

# 67<sup>th</sup> Annual Northwest Fish Culture Concepts

A Workshop for Fish Culturists

“Preserve, Protect, Perpetuate”



# **The Colorado Native Aquatic Species Restoration Facility (NASRF)**

*NASRF takes a proactive approach in its attempt  
to keep State listed species at risk from  
reaching levels warranting Federal protections*

*2.5 million fish, tadpoles & toadlets stocked*

# **NASRF MISSION: To Recover Aquatic Species in Decline**

Constructed in 2000, NASRF to facilitates the conservation of rare aquatic native species through;

- *Captive Propagation*
- *Genetic Conservation*
- *Scientific Research*
- *Public Education and Awareness*

Currently there are 12 fish species and one amphibian specie cultured on the unit. Many are listed as State Threatened, Endangered or Species of Special Concern. One, the Bonytail chub, is listed as Federally Endangered.

## Physical Plant Facilities at NASRF Consists of:

Two 5,500 sqft. Production Buildings

Hatchery & Nursery Buildings

Shop & Garage Building

Effluent Treatment Building

Electrical & Generator Building

Fish "staging" Building

Isolation Building

Toad Breeding Trailer

Toad Mahal

Live Bug Room



# NASRF goes SOLAR

*"the land of cool sunshine"*



300 kw fixed-tilt photo-voltaic  
system designed to produce  
650,000 kWh of electricity annually

# **Water Resources**

**Hatchery water supply is obtained from  
three deep geothermal wells**

**Well No. 1 is 2500 feet deep @ 40° C**

**Well No. 2 is 1500 feet deep @ 29° C**

**Well No. 3 is 900 feet deep @ 21° C**

**Annual Adjudication = 1630 acre-feet**

# TEMPERATURE CONTROL DESATURATION HEAD PRESSURE CENTRAL ALARM SYSTEM



# 30 Production Ponds Both Lined and Earthen



# Winter Fish Production

NASRF currently over-winters  
~300,000 fish for increased  
growth & Spring stocking



# **Twelve Species of Fish & One Amphibian**

- **1 Federal Endangered Fish Specie**
- **5 State Endangered Fish Species**
- **2 State Threatened Fish Species**
- **2 Fish Species of Special Concern**
- **2 Species of Fish, No Official State Status**
- **1 State Endangered Amphibian Specie**

**Record ~564,000 produced FY16**

**Record ~276,000 stocked FY16**

# Bonytail Chub

*Gila elegans*

Federally Endangered, State Endangered

- Over 132,000 stocked
- 10 inch fish
- 45,000 on unit
- USFWS - UCRRP



# NATIVE AQUATIC SPECIES RECOVERY EFFORTS

## Passive Integrated Transponder



- Flow Trained
- PIT Tagged
- Wild Spawned YOY in 2015



# Rio Grande Sucker

*Catostomus plebius*

State Endangered  
Considered for Federal Listing in 2017

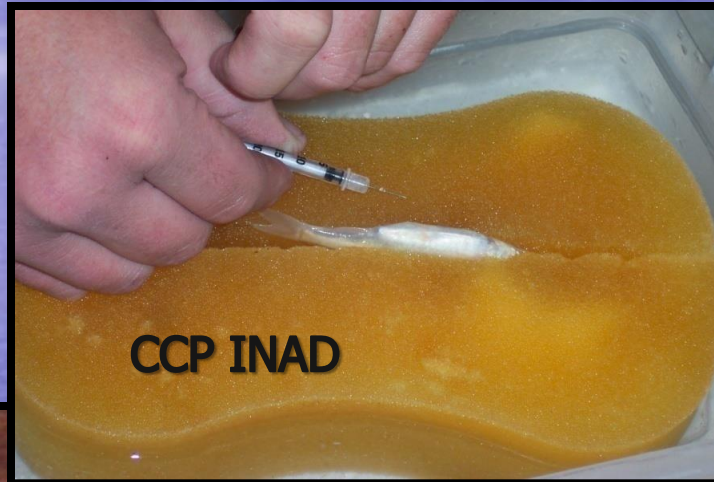
- Over 185,000 stocked
- 4 inch fish
- 740 Broodfish
- April thru May Spawn
- Hand-strip eggs & milt



# Plains Minnow

*Hybognathus placitus*

State Endangered



- Extirpated in 2000
- Reintroduced in 2011
- Over 400,000 stocked
- 2 inch fish
- 2,600 Broodfish
- June thru July Spawn
- Induced Spawn



# Suckermouth Minnow

*Phenacobius mirabilis*

State Endangered



- Over 50,000 stocked
- 2 inch fish
- 2,600 Broodfish
- April thru May Spawn
- Induced Spawn
- "Hog-hair" Mats

# Southern Redbelly Dace & Northern Redbelly Dace

*Phoxinus erythrogaster*

*Phoxinus eos*

State Endangered

- Over 56,000 SRD stocked
- 1.5 inch fish
- 1,500 Broodfish

- Over 23,000 NRD stocked
- 1.5 inch fish
- 2,946 Broodfish
- April thru June Spawn
- "Hog-hair" Mats

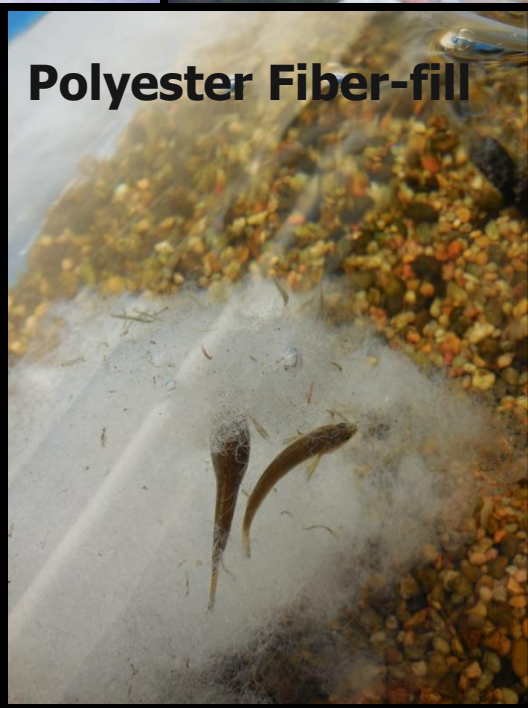


# Arkansas Darter

*Etheostoma cragini*  
State Threatened

Considered for Federal Listing in 2016...

- Over 91,000 stocked
- 1.5 inch fish
- ~2,600 Broodfish
- March thru May Spawn



# 2016 Species Status Assessment Report

## "not warranted"

### Species Status Assessment Report

for

Arkansas Darter (*Etheostoma cragini*)



Prepared by:

U.S. Fish and Wildlife Service  
Mountain-Prairie Region

Kansas Ecological Services Field Office  
Manhattan, Kansas  
&  
Regional Office Ecological Services  
Lakewood, Colorado

August 2016

# Rio Grande Chub

*Gila pandora*

Species of Special Concern  
Considered for Federal Listing in 2017

- Over 867,000 stocked
- 3 inch fish
- ~1,050 Broodfish
- May & June Spawn
- "Hog-hair Mats" & Tank floor



# Common Shiner

*Luxilus cornutus*

State Threatened

- Over 9,900 stocked
- 300 Broodfish - wild spawn



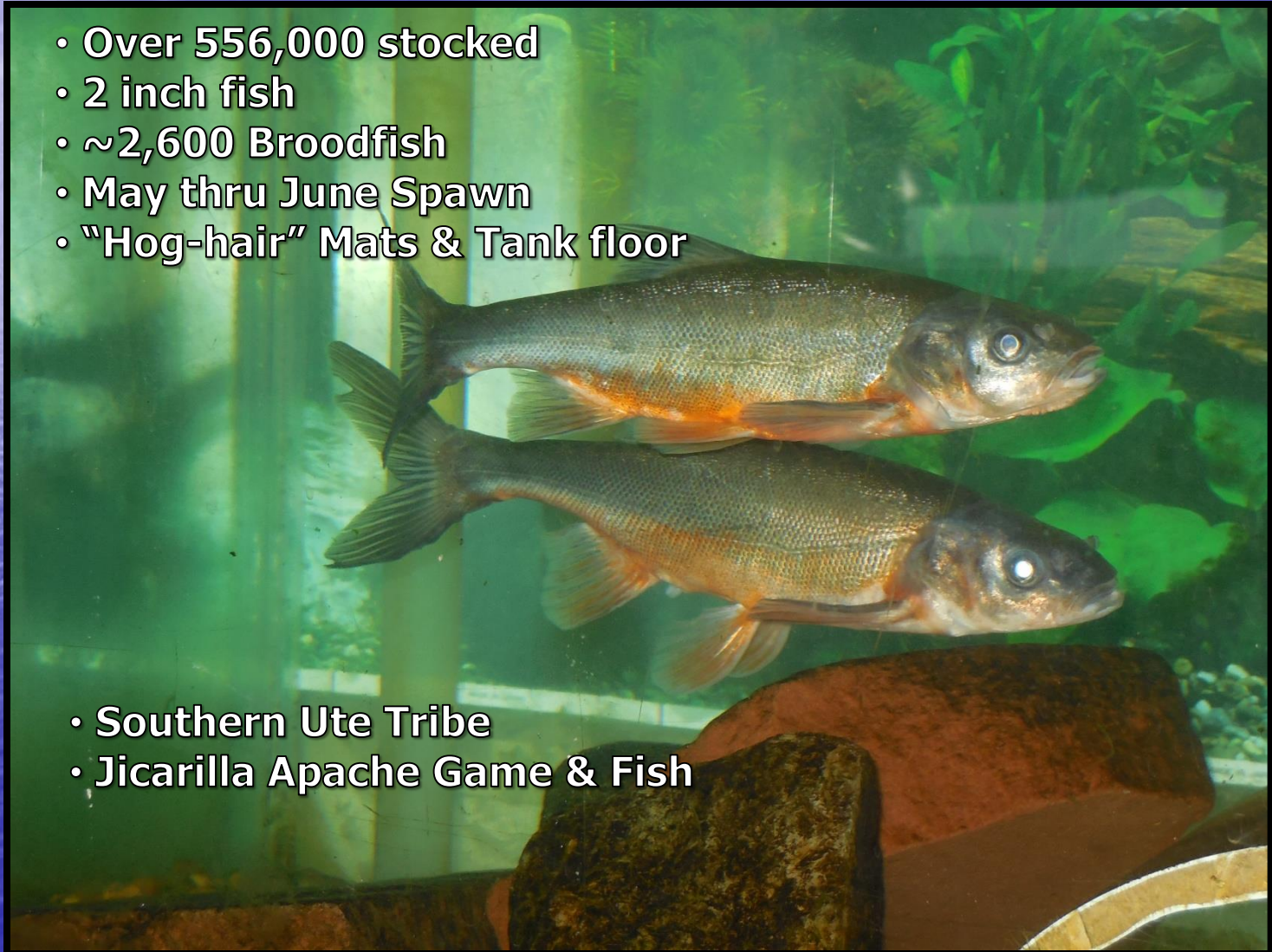
# Colorado Roundtail Chub

*Gila robusta*

## Species of Special Concern

- Over 556,000 stocked
- 2 inch fish
- ~2,600 Broodfish
- May thru June Spawn
- "Hog-hair" Mats & Tank floor

- Southern Ute Tribe
- Jicarilla Apache Game & Fish



# Bluehead Sucker

*Catostomus discobolus*

No Official State Status



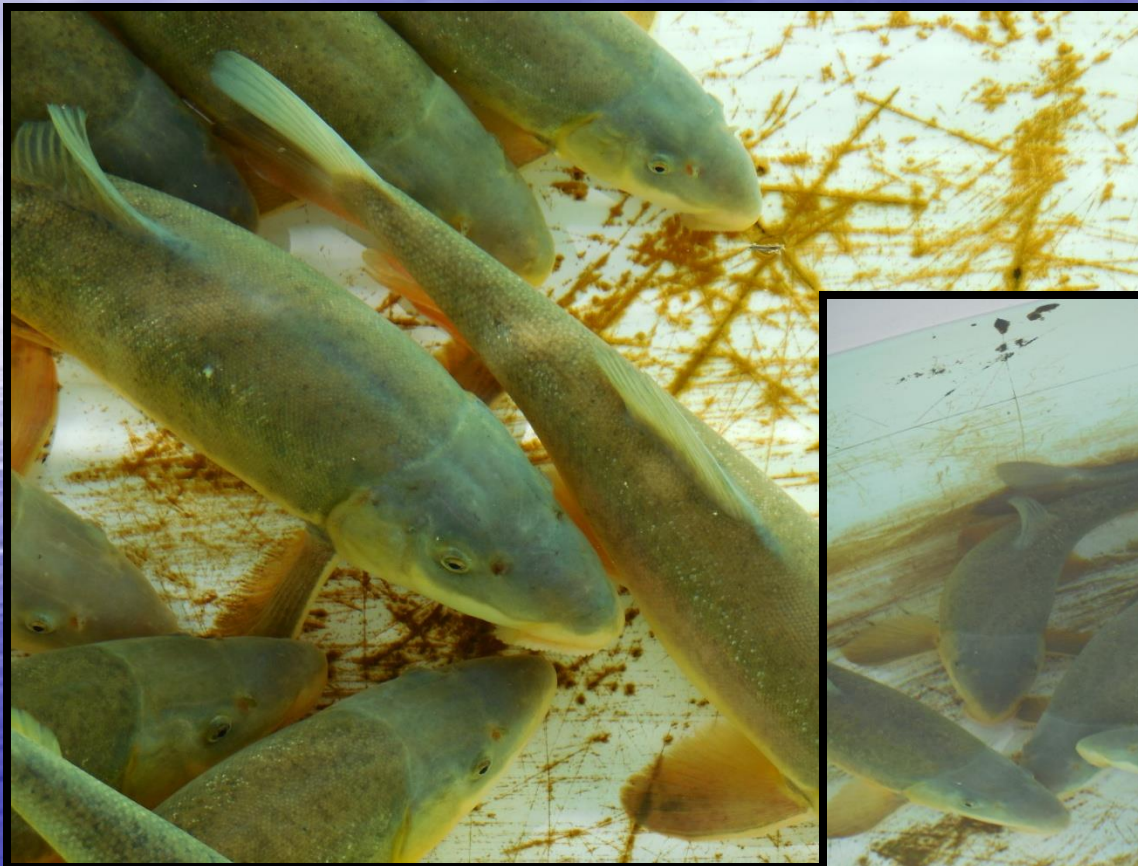
- Over 20,000 stocked
- 8 inch fish
- 45 Broodfish
- May spawn
- Hand strip eggs & milt
- PIT Tagged



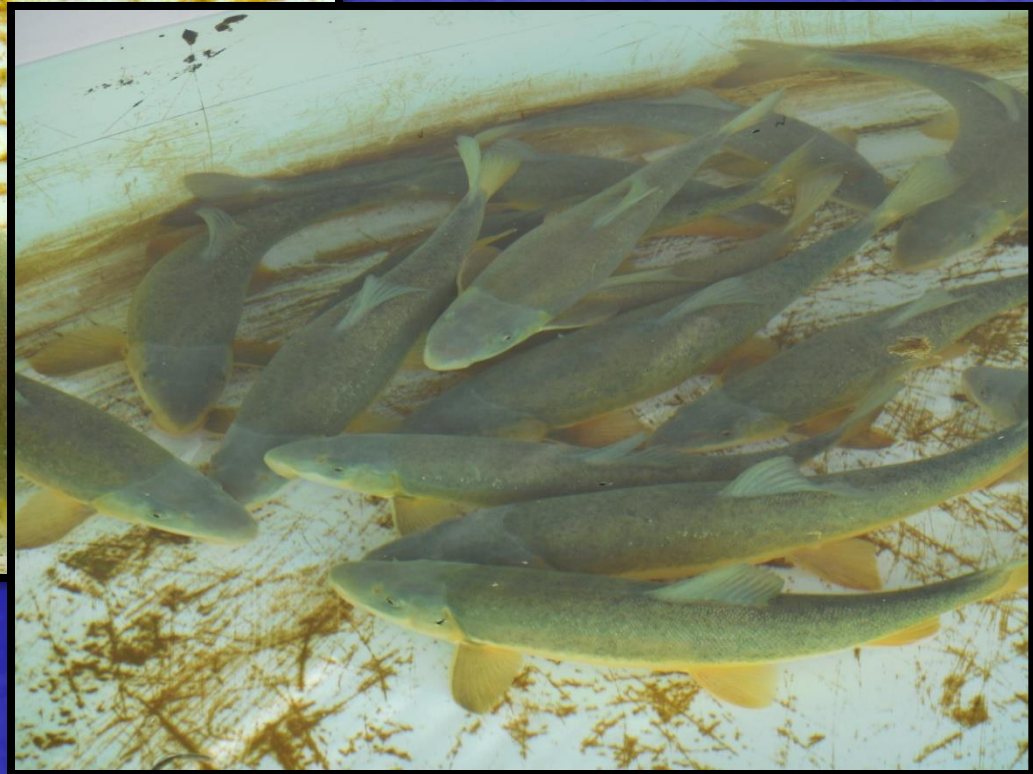
# Flannelmouth Sucker

*Catostomus latipinnis*

No Official State Status



- Yet to Spawn in Captivity
- 8 inch fish
- 14 Broodfish
- CCP in 2017

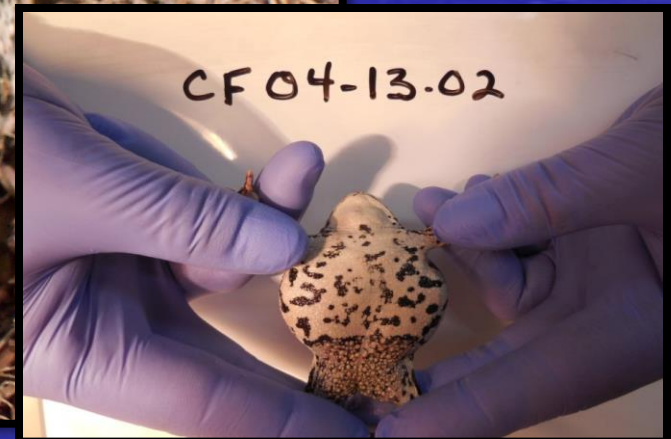


# Boreal Toad

*Anaxyrus boreas boreas*  
State Endangered

Considered for Federal Listing in 2017

- Over 140,000 stocked or reintroduced
- 1 inch tadpole
- 625 Broodstock
- RMNP
- UT & NM
- Chytrid fungus



# QUESTIONS

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