



# Welcome

Upper Colorado River Endangered Fish  
Recovery Program's 2018 Green River Flow Request

*to:*

Flaming Gorge Work Group

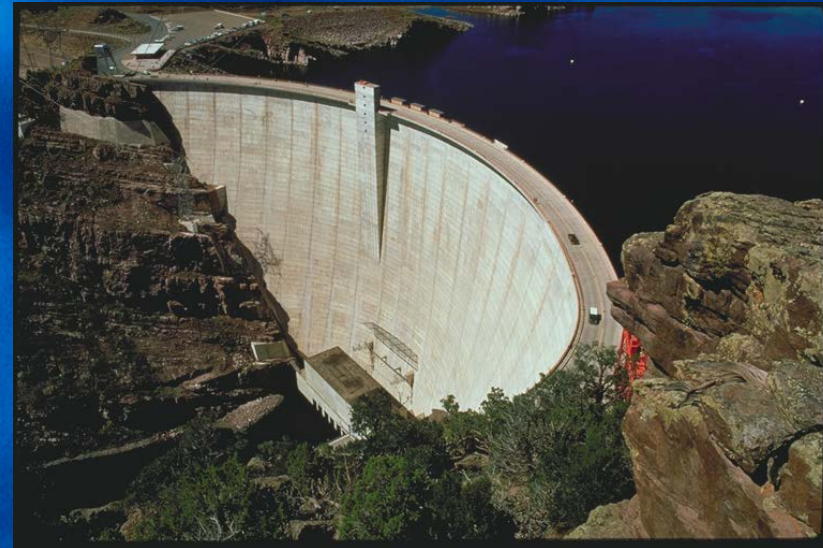
Vernal, UT  
April 19, 2018





# Recovery Program Goal

Recover the endangered fish as water development proceeds in compliance with the Endangered Species Act, state water law, interstate compacts, and federal trust responsibilities to tribes.







# Our Partners

- **Established in 1988**
- **Partners**
  - State of Colorado
  - State of Utah
  - State of Wyoming
  - Bureau of Reclamation
  - Colorado River Energy Distributors Association
  - Colorado Water Congress
  - National Park Service
  - The Nature Conservancy
  - U.S. Fish and Wildlife Service
  - Utah Water Users Association
  - Western Area Power Administration
  - Western Resource Advocates
  - Wyoming Water Association



Fish Illustrations by Joe Tomelleri



# Recovery Program Provides ESA compliance for Historic and New Water Depletion Projects

## Upper Colorado River Endangered Fish Recovery Program Summary of Endangered Species Act Section 7 Consultations 1/1988 through 12/31/2017

		Historical Depletions	New Depletions	Total
State	Number of Projects	Acre-Feet/Yr	Acre-Feet/Yr	Acre-Feet/Yr
Colorado	1232	1,915,682	207,213	2,122,895
Utah	263	517,898	98,777	616,675
Wyoming	416	83,498	36,574	120,072
CO/UT/WY	238 <sup>1</sup>	(Regional)	(Regional)	
<b>Total</b>	<b>2,149</b>	<b>2,517,078</b>	<b>342,564</b>	<b>2,859,642</b>

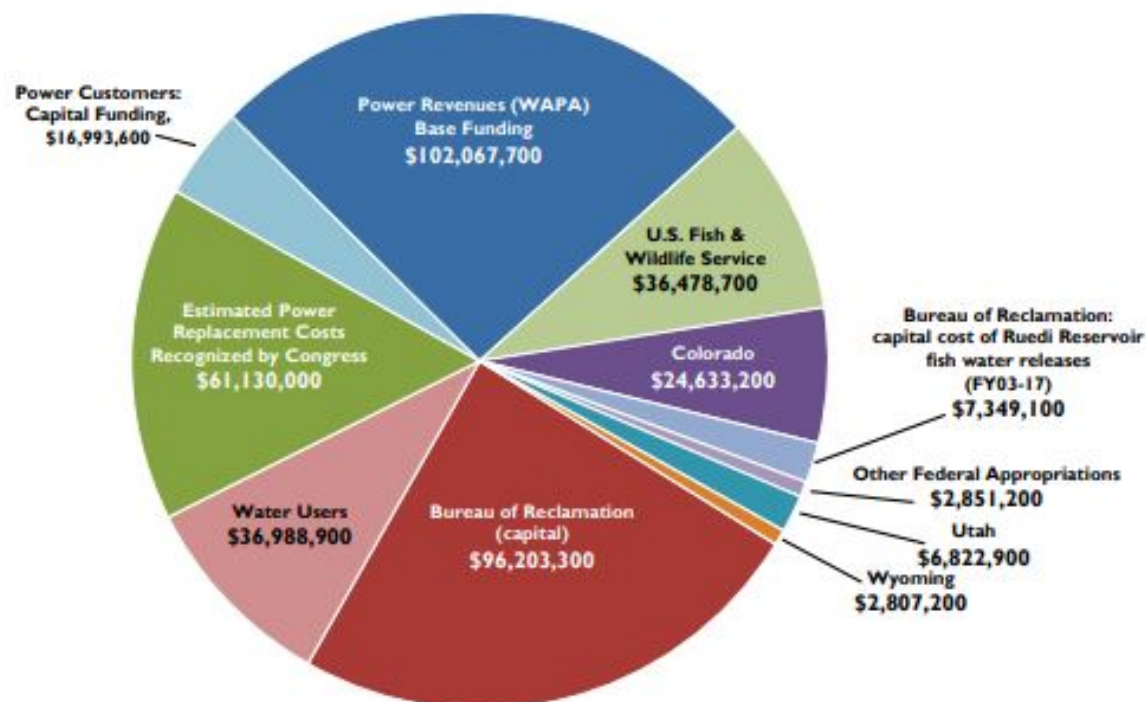
<sup>1</sup>Small depletion projects (<100 acre-feet per year) consulted on between July 3, 1994, and October 1, 1997, when the Recovery Program did not track the number of these projects by state. Depletion totals associated with these 238 projects are captured by state under new depletions.





## Expenditures Upper Colorado River Endangered Fish Recovery Program

Total Partner Contributions = \$394,325,800 (FY 1989-2018)





# Program Actions

Fish Habitat Development

Managing Flows for  
Endangered Fish

Research and Monitoring

Nonnative  
Fish  
Control

Stocking Endangered Fish







# 2017 in Review

- The flood control flows of 2017 did not bode well for the endangered Colorado River fish

- High flows in the early spring (prior to larval razorback sucker presence), provided nonnative predators access to floodplain habs.
- Sustained high flows into July precluded suitable nursery habs. for Colorado pikeminnow larvae drifting from the Yampa River
- However, we assume significant channel maintenance was accomplished.





# 2017 in Review

## Spring Chronology:

- ❑ 5/16: Reach 2 (Jensen, UT gage) experiences an instantaneous peak of 17,700 cfs. BOR releasing ~7,100cfs
- ❑ 6/05: BOR ramps back up to 8,600cfs
- ❑ 6/06: Program detects RBS larvae via std. mon. @ Cliff Ck. (*UDWR later revises 1<sup>st</sup> capture to 03 June*)
- ❑ 6/09: Reach 2 (Jensen, UT gage) experiences annual instantaneous peak of 18,300 cfs. BOR releasing 8,600cfs.





# 2017 in Review

## Floodplain Results:

□ **Stewart Lake:** Fall draining - (2) razorback sucker YOY were collected; 12 adult bonytail and 13 presumptive YOY bonytail. (NNF next slide)



□ **Johnson Bottom:** Bonytail and exp. larval razorback sucker stocking occurs in the early spring. Fall draining- 45 age-0 razorback sucker (of unknown origin). Nonnatives dominate the catch.





# Stewart Lake Nonnatives

Spp.	Adult Size	Size Range Found in Stewart Lake: 2017	#'s / % of Total
 <i>Fathead minnow</i>	2" - 3"	1" - 3"	71,145 / 65%
 <i>Brook Stickleback</i>	2" - 4"	.75" - 3.5"	34,240 / 31%
 <i>Green sunfish</i>	12"	1" - 4.5"	3,089 / 2.8%

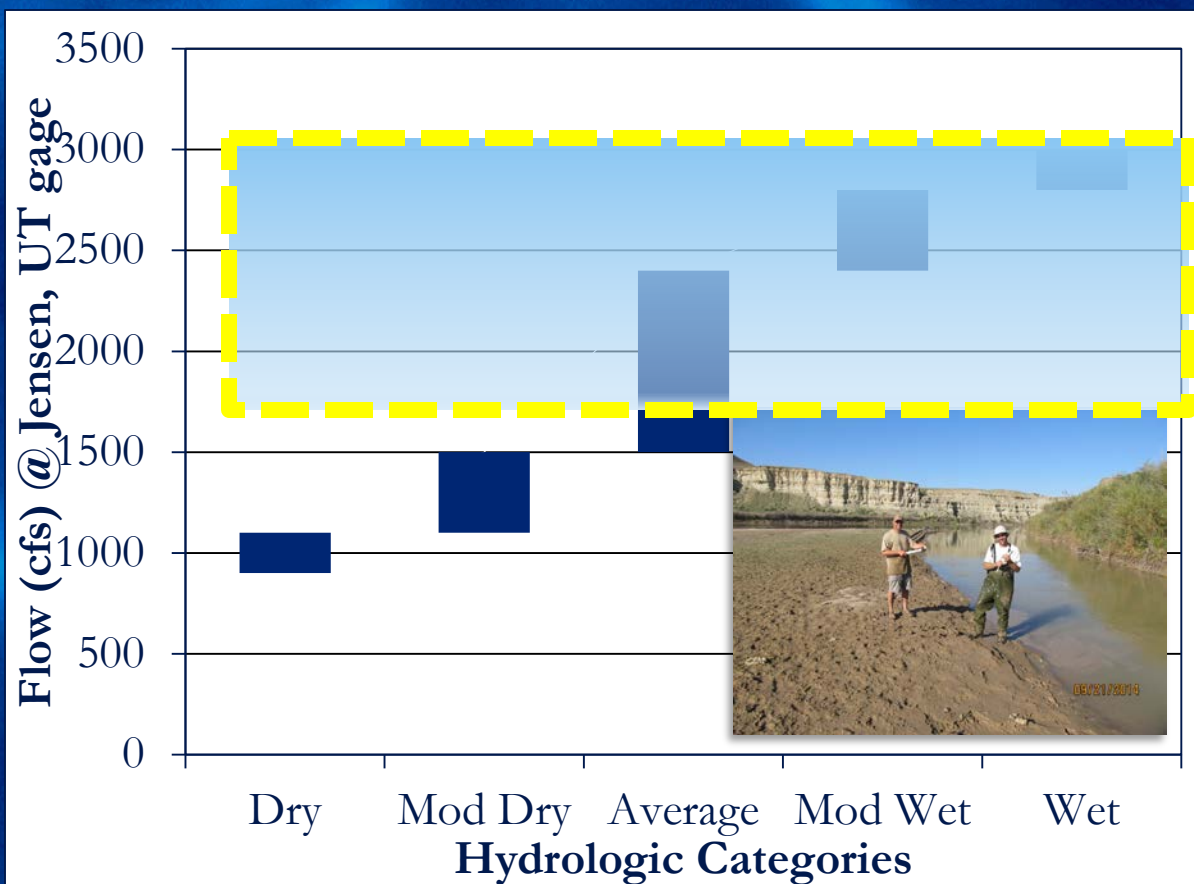
Total catch during the fall draining = 110,181 fish





# 2017 in Review

## Summer Ops to Benefit YOY CO pikeminnow



- Larval pikeminnow detected in Yampa River on 01 July
- Thermal shock to drifting larvae at the confluence w/ GR
- Jensen, UT flow on 01 July 1 = 10,800cfs; drops into the preferred range on 05 August.
- UDWR's fall sampling in middle Green River yields n=1 YOY CPM ; n=25 in the lower Green.



# Recovery Program's 2018 GR Flow Request

- ☐ Larval Triggered Spring Operations
- ☐ Exercise flexibility in the 2006 ROD to achieve preferred summer base flow range at the correct time
- ☐ Continue to investigate spike flows to disadvantage smallmouth bass reproduction in Reaches 1&2

