Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Imperial Ponds

Jeff Lantow

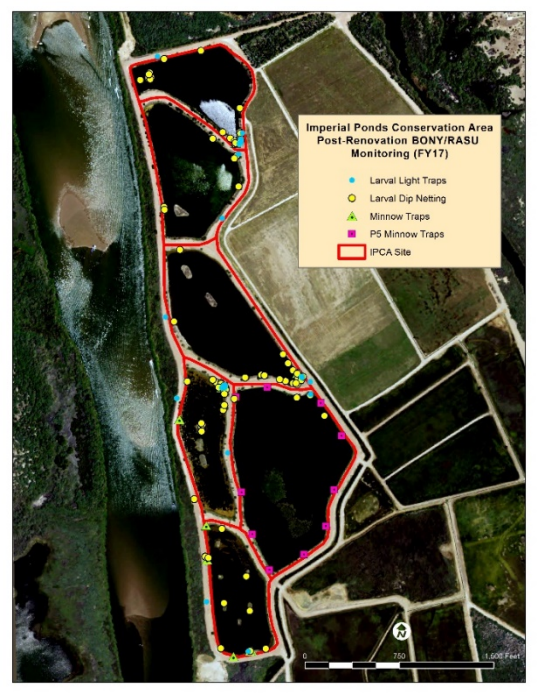
Fisheries Activities and Results

- Fish Monitoring
  - Netting
  - Larvae
  - Scanning

Pond Monitoring

Objectives

- Monitor stocked fish
  - 2-3 permanent scanners/pond
  - Annual Netting Events
- Document spawning/recruitment
  - Larval light traps
  - Larval dip net surveys
  - Minnow traps



FY19 IP Monitoring Effort						
Method	**Pond 1**	**Pond 2**	**Pond 3**	**Pond 4**	**Pond 5**	**Pond 6**
Larval Light Trap	0	0	0	0	0	0
Larval Dip Net	13	2	7	7	0	0
Minnow Traps	16	0	0	0	0	0
Hoop Nets	76	24	20	9	10	14
Trammel Nets	10	3	12	5	4	4
Electro Fishing	0	0	0	0	0	0

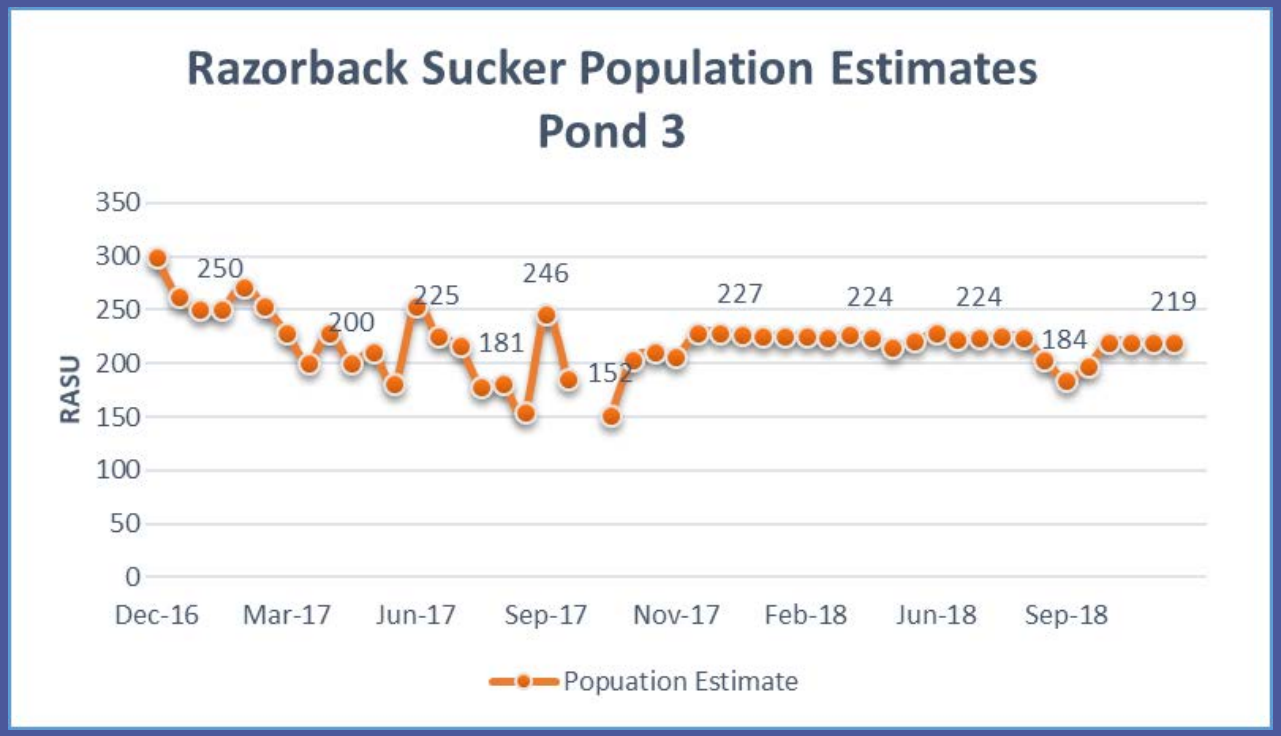
Pond Monitoring

Pond 1 - Remote PIT scanning results

Chapman modification of the Lincoln-Peterson Model (Seber 1973)

Pond Monitoring

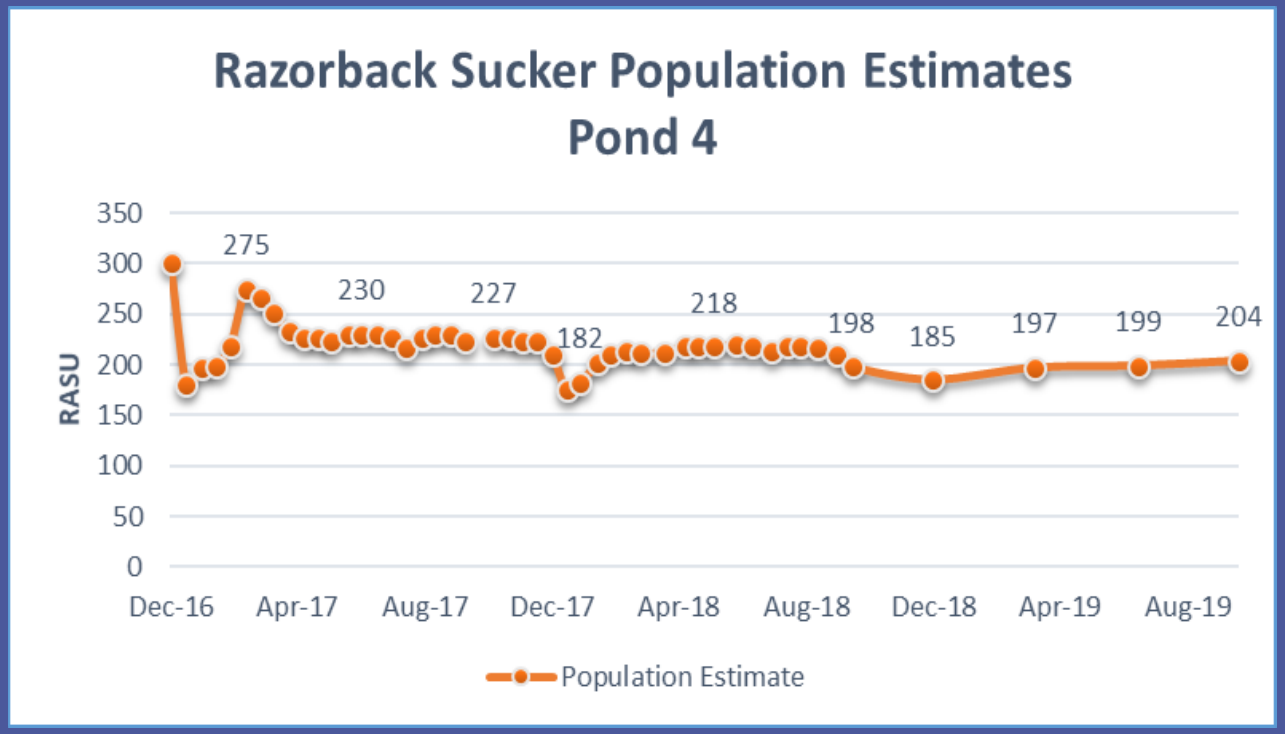
Pond 3 - Remote PIT scanning results



Chapman modification of the Lincoln-Peterson Model (Seber 1973)

Pond Monitoring

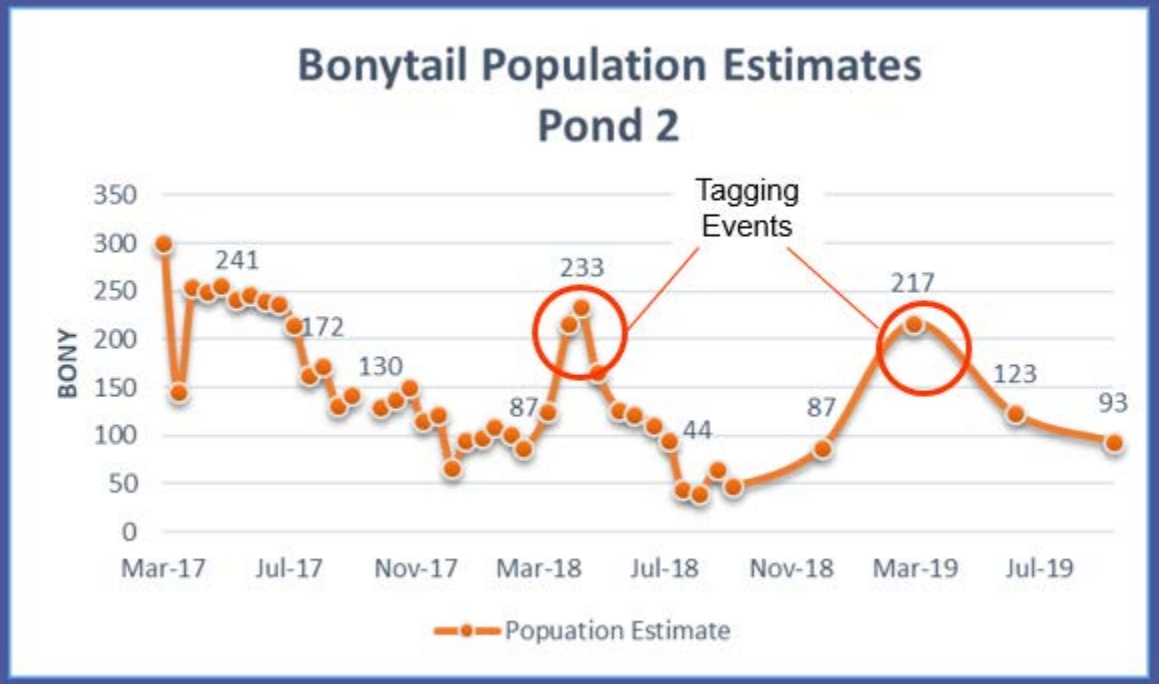
Pond 4 - Remote PIT scanning results

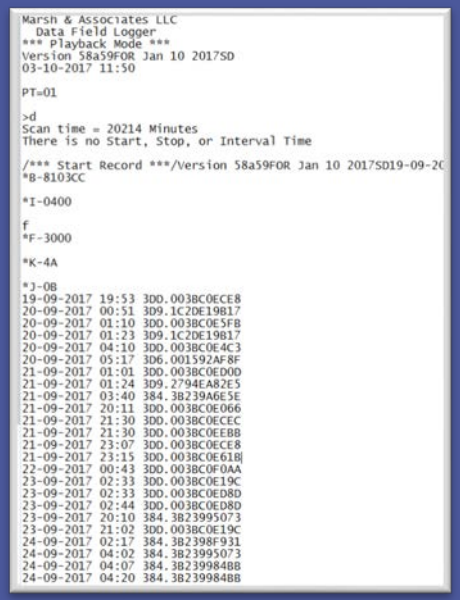


Chapman modification of the Lincoln-Peterson Model (Seber 1973)

Pond Monitoring

Pond 2 - Remote PIT scanning results





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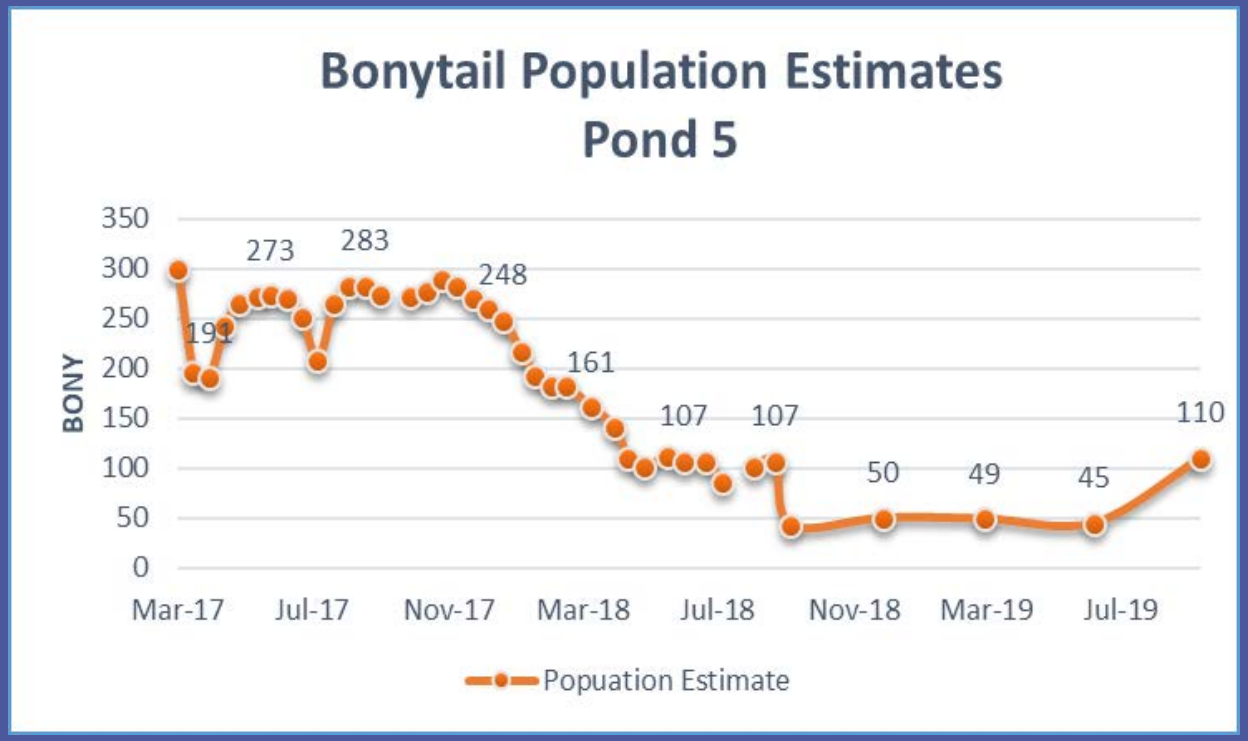
Chapman modification of the Lincoln-Peterson Model (Seber 1973)
*Only 1 PIT tagged fish was captured in nets

Pond Monitoring

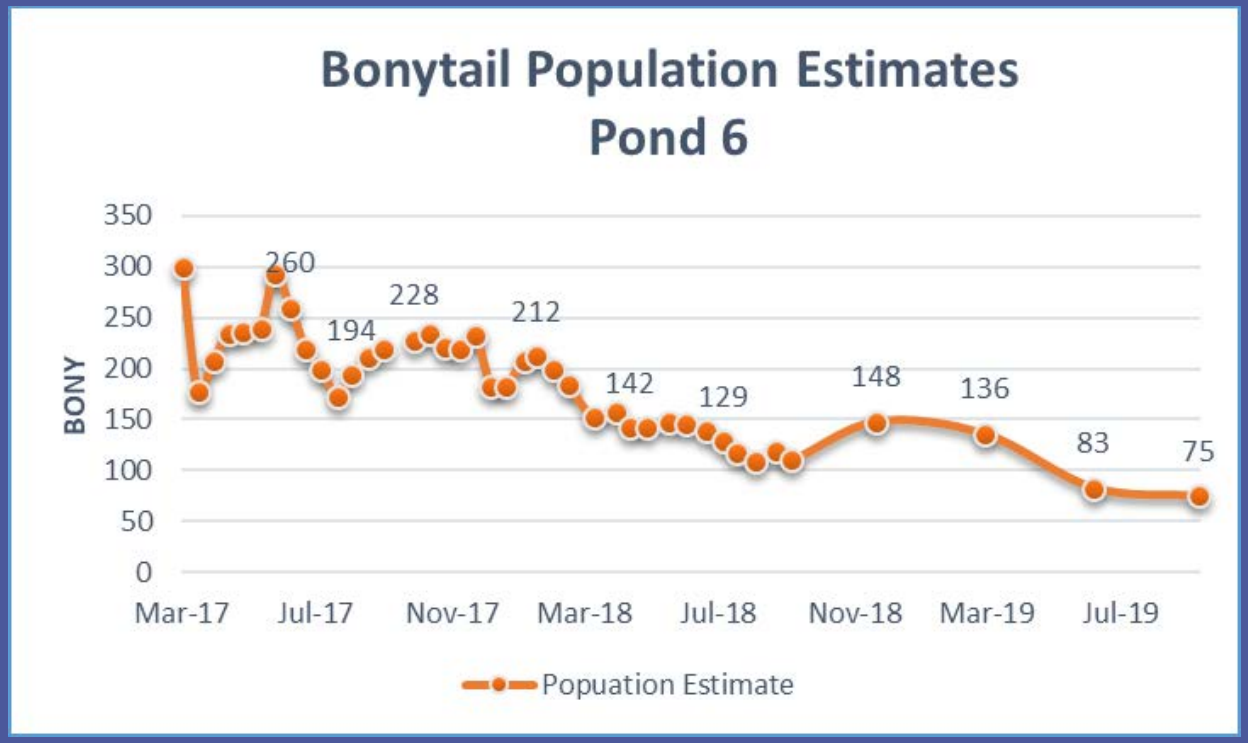
Pond 5 - Remote PIT scanning results



Chapman modification of the Lincoln-Peterson Model (Seber 1973)
*Only 10% of fish captured were PIT tagged

Pond Monitoring

Pond 6 - Remote PIT scanning results



Chapman modification of the Lincoln-Peterson Model (Seber 1973)
*0 fish captured were PIT tagged (12 total captures)

Pond Monitoring

FY19 IP Monitoring Results						
Method	**Pond 1**	**Pond 2**	**Pond 3**	**Pond 4**	**Pond 5**	**Pond 6**
Larval Light Trap	N/A	N/A	N/A	N/A	N/A	N/A
Larval Dip Net	42	0	0	0	0	0
Minnow Traps	0	N/A	N/A	N/A	0	0
Hoop Nets	116	540	2	2	11	3
Trammel Nets	25	8	6	15	24	9
Electro Fishing	N/A	N/A	N/A	N/A	N/A	N/A

FY19 IP Native Fish Breakdown				
Pond	**Captured (Stockers/Recruits)**	**Stockers TL at Release (mm)**	**Stockers TL at Capture (mm)**	**Recruit Average TL (mm)**
Pond 1	141 (18 / 123)	425	535	261
Pond 2	548 (1 / 547)	274	356	130
Pond 3	8 (7 / 1)	425	540	319
Pond 4	17 (17 / 0)	425	528	N/A
Pond 5	34 (3 / 31)	272	427	301
Pond 6	12 (0 / 12)	N/A	N/A	207

Imperial Ponds Highlights RASU

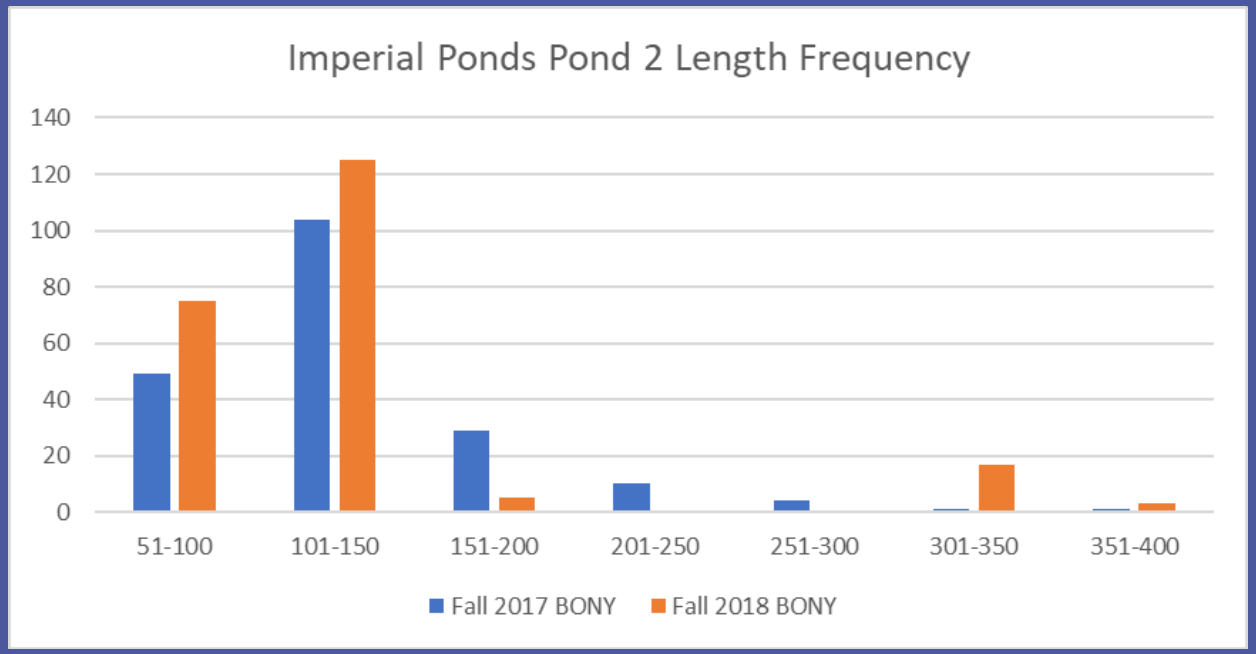
- Pond 1
  - Lots of recruits (123 captured, 42 larvae)
  - Within season population estimate
    - N=549 (95% CI: 272-1199)
  - Non native: Yellow Bullhead (295mm)

- Pond 3
  - 1 recruit captured (319mm)
  - Non-native: Mosquito Fish

- Pond 4
  - No signs of recruitment

Imperial Ponds Highlights BONY

- Pond 2, 5 and 6
  - Annual recruitment
  - Low % of fish captured have PIT tags
  - Non-native: Mosquito fish in Pond 6



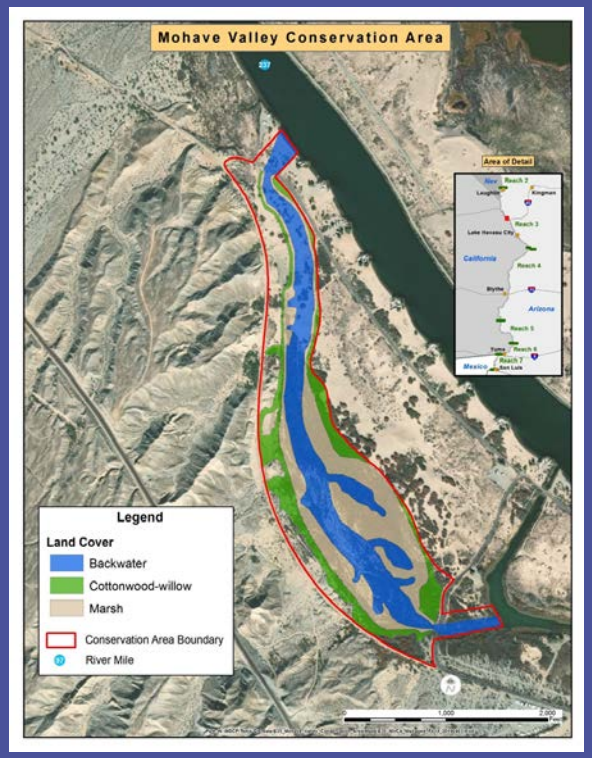
Fisheries Proposed Activities FY20

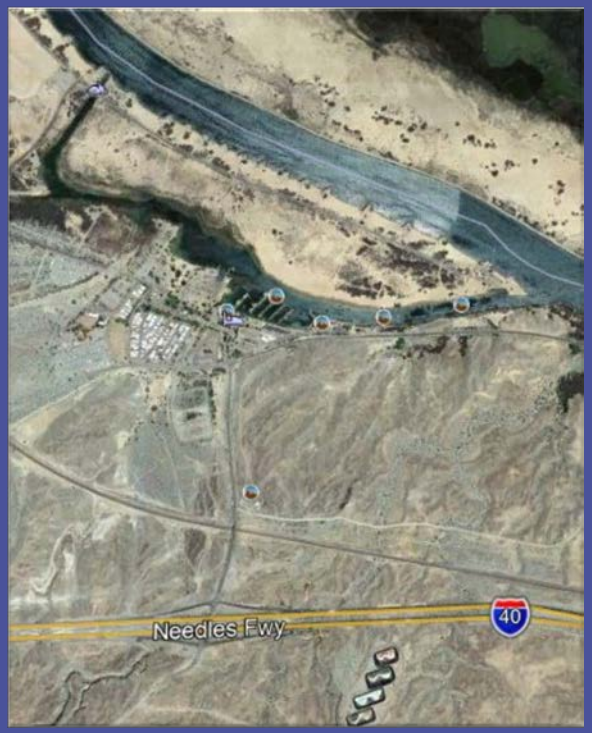
- Water Quality
- Fall Monitoring
  - Hoop nets, trammel nets
  - Larval Sampling
  - Tag more recruits

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Mohave Valley Conservation Area





Dredging

Inlet Bridge

FY19 Scanning Summary

	North Scanners			
	Total uniques	BONY	RASU	FLSU
Quarter 1	139	0	139	0
Quarter 2	201	0	201	0
Quarter 3	327	0	327	0
Quarter 4	317	0	317	0
Total	984	0	984	0
FY19 Uniques	660	0	660	0

	South Scanners			
Quarter 1	0	0	0	0
Quarter 2	910	0	910	0
Quarter 3	1187	1	1186	0
Quarter 4	710	0	710	0
Total	2807	1	2806	0
FY19 Uniques	1665	1	1664	0
FY19 Uniques Combined	**1932**	**1**	**1931**	**0**