

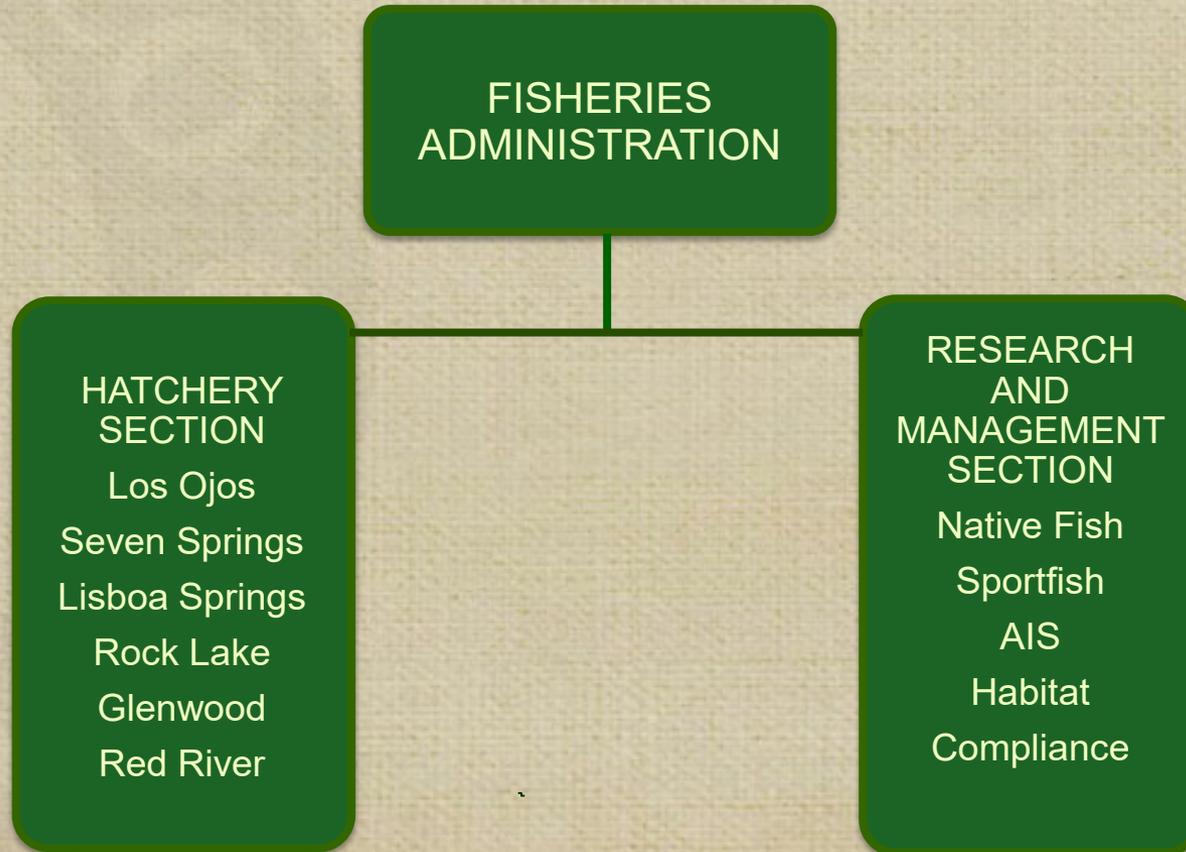
# Agenda Item No. 7

Kirk Patten  
Silver City, NM  
April 19, 2024

Overview of the Fisheries  
Management Division



# FMD Structure



# Management Guidance



New Mexico Department of Game and Fish  
Conserving New Mexico's Wildlife for Future Generations

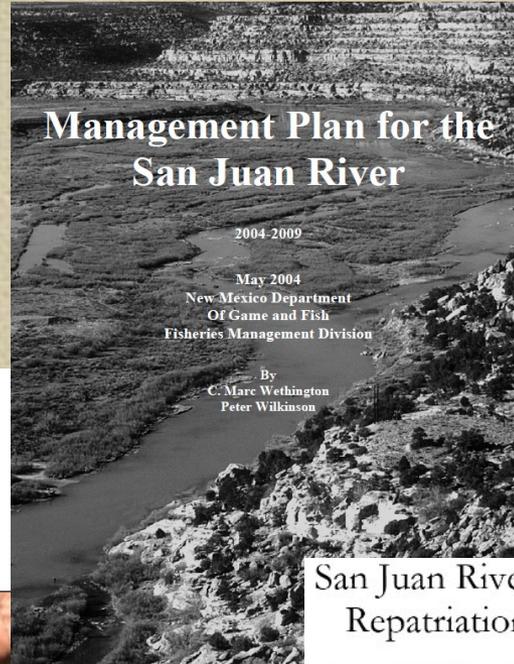
## 2022 Statewide Fisheries Management Plan

Approved by the New Mexico State Game Commission on June 17, 2022

### Rio Grande Cutthroat Trout (*Oncorhynchus clarkii virginalis*) Conservation Strategy



October 2023

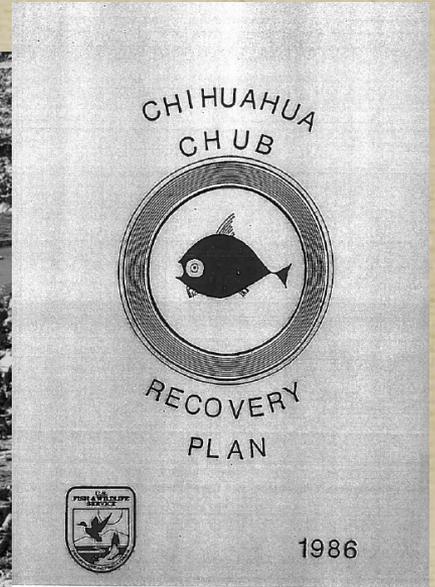


## Management Plan for the San Juan River

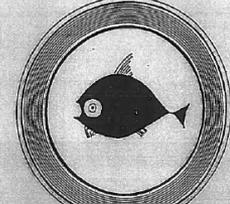
2004-2009

May 2004  
New Mexico Department  
Of Game and Fish  
Fisheries Management Division

By  
C. Marc Wethington  
Peter Wilkinson



CHIHUAHUA  
CHUB



RECOVERY  
PLAN



1986

### San Juan River Basin Roundtail Chub Repatriation Plan in New Mexico



# Statewide Fish Management Plan

## Wild:

### Recreational Trout Waters

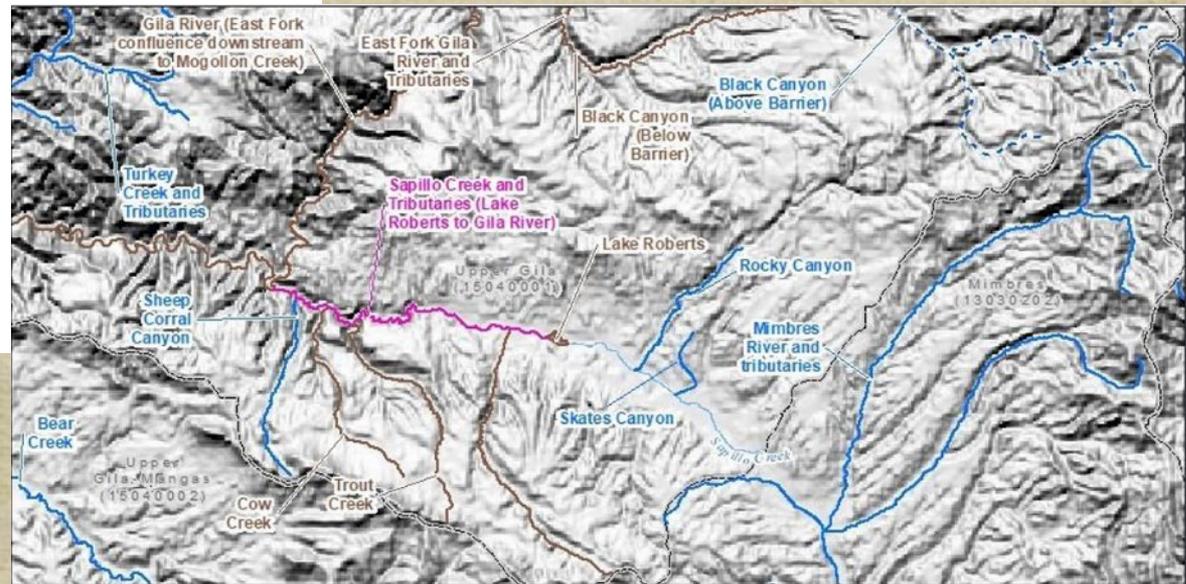
- Size Structure: Multiple year classes of trout including young of year
- Density: > 80 adult trout/acre of habitat

### Quality Trout Waters

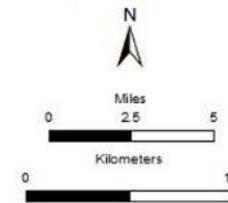
- Quality Potential: 5% of trout  $\geq$  12 inches
- Density:  $\geq$  400 adult trout/acre of habitat

### Trophy Trout Waters

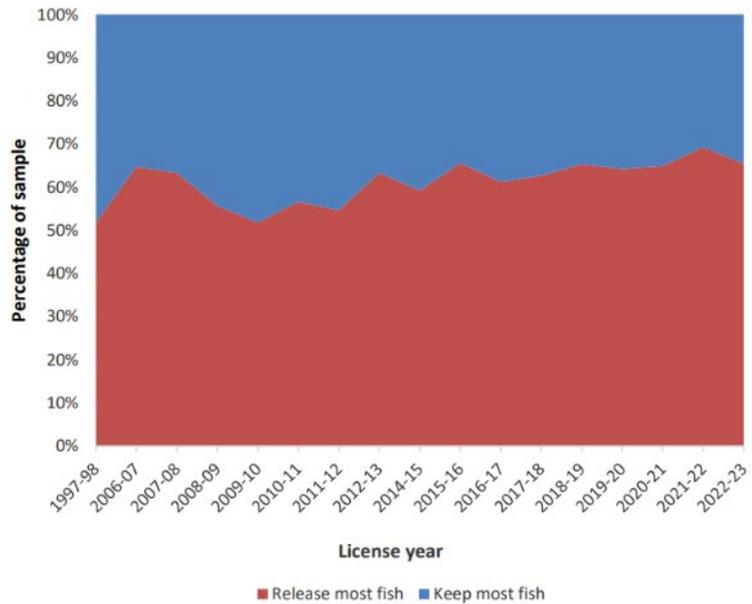
- Trophy Potential: 5% of trout  $\geq$  20 inches
- Angler Catch Rate:  $\geq$  1 fish/hour
- Density:  $\geq$  1,250 adult trout/acre of habitat



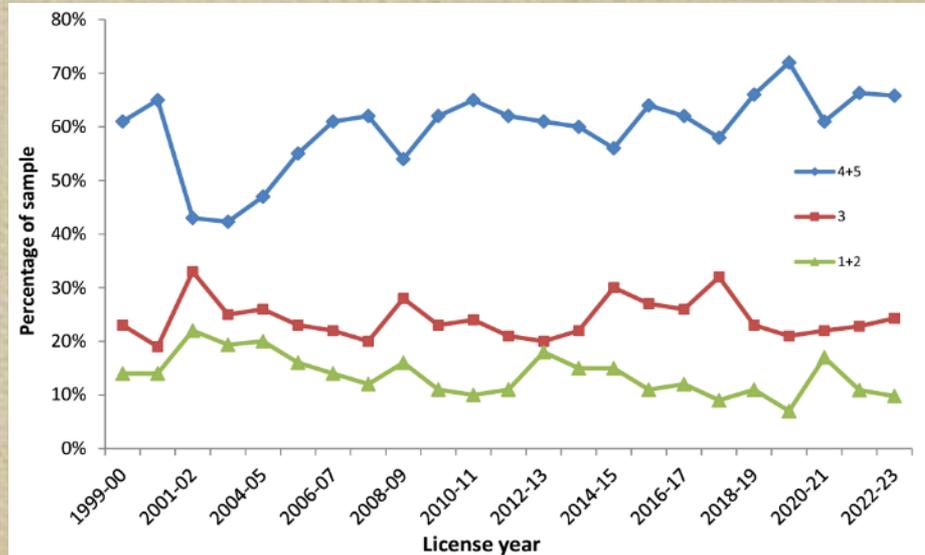
Upper Gila (Map 4 of 4)



# Angler Trends – Annual Survey



5 Year Average – 260,000 angling licenses sold



# Angler Trends – Annual Use Survey

- Email survey to anglers
- Able to estimate use based upon proportion of responses
- Determine average angler days and harvest

Water Name	Average Angler Days
San Juan River (Quality)	226,895
Fenton Lake	80,541
Red River	42,809
Lake Roberts	38,853
Navajo Reservoir	180,844
Elephant Butte Lake	277,268
Pecos River (Cowles)	111,423
Mineral Creek	142
Bull Creek	292



# Research and Management Section



# Aquatic Species Restoration

- Rio Grande Cutthroat, Sucker and Chub – Rio Costilla



- Rio Grande Cutthroat – Willow Creek (Pecos)

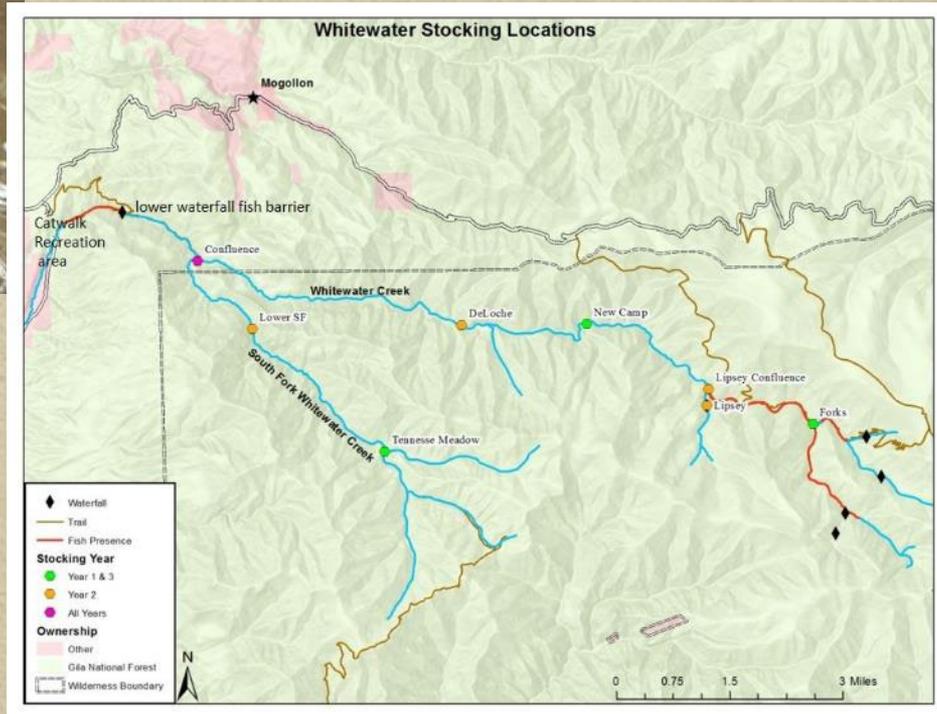


<b>New Mexico - RGCT</b>	<b>2006</b>	<b>2022</b>	<b>% Change</b>
Number of conservation populations	84	85	+ 1.1
Current distribution (km)	638	760	+ 16.1
Historic distribution (km)	5,521	5,527	+ 0.1
Percent of historic distribution	11.6	13.8	+ 15.9
Mean patch length (km)	7.6	8.9	+ 14.6
Lake area occupied (km <sup>2</sup> )	0.18	1.50	+ 88.0

# Aquatic Species Restoration



Gila Trout Recruitment – Whitewater Creek

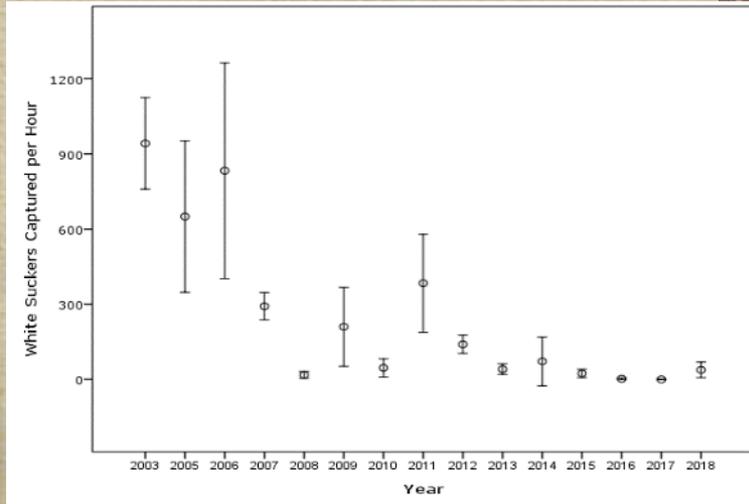


- Rio Grande Chub and Sucker – Bandelier National Monument



# Tiger Muskie Management

- Quemado and Bluewater Lakes
- Fish kills at Quemado
- Overall successful



# Aquatic Habitat and Access



- Bill Evans Improvements



- Rio Chama Habitat Improvements 2023 Surveys

# Aquatic Habitat

- Bill Evans, Carlsbad Municipal



# Aquatic Habitat – HSP Funds

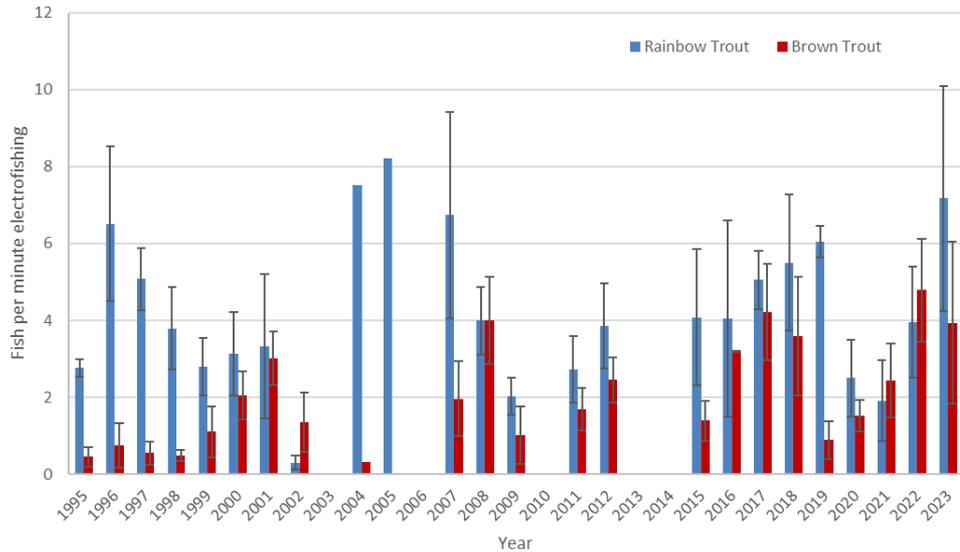
- Costilla Habitat – RGCT, RG Chub, RG Sucker



- Willow Creek – Gila Trout

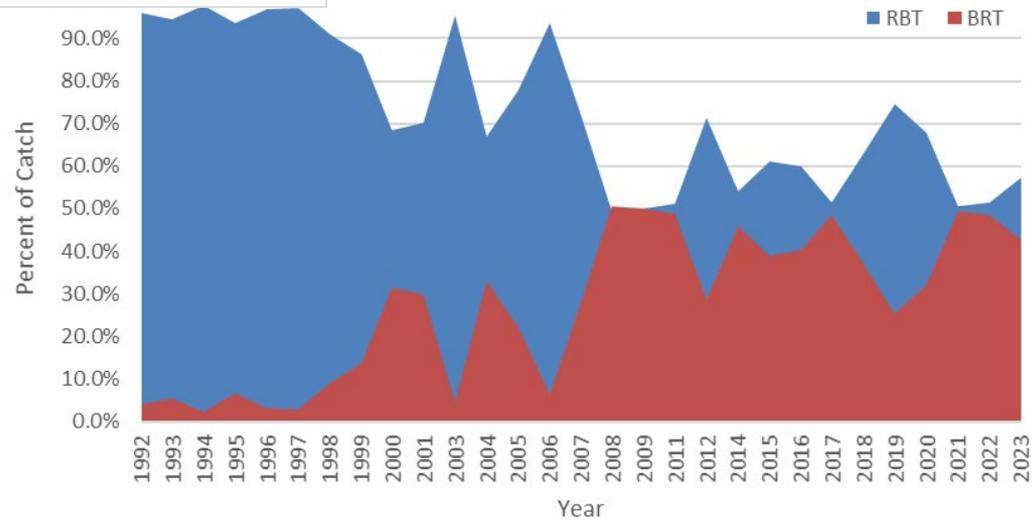


# San Juan Tailwater Fishery



- Trout abundance in Special Trout Water reach of San Juan Tailwater Fishery

- Increased proportion of Brown Trout



# San Juan Recovery Efforts

- PIT Pass Boats - Razorback Sucker



- CO Pikeminnow Recruitment

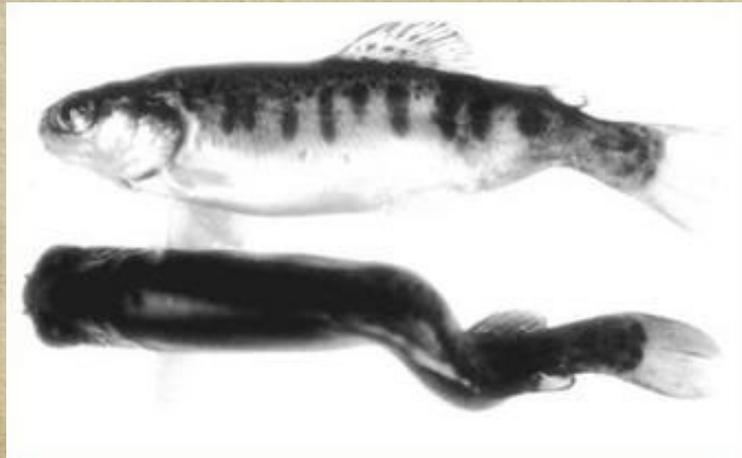


# Fire Response(s)

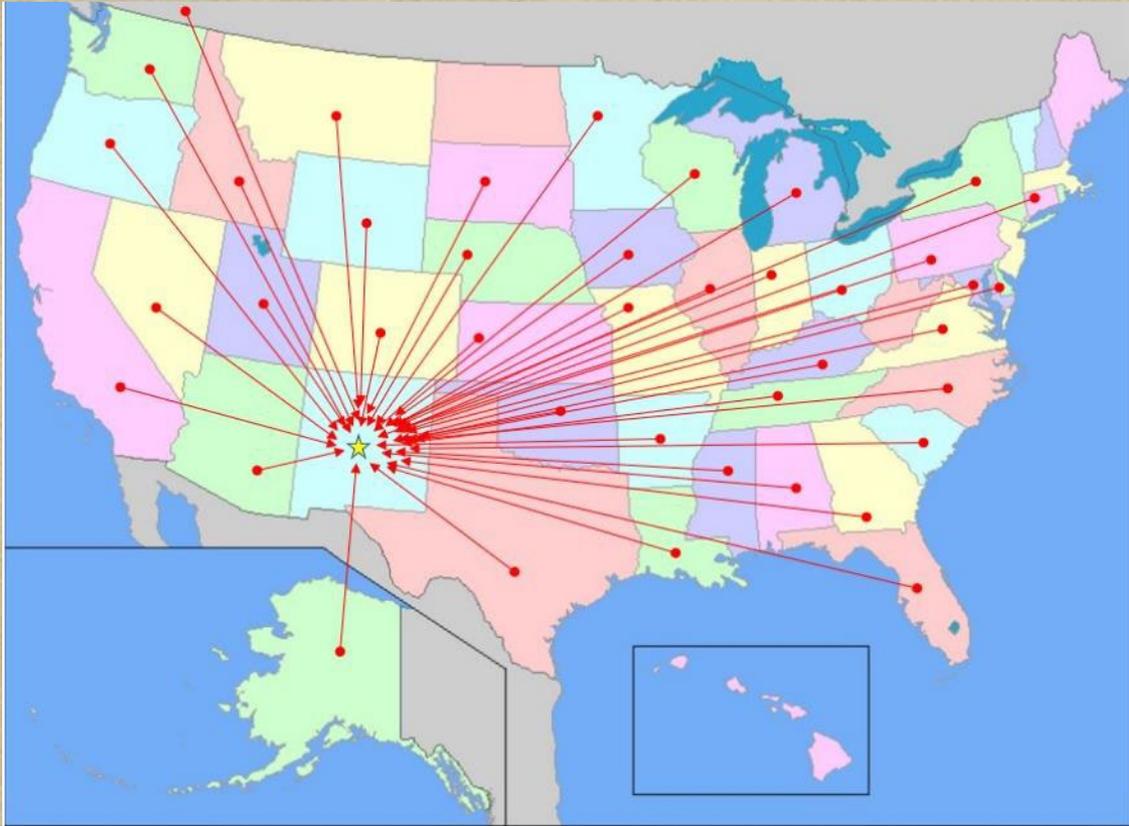


# Fish Health

- Annual testing at fish hatcheries
- Wild populations – fish translocations
- Whirling Disease



# Aquatic Invasive Species

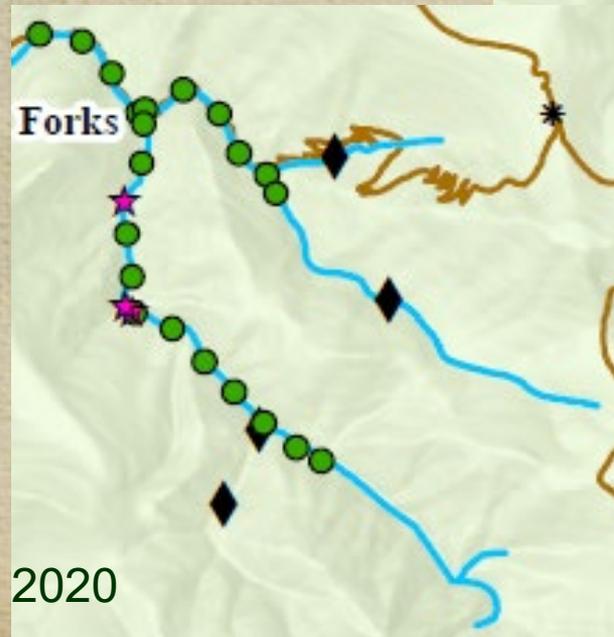
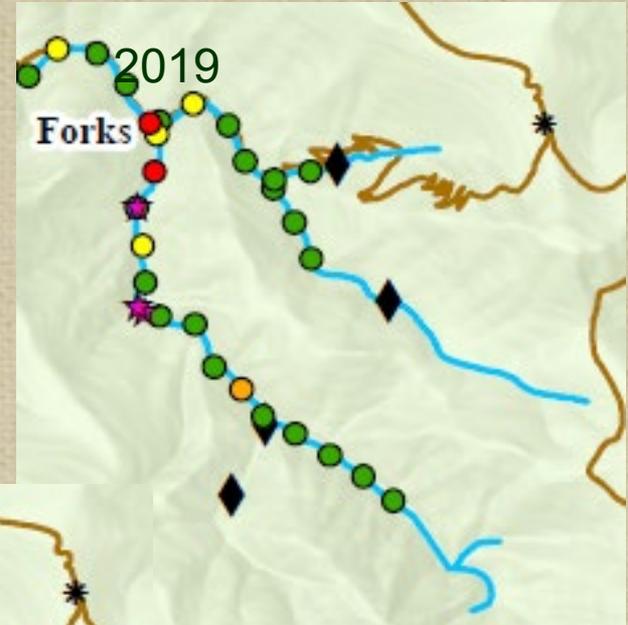


- No Zebra or Quagga Mussels
- 2023
  - 45,841 inspections
  - 274 decons



# eDNA for Species Detection

- Species detection via water samples
- High resolution
- Rare taxa
- Presence of unwanted taxa



- Trout presence/absence

- TX hornshell detection in Black River



# Fisheries Research

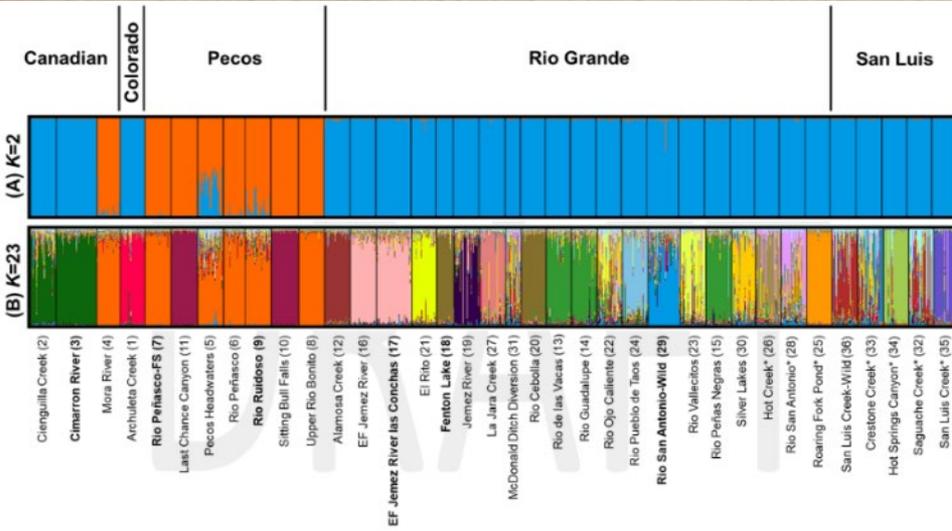
- Caballo Lake - Striped x White Bass Hybrids ~ 10% of white bass population sampled
- Chihuahua Chub Population Dynamics



- Largemouth Bass stocking effectiveness
  - Recruitment at Clayton

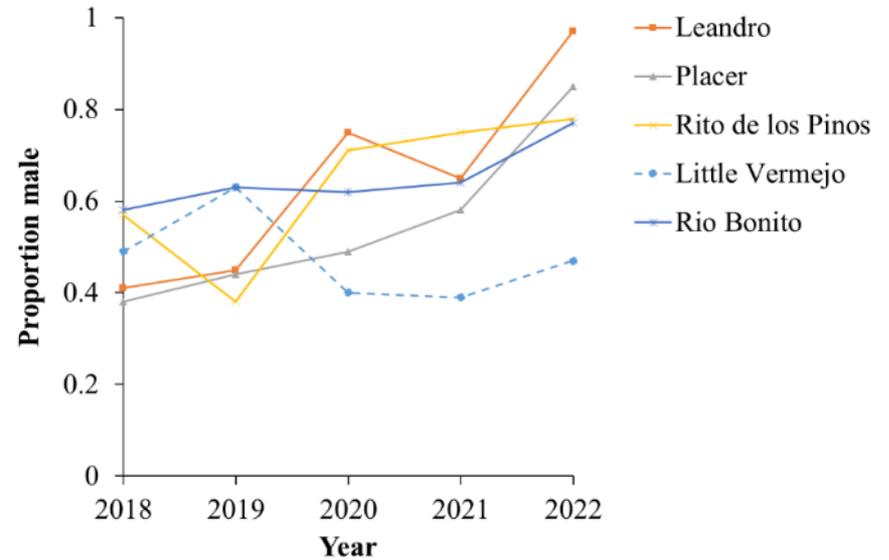


# Fisheries Research



- Rio Grande Chub Basin Assignment

- YY Brook Trout



# Hatchery Section



A map of New Mexico showing the locations of state hatcheries. Major cities and highways are marked. Hatchery locations are indicated by yellow stars: Los Ojos, Red River, Seven Springs, Lisboa Springs, Rock Lake, and Glenwood. The map includes major highways such as I-40, I-25, I-10, US-64, US-70, US-84, and US-285.

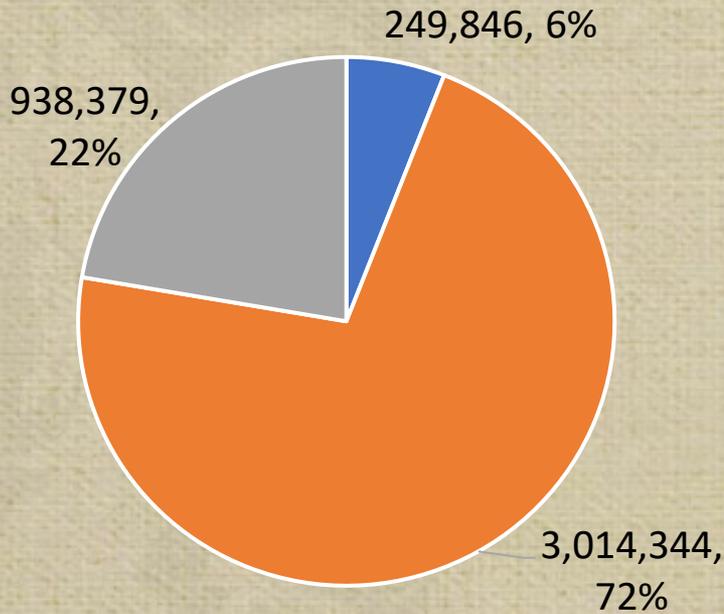
**NEW MEXICO'S STATE HATCHERIES**

	LOS OJOS
	SEVEN SPRINGS
	RED RIVER
	ROCK LAKE
	LISBOA SPRINGS
	GLENWOOD



# Hatchery Contributions

## Angler Days



■ Wild Fisheries   ■ Partial Hatchery Dependence   ■ Hatchery Dependent



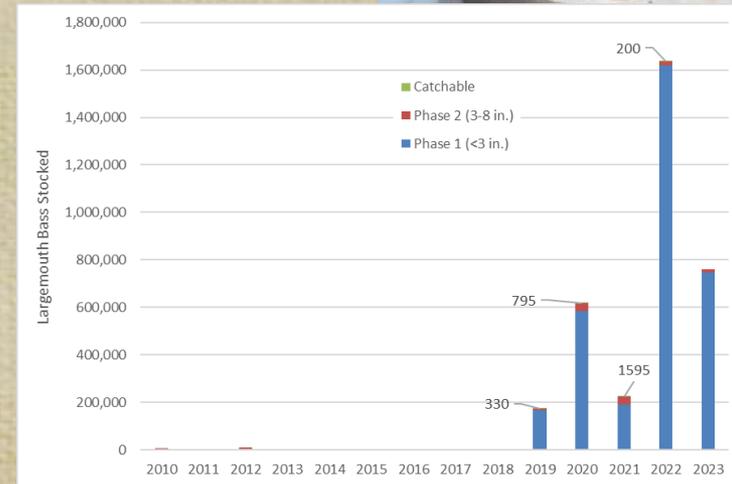
# Hatchery Production and Stocking

Species	Pounds Stocked	Fish Stocked
YY Brook Trout	188	5,626
Channel Catfish	43,358	26,015
Kokanee	906	317,843
Largemouth Bass	1,603	760,143
RG Cutthroat	2,825	354,699
Rainbow Trout	567,891	2,227,397
Tiger Muskies	15	900
Walleye	43	4,839,251
Wiper	48	56,976
Total	616,877	8,588,850



# Spawning and Broodstock

- Rio Grande Cutthroat Trout – Seven Springs and Wild
  - ~400,000 eggs annually
  - 95% of wild diversity represented
- Largemouth Bass – Rock Lake
  - ~250,000 fry and 14,000 fingerlings
- Walleye – Conchas and Santa Rosa
  - ~30,000,000 eggs annually
- Kokanee – Heron and Navajo Lake
  - ~3,000,000 eggs annually
- Gila trout – Glenwood
  - 2024 – First spawn at Glenwood



# Hatchery Improvements

- Glenwood Renovation – Phase I and II



- Housing – New Mobile Home at Rock Lake and other improvements



- Rock Lake Decon and Improvements



# Hatchery Improvements

- Septic and Mobile Homes – Los Ojos
- Drum Filters – Lisboa Springs
- Water Treatment System – Los Ojos
- Bridge – Red River
- Additional Capital Needs



## Summary of Infrastructure and Capital Improvement Needs for Department of Game and Fish Hatcheries – August 2022

**Need:** The Department of Game and Fish operates six state hatcheries which produce approximately 660,000 pounds of fish annually, composed of eight different fish species. Of the annual 4.2 million days anglers engage in fishing activities statewide, approximately 96% of anglers fish at waters which are either entirely supported by hatchery stocking (22%) or partially supported by hatchery stocking (72%). Department hatcheries also support ongoing conservation efforts for sensitive native species such as Rio Grande cutthroat trout and Gila



# Questions

