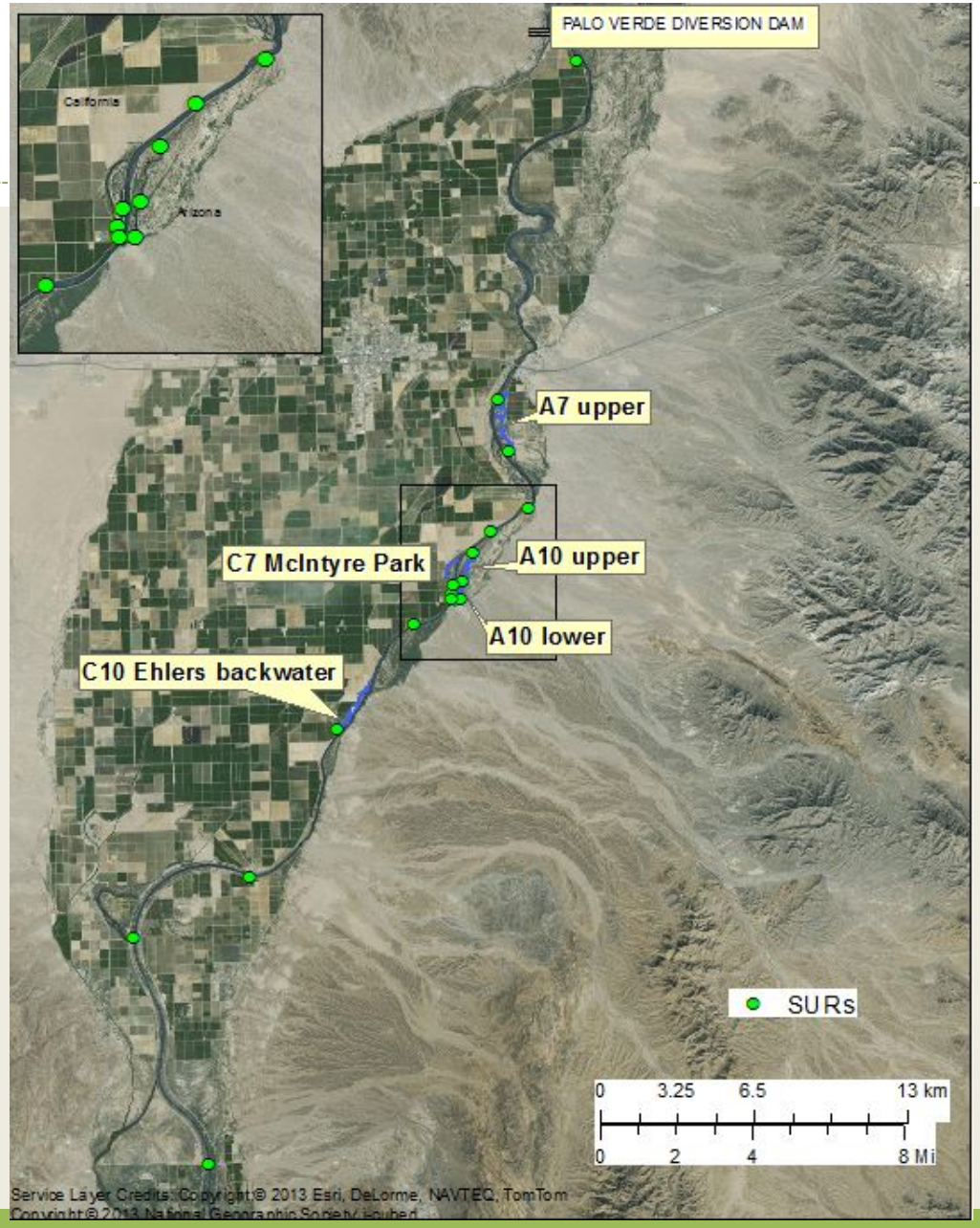
PALO VERDE DIVERSION DAM
California
Arizona
A7 upper
C7 McIntyre Park
A10 upper
A10 lower
C10 Ehlers backwater
SURs
0 3.25 6.5 13 km
0 2 4 8 Mi
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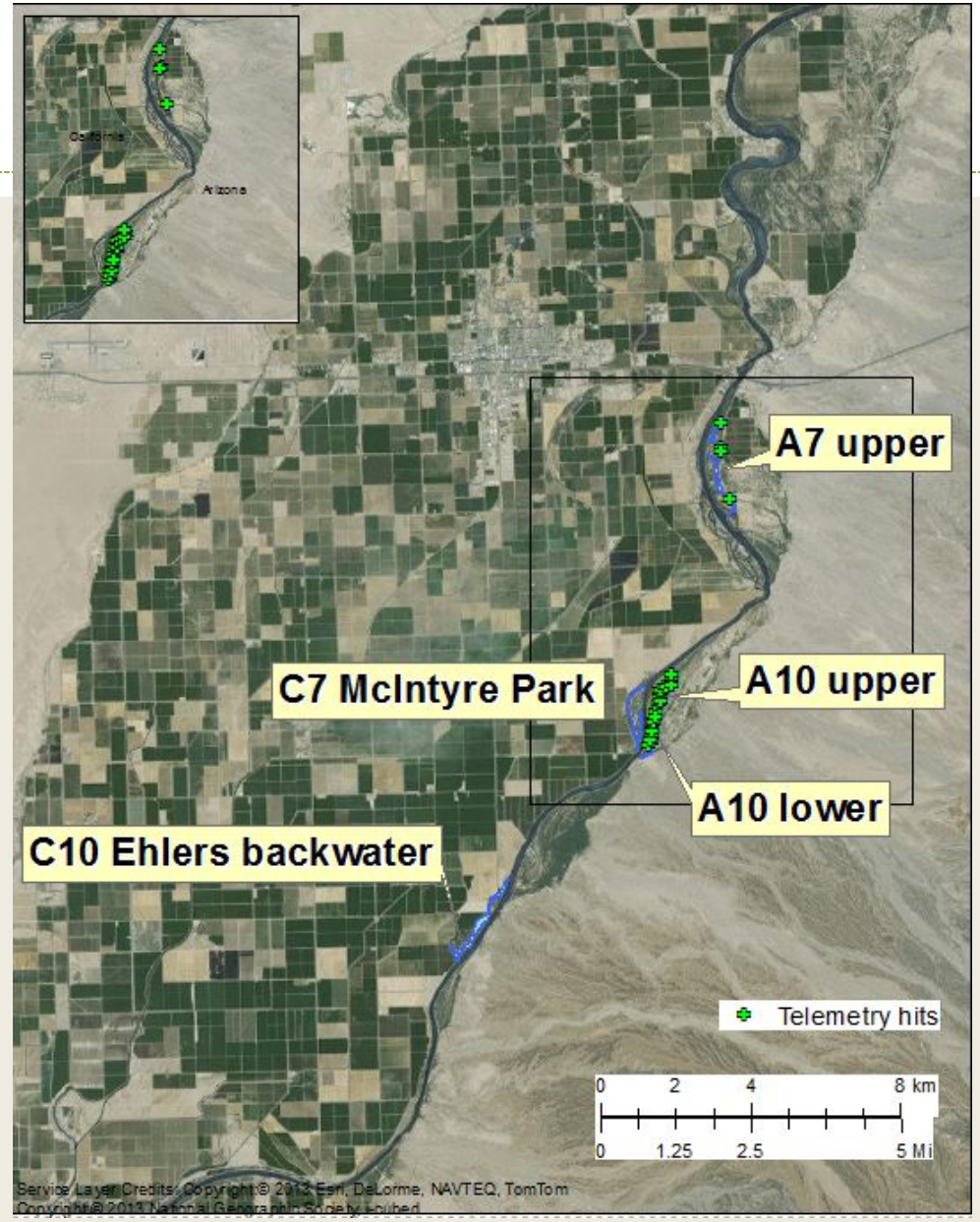
Telemetry

- Each trip, manual telemetry is done in each of the 5 backwaters
- Tags are triangulated via handheld telemetry unit, then best localized via Underwater Diver Receiver.
- If a tag is found in the same spot twice and is determined to be stationary, the fish is declared dead.
- In the 2016-17 study year, 10 tags were recovered via SCUBA diving.


California
Arizona
A7 upper
C7 McIntyre Park
A10 upper
A10 lower
C10 Ehlers backwater
Telemetry hits
0 2 4 8 km
0 1.25 2.5 5 Mi
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Field Observations.

- Heavy piscivorous bird presence.
  - Notably Double-Crested Cormorant and Great Blue Heron
  - One mating pair of Osprey also observed.

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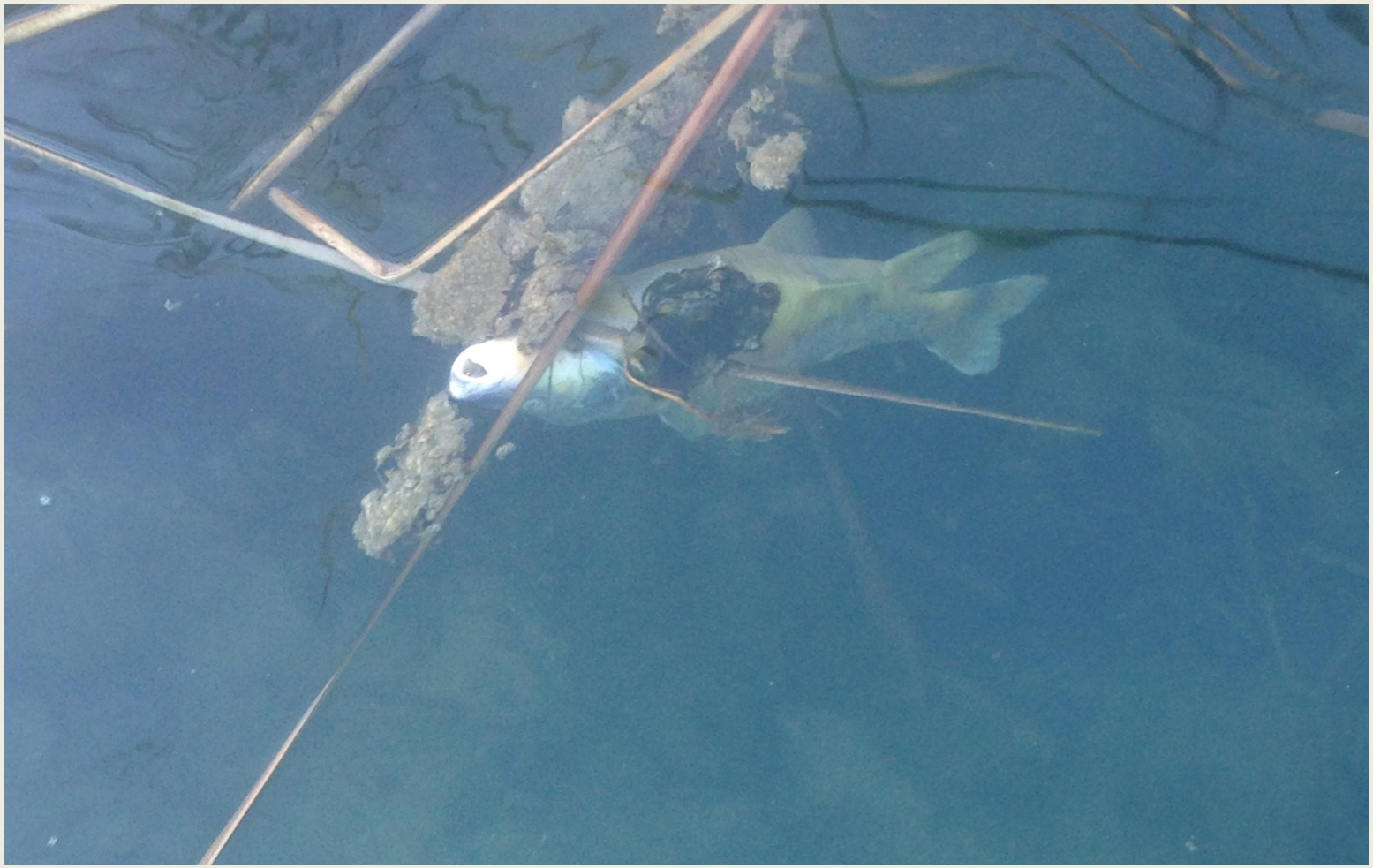

Field Observations.

- Heavy piscivorous bird presence.
  - Notably Double-Crested Cormorant and Great Blue Heron
  - One mating pair of Osprey also observed.
- Late summer flooding.
  - The road separating A-10 upper and lower washed out completely
  - Notable because A-10 upper by the road was observed spawning habitat.

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Goals Going Forward…

- January/February both have 2 weeks in the field.
  - Peak spawning season
- Focus on the river channel for more data collection.
  - More active telemetry
  - Electrofishing river channel
- Adult surgeries later in January, sub-adults in February.
  - Stocking will take place at this time as well.
- By the end of next study year mark-recapture model assessment will be possible.

Thanks to our partners for their support

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