



Lower Dolores River Fishery Status

Lower Dolores River Corridor Planning Meeting

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Objectives

- Overview of cold and warm water fishes in the Dolores River including:
 - Flow and Fish Management
 - Distribution and abundance of fishes
 - General management objectives
- Downstream Approach to fish distribution and abundance

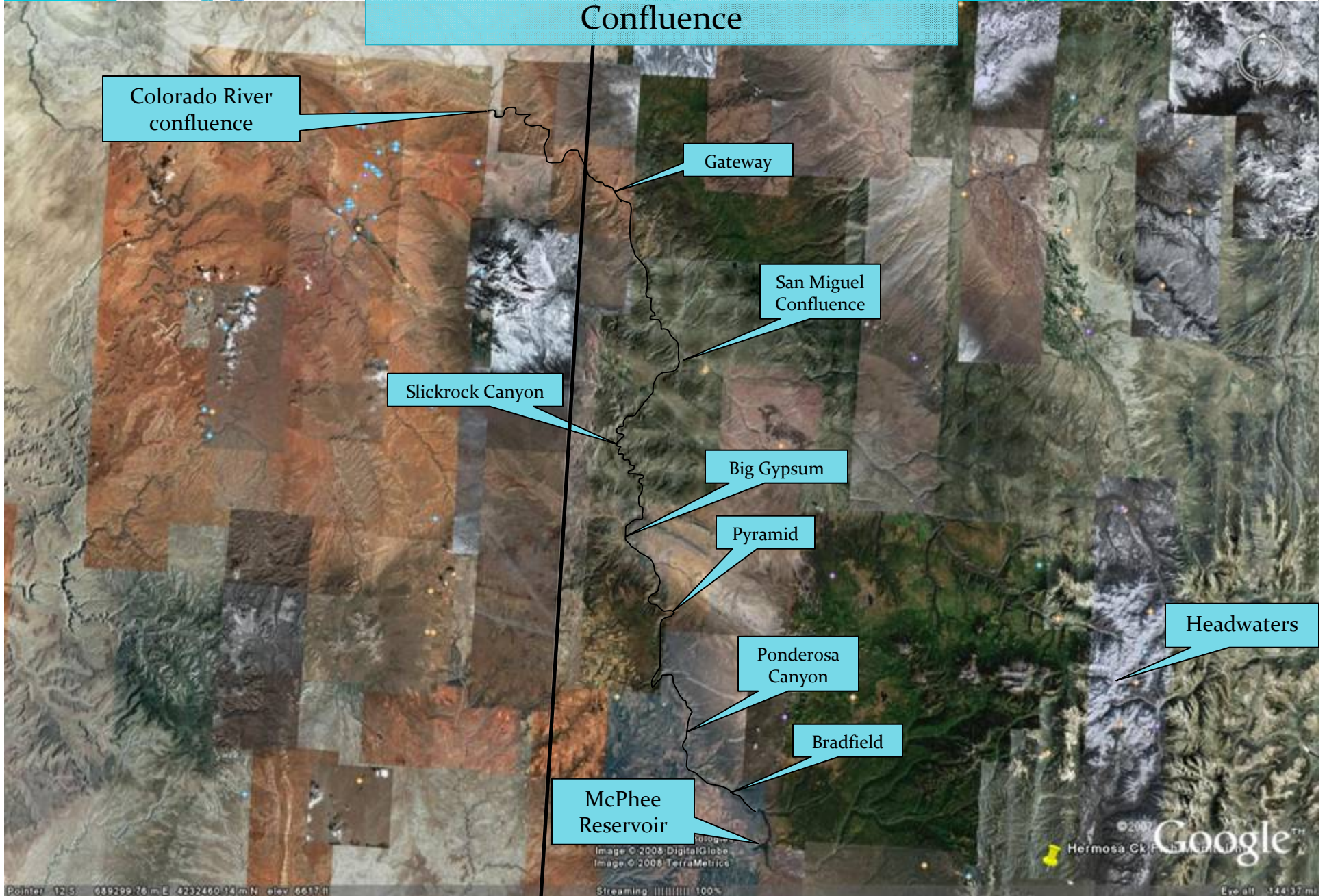


Flow Management

- “Spill water”
 - Multiple management objectives including rafting, river channel maintenance, riparian, fishes (spring peak)
 - Tough to manage – can’t release over spillway, must fill reservoir, must not jeopardize outlet works
- “Fish Pool” water
 - Allocated “pool” of water for fish and wildlife use (baseflows)
 - Only water available during “non-spill” years
 - Subject to “shared shortage” years



Dolores River Below McPhee Dam 185 miles from Dam to Colorado River Confluence



Colorado River confluence

Gateway

San Miguel Confluence

Slickrock Canyon

Big Gypsum

Pyramid

Ponderosa Canyon

Bradfield

McPhee Reservoir

Headwaters

Trout Species

- Brown, rainbow, cutthroat trout
- All prefer clean, cold, waters
- Colorado cutthroat trout are the only native trout to the CR Basin
- Brown trout most tolerant of warm water
- Brown trout cover oriented; rainbows like riffle areas; all utilize pool/run habitats with suitable depth
- Rainbow and cutthroat trout are spring spawners while brown trout spawn in the fall
- Browns resistant to WD



Trout Management

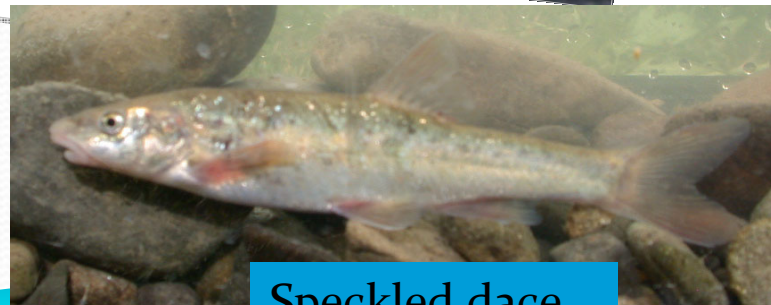


- Dam to Bradfield Bridge is managed as a quality trout fishery (Dolores project commitment)
- Brown trout are self-sustaining
- Rainbow and cutthroat trout are stocked
- Catch and release only (flies and lures)
- Inventory three historic sites for 19 years at the same water level (40 cfs) and the same time of year (Sept)

“New” Dolores Native Species

Paiute Sculpin (*Cottus beldingii*)

- Abundant
- Sculpins occupy cold water and inhabit the interstitial spaces between cobbles and feed on invertebrates
- They spawn in the spring on the underside of large cobbles or flat rocks and the male guards the eggs until they hatch and the fry disperse (~5 weeks)
- Favorite prey item for brown trout

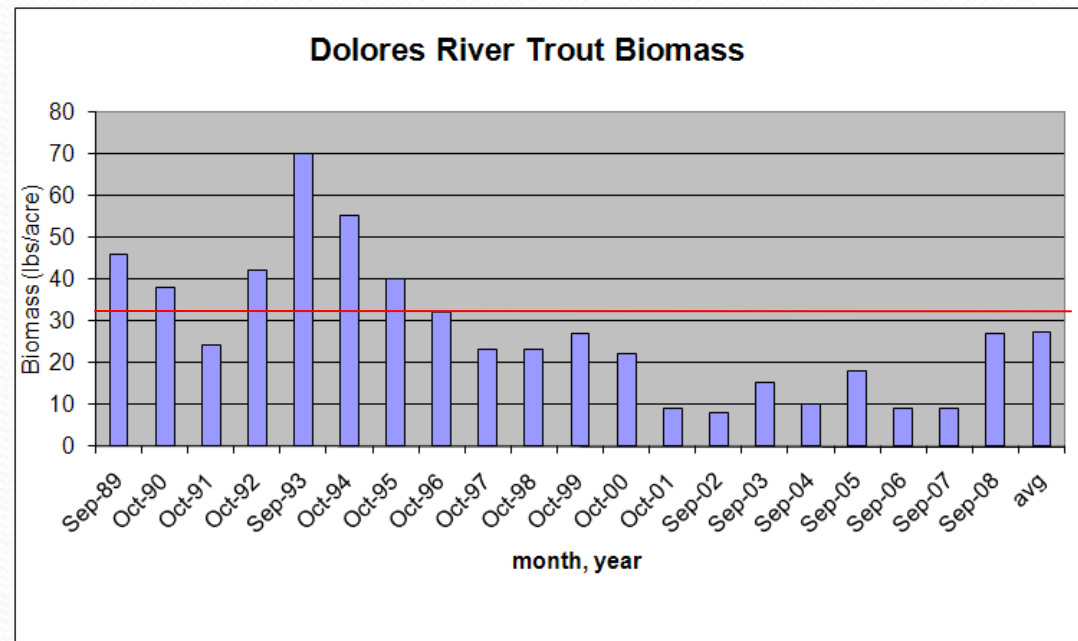


Speckled dace

Status of Trout

Fishery (Dam to Bradfield Bridge)

- Generally downward trend from 1993 on
- 2008 survey shows biomass of trout up from 9 to 29 lbs/ac (long-term average is 27.3 lbs/ac)
- Management goal is 32 lbs/ac
- Drought years are very hard on the trout population

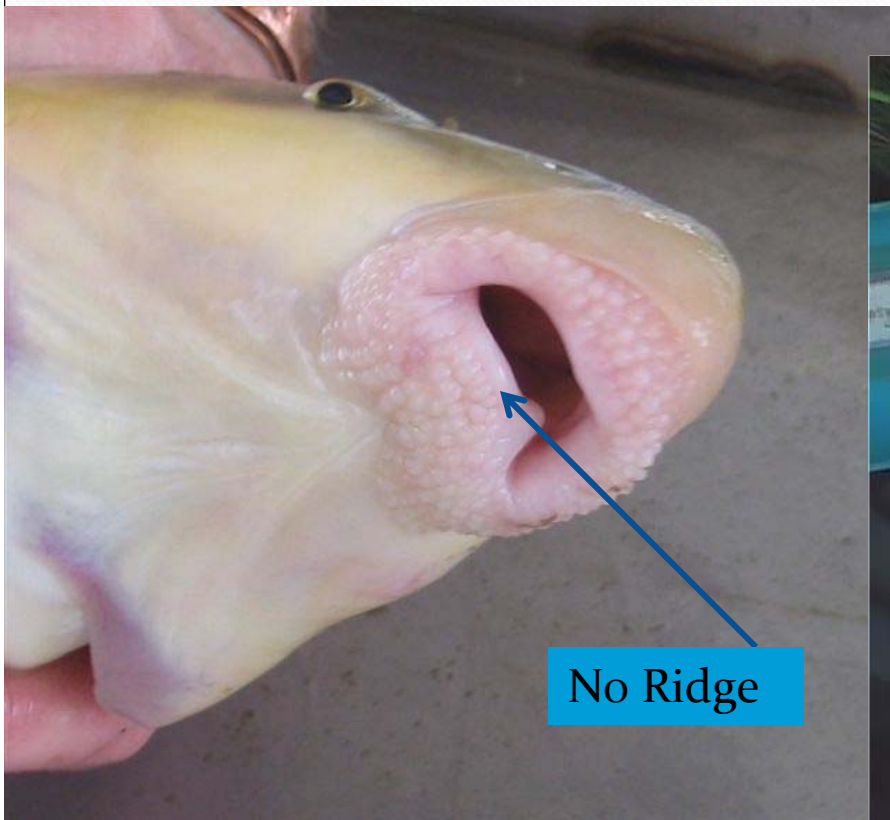


Native Fish Species

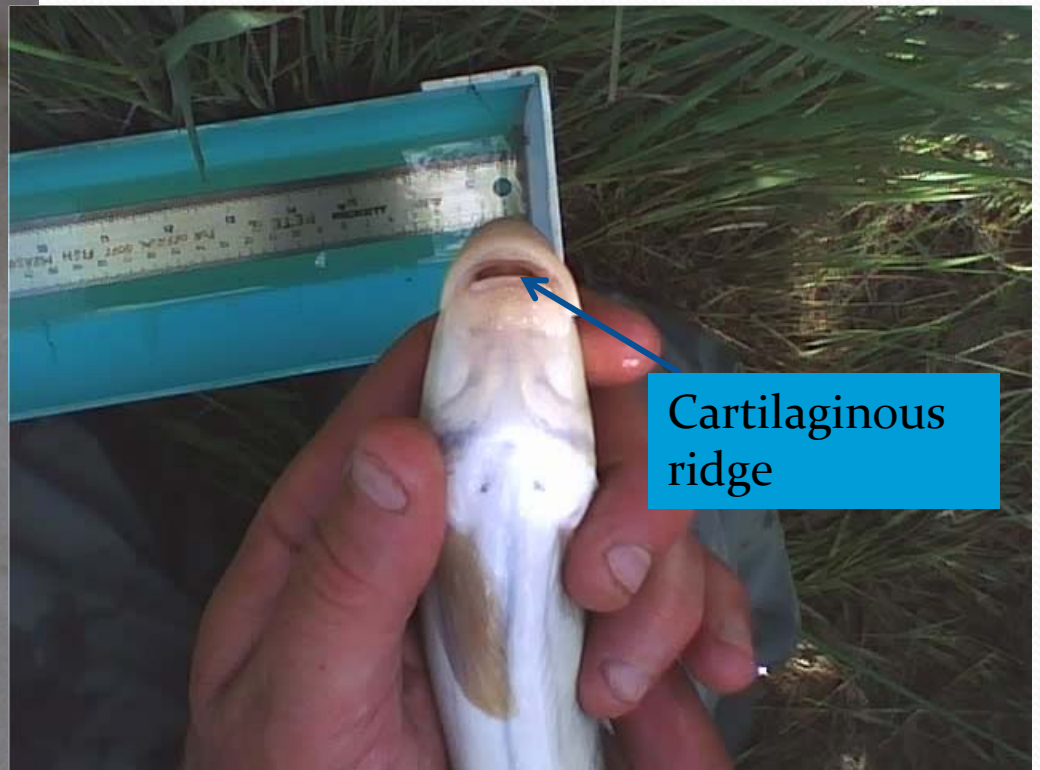
- 3 natives; RTC, BHS, FMS
- Rangewide Conservation Agreement among 6 states and multiple resource agencies to conserve these fishes and avoid Federal Listing
- Primary rangewide threat: habitat loss, non-native fish interactions, and hybridization
- BHS associated with deep riffle habitats
- FMS associated with deep run/riffle interface
- Both are found in cobble bed streams
- RTC pool/rubble/complex habitat
- Suckers benthic dwelling omnivores
- Generally all spawn in late spring to early summer. FMS spawn earlier than BHS. RTC spawn later than both species. No parental care of eggs takes place and the larvae drift downstream and inhabit shallow backwater areas
- Long lived fishes (20+ years)



Flannelmouth and Bluehead Comparison



No Ridge



Cartilaginous ridge

Non-Native Fishes

- Smallmouth bass
- Green sunfish
- Channel catfish
- Black bullhead
- Fathead minnow
- Carp
- (brown and rainbow trout)

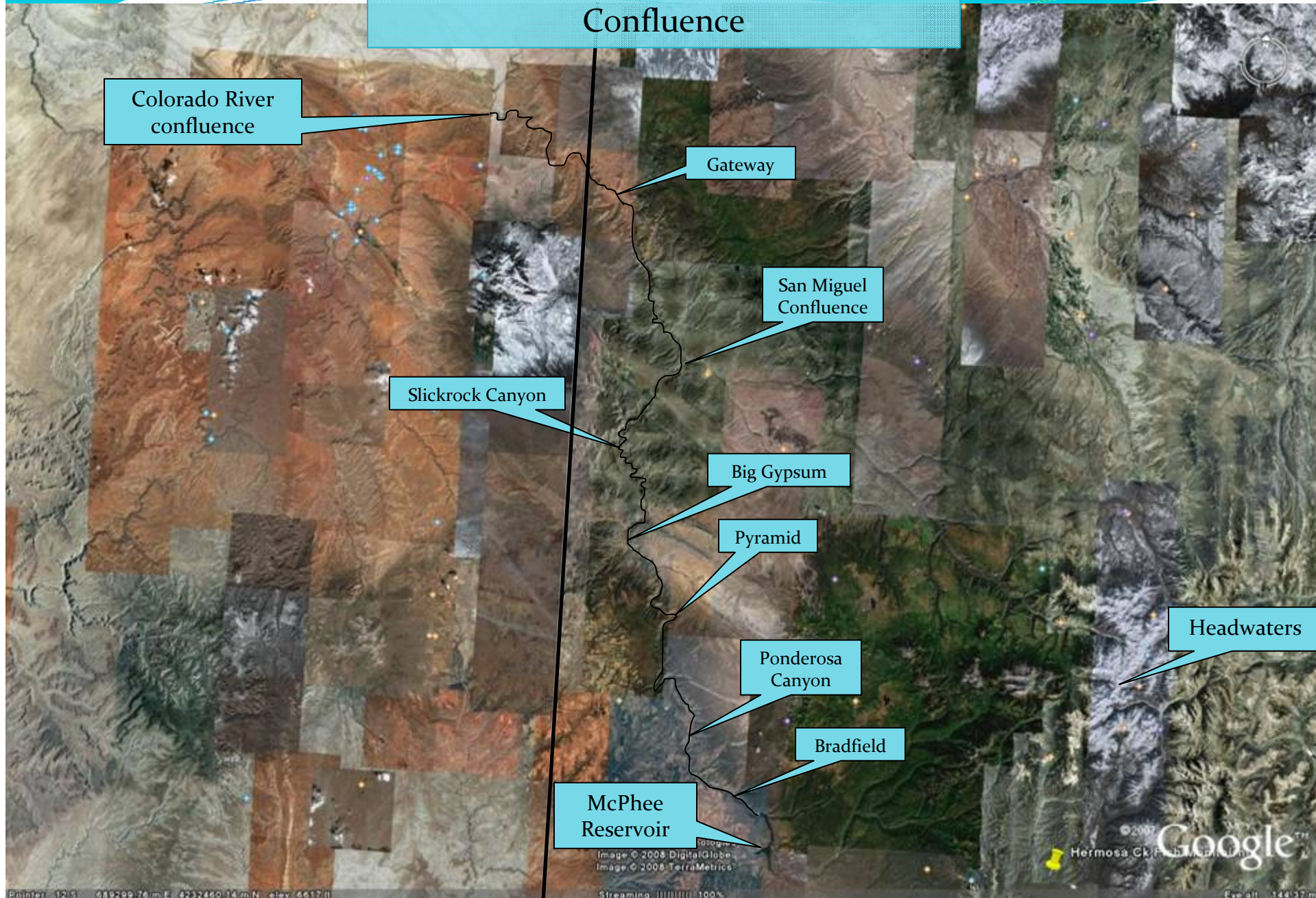


What is not in the Dolores!



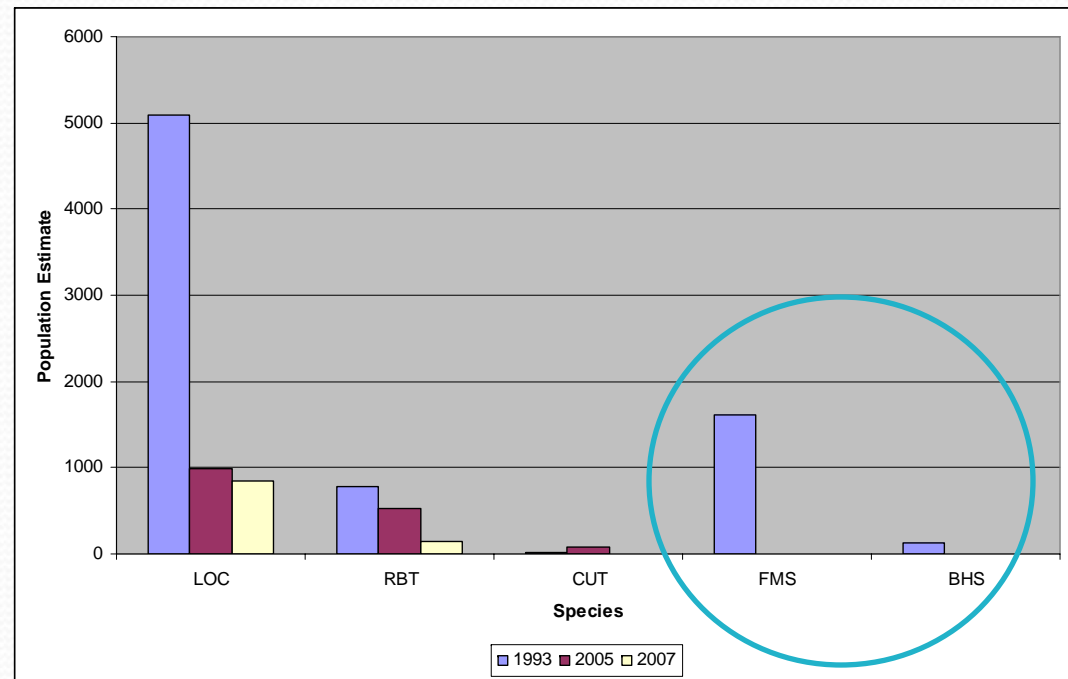
WHITE SUCKER

Dolores River Below McPhee Dam 185 miles from Dam to Colorado River Confluence



Ponderosa Canyon Native Fish Surveys

- 19 miles of “transitional” water
- 2-pass survey in 1993, 2005, 2007
- Decline in trout since 1993
- FMS relatively abundant in 1993 but absent in 2005 and 2007
- BHS rare but present in 1993 and absent in subsequent surveys



Native Fish Species 2008 Survey

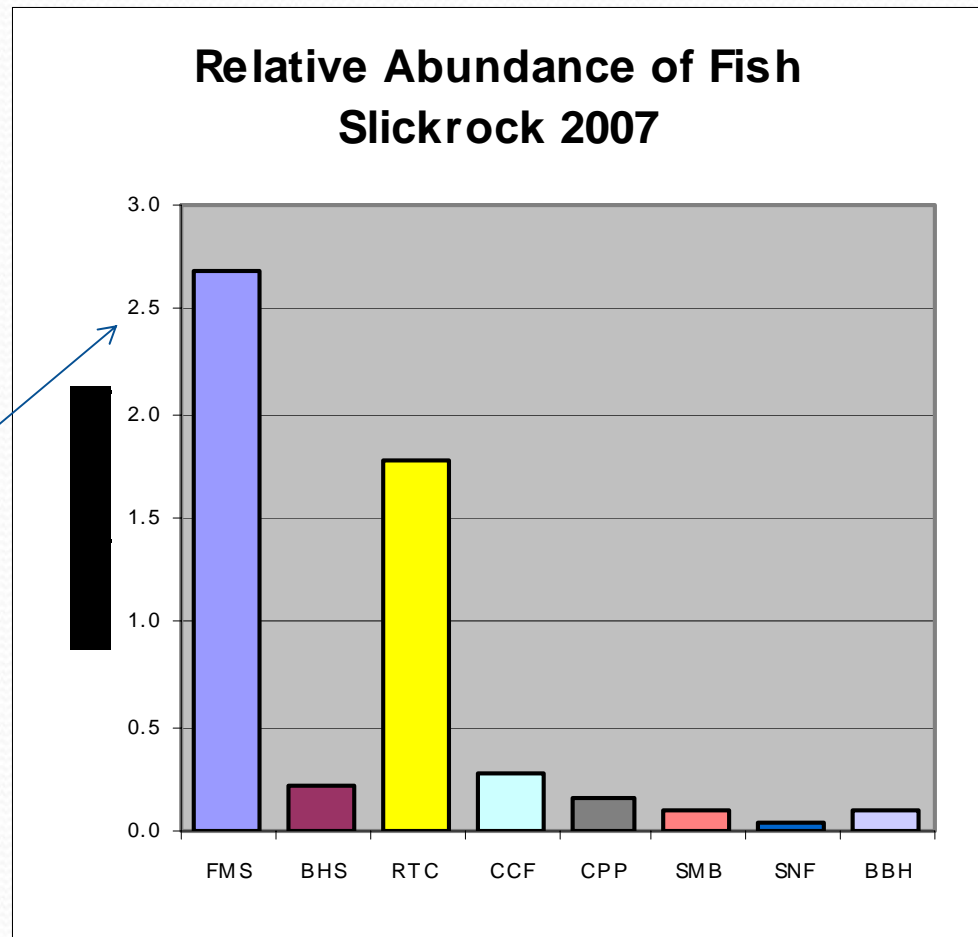
- 14 mile reach of the Dolores River from Pyramid Mountain to James Ranch sampled during the spring of 07 and 08.
- Most abundant fish were smallmouth bass and brown trout
- Very few natives captured



Slickrock Canyon

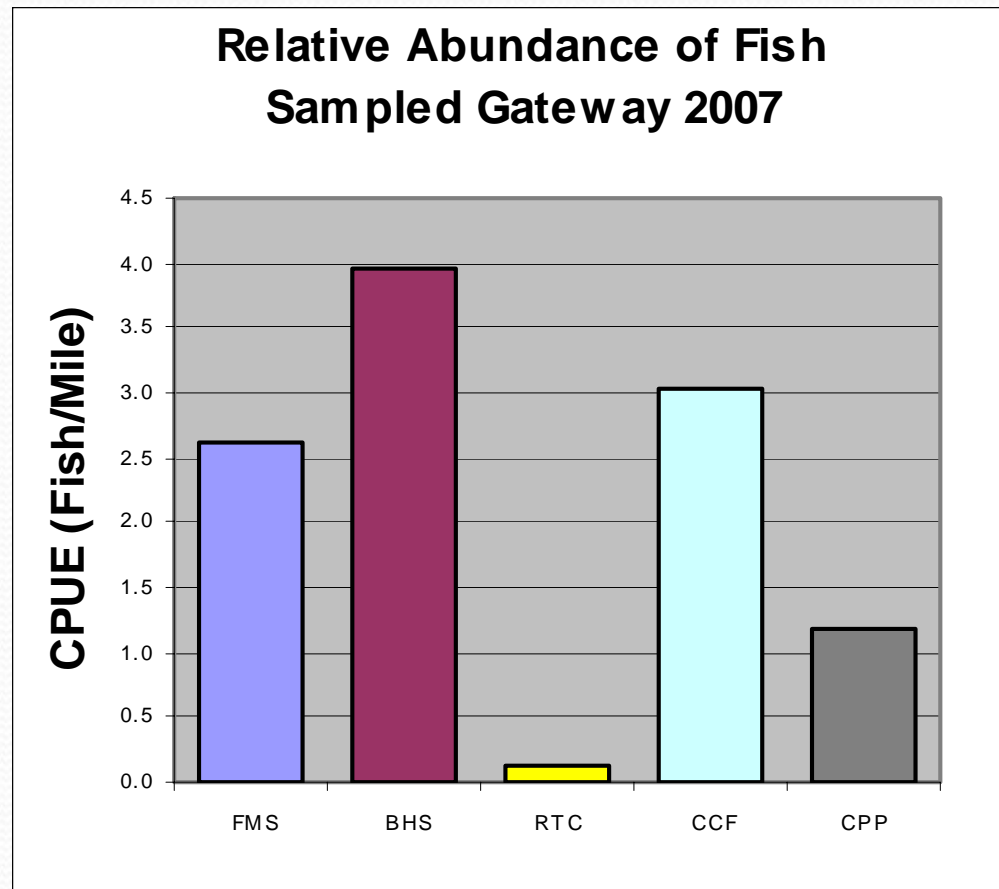
- 32 mile reach of the Dolores
- Inventory was a 1-pass effort conducted by Dan Kowalski during early June 2007
- Abundance of natives low but species composition was mostly native fish

Fish per mile



Gateway

- 7 mile reach of stream from Gateway to the Stateline
- Surveyed in 2007 by Dan Kowalski (1-pass)
- Only site where bluehead sucker was relatively abundant
- This site is below the San Miguel confluence which enhances baseflows
- BHS seemed to be most abundant around a small but perennial tributary , West Creek



Management Objectives

- Adequate base flows are critical to native suckers whose primary habitat consist of deep riffles (BHS) and runs (FMS).
- Better baseflows benefit trout as well as the native fish assemblage
- Releasing flows through the bottom outlet works prevents white sucker introduction
- Fish monitoring in historic sites as well as native longitudinal surveys help us assess short and long-term management efforts
- Non-native fishes that threaten native fishes should be removed
- Stocking WD resistant rainbow trout may help increase the biomass of trout

