

Grand Junction *Fish and Wildlife Conservation Office*

Interior Region 7



Photo by Mike Gross USFWS

800 Razorback Sucker (*Xyrauchen texanus*) at Horsethief Canyon Native Fish Facility in Fruita, Colorado preparing to be stocked into the Colorado River near Grand Junction, Colorado. September 17, 2020

Highlights - September 2020

- **Ouray National Fish Hatchery, Grand Valley Unit (Ouray NFH-GVU)**
 - September Activities:
 - Yearly stocking of endangered Razorback Sucker (*Xyrauchen texanus*) into the Upper Colorado and Gunnison rivers complete.
 - Maintenance activities at Ouray National Fish Hatchery-Grand Valley Unit's 24 Road facility.
 - 2020 year class Razorback Sucker and Bonytail moved from HCNFF to Ouray NFH-GVU.
 - Health Condition Profile (HCP) completed on 2020 year class Razorback Sucker.
- **Grand Junction Fish and Wildlife Conservation Office (FWCO)**
 - September Activities:
 - Humpback Chub monitoring underway at Blacks Rocks on the Colorado River.
 - First Humpback Chub to pass through Redlands Diversion Dam for 2020 field season.
 - Mid-season update: non-native fish removal on the Upper Colorado River.
 - Redlands Diversion Dam and Grand Valley Water Users Fish Passages update.
- **Coordination activities with partners update**

September 2020

Ouray National Fish Hatchery, Grand Valley Unit September Activities: Yearly stocking of endangered Razorback Sucker (*Xyrauchen texanus*) into the Upper Colorado and Gunnison rivers complete.



September 24- Ouray National Fish Hatchery-Grand Valley Unit (Ouray NFH-GVU) completed its yearly stocking of Endangered Razorback Sucker (*Xyrauchen texanus*) into the Upper Colorado and Gunnison rivers for the 2020 field season. A total of 6,732 of these endangered, omnivorous, bottom dwellers averaging 378 millimeters (just under 15 inches) were deployed on the Colorado River between Rifle and Fruita, Colorado as well as 1,922 individuals averaging 362 millimeters into the Gunnison River in Delta, Colorado. Razorback Sucker, an endangered native Colorado River fish, has inhabited the Colorado River for approx. 5 million years. This species is found nowhere else on earth. Once very abundant and widespread throughout the Colorado River basin, it is identified by its large dorsal keel which distinguishes it from other species of suckers. Since 1996, Ouray NFH-GVU has annually cultured and released these unique animals back into their wild native habitat in the Upper Colorado River watershed. Photos by Mike Gross USFWS.



Razorback sucker are cultured at Horsethief Canyon Native Fish Facility in either half or quarter acre grow-out ponds. At harvest time, the pond is drained and the fish are retrieved.



At release, the keel of the fish is boldly pronounced. They are roughly a year and a half old, and generally 14" - 16" long when released into the Colorado and Gunnison rivers.



All razorback sucker have permanent internal Passive Integrated Transponder (PIT) tags (inserted in February 2020) which are scanned before stocking so biologists can track the movement of the fish once in the wild. Corresponding lengths and weights of the fish are also recorded.



Once all pertinent scientific data is acquired, a boom crane-mounted fish bucket is lowered into the pond kettle and the Razorback Sucker are gently loaded into the fish transport truck, which is insulated and equipped with oxygen and aerators. Every effort is made to lower the stress of these fish prior to release.



At the destination stocking site, fish are tempered. River water is slowly exchanged into the hauling tanks until the water chemistry is comparable between the river and tanks. After a suitable tempering period, fish are released.

Characterized by the distinctive "keel" shape behind its head and being the only member of the genus *Xyrauchen*, Razorback Sucker are one of the largest suckers in North America. This unique animal can grow upwards of 3 feet in length, living for more than 40 years. Razorback sucker are omnivorous and will typically eat insects, plankton, and plant matter on the bottom of the river. In the wild, a large mature female Razorback Sucker may lay as many as 200,000 eggs!!

September 2020

Ouray National Fish Hatchery, Grand Valley Unit

September Activities: Maintenance activities at Ouray National Fish Hatchery-Grand Valley Unit's 24 Road facility.



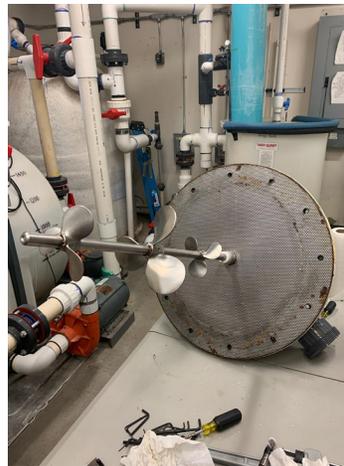
During summer, most of the fish at 24 Road Hatchery are moved to the warmer outdoor grow-out ponds at Horsethief Canyon Native Fish Facility (HCNFF) where growth is maximized as they feed on a natural diet of plankton and invertebrates, while getting accustomed to a natural outdoor environment. This brief pause at 24 Road Hatchery allows biologists the opportunity to accomplish some well needed maintenance tasks while the hatchery is empty. Throughout September, Ouray NFH-GVU personnel installed new backup air line valves and influent water valves on the 92 tanks operating at the 24 Road indoor recirculating hatchery. Also at 24 Road Hatchery, new filter and circulation pumps were installed on one of the two recirculating systems. Furthermore, maintenance on the bead filter, which removes solid particles from one of the two recirculating systems was accomplished in September. Ouray NFH-GVU biologists took apart the bead filter to check welds on the mixing propeller and to replace various seals and the shaft thrust bearing. The bead filter holds both heterotrophic and autotrophic beneficial nitrifying bacteria (*Nitrosomonas* and *Nitrobacter*) which aid in the breakdown of organics once fish are reintroduced into the system. Photos by Brian Scheer USFWS.



Andrew Disch installing new air line valves and influent water valves on the 92 tanks at the 24 Road recirculating fish hatchery.



Left: Haden VanWinkle installing new circulation and filter pumps at Ouray NFH-GVU's 24 Road Facility. Right: Fresh new circulation pump ready to roll.



Left: The bead filter removes solid material from the recirculating aquaculture system at 24 Road Hatchery. Periodically, Ouray NFH-GVU personnel take the bead filter apart to check welds on the mixing propeller (Middle) and to replace various seals and the shaft thrust bearing (Right).

September 2020

Ouray National Fish Hatchery, Grand Valley Unit

September Activities: 2020 year class Razorback Sucker and Bonytail moved from HCNFF to Ouray NFH-GVU for the winter.



Ouray National Fish Hatchery-Grand Valley Unit (Ouray NFH-GVU) biologists graded (sorted by size) and moved the 2020 year class Razorback Sucker and Bonytail from their grow-out ponds utilized during the warmer months at Horsethief Canyon Native Fish Facility to the indoor recirculating facility at 24 Road Hatchery where they will stay until Spring 2021. The 24 Road Hatchery facility is utilized during the cold winter months where culture temperatures can be manipulated indoors, maximizing growth. Roughly 9,000 Bonytail averaging 130mm (slightly over 5”) and approximately 10,600 Razorback Sucker averaging 135mm (slightly over 5”) were harvested and moved. Once spring 2021 arises, these fish will be moved back to HCNFF for three to six months at which point they will be stocked at various locations into the Upper Colorado River basin. Photos by USFWS staff.



Ponds were drained that held 2020 year class Razorback Sucker and Bonytail. The fish were initially stocked into these ponds when they were freshly hatched larvae. Once drained and the fish are in the pond "kettle," biologists can grade the fish (sort and separate fish by size).



Grading fish is necessary to acquire optimum growth, reduce cannibalism, prevent competition between large and small fish, and meet management requirements. Fish at HCNFF are graded before being transported to 24 Road Hatchery by gently gathering them and placing them into a bar grader which allows small fish to pass through the bars, leaving the larger ones within the grader. The bars can be separated at different intervals allowing for different size fish gradings.



This Razorback Sucker is slightly over five months old. In that short time period it grew to 137 millimeters.



This Bonytail is also slightly over five months old. Feeding on plankton, invertebrates and vitamin enriched fish food, It grew just under 130 millimeters during the warm summer months at HCNFF.



Outdoor grow-out ponds at Horsethief Canyon Native Fish Facility (HCNFF) in Fruita CO. Endangered fish are cultured here typically from Spring through Fall.



Indoor recirculating hatchery at the 24 Road facility in Grand Junction, CO.

September 2020

Ouray National Fish Hatchery, Grand Valley Unit

September Activities: Ouray NFH-GVU completed the Health Condition Profile (HCP) on the 2020 year class Razorback Sucker.



September 14- Ouray National Fish Hatchery-Grand Valley Unit (Ouray NFH-GVU) biologists completed the yearly Health Condition Profile (HCP) on 2020 year class Razorback Sucker. Before Razorback Sucker (*Xyrauchen texanus*) are released into the wild, biologists at Horsethief Canyon Native Fish Facility (HCNFF) perform a Health Condition Profile (HCP) on each species of fish held on station to make sure they are of proper, optimum quality once released into the Colorado River. A necropsy-based fish health assessment was performed on a sample of 20 Razorback Sucker. After lengths and weights were recorded, blood was collected for hematocrit, leucocrit and plasma protein analysis and the fish were then visually analyzed (inside and out) for any abnormalities and/or pathological problems. The HCP system has been developed over nearly two decades of research and is intended to be used as a standardized system of observation to assess the relative health and condition of fish cultured from USFWS fish hatcheries. Photos by Brian Scheer USFWS.



Top left: A Razorback Sucker (*Xyrauchen texanus*) prepared for a necropsy to assess the health of the fish. This Razorback Sucker was very robust measuring 410 mm at only one and a half years old and all external characteristics appeared normal and healthy.

Middle: This necropsy revealed high levels of mesenteric fat within the peritoneal cavity of the fish suggesting it had been feeding vigorously in the grow-out pond.

Bottom Left: The necropsy also revealed a large gall bladder full of bile further suggesting that this fish has been feeding very well in recent months.

Bottom Right: A pond kettle full of Razorback Sucker at HCNFF ready to be deployed into the Colorado River near Fruita, Colorado.



September 2020

Grand Junction Fish and Wildlife Conservation Office

September Activities: Humpback Chub sampling commences at Black Rocks on the Upper Colorado River.



September 23- Grand Junction Fish and Wildlife Conservation Office (Grand Junction FWCO) biologists kicked off the 2020 Humpback Chub (*Gila cypha*) population monitoring to assess survival, abundance and transition rates in the Upper Colorado River within the Ruby Horsethief Canyon area. Humpback Chub have inhabited the Colorado River for at least 3 million years, but have become highly endangered in a mere few decades due to loss of habitat and cumulative other anthropogenic causes, subsequently listed as endangered in 1967. The study commenced on the Colorado River, sampling at and around Black Rocks, which is designated as Critical Habitat for Humpback Chub. Grand Junction FWCO biologists will conduct four sampling passes primarily utilizing baited hoop nets and trammel nets and is set to conclude October 23. This ongoing study has been conducted since 1998 (two years of sampling followed by a two year rest period) and has documented recruitment of *Gila cypha* near Black Rocks in recent years. The preliminary data of 2020 looks very promising showing high catch rates of all life stages of Humpback Chub. Photos by USFWS staff.



Black Rocks, near the CO/UT border holds some of the oldest exposed rock (Vishnu schist) along the Colorado River and dates back about 1.7 billion years. This same rock is exposed in certain sections of the Grand Canyon. The deep canyon habitat in the Black Rock area is ideal for numerous *Gila* species.



Tyler Trump (left) and Ben DeRidder (right) displaying a Humpback Chub captured in a baited hoop net at night on the Colorado River near Black Rocks, September 2020.



Ben DeRidder prepares to release a captured Humpback Chub back into the Colorado River after collecting all pertinent scientific data. September 2020.



Travis Francis and Nathan Vargas displaying two Humpback Chub on the Colorado River near Black Rocks. September 2020.

September 2020

Grand Junction Fish and Wildlife Conservation Office

September Activities: Other notable ongoing:

Biologists capture the first Humpback Chub for 2020 at the Redlands Diversion Dam Fish Passage.



September 28 - Grand Junction Fish and Wildlife Conservation Office (Grand Junction FWCO) biologists captured the first Humpback Chub (*Gila cypha*) at the Redlands Diversion Dam (RDD) Fish Passage for 2020. This endangered species is rarely collected at the Redlands Diversion Dam (on the Gunnison River), with only three other individuals being encountered there over the past ten years, two in 2017 and one in 2010. Biologists have speculated that there is suitable habitat for Humpback Chub in the deep canyon areas upstream of RDD.



(Left) Aaron Mathews preparing to release a Humpback Chub above the Redlands Diversion Dam, after it made it's way through the fish passage. (Right) Until the hump on their back is highly pronounced, smaller Humpback Chub (*Gila cypha*) are often misidentified by anglers as a different chub species such as Roundtail Chub (*Gila robusta*) or Bonytail (*Gila elegans*). Humpback Chub are olive-colored on their back, have silver sides, a white belly, small eyes and a long snout that overhangs its jaw (the snouts of other chub species don't overhang as dramatically). Photos by Darek Elverud USFWS.



Redlands Diversion Dam on the Gunnison River near Orchard Mesa, Colorado was built in 1918. Until the fish passage was constructed in 1996 (a time span of nearly 80 years), native fish were unable to continue upriver past this point, leading to the decline of native fish populations on the Gunnison River. Photos by Mike Gross USFWS.

September 2020

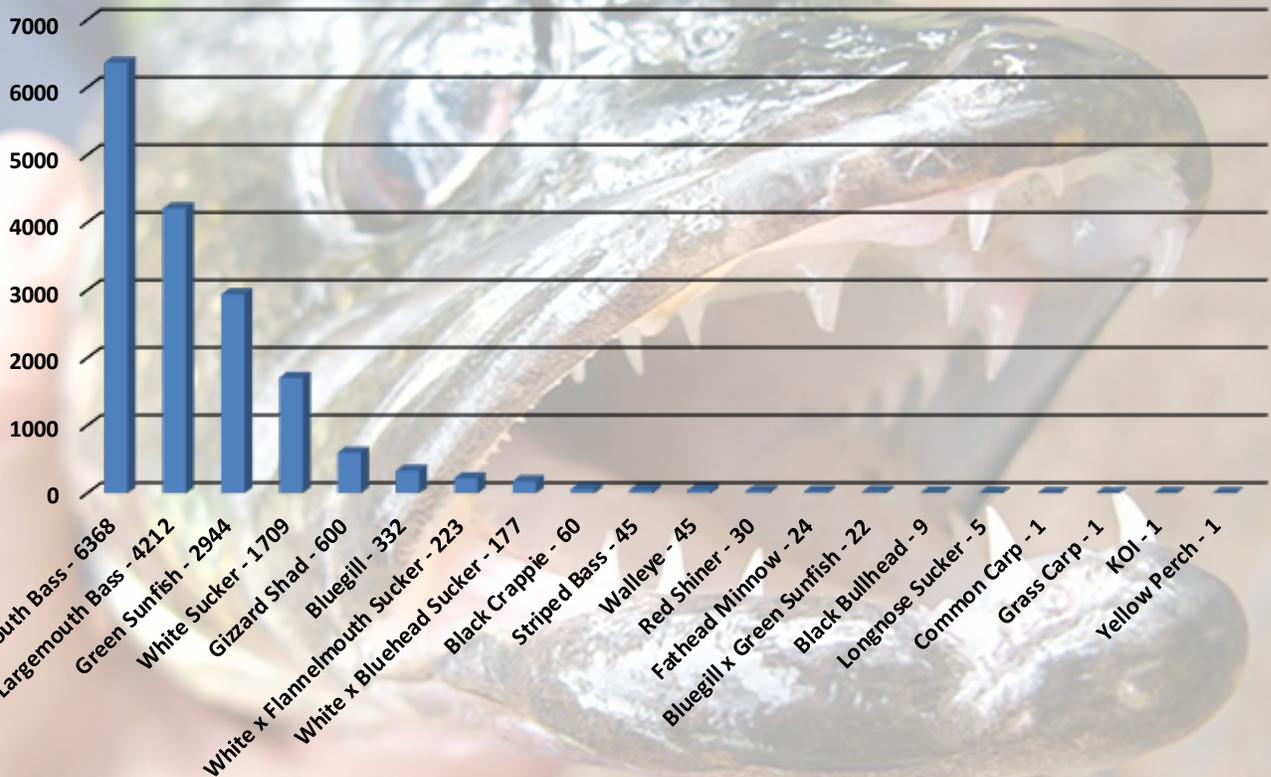
Grand Junction Fish and Wildlife Conservation Office

September Activities: Non-native fish removal on the upper Colorado River update.



Biologists estimate from 65-100 species of non-native fish currently inhabit the Colorado River basin (most stocked by government agencies as sportfish), versus 13 native fish species. These non-native fishes represent enormous hurdles for native fish residing in the Upper Colorado River including predation, competition for food and habitat, non-native x native fish hybridization, vectors for disease and more. Depending on the specific reach, Grand Junction FWCO biologists perform two to ten passes of non-native fish removal from Palisade, Colorado, to Potash, Utah. This project will conclude in late October of 2020. Below are the current number of non-native fish captured by GJFWCO biologists through September 25, 2020. Photos by USFWS staff.

Number of non-native fish captured on the Colorado River by GJ FWCO June 26 - September 25, 2020



Travis Francis holding a giant Grass Carp captured in the Colorado River near Fruita Colorado.



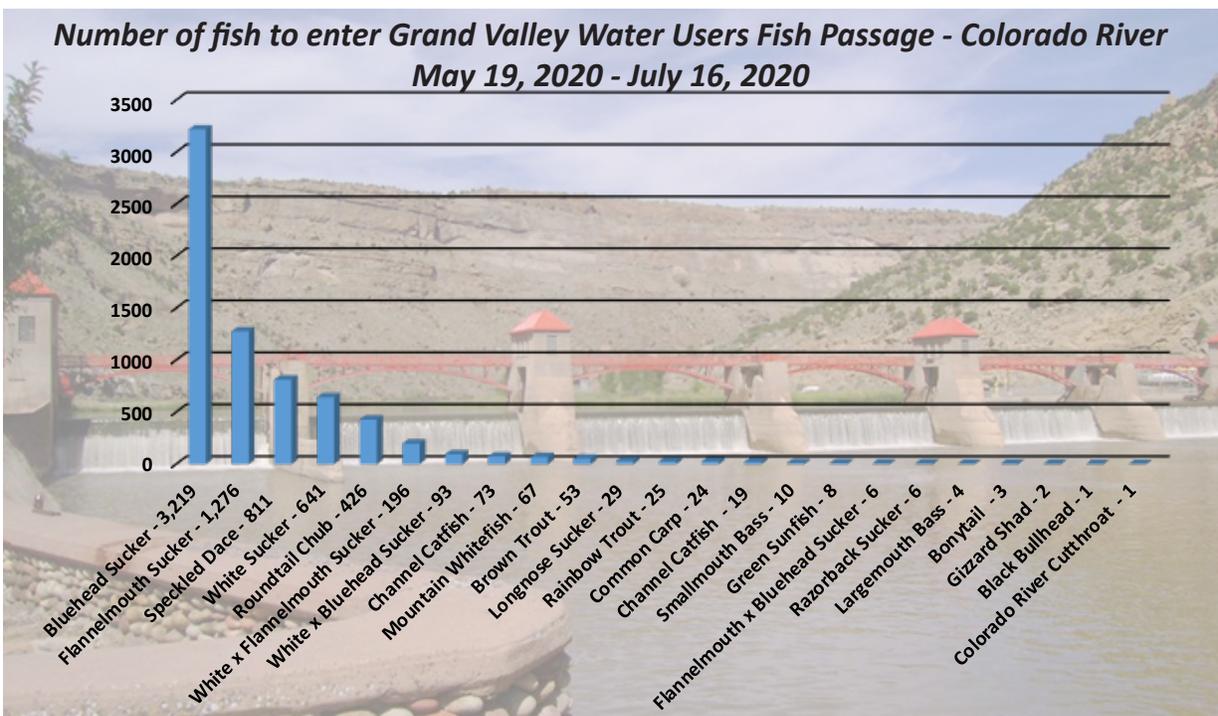
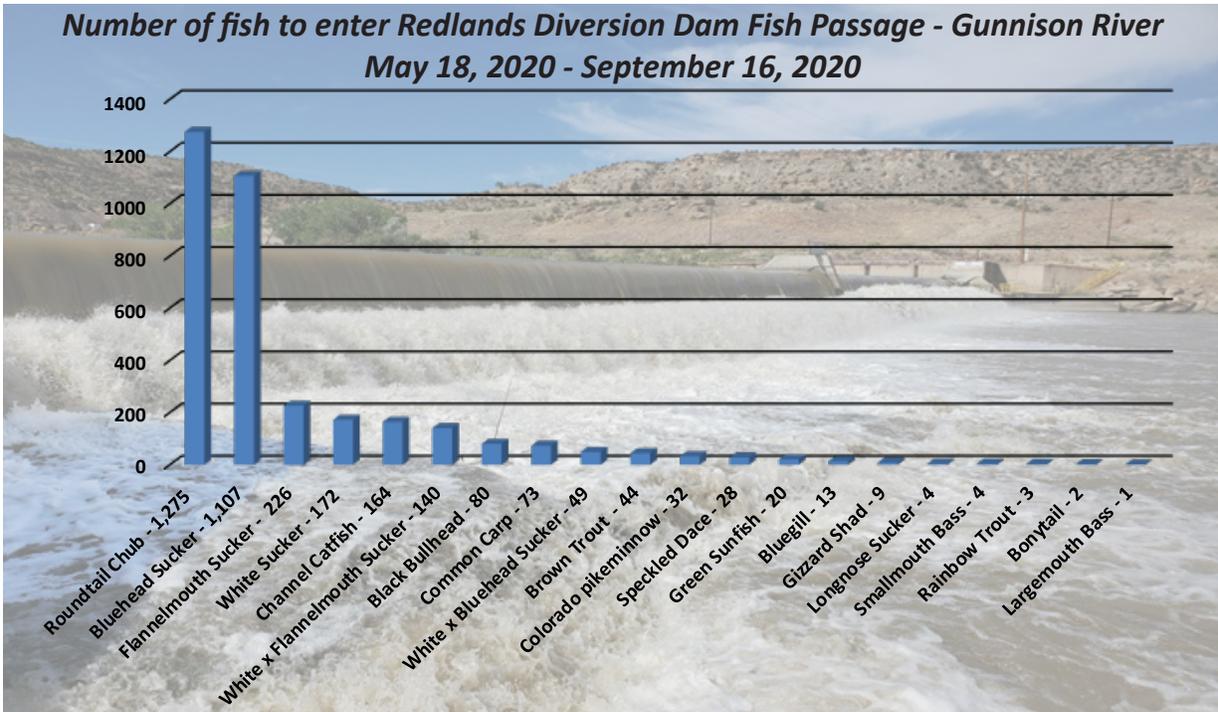
Bill Hilzer acquiring scientific data on a Smallmouth Bass captured near Grand Junction, Colorado.

September 2020

Grand Junction Fish and Wildlife Conservation Office September Activities: Redlands Diversion Dam and Grand Valley Water Users Fish Passages update.



Grand Junction Fish and Wildlife Conservation Office (Grand Junction FWCO) operates two separate fish passage facilities daily from mid-April through mid-October. Both are located near Grand Junction, Colorado: Redlands Diversion Dam Fish Passage (on the lower Gunnison River) and Grand Valley Water Users Fish Passage (just upstream of Palisade, Colorado, on the Colorado River). These two passages are very important to the long term survival of numerous native fish species, expanding their range by 44 miles on the Colorado River and by 50 miles on the Gunnison River. Below are the total numbers of fish that utilized these two fish passages, as of mid-September 2020. The Grand Valley Water Users Fish Passage has been closed since July 16th, due to severe drought, resulting in very low instream flows.



September 2020

*Grand Junction Fish and Wildlife Conservation Office:
September Activities: Coordination activities with partners.*



9/16/2020:

Ouray NFH-GVU provided fin clips from 2020 year class Razorback Sucker to Colorado Parks and Wildlife's Aquatic Research Associate, Zachary Hooley-Underwood. These fin clips will provide baseline genetic information that will help CPW assess native sucker reproductive success and possible hybridization between sucker species in and around Roubideau and Cottonwood creeks (tributary streams in the Gunnison River drainage, near Delta, Colorado). Photos by Brian Scheer USFWS



Colorado Parks and Wildlife Aquatic Research Associate Zachary Hooley-Underwood clipping a small piece of the caudal fin from a Razorback Sucker at Horsethief Canyon Native Fish Facility in Fruita, Colorado.

Grand Junction Fish and Wildlife Conservation Office Staff



Project Leader - Dale Ryden
Administrative Officer - Vacant 41 months

Grand Junction FWCO Staff:

Fish Biologist - Darek Elverud
Fish Biologist - Travis Francis
Fish Biologist - Ben Schleicher
Biological Science Technician - Michael Berg
Biological Science Technician - Connor Church
Biological Science Technician - Benjamin DeRidder
Biological Science Technician - Andrew Disch
Biological Science Technician - Lucas Laurita
Biological Science Technician - Aaron Matthews
Biological Science Technician - Justin Howard
Biological Science Technician - Tyler Trump
Biological Science Technician - Nathan Vargas
Biological Science Technician - Tyler Walton

Ouray National Fish Hatchery - Grand Valley Unit Staff:

Fish Biologist - Brian Scheer
Biological Science Technician - Haden Van Winkle
Biological Science Technician & Educational Outreach - Mike Gross
Biological Science Technician - Haden Van Winkle

Grand Junction Fish and Wildlife Conservation Office About Us



The Grand Junction Fish and Wildlife Conservation Office in Grand Junction, Colorado (Formerly known as Colorado River Fishery Project, aka CRFP) consists of both a field office (FWCO) and an endangered fish hatchery, known as the Ouray National Fish Hatchery-Grand Valley Unit.

The CRFP field office was established in 1979 to perform research and management actions aimed at helping recover four endangered fish species of the upper Colorado River basin: Razorback Sucker, Colorado Pikeminnow, Humpback Chub, and Bonytail.

Ouray NFH-GVU was established in 1992 as CRFP's endangered fish propagation center and currently produces over 20,000 endangered Bonytail and Razorback Sucker annually.

The Grand Junction Fish and Wildlife Conservation Office works in the Colorado, Gunnison, San Juan and Yampa rivers in Colorado, Utah and New Mexico, as well as in Lake Powell in Utah.

Ouray National Fish Hatchery - Grand Valley Unit

Current fish on station:

Horsethief Canyon Native Fish Facility

Razorback Sucker 4,800 (325mm-425mm)
Bonytail 5,000 (90mm-140mm)

24 Road Hatchery

Razorback Sucker 13,000 (100mm-140mm)
Razorback Sucker 3,200 (60mm-80mm)
Bonytail 9,000 (110mm-140mm)