Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

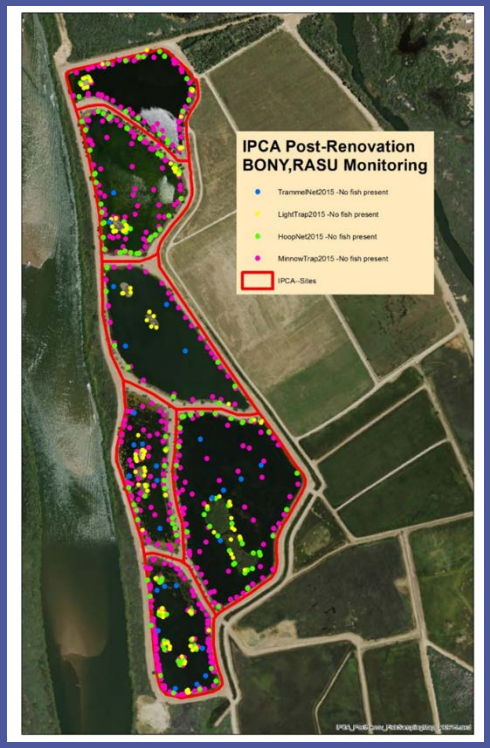
Imperial Ponds Conservation Area

Overview

- 2014 – Installed 2nd well
- 2014 – Native Fish Removal
- 2014 – Rotenone Treatment (2 applications)
- 2015 – Post Renovation Monitoring (2 years)
- 2017 – Native Fish Stocking

Post Renovation Monitoring

- Quarterly sampling
  - Hoop and trammel nets, minnow and light traps.
- *Gambusia affinis* detected in pond 5



	Pond 1	Pond 2	Pond 3	Pond 4	Pond 5	Pond 6	FY16 Total	2 Year Total
Trammel	14	16	12	10	12	12	**76**	**112**
Hoop	50	54	40	50	40	40	**274**	**403**
Minnow	101	101	74	75	75	101	**527**	**874**
Light	12	14	8	8	8	10	**60**	**162**

Water Quality

- 2015: Water Management Plan
  - Ponds receive water every 2 weeks
- Continuous Water Quality Monitoring
  - 1 probe/pond
  - Mid pond at ≈ 1 meter depth
  - 2 readings/day
  - DO consistently > 5 mg/l
  - pH < 9.5
  - Conductivity ≈ 5,000 µS/cm

Remote PIT Scanner Setup

- Two Permanent Scanners Per Pond
  - Boat Ramp and Inflow
  - Solar Powered

Native Fish Stocking

- RASU
  - Ponds 1, 3, and 4
  - Based on past successes
    - Survival and/or recruitment
  - 300 Adults (150 ♂ and 150 ♀)
    - Each individual genotyped
    - Lake Mohave Origin
  - **Released: December 12, 2016**

Native Fish Stocking

- BONY
  - Ponds 2, 5, and 6
  - Based on past successes and habitat
    - Survival and/or recruitment
  - 300 Adults (150 ♂ and 150 ♀)
    - Each individual genotyped
  - Release date: February, 2017

Avian Predation Monitoring

- Point Counts
  - One location per pond (2 at Pond 5)
  - 3 x Day for 10 minutes
  - Initiated in September
- Pre Release
  - No large piscivores on ponds
    - Cormorants and osprey flyovers
- Post Release
  - GBH and Osprey within days
  - Cormorants about 2 weeks

Avian Predation and Bioenergetics

- Roost Scanning and Point Counts
  - 10 days post-stocking
  - Point counts each subsequent trip
- Correlate bird use and changes in population
- Develop model to evaluate range of impact

Post-Stocking Monitoring

- Adult Monitoring via remote PIT scanning
  - Monthly population estimates
  - Individual survival
- Larval collections
  - Every 2 weeks during spawning seasons
    - RASU (Jan - March)
    - BONY (March – May)
- Fall Netting and electrofishing surveys
  - Validate population estimates
  - PIT tag and collect genetics from recruits