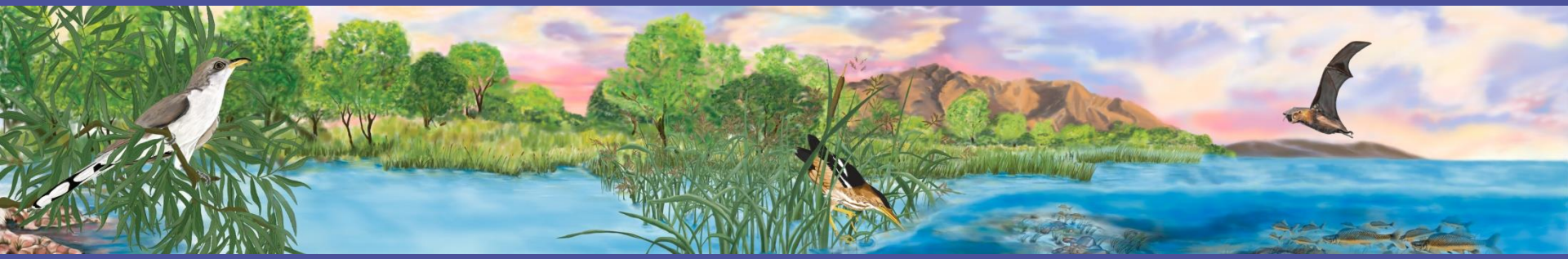
Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

LOWER COLORADO RIVER
MULTI-SPECIES CONSERVATION PROGRAM



PROGRAM UPDATES

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Northern Mexican Gartersnake

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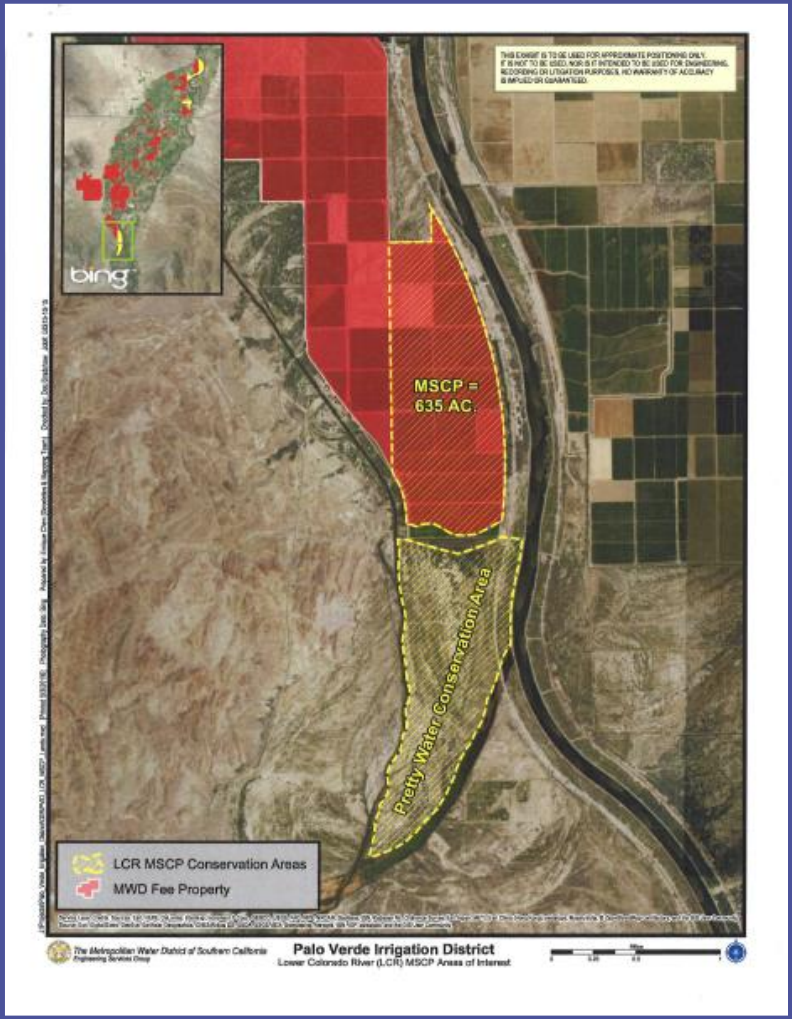
Dennis Underwood Conservation Area



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Willow Beach National Fish Hatchery
Ich (*Ichthyophthirius multifilis*) Outbreak

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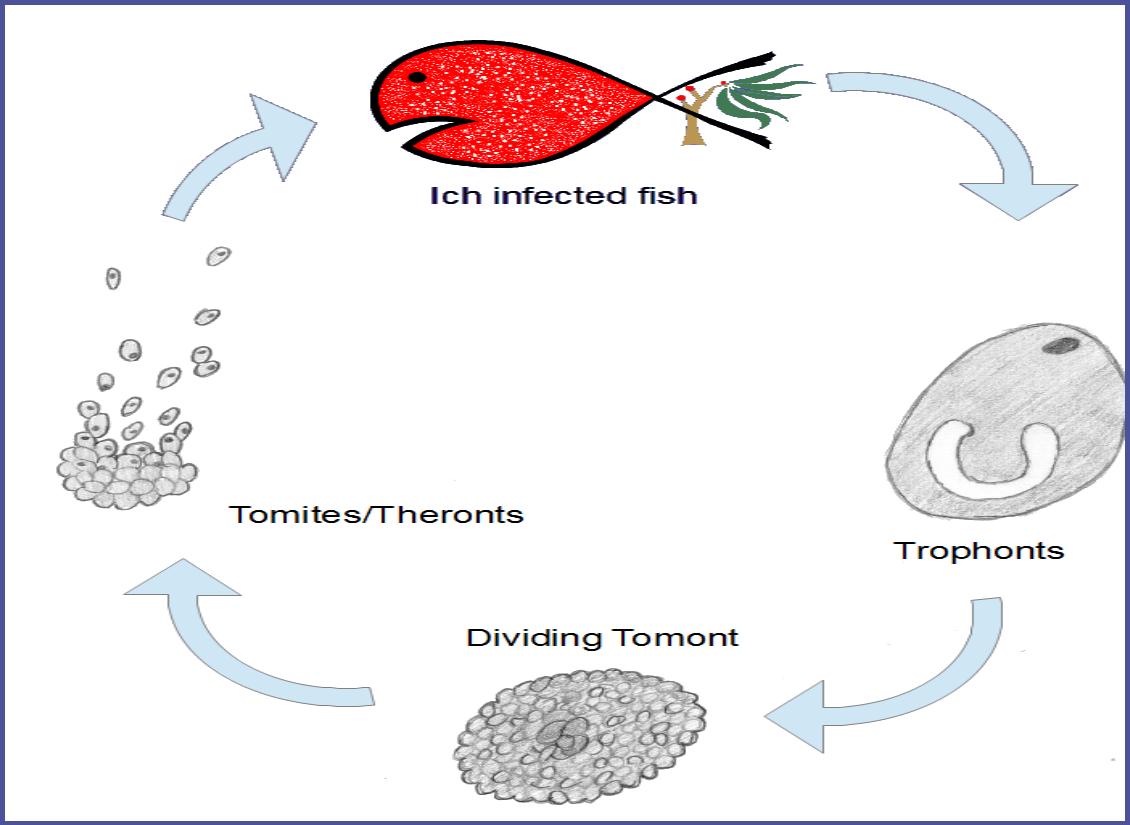
Ich Cycle



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Source of the Infection

River water
Leaking concrete walls
Birds
Raccoons

Other Contributing Factors

- Naive immune systems from well water rearing
- Water cooling/ spawning response
- Fish reduce feeding at this time of year, further weakened immune response.

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Fish Loss Numbers

Inventory on 10/1/2016	
Year Class	Number
2013	10,403
2014	15,111
2015	10,224
2016	10,542
Total	46,280
Inventory on 1/1/2017	
2014	3,500
2016	10,000
Total	13,500
Total Loss	32,780

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Affects on the Fish Augmentation Program and the LCR MSCP Response

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Affects on FY 17 Augmentation

- Reduced number of RASU available for Reach 3 augmentation and Lake Mohave stocking
- Increased experimental stocking planned for FY17 will be delayed
- Older, larger RASU for Lake Mohave stocking were lost

Strategy

Redirect stocking efforts in other reaches to balance reach goals and still provide some fish for Lake Mohave genetic broodstock

LCR Reach	2	3	4/5
FY 17 LCR MSCP RASU Goal	7000 - 8000 adults (genetic broodstock)	6000 sub-adults (population augmentation)	6,000 sub-adults + 6,000 (Population augmentation + Experimental Stocking)
Hatchery	Willow Beach (WB), Lake Mead Hatchery (LMH)	LMH, Achii Hanyo (Achii), WB	Bubbling Ponds (BP)
What we're getting	~1,100 (in Mohave + ~500 lakeside ponds*)	~4,300	~6,000
Where did they come from?	~500 LMH* ~600 Achii ~500 WB (lakeside ponds)	~2,000 LMH ~300 Achii ~2,000 BP*	~5,500 BP ~500 LMH (Lake Mead Origin)*

*These fish have not yet been stocked

Rebuilding Hatchery Population

- Bring in 30,000 larvae in 2017 to bring the population back to 43,000
- 9,000 transferred to Achii Hanyo
- Use half of the space at Achii Hanyo for RASU to raise RASU to stocking size in two years
- Continue strategy to raise 5 year old RASU at WB for Lake Mohave stocking

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Efforts to Improve Preventative Measures for Future Outbreaks

- LCR MSCP, USFWS, and WBNFH staff met to develop possible preventative measures
- WBNFH has implemented additional preventative measures to reduce the potential of cross-contamination
- Hatchery experts with LCR native fishes are convening to identify techniques, system enhancements and technologies that could reduce the likelihood and/or severity of additional outbreaks at WB and other facilities that rear fish for the LCR MSCP

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Affects on Future Fish Augmentation

- Low numbers of RASU for Lake Mohave in subsequent years
- Delay in experimental augmentation

Strategies to cope and rebuild

- More fish
  - Increased larval goals
  - Expanding rearing capacity at Lake Mead Hatchery
  - Using rearing space at Achii Hanyo for more RASU capacity

- Developing additional grow out areas:
  - Beal Lake (large fish grow out)
  - Yuma Meadows Conservation Area
  - Investigate new areas