



Restoring Endangered Species in an Urban River Corridor

Sustaining Colorado Watersheds – Avon CO – 2019

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The Upper Colorado River Endangered Fish Recovery Program



- Ensures water storage and depletion is in compliance with ESA.
- Sufficient progress towards species recovery must be demonstrated
- Program Elements:
 1. Native Fish Stocking
 2. Environmental Flows
 3. Habitat Restoration
 4. Non-native Management
 5. Research and Monitoring

The Fishes



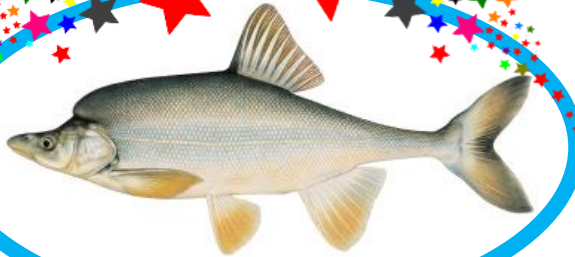
Colorado pikeminnow

One of the world's largest minnows, the Colorado pikeminnow once grew to nearly six feet long, lived for more than 50 years, and was the river's top predator. Fishermen sometimes caught them using mice and birds as bait. The pikeminnow, which has silvery sides and a green-and-gold back, was listed as endangered in 1967, under a precursor to the Endangered Species Act, and downlisted to threatened in 1998. There are perhaps 4,500 wild pikeminnows in the upper river, and none in the lower.



Bonytail

Another type of minnow, the bonytail, a gray-and-silver fish with a thin tail and large fins, is the rarest fish in the Colorado. Historically, it grew to about 22 inches and lived for 50 years. The bonytail was listed as endangered in 1980. Today, there are no known reproducing populations left in the wild.



Humpback chub

The humpback chub, also known as the humphead, has a large, prominent hump just behind its head. It can live for 30 years or longer and grows to about 20 inches. The humpback chub lives mainly in whitewater canyons, but also feeds on insects in slow-water parts of the river. It was listed as endangered in 1964. One wild humpback chub population, with more than 5,000 fish, survives in the Grand Canyon, and there are roughly 4,000 fish scattered throughout the upper river.



Razorback sucker

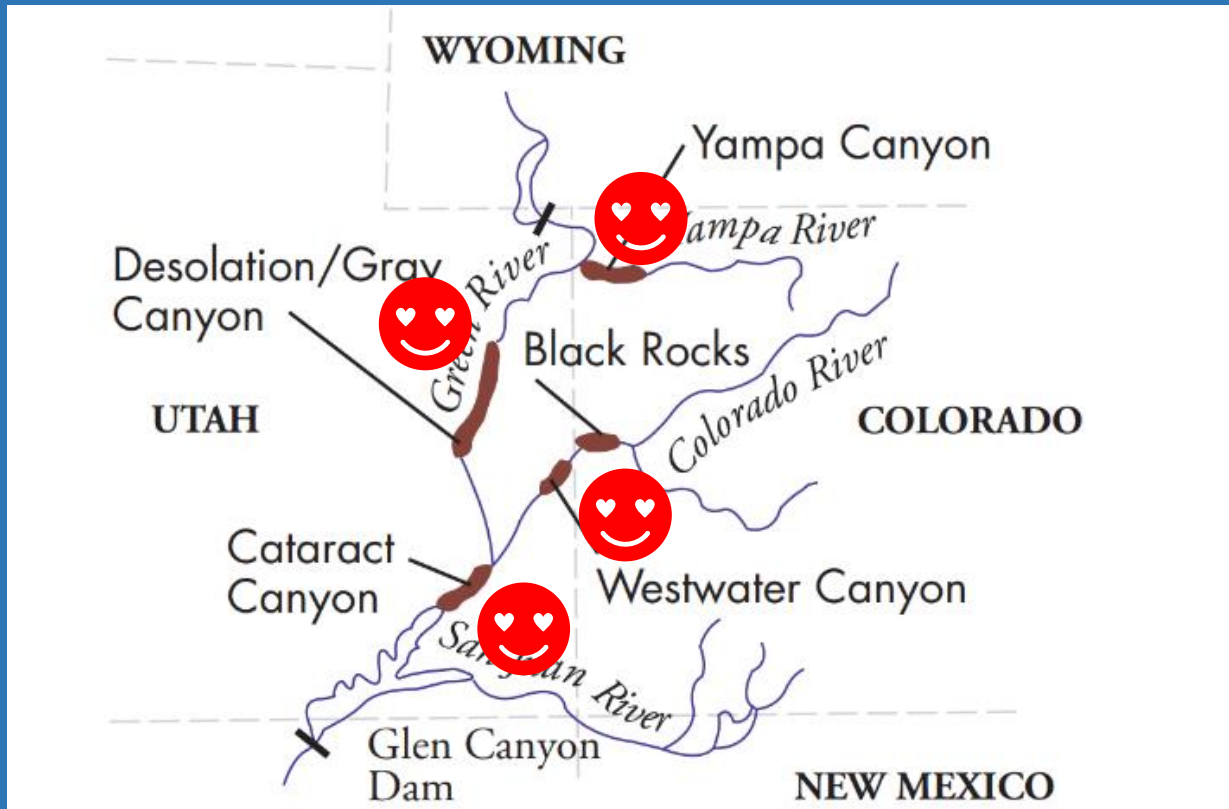
The razorback sucker can live for up to 50 years, weigh as much as 13 pounds, and grow to more than three feet long. It was listed as endangered in 1991. There are only about 500 adult razorback suckers in the Upper Colorado River Basin, most of them adults over 25 years old. There are perhaps 3,500 in the lower river. HILLARY ROSNER

ILLUSTRATIONS
COURTESY
JOSEPH R.
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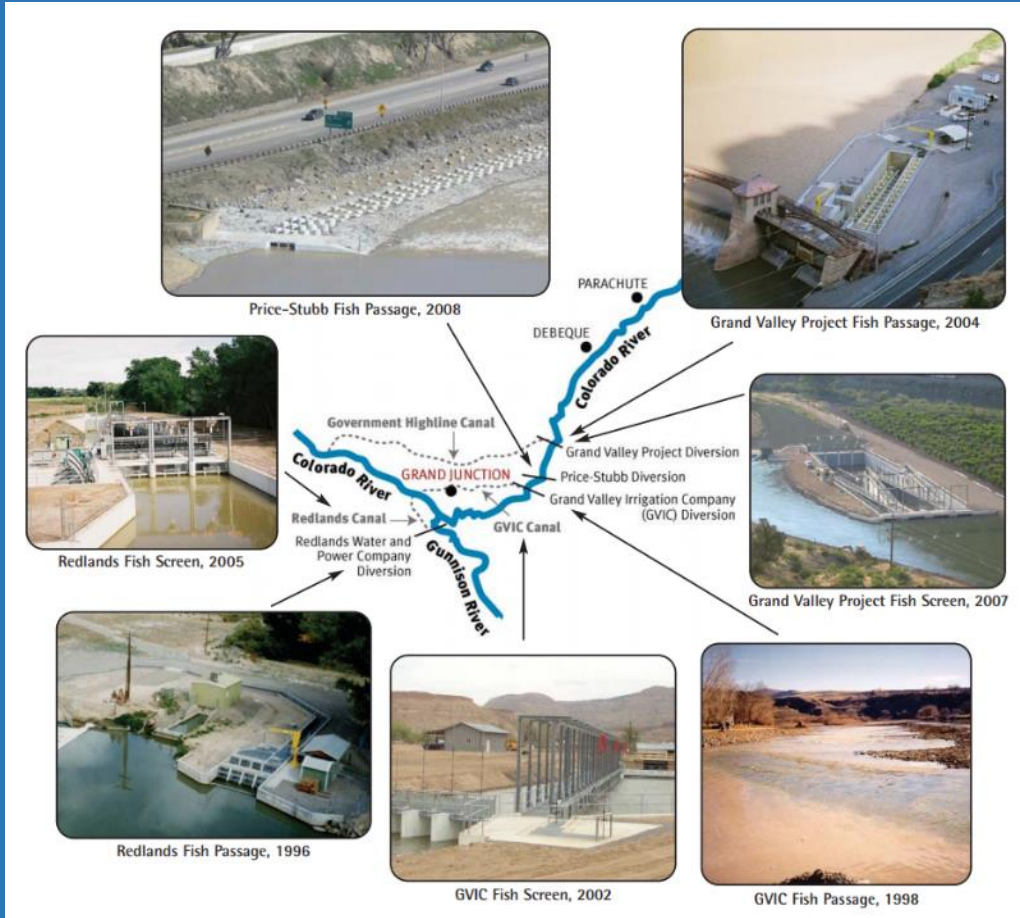
Sea Turtles of the Colorado Basin



Sea Turtles of the Colorado Basin



Removing Barriers



Larval Nurseries – Think of the Children!

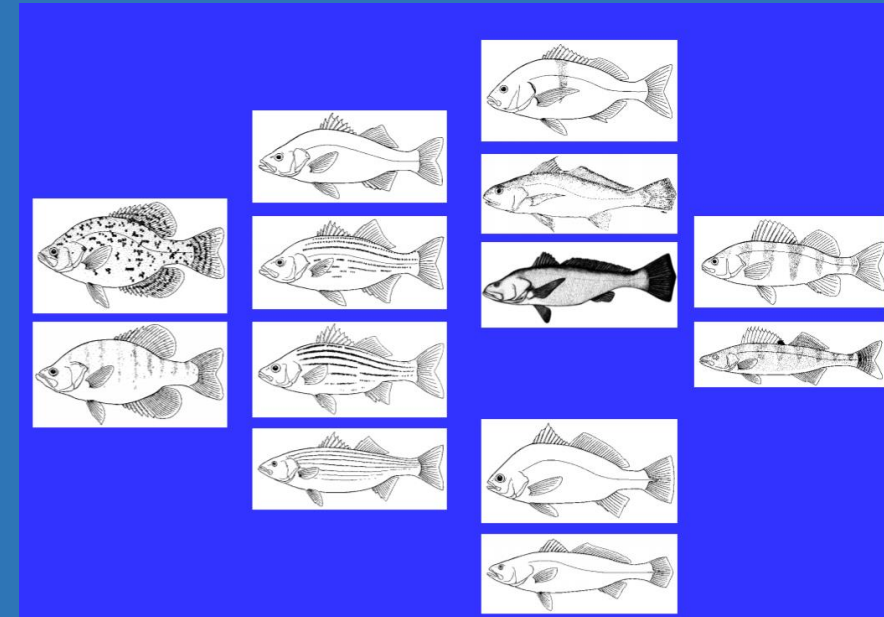
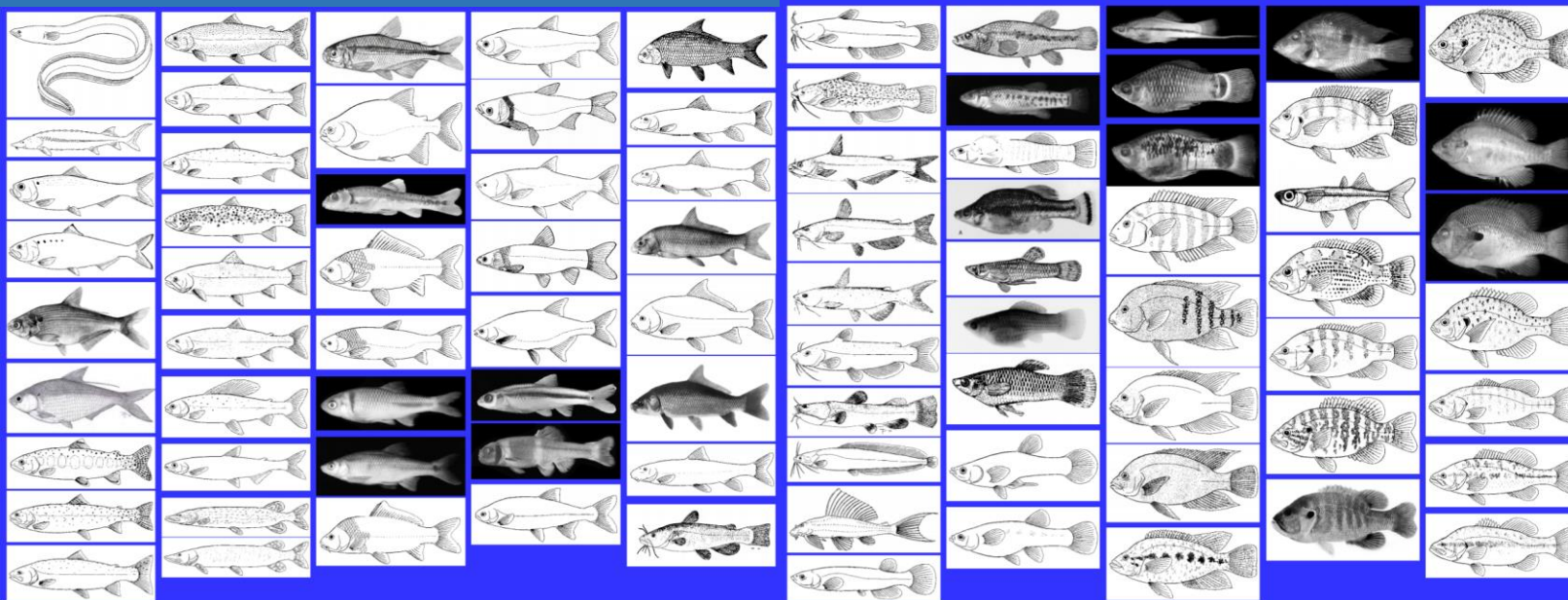


Larval Nurseries – Think of the Children!

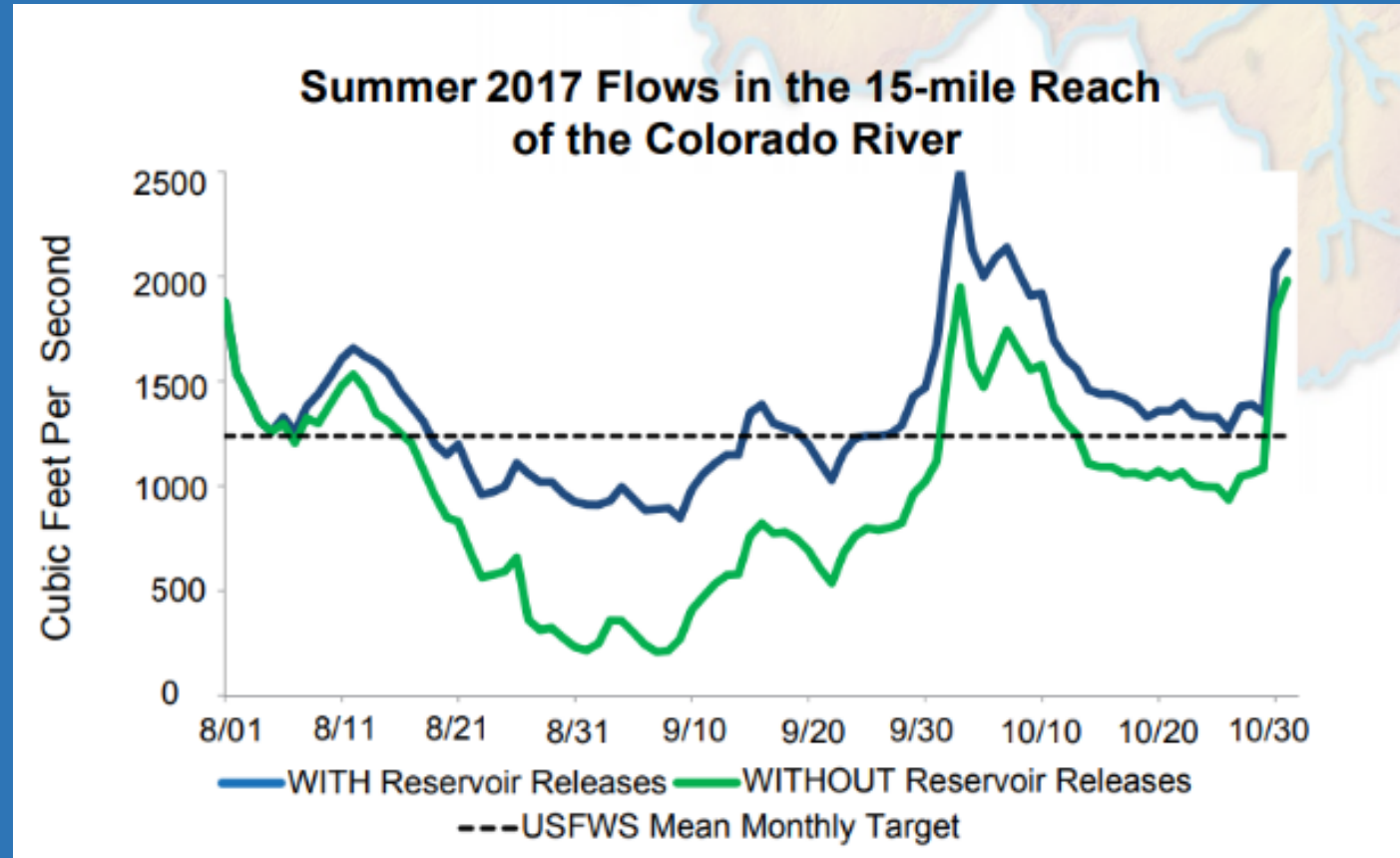
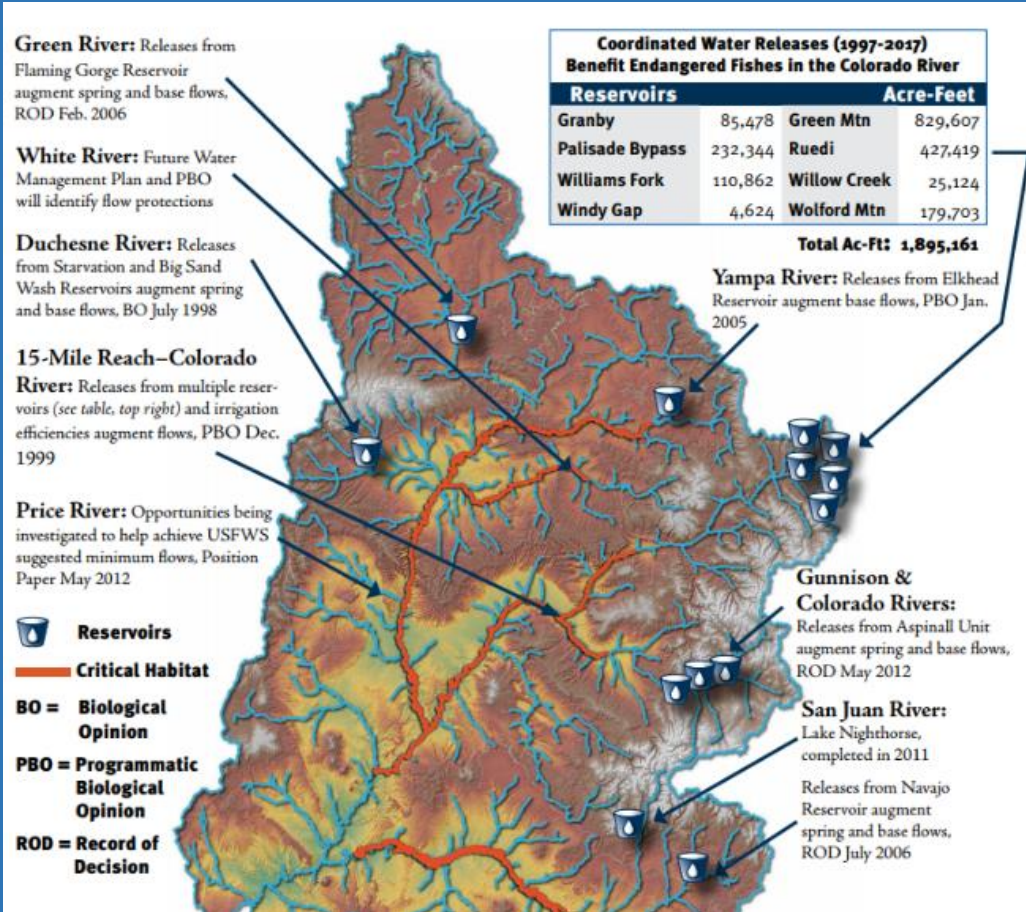


Non-Native Fish Management

- One of the most significant obstacles to the successful recovery of native fishes
 - 24 families of Non-native fishes
 - About 100 species



Environmental Flows



Habitat Management



Picket weir at inlet gate

Habitat Management

- **Exclude non-natives**
- **Draw-down ponds/wetlands**
- **Maintain hydrologic connectivity**
- **Supplemental water source**
- **Control structures**

Habitat in the Grand Valley?

1937

2018



Constructed Habitat

Jarvis Property

- Breached dyke
- Passively drains in fall/winter
- Still hydrologically connected?



Riverfront Re-development: Las Colonias



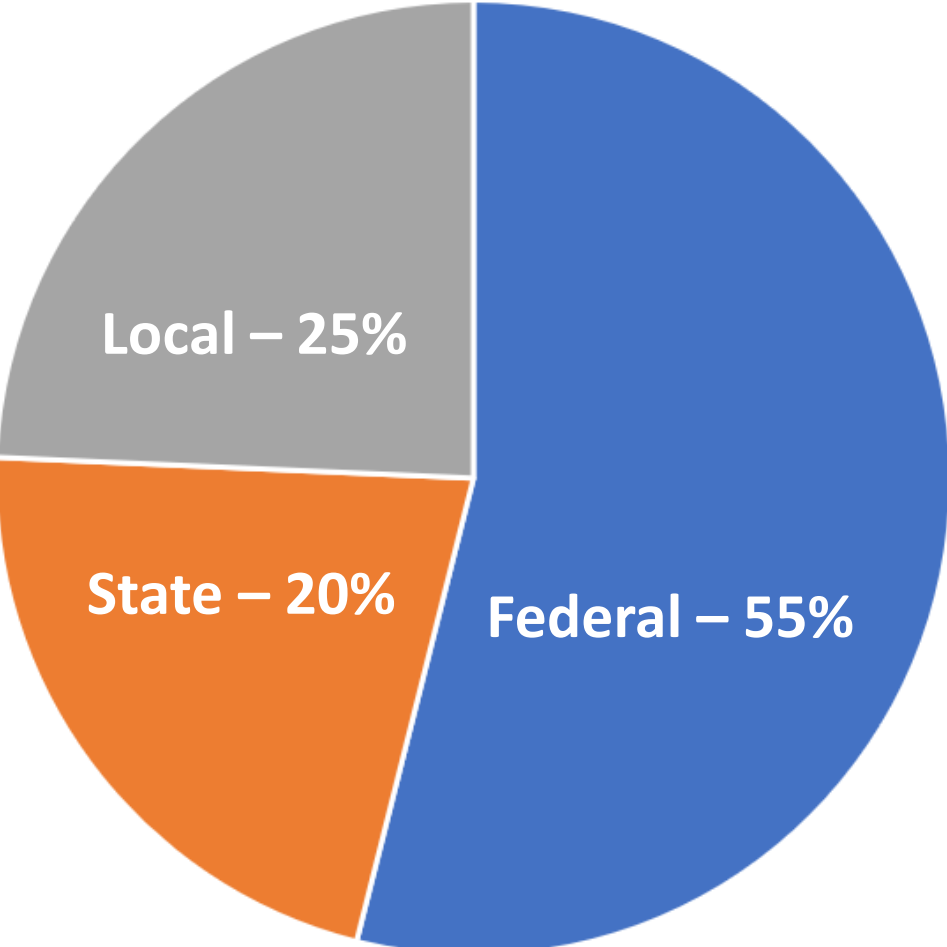
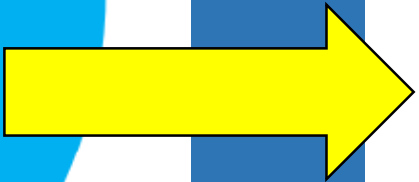
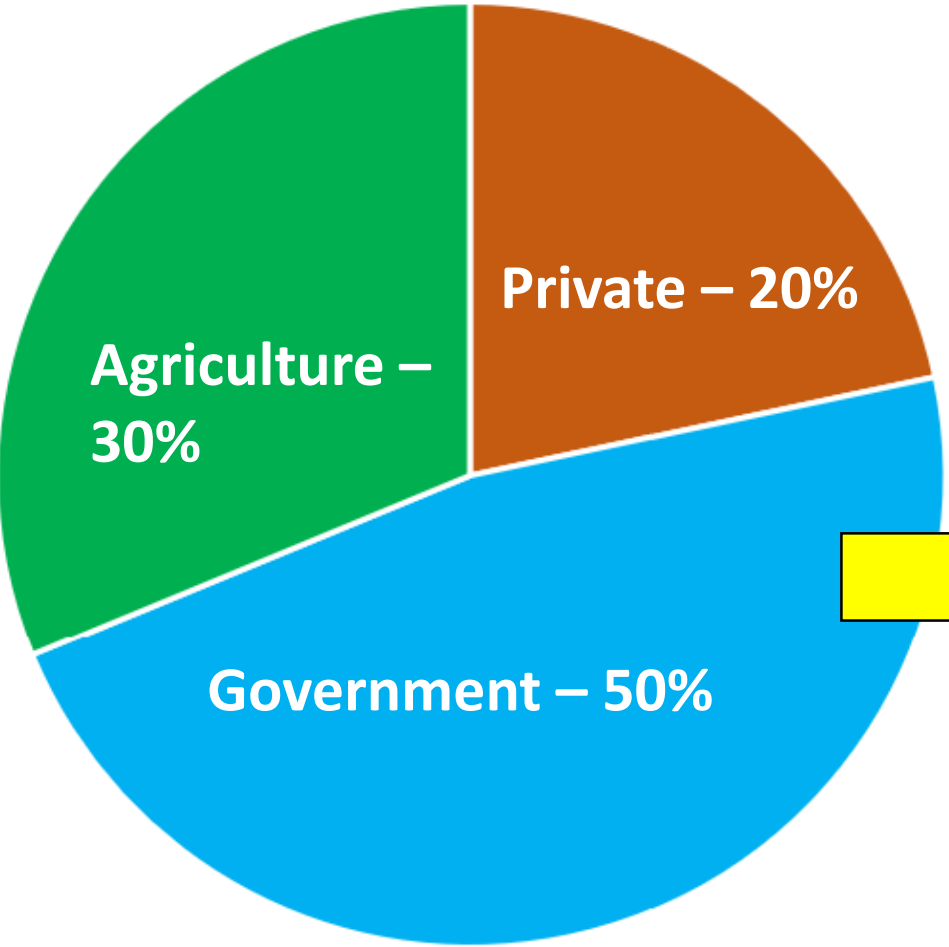
Riverfront Re-development: Dos Rios



- Mixed Use
- Riverfront Access
- *Fairly* high and dry
- Gentrification

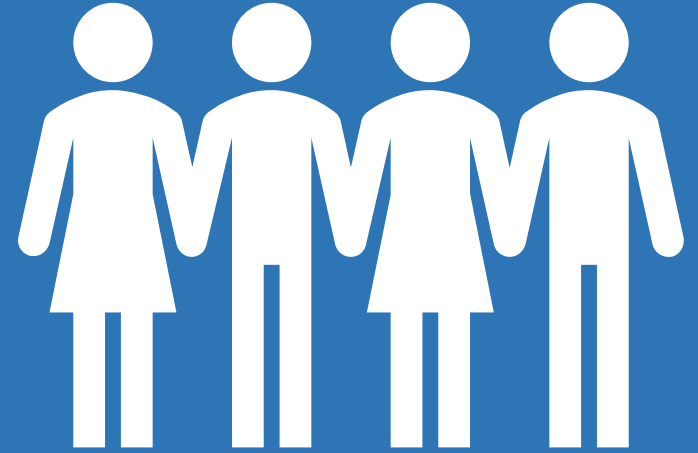


Grand Valley River Corridor Land Ownership



Coalitions

- **Fish and Wildlife Service**
- **Bureau of Reclamation**
- **Bureau of Land Management**
- **Colorado Parks and Wildlife**
- **Cities of Grand Junction, Palisade, Fruita**
- **Rivers Edge West**
- **Audubon**
- **Grand Junction Economic Partnership**





Thank You.

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