

**Investigations of razorback sucker  
(*Xyrauchen texanus*) and bonytail chub (*Gila  
elegans*) Movement, Survival, and Habitat Use  
Parker Dam to Palo Verde Diversion Dam  
Arizona Fishery Resources Office, Parker**







3-4-4-5

#187

IBT-964

SONOTRON

1212

3-3-3-5

#182

IBT-964

SONOTRON

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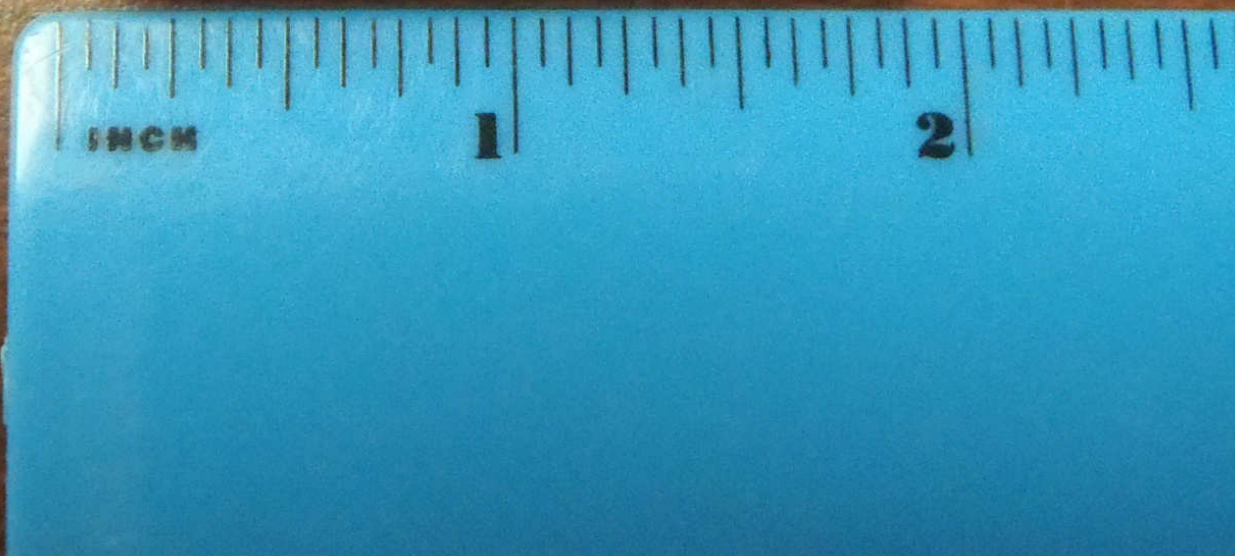
5-8-6-7

#207

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## ■ Average Size

### – Backwater Razorback

- River Island (N=15) had an average TL of 518mm (range 450-567mm) and Bluewater Lagoon (N=15) had an average TL of 520mm (range 465-554 mm).

### – Hatchery Razorback

- The hatchery razorback released at River Island (N=15) had an average TL of 417mm (range 364-490mm) and Bluewater Lagoon (N=15) had an average TL of 414mm (range 365-448mm).

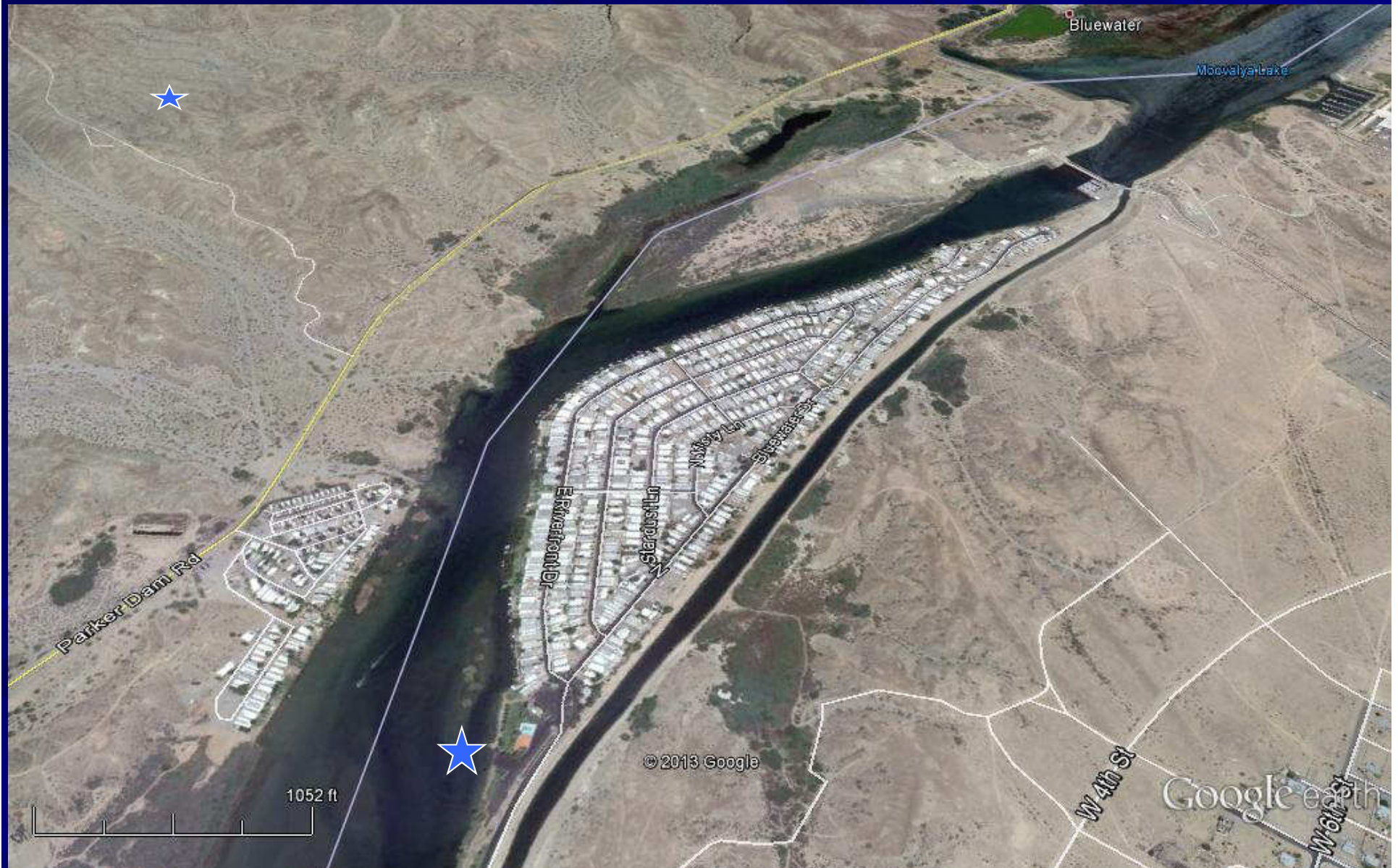


# River Island State Park





# Blue Water Logon



# Razorback Stockings

- January and February 2014, 6 stockings, totaling 6,213 razorbacks
- 10% of stocked fish were PIT tagged
- Avg. size 358 mm



# Methods used to determine species status.

- Sonic tracking
- Trammel netting
- Electro-shocking
- Mobil scanner
- SUR Scanners

# Methods Of Tracking

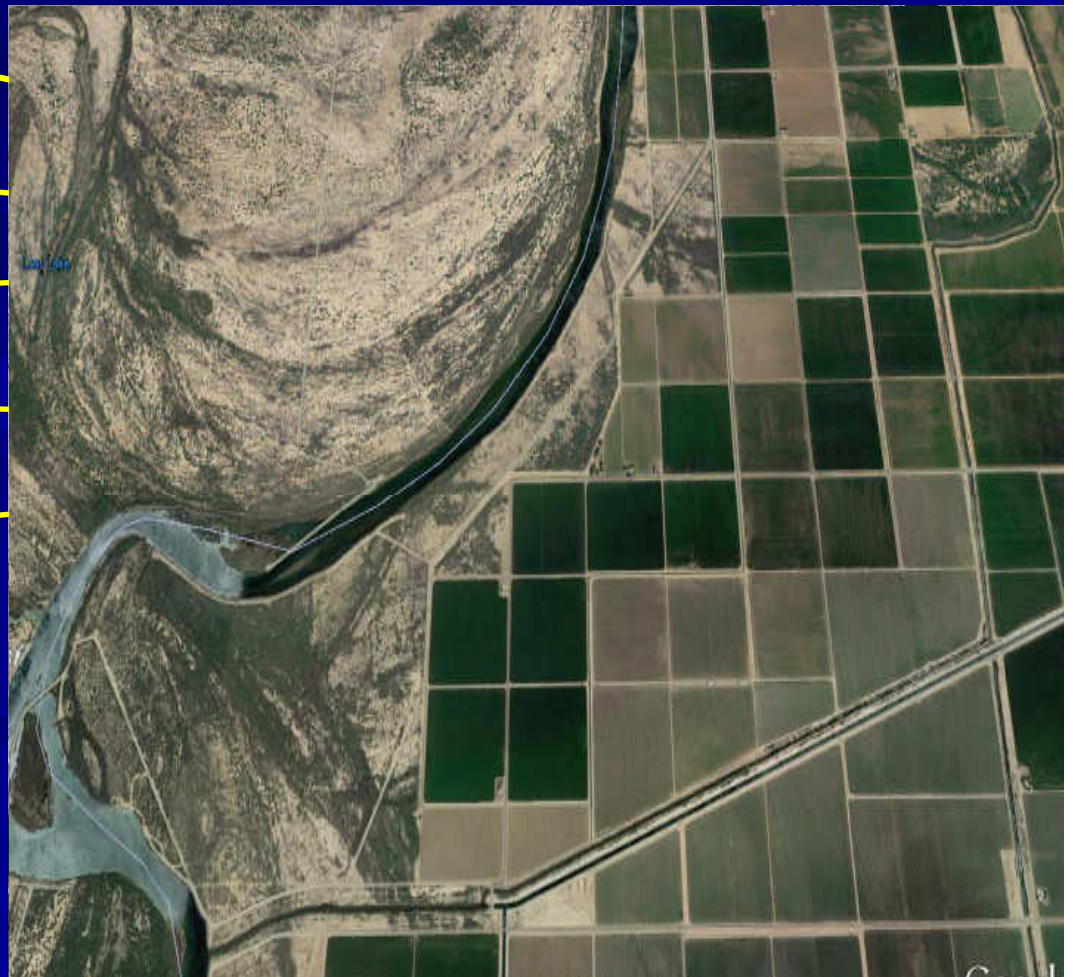
- Sixty razorback were implanted with a BT-96-I, 6 month telemetry tag, 30 from backwater (High Levee Pond) and 30 from hatchery (Bubbling Pond)
- Fourteen day tracking event
- Five day tracking event each month for the next three months
- Electro-Fishing
- Trammel netting





# Sites Tracked and Surveyed

- Main stem of the Colorado River in Reach 4
- Moovayla Lake
- Willow Beach
- Deer Island
- No Name Lake
- CRIT Drain Canal







Google™ earth

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# Results

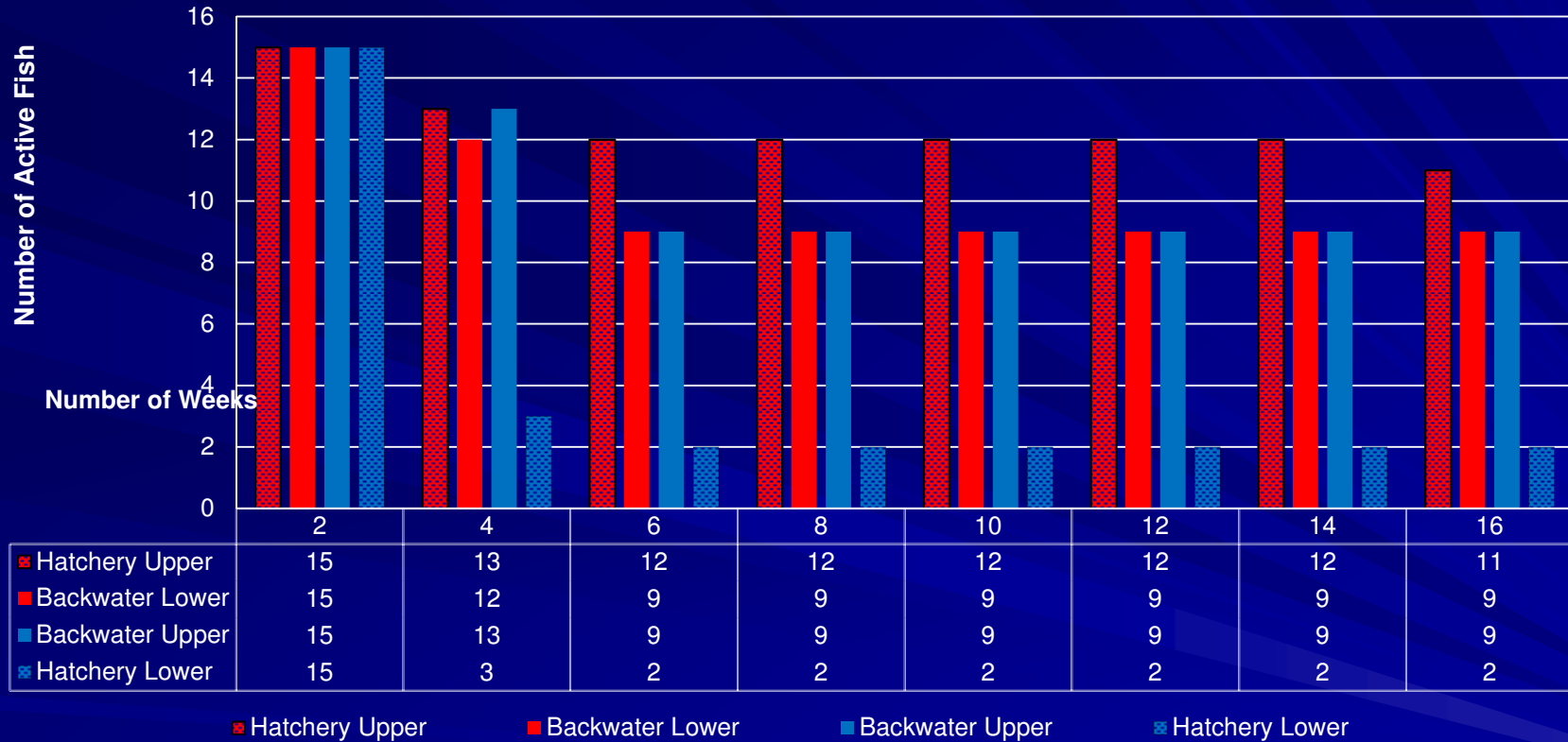
- Electrofishing: 4,500 shocking seconds, resulted in 12 razorbacks
- Remote PIT scanning antennas: 576 hours with one unique
- Dispersal rates compared to upper and lower backwater-reared razorbacks
- Dispersal rates compared to upper and lower hatchery razorback
- Average net movement for all 60 razorbacks
- Average net movement of backwater-reared razorback to hatchery razorbacks



# Results Cont.

- Mortality of backwater-reared razorback stocked at Bluewater Lagoon was 25% and River Island was 46% after four weeks.
- Average survival, 104 lower reach and 77 upper reach
- Hatchery razorback mortality stocked at Bluewater Lagoon was 66% and River Island was 15% after four weeks
- Average survival of sonic-tagged hatchery razorback was 54 d for fish stocked in the lower reach and 108 d for the upper

## Telemetry Activity of Fish during study









# Recommendations

- Consider using radio telemetry for Lower River to compensate for low water levels of the lower river, high noise levels, and inaccessible backwaters.
- The lower river has many backwaters that are inaccessible by boat due to thick vegetation or shallow water.
- The large sampling area of the lower river (40RM) compared to the upper river (12 RM) has proven difficult to monitor with the current crew size.



# Recommendations Cont.

- Monitoring of the CRIT Canal presents additional challenges.
- The 2014 summer time frame presented monitoring challenges.
- This year's low mortality may be attributed to the increased holding time of post-surgery fish.

# Questions!

