

**Rearing Endangered Fish at the
Horsethief Canyon Native Fish Facility Ponds for
Stocking into the San Juan River
Draft Fiscal Year FY-2017 Project Proposal
31 March 2016**

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**Operation & Maintenance of the
Horsethief Canyon Native Fish Facility Ponds
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The Ouray National Fish Hatchery – Grand Valley Unit (NFH-GVU) consists of several distinct facilities located in and around Grand Junction, CO. One of these facilities is the Horsethief Canyon Native Fish Facility (HCNFF) pond complex (about 7½ miles west of the main hatchery building) near Fruita, CO.

The HCNFF consists of 22 ponds, ranging in size from 0.1 to 0.5 surface acres, with a total surface acreage for the entire facility of 6.2 acres. Each pond is 5-6 feet deep and is equipped with a fabric liner to prevent seepage. Each pond also has a concrete kettle and drain structure to facilitate draining and concentrating of fish for ease of harvest. This facility is a multi-species broodstock, production, and rearing facility dedicated to rearing the three endangered Colorado River fishes: Razorback Sucker, Humpback Chub, and Bonytail.

Until 2012, the operation and maintenance (O&M) of the entire Ouray NFH-GVU complex (Project 29a: Operation and Maintenance of Ouray National Fish Hatchery – Grand Valley Unit) was funded by Upper Colorado River Endangered Fish Recovery Program (UCREFRP). On 25 March 2010, the Coordination Committee of the San Juan River Basin Recovery Implementation Program (SJRBRIP) voted to cost-share 1/6 of the operation and maintenance costs for the HCNFF pond complex. This equates to a total of one surface acre of pond rearing and production space.

Currently, the one surface acre of grow-out ponds allotted to the SJRBRIP is being used to rear Razorback Sucker that are progeny of paired matings of appropriate genetic lineage, produced annually from Razorback Sucker broodstock being held at Ouray NFH-GVU. After spawning, fertilized eggs are reared in flow-through egg jars at HCNFF. As these fish approach 200 mm TL, they are stocked back out into grow-out ponds at HCNFF to be reared until they reach their target stocking size (≥ 300 mm TL). It is anticipated that 2,000-4,000 Razorback Sucker (≥ 300 mm TL) can be reared in the one surface acre of ponds allotted to the SJRBRIP. Razorback Sucker of the appropriate target stocking size will be made available to the SJRBRIP in October of each calendar year for stocking (after the annual fall fish community monitoring studies are completed).

The SJRBRIP will have the option to change the management approach and species being reared in their ponds as they see fit, but will need to coordinate such changes with Ouray NFH-GVU hatchery staff, allowing enough lead time to prepare for changes in importation/exportation permitting, purchasing of feed proper for the species being reared, etc. Changes in numbers or sizes of fish desired, species being reared, etc. may lead to adjustments in future years' budgets. For instance, if the SJRBRIP decides to rear Colorado Pikeminnow (a species not currently being held on station at Ouray NFH-GVU), appropriate lead time will be needed to arrange attaining young fish from another facility.

Cost Share with Upper Colorado River Endangered Fish Recovery Program

As stated earlier, the SJRBRIP's Coordination Committee voted to cost-share 1/6 of the O&M costs for the HCNFF pond complex. However, the O&M of the HCNFF ponds is in reality part of a much larger picture of the overall O&M of the Ouray NFH-GVU itself. So, the following staffing breakdowns were used to determine the overall O&M of the entire Ouray NFH-GVU:

- 1) 24-Road Hatchery building will require 100% staffing for 6 months of the year
- 2) 24-Road Hatchery building will require 50% staffing for the other 6 months of the year
- 3) Peter's ponds complex, Horsethief SWA ponds & lease-free grow-out ponds will require 10 % staffing for 6 months of the year
- 4) The HCNFF ponds will require 40% staffing for 6 months of the year
 - a. One-sixth of the O&M of the HCNFF ponds will be paid for by the SJRBRIP

Possible Outyear Cost Adjustments

If the SJRBRIP decides to change stocking strategies (species, sizes, times of year at which fish are being stocked, etc.) outyear budgets may need to be adjusted to account for this. The costs presented in this workplan represent the best estimates we can develop, based on the species, numbers, and timing of fish to be stocked from our facility to the San Juan River.

FY-2017 Budget:

(Based on projected FY-2017 costs)

Costs Shared by UCREFRP and SJRBRIP (i.e. O&M Costs)

Personnel/Labor Costs (Federal Salary + Benefits)

	UCREFRP Project 29a	SJRBRIP Cost
Principal Biologists (GS-11) – 1,960 hours @ \$54.63/hr X 2 people (130 total hours covered by SJRBRIP or 65 hr/person)	214,150	7,153
Biological Technician (GS-7) – 1,960 hours @ \$34.71/hr (65 total hours covered by SJRBRIP)	68,032	2,272
Biological Technicians (GS-5) – 600 hours @ \$25.70/hr X 2 people (40 total hours covered by SJRBRIP or 20 hr/person)	30,840	1,030
Overtime:		
Biological Technician (GS-7) – 120 hours overtime @ \$52.07/hr (4 total hours of overtime hours covered by SJRBRIP)	6,248	209
Biological Technician (GS-5) – 40 hours @ \$38.55/hr X 2 people (2.7 total hours covered by SJRBRIP or 1.35 hr/person)	3,084	103
Subtotal	322,354	10,767

Permitting; Coordination; Data Input, Analysis, Management & Presentation; Report Writing; Office & Administrative Support (Federal Salary + Benefits)

Project Leader (GS-14) – 320 hours @ \$85.92/hr (10.7 total hours covered by SJRBRIP)	27,494	918
Administrative Officer (GS-9) – 320 hours @ \$46.06/hr (10.7 total hours covered by SJRBRIP)	14,739	492
Subtotal	42,233	1,410

In-Kind Services

Bozeman Fish Technology Center		
Grind and sift fish food for larval Razorback Suckers	<\$2,814>	<94>

Operations (Fish Food, Chemicals and Fertilizer, Hatchery Supplies, Vehicles and Fuel, Electricity)

Fish Food (from Skretting USA)

Actual costs = 4 orders of fish food per year (1 order per fiscal quarter) at \$18,350 each = \$73,400. The line items below represent one of our four orders (placed April 2016). This fish food order will last us 90 days. We have several different sizes of fish on station, thus the different sizes of food in each order.

Trout # 1 Crumble: 1,000 lbs @ \$1.18 per lb = \$1,180		
Trout # 2 Crumble: 1,000 lbs @ \$1.17 per lb = \$1,170		
1.0 mm RZ Grower 2,000 lbs @ \$1.00 per lb = \$2,000		
2.0 mm RZ Grower 4,000 lbs @ \$1.00 per lb = \$4,000		
3.0 mm RZ Grower 8,000 lbs @ \$1.00 per lb = \$8,000		
4.0 mm RZ Grower 2,000 lbs @ \$1.00 per lb = \$2,000		
Fish Food Subtotal	73,400	2,452

Chemicals and Fertilizer

Exact use of the money in this line item will vary from year to year depending on specific chemical/fertilizer/herbicide needs in a particular year. It will also depend on if there are outbreaks of pathogens that need to be treated (e.g., "Ich") in a given year. Funds for a "typical" field season for one study would likely include the following:

Sodium Bicarbonate (pH increaser) = \$5,600

Eighty 50-lb bags @ \$70 per bag annually

Copper Sulfate = \$4,825

Ten 50-lb bags (pellets) @ \$95 each = \$950

50 gallons 10% solution @ \$77.50/gallon
= \$3,875

Spartan Sparquat 256 Germicidal Cleaner = \$300

10 gallons @ \$30 per gallon

Chloram-X (dechloriator) = \$1,440

Sixteen 10 lb buckets (4/case, 4 cases/year)
@ \$90/bucket

Finquel brand MS-222 anesthetic = \$900

Two 1 kg bottles @ \$450/bottle

Chloramine-T = \$880

Two 55-lb containers @ \$440 per container

Formalin (10% fixative) = \$2,100

Four 55-gallon drums @ \$275 each

Specialized Haz-Mat shipping @ \$1,000

Denatured ethyl alcohol = \$760

Eight 5-gallon jugs @ \$95 per jug

Distilled water = \$300

Ten 2-gallon jugs @ \$30 per jug

Stress Coat (slime coat replacement) = \$290

Two 5-gallon containers @ \$145 each

No-Foam De-Foamer = \$210

6 gallons @ \$35/gallon

Weed killer (2,4-D and Roundup) = \$3,200

2,4-D 40 quarts of concentrate @ \$35 each

Roundup 10 gallons concentrate @ \$180 each

Aquashade (water colorant) = \$3,000

50 gallons @ \$60 per gallon

Dimilin 25W (for anchor worm control) = \$5,000

Twenty 5 lb boxes @ \$250 per 5 lb box

Chemicals and Fertilizer Subtotal	28,805	962
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Hatchery Supplies and Equipment Repair and Replacement

Exact use of the money in this line item will vary from year to year depending on specific equipment repair, replacement, or upgrade needs in a particular year. Funds for a "typical" field season for one study would likely include the following:

Egg hatching jars – Model J30 = \$455

5 @ \$85/each

24-hr belt feeder = \$2,700

Repair/replace 10 annually @ \$270 each

Waders = \$225

Replace 3 pair annually @ \$75 each

Duraframe dip nets = \$1,500		
Replace 5 annually @ \$300 each		
Digital scale repair, replace battery, recalibration = \$1,500		
(3 scales per year @ \$500 per service per scale)		
YSI brand water chemistry meters = \$2,000		
(dissolved oxygen, pH, salinity) – repair, replace, recalibrate annually		
HVAC service = \$1,200		
Done annually		
Service fish food cooler refrigeration unit = \$750		
Done annually		
Service the backup generator = \$700		
Done annually		
Pump & motor maintenance/service = \$5,700		
Labor & parts to rebuild:		
One portable water pump/year = \$1,700		
One hatchery motor/pump set/year = \$4,000		
Fluorescent hatchery lights = \$2,200		
Replace ½ of all hatchery lights annually		
Tank Cleaning Supplies = \$235		
Scotch-Brite pads, scrubbing handles		
Maintenance tool replacement = \$400		
Screwdrivers, crescent wrenches, monkey wrenches, vise grips, hammers, rubber mallets, ratchets & sockets, drills & drill bits, chop saw blades		
Plumbing supplies = \$2,000		
PVC pipe, couplers, primer & glue		
Refill compressed oxygen bottles = \$2,500		
50 per year @ \$50 each		
Air stones, tubing couplers, hose clamps = \$1,500		
0.4" air stones – 20 @ \$50 each = \$1,000		
Tubing, couplers, hose clamps = \$500		
Screens and pond boards = \$3,700		
10 screens @ \$300/screen		
PVC lumber for making screen frames		
Metal mesh for making screens		
Redwood pond boards		
100 boards (2" X 8" X 6') @ \$7 each = \$700		
Koch rings = \$500		
For aerating water in packed columns		
Sand = \$2,000		
For sand filters - 1 pallet = twenty 80 lb bags		
	Hatchery Supplies Subtotal	31,765
		1,061

Office Supplies

Staples, copier paper, pencils/pens, paperclips, note pads, cleaning supplies, toilet paper, paper towels, etc.

Office Supplies Subtotal 1,500 50

Vehicles (maintenance & repair) and fuel

Vehicles: GSA-lease rate (@ \$365/month lease = \$12.17 per

day based on 30 days in an "average" month + \$0.33/mile)

Hatchery pickup truck = \$9,803

24-Road Hatchery Building to Horsethief Canyon Native
Fish Facility ponds (45 mile round trip X 1 vehicle X
365 days per year = 16,425 total miles per year)

Fuel

Diesel fuel = \$350

For Kubota tractor – one 55-gallon drum of diesel @
\$250 (includes fuel, barrel & delivery)

For back-up generator at hatchery – 25 gallons @
\$4.00/gallon

Repair/replace shocks, struts, brakes = \$800

Vehicles and Fuel Subtotal	10,953	366
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Electricity = \$6,800

For pump and spawning shed at the Horsethief State
Wildlife Area brood ponds

8 months operation at \$850/month

Electricity Subtotal	<u>6,800</u>	<u>227</u>
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Operations Subtotal	153,223	5,118
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Subtotal for All Shared Costs	517,810	17,295
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Costs Unique to SJRBRIP (Harvest, PIT-Tagging & Stocking Costs)

Personnel/Labor Costs (Federal Salary + Benefits)

**SJRBRIP
Cost**

Pond Harvest, PIT-Tagging, Stocking and Database Management

Principal Biologist (GS-11) – 80 hours @ \$54.63/hr (2 days X 2 people/day for fish harvest) (6 days X 1 person/day for PIT-tagging)	4,370
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Biological Technician (GS-7) – 136 hours @ \$34.71/hr (2 days for fish harvest) (6 days for PIT-tagging) (5 days for database and records management) (2 stocking trips X 2 days each X 1 person)	4,721
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Biological Technician (GS-5) – 320 hours @ \$25.70/hr (2 days X 3 people/day for fish harvest) (6 days X 5 people/day for PIT-tagging) (2 stocking trips X 2 days each X 1 person)	8,224
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Subtotal	<u>17,315</u>
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Lodging and Per Diem (Based on Published FY-2016 GSA Per Diem Rates)

Lodging

2 nights lodging in Farmington, NM X 2 people at \$89.00/night =	356
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Per Diem

4 days hotel rate (Farmington, NM) X 2 people at \$51/day =	<u>408</u>
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Subtotal	764
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Fuel

Stocking truck (gets 8 miles per gallon) X 2 trips
from Grand Junction, CO to Farmington, NM (660
miles round trip) X 2 trips (= 1,320 total miles)

= 170 gallons of gas at \$4.00/gallon	678
Water pump for tempering fish	
= 20 gallons gas at \$4.00/gallon	<u>80</u>
Subtotal	758

Subtotal for Costs Unique to SJRBRIP 18,837

Total of All Costs Incurred by SJRBRIP:

USFWS-CRFP (Grand Junction, CO) Total	\$36,132
USFWS Region 6 Administrative Overhead (3.00%)	<u>\$ 1,084</u>
USFWS Region 6 Total	\$37,216

Cost/Fish Comparison:

Workplan total cost in FY-2017 = \$37,216

Estimated production in FY-2017 = 2,000-4,000 fish

For 2,000 Razorback Sucker produced, the cost/fish = \$18.61

For 3,000 Razorback Sucker produced, the cost/fish = \$12.41

For 4,000 Razorback Sucker produced, the cost/fish = \$ 9.30