

Use of remote PIT-scanners to monitor razorback sucker in Lake Mohave

Abraham Karam, Brian Kesner, Kristen Patterson, and Paul Marsh
Marsh & Associates, LLC



Colorado River Aquatic Biologist Meeting
January 11-12, 2012
Laughlin, NV

2011 Goals

- Increase overall number of contacts with PIT tagged fish in Lake Mohave
- Better resolution on emigration throughout the reservoir



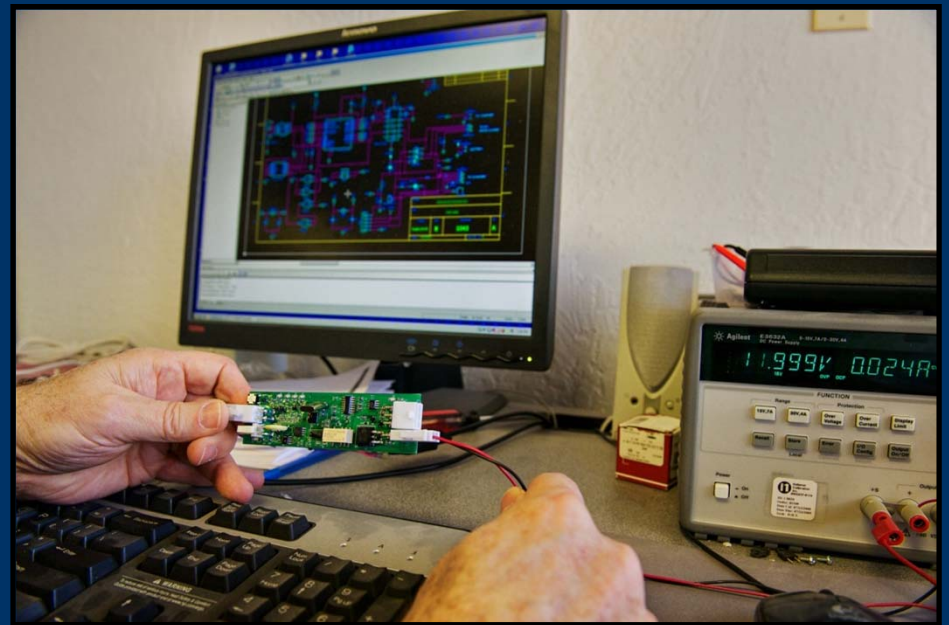
Remote PIT-scanning development

- 2005-12
 - Jon Nelson (BOR) utilized flat-plate antennae and integrated Destron scanners inside floating ice chests



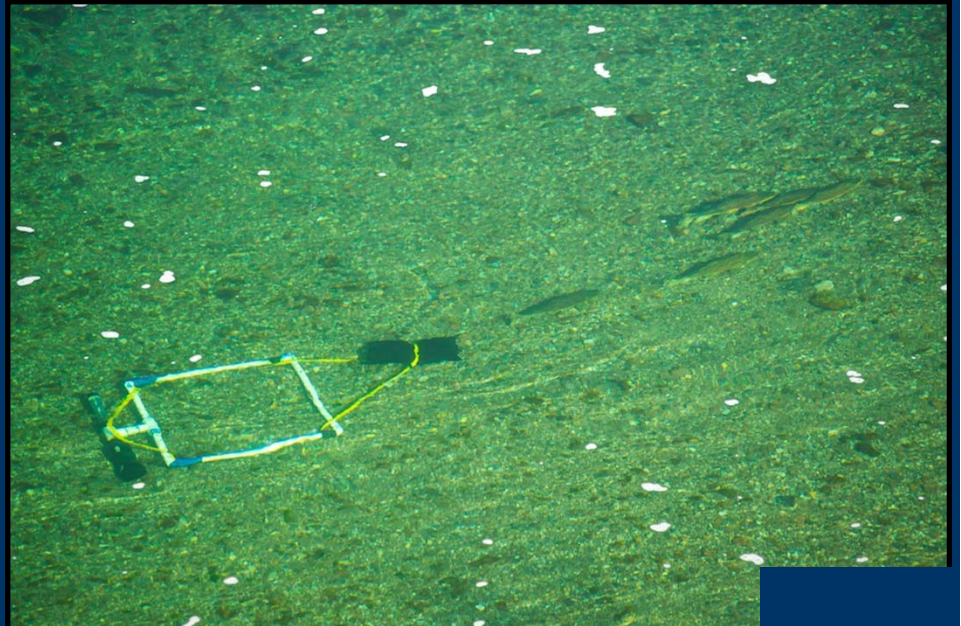
Remote PIT-scanning development

- 2008-12
 - Don and Brian Kesner (M&A) engineered energy efficient loggers paired with Allflex scanners which could be programmed in the field



Remote PIT-scanning development

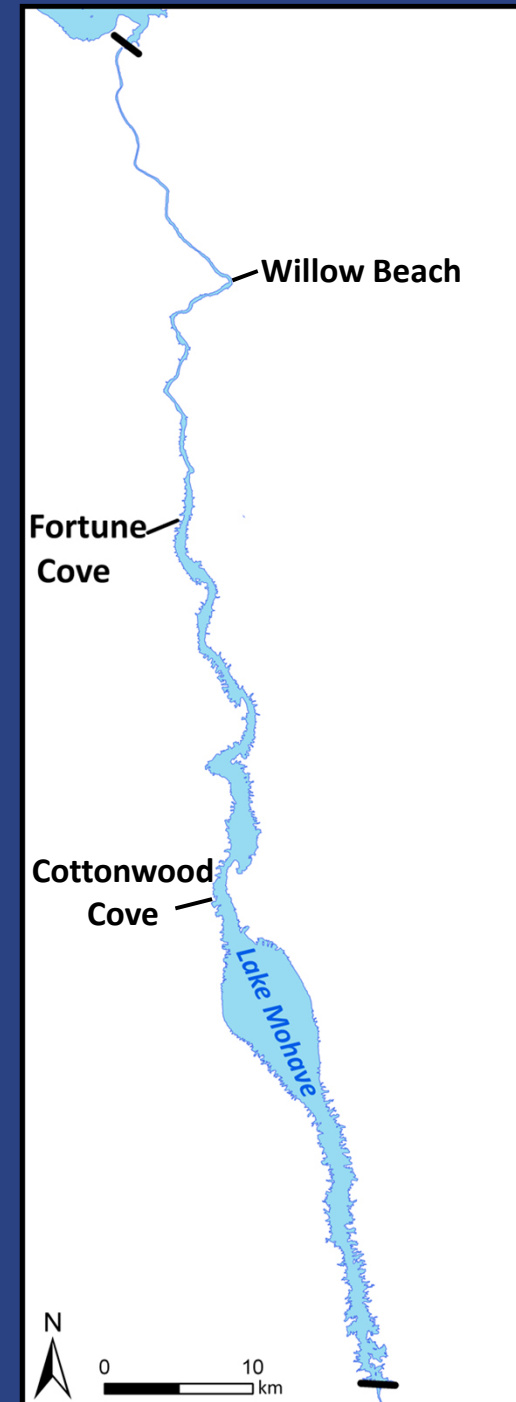
- 2008-12
 - Fabrication of completely submersible remote PIT-scanning antennae with 24-hr battery life



2006-09 telemetry



- Post-stocking dispersal and survival of subadult and adult razorback sucker



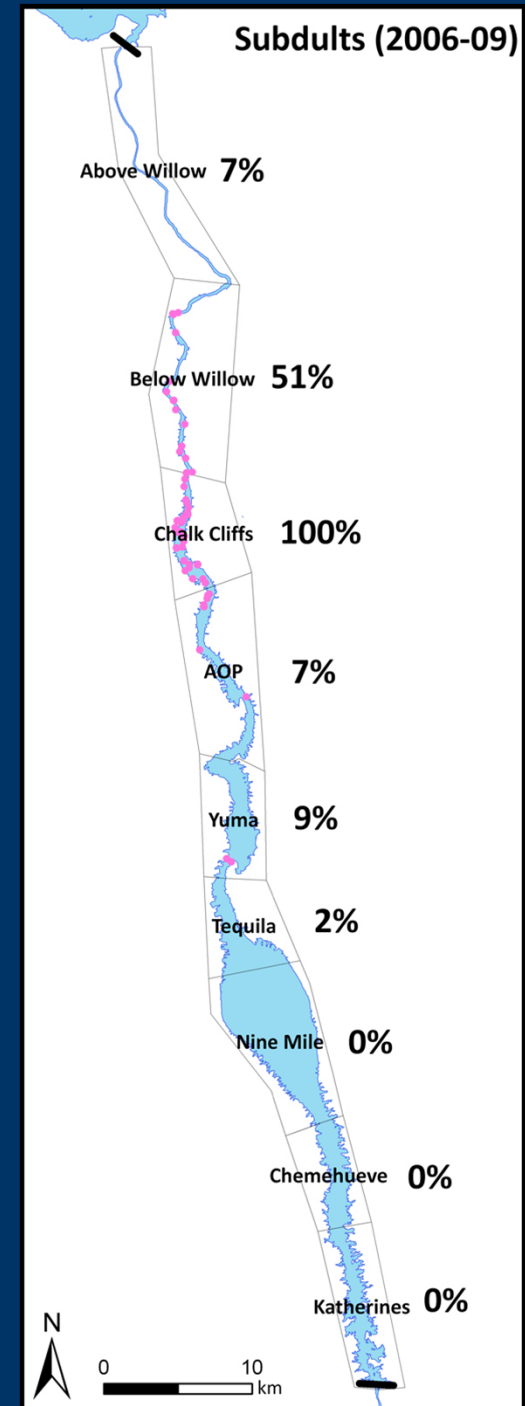
2006-09 telemetry



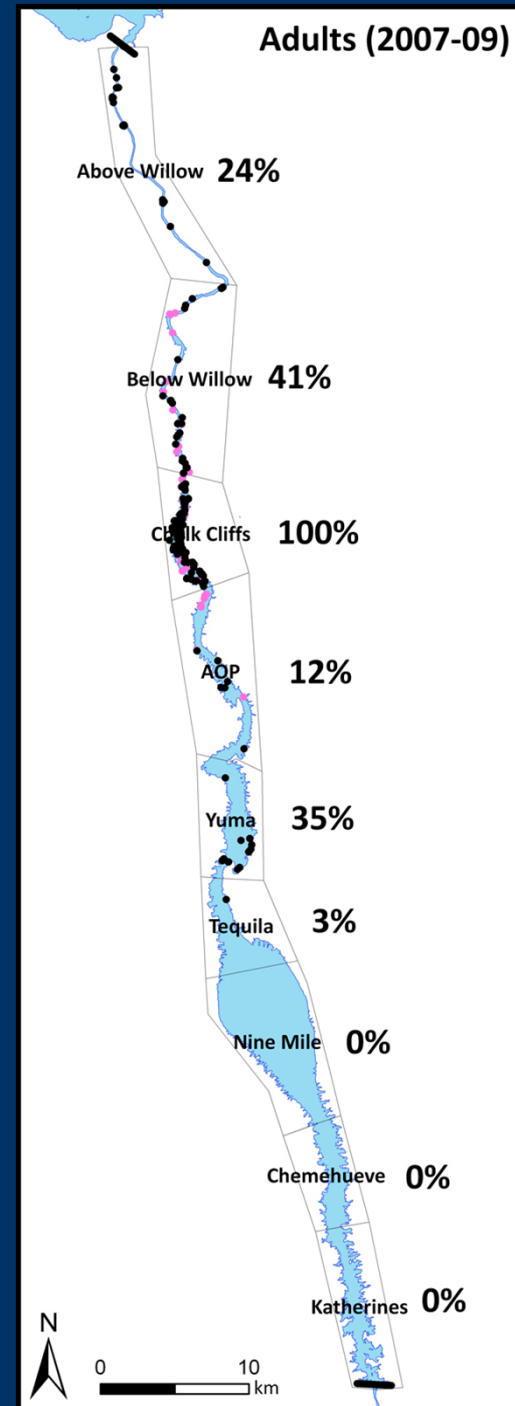
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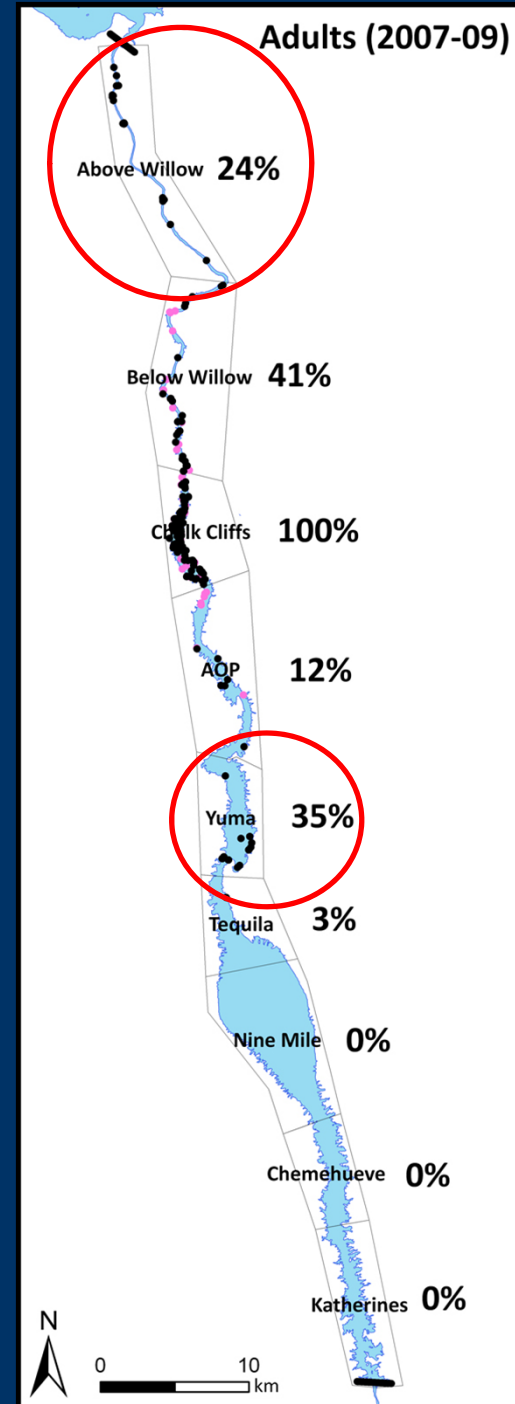
2006-09 dispersal

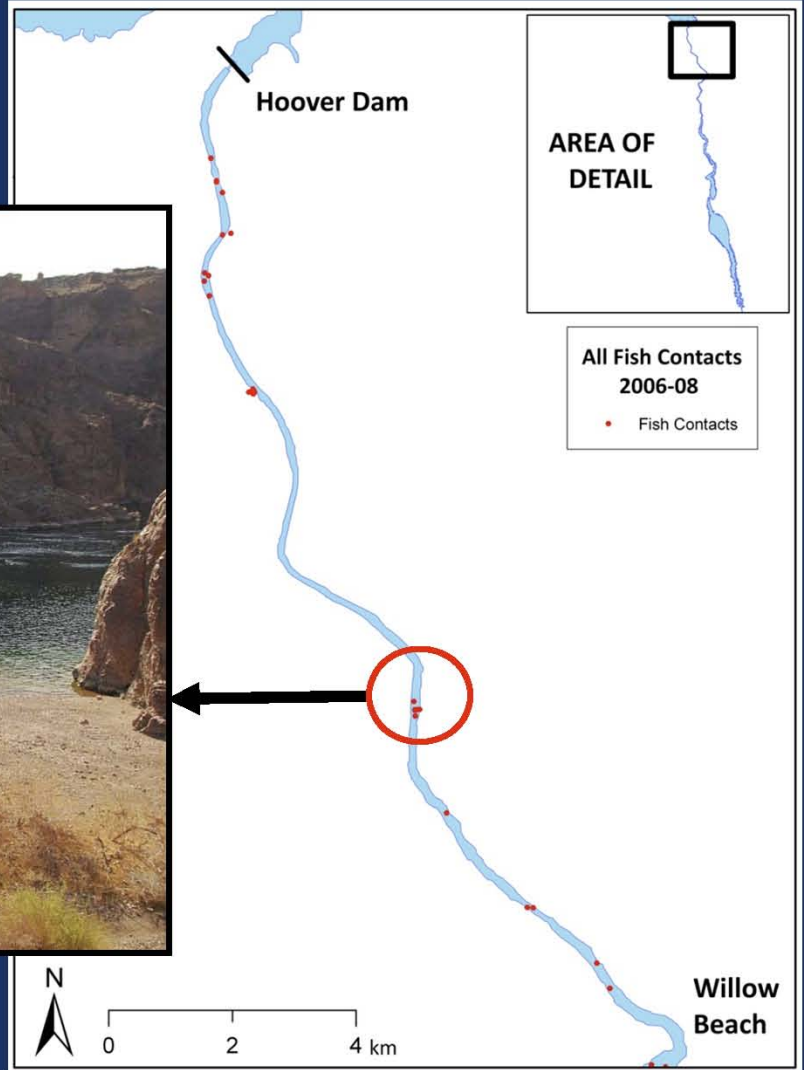
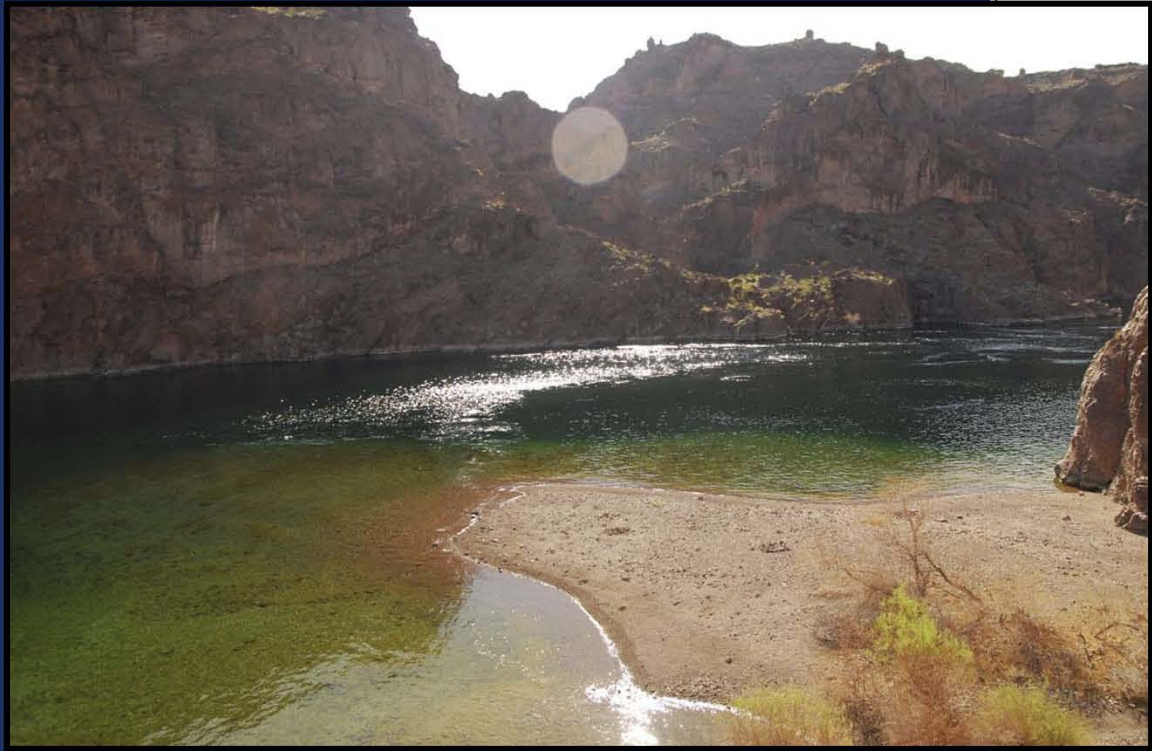


2006-09 dispersal



2006-09 dispersal





Shore-based PIT-scanning units



96 hours battery life



Submersible PIT-scanning units



Unique razorback sucker contacts in Lake Mohave

- 2002-11
 - Electrofishing and netting efforts of NPS, FWS, BOR, NDOW, AZDFG, BLM, M&A, USGS, ASU, M&A (2002-2011)



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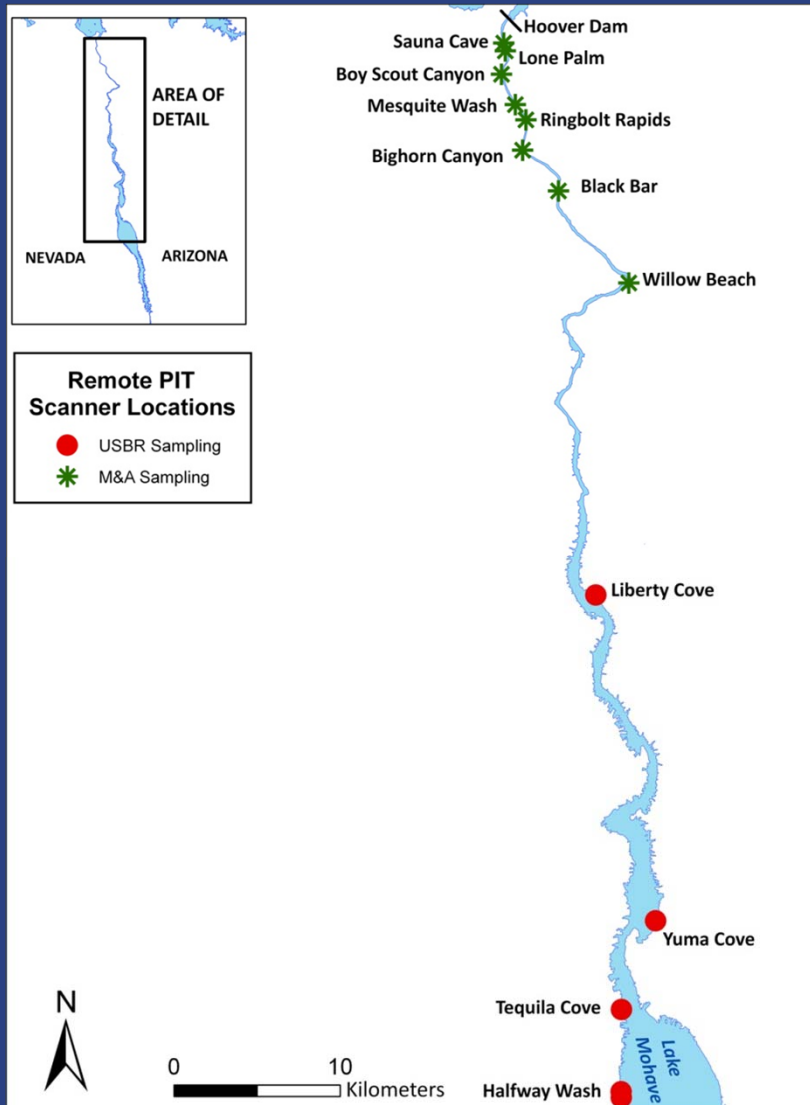


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 - 1,044 unique contacts



Unique razorback sucker contacts in Lake Mohave



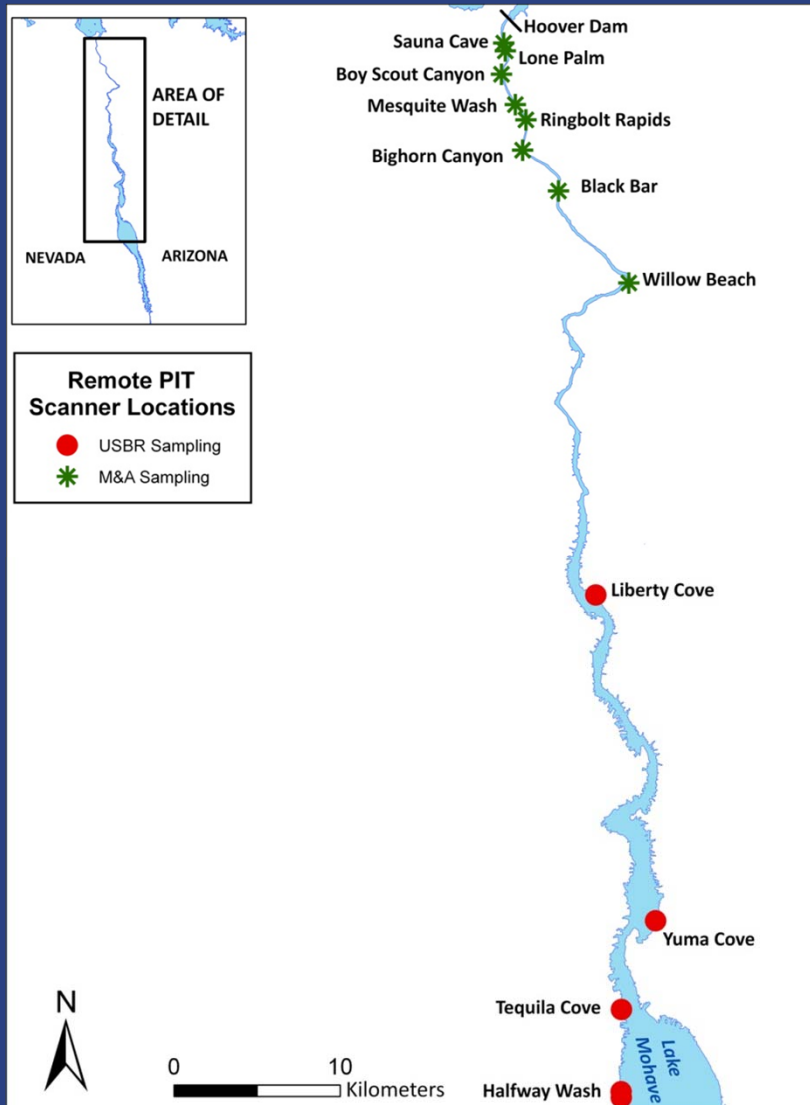
M&A data

- Two person field crew
- 1987 scan hours
- 730 unique contacts

BOR data

- One person field crew
- 1275.5 scan hours
- 321 unique contacts

Unique razorback sucker contacts in Lake Mohave



Fish movement

- 7 fish (<1%) detected between monitoring sites
- No directional movement

164 unique contacts (16%) were detected at between 2-4 different spawning sites

Unique razorback sucker contacts in Lake Mohave



- Of the 1,044 unique PIT scanner contacts, 12 fish were released during 2008 or 2009 telemetry studies
- Half of those (6 fish) were reared in Yuma Cove backwater

2012 and beyond

- Intensive monthly remote PIT-scanning
- Increase overall number of contacts with PIT tagged fish
- Better resolution on repatriate emigration and survival throughout Lake Mohave
 - Particularly, how does stocking location affect survival



Thanks to our partners for their support

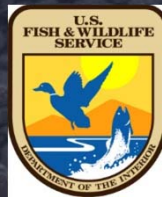
- MSCP



- USBR



- USFWS



- Cross Country Consulting, LLC

