Muddy River Conservation and Recovery Program

Partners in the protection and recovery of the Muddy River (MRBAC , MOA, MRRIP, etc)

"The goal of the MRRIP is to implement a series of recovery actions necessary to promote recovery and/or conservation of aquatic species in the Muddy River ecosystem, while at the same time, providing for mitigation and minimization of potential adverse effects associated with the development and use of water supplies and other activities"

Native fishes

Moapa Dace (endangered)

Moapa White River Springfish

Moapa Speckled Dace

Moapa Virgin River Chub

Headwater Thermal Springs

What to do?

N[illegible]crifice the habitat, risk further spread

Dewater[illegible]eates problems for water users

Manual removal – i[illegible] unsuccessful

Rotenone (fish pesticide)

- Root extract from plants of the bean family
- Used for fishing by South American tribes
- Specifically targets fish (gilled animals)
- Metabolized by most other animals
  (very low toxicity)
- Easily neutralized by adding a water purifier
- NDEP approved

2009
South Fork
Muddy River
treatment

- December 9, 2009
- December 16, 2009

2010-2011
Main stem Muddy River

- October 6, 2010
- October 13, 2010
- February 23, 2011

in

2011
South Fork
Muddy River,
AGAIN!

- October 6,
- October 13,
- October 23,
- November 4,

Fish Barriers
(Reach segments)

Preparation - Surveys

2015 Sampling:

- 8 Virgin River Chub
- 117 Tilapia
- 2300 Mollies
- 900 Mosquitofish
- 1 Carp, 2 crayfish

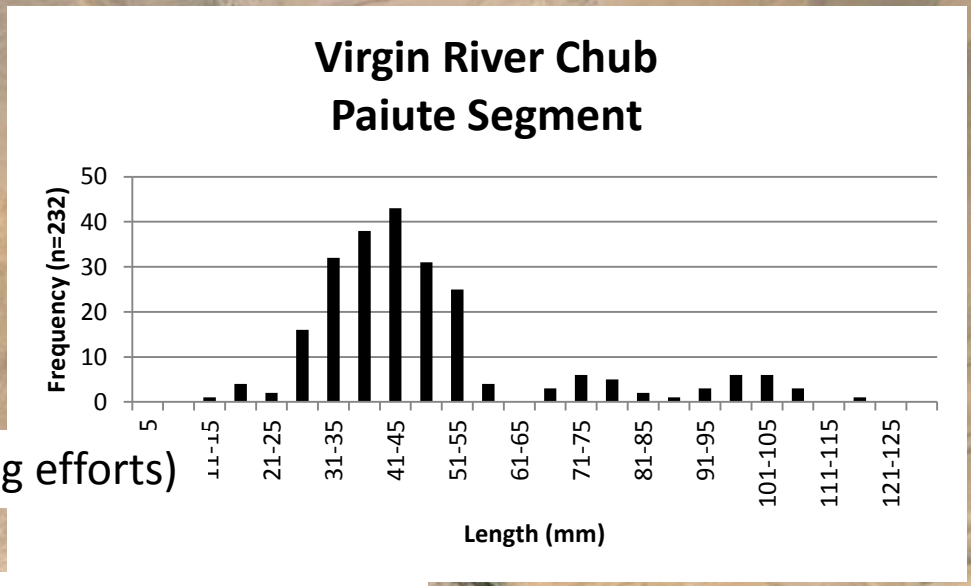
Preparation - Access

Preparation - Salvage

Application:

Jan 20, 2016

Results:



300-400 Tilapia removed

No tilapia observed (4 post treatment sampling efforts)

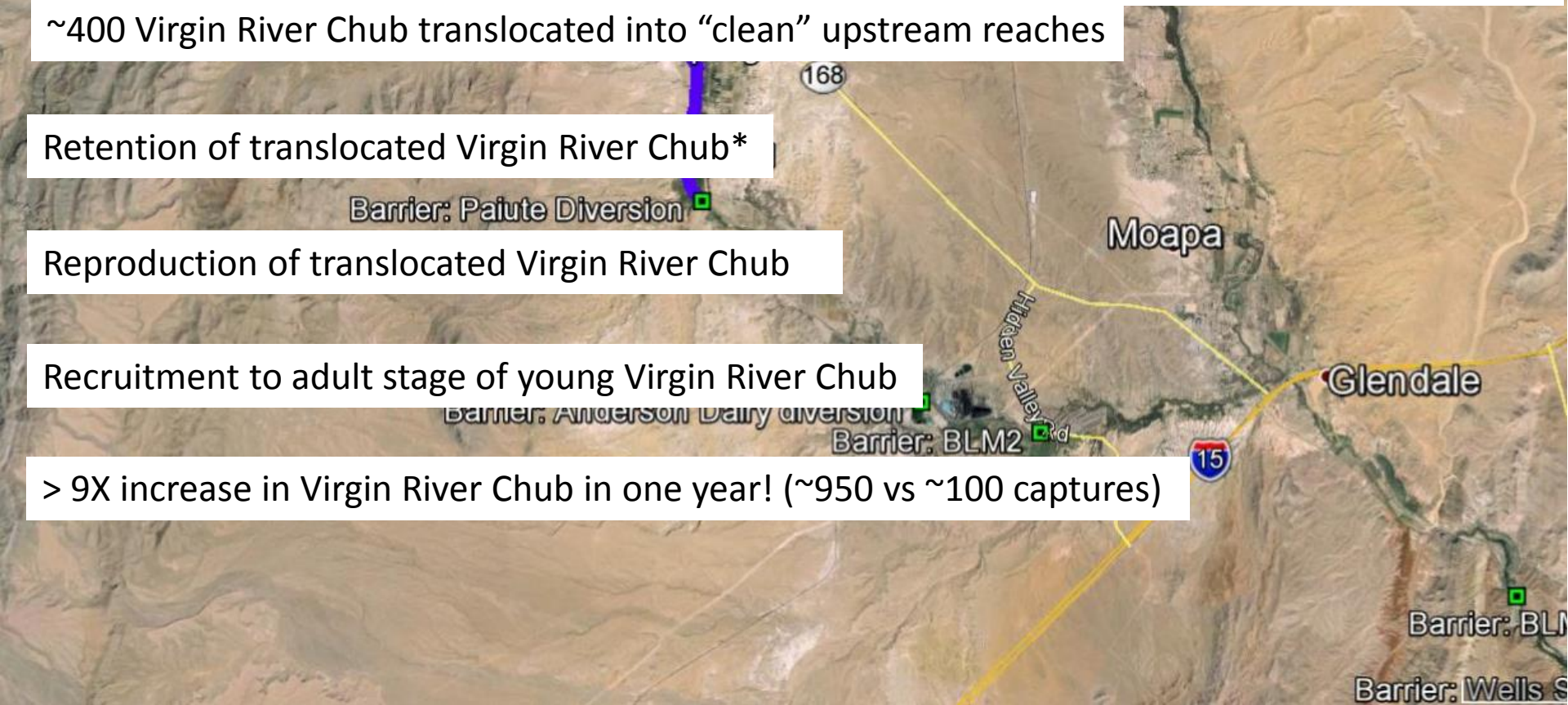
~400 Virgin River Chub translocated into “clean” upstream reaches

Retention of translocated Virgin River Chub*

Reproduction of translocated Virgin River Chub

Recruitment to adult stage of young Virgin River Chub

> 9X increase in Virgin River Chub in one year! (~950 vs ~100 captures)

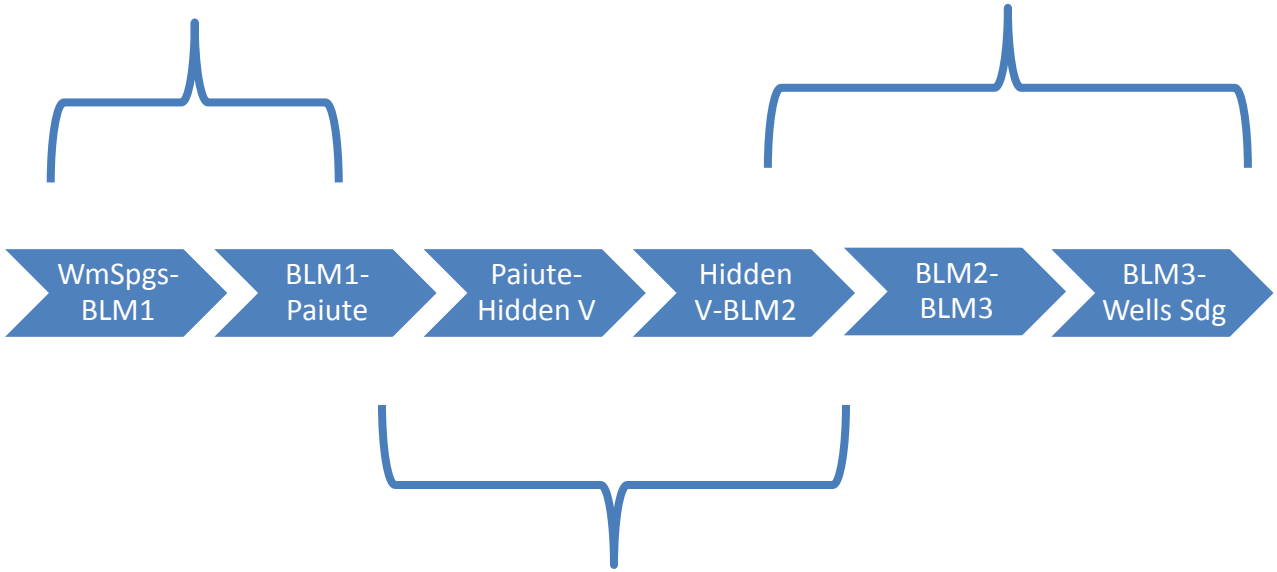


19 Speckled dace captured over two months
(from BLM2 – US15 highway bridge)
Established in raceway July 8, 2016

Plan and Progress

1. Completed Jan 2016; Monitor

3. Future Plans



2. Coming up Nov/Dec 2016