

UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

FY 2023 ANNUAL REPORT

PROJECT: 29a

Project Title

Propagation Facilities in the Grand Valley (Ouray National Fish Hatchery - Grand Valley Unit) for Captive Rearing of Endangered Fishes for the Upper Colorado River Basin.

Bureau of Reclamation Agreement Number:

R20PG00024

Project/Grant Period:

Start date: 10/01/2021

End date: 09/30/2024

Reporting period end date: 09/30/2023

Is this the final report? Yes No

Principal Investigator:

Brian Scheer, Deputy Project Leader

Dale Ryden, Project Leader

Additional Investigators:

Michael Gross, Biological Science Technician

Haden VanWinkle, Biological Science Technician

Aaron Mathews, Biological Science Technician

Ouray National Fish Hatchery - Grand Valley Unit

1149 24 Road

Grand Junction, Colorado 81505

Phone: (970) 245-9236

Fax: (970) 628-7217

Email: brian_scheer@fws.gov, dale_ryden@fws.gov, michael_gross@fws.gov, haden_vanwinkle@fws.gov, aaron_mathews@fws.gov

Abstract:

Ouray National Fish Hatchery - Grand Valley Unit (Ouray NFH-GVU) consists of several facilities near Grand Junction, CO. These facilities include the Horsethief Canyon Native Fish Facility (HCNFF), the 24 Road Hatchery building, and three other “lease-free” grow-out ponds (CDOT Pond, Beswick’s Pond, and Butch Craig Pond).

Ouray NFH-GVU produces and rears razorback sucker for stocking into the Colorado and Gunnison rivers. In addition, Ouray NFH-GVU rears bonytail obtained as larvae from the USFWS’s Southwest Native Aquatic Resources and Recovery Center (SNARRC) in Dexter, NM, for stocking into the Colorado River. All stockings of these two endangered fishes are in accordance with the approved Integrated Stocking Plan (ISP; Integrated Stocking Plan Revision Committee 2015, <https://coloradoriverrecovery.org/uc/science/technical-reports/propagation-stocking/>).

Study Schedule:

1996-Ongoing

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Relationship to RIPRAP:

General Recovery Program Support Action Plan: 2023 RIPRAP

IV. Manage genetic integrity and augment or restore populations (stocking endangered fishes)

IV.A. Genetics Management

IV.A.2. Develop and implement Genetics Management Plan for all species and update as Needed. Czapla 1999

IV.A.4. Secure and manage the following species in hatcheries (according to the Genetics Management Plan)

IV.A.4.a. Razorback sucker

IV.A.4.a.(2) Upper Colorado River

IV.A.4.b. Bonytail

IV.B. Conduct annual fish propagation activities

IV.B.2. Implement revised integrated stocking plan (Integrated Stocking Plan Revision Committee 2015); supersedes all earlier stocking plans, including species-specific and individual basin plans.

IV.C. Operate and maintain facilities

IV.C.2. Ouray NFH: Grand Valley Unit

Accomplishment of FY 2023 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Facility Inspections

Ouray NFH-GVU routinely participates in annual inspections to ensure our facilities, as well as the fish we grow, are free from problematic diseases and Aquatic Invasive Species (AIS). On 10 April 2023, personnel from USFWS's Bozeman Fish Health Center (Bozeman FHC) travelled to Ouray NFH-GVU and collected samples for bacteriology and virology. Bacteriology and virology tests were negative for any problematic/reportable fish health diseases. However, adult Asian tapeworm(s), a non-reportable pathogen, were observed in one of the bonytail chub sampled.

For the past couple of years, our annual Aquatic Invasive Species (AIS) inspection (normally conducted by personnel from Hotchkiss NFH) was cancelled due to COVID restrictions. Due to time constraints and lack of personnel, our annual AIS inspections and collection of veligers for this year were again allowed to be self-inspected/collected. On 15 August 2023, Ouray NFH-GVU personnel gathered the appropriate water and plankton samples and sent them to the Montana Fish, Wildlife & Parks in Helena, MT to be tested for the presence or absence of zebra and/or quagga mussel veligers. A walk-through, hands-on, visual inspection of both our hatchery building and ponds was also conducted by Ouray NFH-GVU personnel. The results of the walk-through inspection were negative for any problematic or reportable AIS (i.e., zebra mussels, quagga mussels, or Asian clams). The water and plankton samples were processed by Montana Fish, Wildlife & Parks and on 28 August 2023, our facility was declared negative for the presence of mussel veligers.

Health Condition Profile (HCP) necropsies were performed for both bonytail and razorback sucker (20 fish per species) on 22 August (for bonytail) and 14 September (for razorback sucker) 2023 by Ouray NFH-GVU staff. All metrics were within normally observed ranges. Results were submitted to the recovery program propagation coordinator on 17 September 2023.

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Education and Public Outreach Activities

Though the activity is unfunded, Ouray NFH-GVU staff annually provide a wide variety of public education and outreach opportunities. These activities are geared toward informing the general public about endangered fish recovery issues and trying to build an advocacy base for endangered fish recovery among the local population. Outreach efforts reach several thousand people each year, ranging from elementary school through college age students, families, Cub Scout troops, professional NGO (e.g., Nature Conservancy), government agency personnel, etc. They include providing tours of the 24 Road Hatchery building, partnering with Colorado Parks and Wildlife (CPW) to provide endangered razorback sucker for their Aquarium in the Classroom Program (which allows local elementary school students to raise endangered fish in their classroom, then tag and stock them into the river at the end of the school year), attending local water festivals, providing fish for outreach events, such as Outdoor Heritage Day, Palisade Peach Festival, Home and Garden shows, Farmer's Markets, etc. Ouray NFH-GVU staff also participate in outreach via local newspaper, television, and radio interviews. In addition, our staff annually either performs endangered fish related lectures at or provides panel members for symposiums at Colorado Mesa University.

These education and outreach activities increased in FY 2023, from the previous decline during the height of the COVID epidemic allowing Ouray NFH-GVU staff to participate in numerous successful outreach events. These included:

- Participating in four community parades- Palisade High School Homecoming Parade 7 October 2022, Palisade Old Fashioned Christmas Parade of Lights 2 December 2022, Grand Junction Parade of lights 3 December 2022 and Palisade Homecoming Parade 9 September 2023, where thousands of pieces of I & E material, representing both the Recovery Program and USFWS, were distributed to the community
- Presenting and providing razorback sucker and bonytail for the Ute Water Children's Water Festival in Grand Junction, Colorado, 13-14 May 2023 and the Yampa Youth Water Festival in Hayden, Colorado, 28 September 2023
- Providing fish for permanent endangered fish exhibits at Eureka McConnel Science Center at Colorado Mesa University and the Persigo Wash Wastewater Treatment Plant in Fruita, Colorado
- Presenting at 20 January 2023 Palisade High School Career Day, 17 April 2023 Colorado Mesa University Fisheries Management Course and 26 October 2023 River Recreation Milestones Course at Colorado Mesa University
- Providing a total of 11 tours and lectures of the 24 Road Hatchery facility and local fish passages to various Grand Valley schools
- Instructing and providing input at numerous official USFWS trainings, summits and workshops in FY 2023: 15-19 November 2022 Visitor Services and Outreach Workshop at NCTC, 7-8 March 2023 Mesa Conservation District Water Resilient Agriculture Workshop in Grand Junction, 17-20 July 2023 Motorboat Operators Certification Course (MOCC), and Engaging Communities in Conservation Summit at NCTC 28-31 August 2023.

During FY 2023, Ouray NFH-GVU staff continued to partner with and support the Palisade High School (PHS) Fish Hatchery. The 2023-2024 school year is the fourth year in operation for the student led on-campus fish hatchery. From September 2022 through May 2023, PHS staff and students reared their

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third batch of 215 razorback sucker that had been transferred from Ouray NFH-GVU to the PHS Fish Hatchery on 29 August 2022. Ouray NFH-GVU staff helped PHS students spawn their next batch of razorback sucker 26 April 2023 helping create an incredible sense of ownership for staff and students. Ouray NFH-GVU also gave aquaculture lessons in hatchery O&M, water quality, fish handling, feeding, sample counting, and PIT-tagging, applying for and administering Investigational New Animal Drug (INAD) treatments (to use non-MS-222 based fish tranquilizers), performing fish health inspections, harvesting, transporting, tempering, and stocking fish into the wild. In May 2023, 215 razorback sucker (mean TL = 174 mm) were stocked back into the Colorado River near Palisade High School, while a crowd of over 300 attendees including numerous political representatives looked on. The stocking generated numerous television reports, and newspaper and internet blog articles. On 15 September 2023, a new batch of 250 juvenile razorback sucker were delivered to the Palisade High School Fish Hatchery for the 2023-2024 school year.

At the end of the 2023-2024 school year PHS students will have cultured nearly 1000 endangered razorback sucker and released them into the Colorado River near the High School. Since the partnership began in 2015, eight "year classes" of students who have participated in the planning of and/or culturing of fish at the PHS Fish Hatchery have graduated. A number of these students are currently eagerly pursuing college degrees and careers in conservation around the country. The partnership has reinforced a new level of trust between the local Grand Valley community and USFWS and has instilled a feeling of ownership from local businesses and residents with regards to fish recovery efforts in the Colorado River. This on-campus partnership concept has recently expanded to include Uintah High School in Vernal, Utah (in partnership with Ouray NFH-Randlett and the Upper Colorado Endangered Fish Recovery Program) where students will culture razorback sucker to be released into the Green River.

Hatchery Maintenance Activities

In FY 2023, Ouray NFH-GVU staff performed several repairs of broken water lines, water control valves, air distribution lines at the HCNFF ponds. Ouray NFH-GVU staff also repaired the septic system at the 24 Road Hatchery.

Several large-scale projects are still ongoing at the Ouray NFH-GVU, including:

1. There has been some subsidence under the north side floor of the 24 Road hatchery building (i.e., Hatchery # 2). The Ouray NFH-GVU personnel are in the process of finding a new contractor(s) to provide current bids to have the voided space under the floor filled and supported with an expanding foam. This project is currently ongoing, with repairs anticipated to be completed in FY 2024 using annual funds. Getting a contractor registered in the federal system has been challenging.
2. The water valve operators that were originally installed on the HCNFF ponds were not the proper model (i.e., they were not engineered to be buried and then exposed to ground water moisture). As a result, we have been replacing these valve operators with a different model (that can be buried and then exposed to ground moisture) as they have been breaking, which is happening with increasing frequency each year (this year USFWS personnel replaced four).

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However, each time a water valve operator ceases to function, it costs a delay of days to weeks to dig it up and repair it, plus the cost associated with the part, backhoe, labor etc.

3. Since 2013, there has been a considerable build-up of iron in the pipes leading from the underground infiltration gallery to the HCNFF grow-out ponds. This has restricted the ability to deliver water to the HCNFF ponds. Currently USFWS personnel is working with USBR to have these lines jetted as USBR has their own jetting equipment. This work is scheduled to take place in November FY 2024.
4. The HVAC/Dehumidifier units at the 24 Road Hatchery have been in operation since 2010 and are needing to be replaced. Through FY 2023 scope of work BIL funding was obtained to fund the replacement of HVAC/Dehumidifier systems for 24 Road Hatchery. This project is currently ongoing, updated bids are being obtained, and repairs are anticipated to be completed in FY 2024.
5. Current pond liners (manufactured by Firestone and installed in 2012) are delaminating, due to sun exposure and product defects. Ouray NFH-GVU is currently working with USBR, H&H Lining, and Colorado Lining International to come up with a cost estimate and reasonable timeline for replacing or mending the delaminated pond liner as well as to check with Firestone to see what kind of warranty they can give us for the original product (original liners were installed in 2012 and had a prorated warranty on materials only, for 20 years).

Future projects that are imperative or would be beneficial to Ouray NFH-GVU include:

1. All circular rearing tanks at the 24 Road RAS are 23 to 28 years old and are needing to be replaced and updated with new modern tanks. Many tanks are starting to crack and leak. This includes 75 – 4’ diameter and 14 – 8’ diameter tanks. The replacement of tanks would potentially allow for customization for rearing of future species of concern.
2. The current lighting system at the 24 Road RAS needs to be replaced or retrofitted with a lightning system (Once Lighting Solutions) that mimics the natural photoperiod. Currently our lights are manually turned on each morning and are programmed to stay on for 12 hours. When the lights are turned on and off, it is immediate with no transition from dark to light or light to dark. The new system would allow lights to auto dim on and off and significantly reduce the stress response to fish when lights are just turned on and off.
3. The current filtration systems at the 24 Road RAS have been in operation for 22+ years. Specifically the bead filter in hatchery 1 and both U.V. Filters need to be updated to new more efficient systems. The U.V. Filters are critical for biosecurity and pathogen isolation and management. Also, the addition of foam fractionators or radial flow separators would be beneficial to the overall water quality, fish health and management of the RAS.
4. At the HCNFF (Snook’s Ponds) it is imperative that an isolated system is developed for treatment of fish, specifically praziquantel treatments for Asian Tapeworm. This could include the addition of a large circular tank or raceway that is separate from the ponds.

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2023 Rearing Summary

Razorback sucker: In March 2023, approximately 10,432 age-1 razorback sucker were being held indoors at the 24 Road Hatchery building. These fish represented young from 15 different paired matings of brood stock performed in April 2022. From early April to mid-May 2023 approximately 6,680 of these age-1 razorback sucker were stocked into the grow-out ponds at HCNFF. Ponds were stocked with a mixture of fish from 15 different family lots. Equal numbers from each represented family lot were stocked into a total of eight ponds. These fish were all PIT tagged in the 24 Road Hatchery building several weeks prior to being stocked into grow-out ponds. The remaining age-1 razorback sucker (approximately 3,752 fish) continued to be held at the 24 Road Hatchery building until bonytail were harvested from four ponds at HCNFF (in mid-July through August 2023). Those four ponds were then available to be stocked with the razorback sucker remaining at 24 Road Hatchery.

Spawning, rearing, tagging, harvest, and stocking procedures used for razorback sucker in FY-2023 followed standard protocols used in previous years for this project. No significant deviations from these protocols/processes occurred in FY-2023. While razorback sucker are in the hatchery, they are reared in circular tanks where a constant current exists. As water enters the circular tank from above, on the outside perimeter of the tank, it circulates around the tank, and exits via vertical slots in a standpipe, in the bottom center of the tank. This has always been standard protocol and is necessary to help circulate/oxygenate the water, distribute food throughout the tank, and flush/eliminate waste products. Over the years, it has been argued within the Biology Committee, whether this constant water flow within circular tanks constitutes flow training or not. However, no specific “flow training” experiments were done outside of this normal operating procedure. When razorback sucker are in the larger grow-out ponds, a small amount of current still exists, due to wind, water flowing into and out of the pond, etc., but the current in grow-out ponds is less than what these fish experience in hatchery tanks. For razorback sucker, there were no feed changes, predator exposure experiments, etc. in FY-2023.

Despite staffing shortage in April 2023, Ouray NFH-GVU staff were once again able to successfully spawn razorback sucker broodstock held at HCNFF. Students from Palisade High School assisted with spawning operations in addition to spawning their own family lot contributing to the overall success of FY 2023 razorback spawn. The eggs produced from this spawning effort were transferred to the 24 Road Hatchery building. In 2023, approximately 60% of all razorback sucker eggs successfully hatched into fry. The hatchery is currently holding 10,675 2023 year-class razorback sucker for UCREFRP 2024 production purposes.

In FY-2023, we had a 91% average return rate for FY-2022 razorback sucker, for all fish stocked from the hatchery into grow-out ponds versus the number that were harvested and stocked into the river. Any “excess” age-0 razorback sucker (i.e., fish above and beyond numbers required to meet Recovery Program annual stocking goals) culled from family lots as fish grew in the hatchery were stocked into our “lease-free” grow-out ponds for later opportunistic harvest and stocking.

Our three “lease-free” grow-out ponds (CDOT, Beswick’s, and Butch Craig ponds) will continue to be used as necessary in future years to provide redundancy and as we continue to evaluate management options to improve the survival and growth of razorback sucker for augmentation.

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In October of FY 2023, Ouray NFH-GVU stocked 12,000 excess 2023 young-of-year razorback sucker averaging 40-70 mm TL into CDOT pond.

Bonytail: In spring 2022 approximately 15,000 larval bonytail (YC 2022 for stocking in 2023) were received from SNARRC. These fish were stocked into one, ½-acre grow-out pond at HCNFF. In October 2022 these bonytail were harvested from HCNFF and brought into the 24 Road Hatchery to overwinter. In early to mid-April 2023 these bonytail were transferred to HCNFF to maximize growth until being stocked in summer 2023. These fish were all PIT tagged in the 24 Road Hatchery building, several months prior to being stocked into the grow-out ponds.

In spring 2023 approximately 15,000 larval bonytail (YC 2023 for stocking in 2024) were received from SNARRC. These fish were stocked into one, ½-acre pond at HCNFF. In October 2023 11,893 bonytail were harvested from HCNFF and brought into the 24 Road Hatchery to be grown overwinter. In spring 2024 the 11,893 bonytail in the 24 Road Hatchery will be stocked back into grow-out ponds at HCNFF, where they will be reared until being stocked in summer 2024 at various locations in the Colorado River.

Rearing, tagging, harvest, and stocking procedures used for bonytail in FY-2023 followed standard protocols used in previous years for this project. At the 24 Road hatchery no significant deviations from these protocols/processes occurred in FY-2023. While bonytail are in the hatchery, they are reared in circular tanks where a constant current exists. As water enters the circular tank from above, on the outside perimeter of the tank, it circulates around the tank, and exits via vertical slots in a standpipe, in the bottom center of the tank. This has always been standard protocol and is necessary to help circulate/oxygenate the water, distribute food throughout the tank, and flush/eliminate waste products. Over the years, it has been argued within the Biology Committee, whether this constant water flow within circular tanks constitutes flow training or not. However, no specific “flow training” experiments were done outside of this normal operating procedure. When bonytail are in the larger grow-out ponds, a small amount of current still exists, due to wind, water flowing into and out of the pond, etc., but the current in grow-out ponds is less than what these fish experience in hatchery tanks. For bonytail, there were no feed changes, predator exposure experiments, etc. However, harvest and stocking standard procedures were changed due to the detection of Asian tapeworm (ATW), a non-reportable pathogen. These changes were implemented to include treating the bonytail with praziquantel using Utah Department of Agriculture and Food (UDAF) guidelines to accommodate pre stocking eradication of ATW required by Colorado Parks and Wildlife in FY2023.

We typically observe < 10% loss of larval bonytail to stockable age-1 fish, with the greatest losses typically occurring immediately after larval fish are received via FedEx from SNARRC and after stocking into grow-out ponds due to avian predation. Any “excess” bonytail culled from family lots as fish grew were disposed of.

2023 Stocking Summary

Razorback sucker: A total of 7,441 razorback sucker (124.01% of the target stocking number {n = 6,000}) were stocked into the Colorado and Gunnison rivers in 2023. Of these, 6,440 were from the HCNFF grow-out ponds. The other 1,001 were from Palisade High School (PHS), gravel pit ponds, oldest year class (retired fish ≥ 5 years of age) razorback sucker broodstock and Yampa River Water Festival. Palisade High School received 215 razorback sucker for production in their facility. Those 215

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fish were stocked into the river by PHS staff and students at the Riverbend Park boat launch in May 2023. An additional 773 razorback sucker were harvested from gravel pit ponds and old retired broodstock. These fish were stocked into the Colorado River downstream of the 15 Mile Reach. All other razorback sucker stocked in 2023 were stocked either far upstream of Grand Junction, CO (i.e., in Rifle, CO) or downstream of the 15 Mile Reach. The remaining 13 fish from the Yampa River Water Festival were stocked into the Yampa River. Excessively low in-river flows in the 15 Mile Reach throughout the latter portion of the 2023 water year (i.e., after June) made stocking razorback sucker in the 15 Mile Reach in 2023 unsuitable. Likewise, the few off-channel, wetland type habitats that are located in the Grand Valley outside of the 15 Mile Reach were unavailable for stocking, due to low water levels in the mainstem river. After transport to the river and an appropriate tempering/water exchange period (minimum of 1-2 hours, to acclimate fish to riverine water chemistry and temperatures), all razorback sucker were stocked into low velocity main channel habitats, during daylight hours. Stocking locations were the same as those used for razorback sucker the last several years. The mean TL for the 6,440 razorback sucker stocked from HCNFF in 2023 was 386 mm. The mean TL for the 215 razorback sucker stocked from Palisade High School Fish hatchery in 2023 was 174 mm. The mean TL for the 659 gravel pit pond fish was 385 mm. The mean TL for the oldest year class of broodstock was 499mm. The mean TL data for fish stocked in the Yampa River was not recorded. Numbers and sizes of fish stocked in each location in 2023 can be found in Table 1. Weights were taken for approximately 10% of stocked fish.

Bonytail: A total of 10,580 bonytail (105.80% of the target stocking number {n = 10,000}) were stocked into the Colorado River in 2023. Most were from the HCNFF grow-out ponds with a small number coming from CDOT/Beswick ponds and Yampa River water festival (See Gravel-pit ponds/ Yampa River in chart below). The mean TL for all bonytail stocked in 2023 from HCNFF was 255 mm. The mean TL for all bonytail stocked from gravel pit ponds in 2023 was 277mm. The mean TL for bonytail stocked in the Yampa River was not reported. The mean TL exceeded the target mean stocking size identified in the ISP (≥ 250 mm TL). In Fall 2022 (i.e., the beginning of FY 2023) prior to bringing bonytail into the 24 Road Hatchery, the bonytail were graded at HCNFF which resulted in two different size groups of fish (“Tops” and “Bottoms”). The goal of grading was to eliminate feeding competition in the rearing tanks at the 24 Road Hatchery and to produce more consistent size (i.e., Total Length) groups for stocking into the grow-out ponds at HCNFF in spring of 2023. Numbers of fish stocked in each location in FY 2023 can be found in Table 2. Weights were taken for approximately 10% of stocked fish.

Like most razorback sucker, bonytail were stocked after precipitous in-river drops in flow that occurred in 2023. The length of our “normal” stocking timeline was also significantly increased due to the amount of time it took to administer praziquantel treatments for Asian Tapeworm. Thus, stockings were made in areas that would avoid the 15 Mile Reach, which had become unsuitable for stocking fish by the end of August 2023. Likewise, the few off-channel, wetland type habitats that are located in the Grand Valley outside of the 15 Mile Reach were unavailable for stocking, due to low water levels in the mainstem river. After transport to the river and an appropriate tempering/water exchange period (minimum of 1-2 hours, to acclimate fish to riverine water chemistry and temperatures), all bonytail were stocked into low velocity main channel habitats, during daylight hours. Stocking locations were the same as those used for razorback sucker the last several years.

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Shortcomings

Due to the addition of having to treat all bonytail for Asian tapeworm, significant changes to our stocking protocols were implemented. In previous years, harvest and stocking of bonytail began in mid-July and was completed within a 2-week time frame. This allowed time for maintenance projects during the month of August. To be able to successfully treat all bonytail with praziquantel, individual pond treatments were set up and administered in each pond kettle. Due to high ambient temperatures and duration of treatment, one pond of bonytail were treated per week. There were 8 ponds of bonytail resulting in treatments taking 8 weeks (6 weeks longer than previous years) to complete through our August maintenance period. This totaled 192 hours of treatment time that required one staff member to be on-site for two 12-hour periods of treatment. Although the treatments were a success, the process was less than ideal, difficult to sustain and required a tremendous amount of overtime by staff. Evening/nighttime stocking of bonytail did not occur because of the lengthy duration of administering praziquantel treatments.

Additional noteworthy observations:

None

Questions and ideas:

Recommendations

1. Continue management and operation of Ouray NFH – GVU facilities to serve as a primary refuge facility for razorback sucker and bonytail.
2. Continue production, grow-out, and stocking of razorback sucker and bonytail (and other native, endangered fish species as appropriate) to meet stocking goals set forth in approved stocking plans by the UCREFRP.
3. Address as many of the maintenance-related issues and future projects (identified above) as possible in FY 2024. Some of these maintenance-related activities may require financial and/or engineering assistance from the UCREFRP and/or BOR to accomplish.
4. Continue to work with the UCREFRP to determine if more ponds need to be constructed (or current ponds re-purposed) at HCNFF to prepare to take Colorado pikeminnow on station in upcoming years.
5. Work with Ocean Design to address new rearing tank, filtration and lighting needs at the 24 Road RAS.
6. Contribute to development of experimental bonytail rearing and stocking protocols to include treatment facilities and SOPs.

Project Status:

Project is on track and ongoing.

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FY2023 Budget Status

Funds Provided: \$567,658

Funds Expended: \$567,658

Difference: -0-

Percent of the FY 2022 work completed, and projected costs to complete: 100%

Recovery Program funds spent for publication charges: -0-

Status of Data Submission

All PIT tag data was submitted to the UCREFRP database manager and STReaMS database system in October 2023 for Project 29a

Signed:

Brian Scheer

Dale Ryden

Michael Gross

Haden VanWinkle

Aaron Mathews

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Table 1. Locations, dates, and numbers of razorback suckers stocked into the Upper Colorado River Basin by Ouray National Fish Hatchery – Grand Valley Unit in 2022. Production fish from Palisade H.S. and HCNFF were year class 2022. Old broodstock were year class 2017 and fish from Beswick and CDOT ponds were a mixed age class of fish. CO = Colorado River, GU = Gunnison River, YA = Yampa River.

River	Stocking Location	River Mile	Number Stocked	TL Range (in mm)	Stocking Date	Source
CO	Colorado River State Park: Fruita, CO	157.1	114	403-560	25-Apr	Old broodstock from HCNFF
CO	Riverbend Park: Palisade, CO	183.6	215	80-300	9-May	Palisade H.S.
CO	Rifle Boat Ramp: Rifle, CO	240.7	804	333-437	5-Sep	HCNFF
CO	Redlands Parkway Boat Ramp: Grand Jct., CO	166.7	812	324-444	6-Sep	HCNFF
CO	Rifle Boat Ramp: Rifle, CO	240.7	823	318-463	7-Sep	HCNFF
CO	Colorado River State Park: Fruita, CO	157.1	809	334-443	12-Sep	HCNFF
CO	Redlands Parkway Boat Ramp: Grand Jct., CO	166.7	812	332-438	13-Sep	HCNFF
CO	Colorado River State Park: Fruita, CO	157.1	794	356-450	14-Sep	HCNFF
GU	Confluence Park: Delta, CO	57.1	780	340-431	15-Sep	HCNFF
GU	Confluence Park: Delta, CO	57.1	806	313-418	19-Sep	HCNFF
CO	CO River adjacent to Beswick Pond: Grand Jct., CO	174.9	540	254-540	17 April - 25 Oct	Beswick Pond
CO	CO River adjacent to CDOT Pond: Grand Jct., CO	205.6	119	263-537	1 June - 28 Sep	CDOT Pond
YA	Hayden, CO	80	13	NA	27-Sep	HCNFF

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Table 2. Locations, dates, and numbers of bonytail stocked into the Upper Colorado River Basin by Ouray National Fish Hatchery – Grand Valley Unit in 2023. Production fish from HCNFF were year class 2022. Fish from Beswick and CDOT ponds were a mixed age class of fish. CO = Colorado River. YA = Yampa River

River	Stocking Location	River Mile	Number Stocked	TL Range (in mm)	Stocking Date	Source & Stocking Period
CO	CO River adjacent to Beswick Pond: Grand Jct., CO	174.9	9	229-282	21 Mar - 24 Aug	Beswick Pond Daytime Stocking
CO	CO River adjacent to CDOT Pond: Grand Jct., CO	205.6	4	252-363	1 June – 19 July	CDOT POND Daytime Stocking
YA	Yampa River State Park: Hayden, CO	158.2	2	NA	27 Sep	HCNFF Daytime Stocking
CO	Redlands Parkway Boat Ramp: Grand Jct., CO	166.7	1,203	135-304	9 Jul	HCNFF Daytime Stocking
CO	Colorado River State Park: Fruita, CO	157.1	1,125	156-331	16 Jul	HCNFF Daytime Stocking
CO	Redlands Parkway Boat Ramp: Grand Jct., CO	166.7	1,183	156-304	23 Jul	HCNFF Daytime Stocking
CO	Rifle Boat Ramp: Rifle, CO	240.7	1,200	138-348	29 Jul	HCNFF Daytime Stocking
CO	Colorado River State Park: Fruita, CO	157.1	1,215	164-320	6 Aug	HCNFF Daytime Stocking
CO	Redlands Parkway Boat Ramp: Grand Jct., CO	166.7	1,200	150-328	13 Aug	HCNFF Daytime Stocking
CO	Colorado River State Park: Fruita, CO	157.1	1,773	202-371	17 Aug	HCNFF Daytime Stocking
CO	Rifle Boat Ramp: Rifle, CO	240.7	1,666	190-399	27 Aug	HCNFF Daytime Stocking