

**COLORADO RIVER RECOVERY PROGRAM  
FY 2008 PROPOSED SCOPE-OF-WORK FOR:**

**Project No.: 154**

Nonnative fish control in the lower Green River and tributaries within the Uintah and Ouray Indian Reservation, Utah.

Lead Agency: Ute Indian Tribe, USFWS and UDWR

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**Category:**

- Ongoing project
- Ongoing-revised project
- Requested new project
- Unsolicited proposal

**Expected Funding Sources:**

- Annual funds
- Capital funds
- Other (In Kind)

I. Title of Proposal:

Nonnative Fish Control in the lower Green River and tributaries within the Uintah and Ouray Indian Reservation, Utah.

II. Relationship to RIPRAP:

## GENERAL RECOVERY PROGRAM SUPPORT ACTION PLAN

- III. Reduce negative impacts of nonnative fishes and sportfish management activities (nonnative and sportfish management).
- III.A. Reduce negative interactions between nonnative and endangered fishes.
- III.A.2. Identify and implement viable active control measures.

## GREEN RIVER ACTION PLAN: MAINSTEM

- III. Reduce impacts of nonnative fishes and sportfish management activities (nonnative and sportfish management).
- III.A. Reduce negative impacts to endangered fishes from sportfish management activities.
- III.A.4. Develop and implement control programs for nonnative fishes in river reaches occupied by the endangered fishes, to identify required levels of control. Each control activity will be evaluated for effectiveness, and then continued as needed.

### III. Study Background/Rationale and Hypotheses:

The Upper Colorado River Endangered Fish Recovery Program has implemented a nonnative fish control strategy in the Upper Colorado River basin for nonnative fishes. It considers nonnative control essential to the recovery of the four endangered Colorado River fishes: Colorado pikeminnow, razorback sucker, humpback chub, and bonytail. The abundance of smallmouth bass in the Colorado River basin has dramatically increased since 2000.

As early as 2003 research findings presented at the Recovery Program's annual nonnative works have shown that smallmouth bass and other nonnative fishes have had a significant impact on the endangered fish populations. Recommendations developed at these workshops have directed the Recovery Program to mechanically remove smallmouth bass and other nonnative fishes from the Colorado River and its tributaries. Initially, channel catfish, Northern pike, and smallmouth bass were removed. In recent years, most of the removal efforts have focused on smallmouth bass.

Research conducted over the past few years have helped managers understand what is needed to successfully control smallmouth bass in larger river systems. During the 2006 nonnative workshop biologists determined that removal efforts of smallmouth bass needed to increase. In 2007 removal efforts were reallocating and focused in specific areas in the Green River (Echo Park to Split Mountain, Split Mountain to Sand Wash) to increase exploitation rates of smallmouth bass. These increased removal efforts appear to be successful and will be repeated again in 2008.

The downside of this concentrated removal effort is that it leaves former removal areas

unchecked and open for reinvasion of smallmouth bass. During the 2007 field season large numbers of smallmouth bass were captured in trammel nets and by electrofishing in Desolation Canyon (Paul Badame and Tim Modde, personal communication) on the Green River. This data suggests that control and monitoring work needs to be conducted again in this reach of the Green River. Thus, the purpose of this proposal is to renew smallmouth bass control in the Green River in Desolation Canyon. This work will also include nonnative fish removal in other Green River tributaries (Duchesne and White rivers) within the Uintah and Ouray Indian Reservation in Utah.

#### IV. Study Goals, Objectives, End Product:

Goal: Control smallmouth bass in the Green River in Desolation Canyon and its associated tributaries within the Uintah and Ouray Indian Reservation.

Objectives:

1. Monitor adult and juvenile smallmouth bass to determine extent of control needed in this part of the Green River drainage.
2. Remove smallmouth bass in the Green River from Sand Wash (RM 215.3) to Swaseys Rapid (RM 129.8), and in tributaries within the Uintah and Ouray Indian Reservation.
3. Identify areas of high smallmouth bass density and prioritize for spatial control.

End Product:

An annual report will be written that provides information on: adult and juvenile smallmouth bass catch rates, annual exploitation estimates, total catch-per-unit-effort (CPUE), CPUE by river mile and size class, length frequency histograms, CPUE for other nonnatives, total numbers captured for target species, and estimates of high concentration locations. Data from past years of sampling will be included for relevant metrics to provide background, demonstrate trends and progress toward smallmouth bass removal criteria.

#### V. Study Area

The study area is located on the Green River from Sand Wash (RM 215.3) to Swaseys Rapid boat ramp (RM 129.8) (85.5 river miles); the Duchesne River (RM 0-40); and the White River (RM 0-20).

#### VI. Study Methods/Approach

Smallmouth bass will be removed using electrofishing rafts. Two rafts will simultaneously electrofish each shoreline of the river, focusing primarily on habitat that most likely contains smallmouth bass. We will document those areas with the highest concentration of smallmouth bass to help in determining management and control needs. Two electrofishing passes will be conducted from September through October. All smallmouth bass captured

will be removed. We are not proposing population estimates, but will use CRUE to estimate capture probabilities and to measure depletion.

The number of young of year (YOY) smallmouth captured will be used to estimate growth rates and potential recruitment sites. We will also record the number of age 2 fish to help determine YOY over-winter survival. Exploitation rates and recruitment estimates will be used in a population dynamics model to examine removal effectiveness and the need to continue removal efforts in the future.

All green sunfish, bluegill, black crappie, largemouth bass, northern pike, walleye, grass carp, gizzard shad, and burbot that are captured will be removed. All nonnative fish removed will be euthanized and deposited on the river bank away from public sight. If endangered fishes are captured they will be revived according to Recovery Program protocols and released back into the river. All capture data will be recorded on an electronic data recorded in the field and then downloaded onto spreadsheets when we return to the office.

Field crews will consist of personnel from the Ute Indian Tribe (Ute Tribe), the Utah Fish and Wildlife Conservation Office (UFWCO), and the Utah Division of Wildlife Resources (UDWR).

## VII. Task Description and Schedule

- Task 1. USFWS/Ute Indian Tribe: Conduct one removal passes for smallmouth bass in Desolation Canyon between Sand Wash and Swaseys Rapid in September and October 2008.
- Task 2. USFWS/Ute Indian Tribe: Conduct one removal and monitoring pass for smallmouth bass in the Duchesne River between Myton and the Duchesne/Green river confluence in September and October 2008.
- Task 2. UDWR: Conduct one removal passes for smallmouth bass in Desolation Canyon between Sand Wash and Swaseys Rapid in September and October 2008.
- Task 4. USFWS, Ute Indian Tribe, UDWR: Data entry, data analysis, and report writing – October/November 2008

## VIII. FY2008 Work

Budget:

Task Activity	Cost
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Task 1 – USFWS 1 pass Sand Wash to Swaseys Green River

Labor	
GS-8 Fish Tech (\$30.74/hr x 8 hrs/day x 2 days/trip prep x 1 trip prep)	\$492
GS-5 Tech (\$15.09/hr x 8 hrs/day x 2 days/trip prep x 1 trip prep)	\$241
GS-11 Biologist (\$39.89/hr x 8 hrs/day x 5 days/trip x 1 trip) + (\$59.84/hr x 2 hrs OT x 5 days/trip x 1 trip)	\$2,194
GS-8 Fish Tech (\$30.74/hr x 8 hr/day x 5 day/trip x 1 trip) + (\$46.11/hr x 2 hs OT/day x 5 days/trip x 1 trip)	\$1,691
GS-5 Tech (\$15.09/hr x 8 hrs/day x 5 days/trip x 1 trip) + (\$22.64/hr x 2 hrs OT/day x 5 days/trip x 1 trip)	\$830
Subtotal	\$4,716

Travel, Per Diem, Equipment	
(4 trucks/trip x 175 mi/truck x \$0.417/mi x 1 trip) Vernal to Sand Wash	\$292
Shuttle (\$110/truck x 4 trucks/trip x 1 trip) Vernal to Sand Wash	\$440
Boat gas (6 gal gas/boat x \$3.50/gal x 3 boats/trip x 1 trip) Sand Wash to Swaseys	\$63
Boat oil (1 qts. Oil/boat x \$3.00/qt x 3 boats/trip x 1 trip) Sand Wash to Swaseys	\$9
Per diem ( 5 people/day x \$27/person x 5 days/trip x 1 trip) Sand Wash to Swaseys	\$675
(4 trucks/trip x 400 mi/truck x \$0.417/mi x 1 trip) Sand Wash to Swaseys to Vernal	\$667
Shuttle (\$170/truck x 4 trucks/trip x 1 trip) Sand Wash to Swaseys to Vernal	\$680
Equipment and supplies (nets, electrofishing gear, maintenance and repairs, boat motors, etc.)	\$1,750
Subtotal	\$4,576
Total	\$9,292

Task 2 – USFWS 1 pass Myton to Green River, Duchesne River

Labor	
GS-8 Fish Tech (\$30.74/hr x 8 hrs/day x 2 days/trip prep x 1 trip prep)	\$492
GS-5 Tech (\$15.09/hr x 8 hrs/day x 2 days/trip prep x 1 trip prep)	\$241
GS-11 Biologist (\$39.89/hr x 8 hrs/day x 2 days/trip x 1 trip) + (\$59.84/hr x 2 hrs OT x 2 days/trip x 1 trip)	\$877
GS-8 Fish Tech (\$30.74/hr x 8 hr/day x 2 day/trip x 1 trip) + (\$46.11/hr x 2 hr OT/day x 2 days/trip x 1 trip)	\$676
GS-5 Tech (\$15.09/hr x 8 hrs/day x 2 days/trip x 1 trip) + (\$22.64/hr x 2 hrs OT/day x 2 days/trip x 1 trip)	\$332
Subtotal	\$1,885

Travel, Per Diem, Equipment	
(4 trucks/trip x 120 mi/truck x \$0.417/mi x 1 trip) Vernal to Myton Ute Diversion to Vernal	\$200
Shuttle (\$110/truck x 4 trucks/trip x 1 trip) Myton to Ute Diversion to Green River confluence	\$440
Boat gas (6 gal gas/boat x \$3.50/gal x 3 boats/trip x 1 trip) Myton to Green River confluence	\$63
Boat oil (1 qts. Oil/boat x \$3.00/qt x 3 boats/trip x 1 trip) Myton to Green River confluence	\$9
Per diem ( 5 people/day x \$27/person x 2 days/trip x 1 trip) Myton to Green River confluence	\$270
Equipment and supplies (nets, electrofishing gear, maintenance and repairs, boat motors, etc.)	\$1,000
Subtotal	\$1,982
Total	\$3,867

Task 3 - UDWR 1 pass Sand Wash to Swaseys Green River

Labor	Cost
Fish Biologist (\$340/day x 10 days/trip x 1 trip)	\$3,400
Tech (\$195/day x 43 days/trip x 1 trip)	\$8,385

Subtotal	\$11,785
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Travel, Per Diem, Equipment	
(3 trucks/trip x 200 mi/truck x \$0.417/mi x 1 trip) Moab to Sand Wash	\$250
Shuttle (\$170/truck x 4 trucks/trip x 1 trip) Sand Wash to Swaseys	\$680
Per diem ( 5 people/day x \$35/person x 5 days/trip x 1 trip) Sand Wash to Swaseys	\$875
(3 trucks/trip x 65 mi/truck x \$0.417/mi x 1 trip) Swaseys to Moab	\$81
Equipment and supplies (nets, electrofishing gear, maintenance, fuel and oil, etc.)	\$409
Subtotal	\$2,295
Total	\$14,080

Task 4 - USFWS Data management and report writing

Labor	
GS-14 Project Leader (\$66.01/hr x 8 hrs/day x 2 days) Oversee project and review report	\$1,056
GS-11 Biologist (\$39.89/hr x 8 hrs/day x 20 days) Data summary, data analysis, report writing	\$6,382
GS-9 Admin Officer (\$34.36/hr x 8 hrs/day x 2 days) admin support	\$550
Preparation, travel and per diem, and presentation of findings at professional meetings	\$500
Miscellaneous office supplies	\$643
Subtotal	\$9,131
Project Total	\$36,370

Tasks 1, 2, 4 - Ute Indian Tribe (In-Kind Services)

Labor (Biologist and Technicians help with river trips)	\$10,000
Equipment (Two electrofishing rafts, gear, and equipment)	\$14,000
Total	\$24,000

Deliverables/Due Dates: Recovery Program annual progress report: November 2008

IX. Program Budget Summary

UDWR Moab	\$14,080
<u>USFWS Vernal</u>	<u>\$22,290</u>
<b>FY 2008 Subtotal</b>	<b>\$36,370</b>
<u>Ute Indian Tribe</u>	<u>\$24,000</u>
<u>In-kind</u>	<u>\$24,000</u>
<b>FY 2008 Total</b>	<b>\$60,370</b>

IX. Reviewers

Dave Irving, Project Leader, Utah Fisheries Office, Vernal, Utah. March 2008.

## X. References