

**COLORADO RIVER RECOVERY PROGRAM
FY-2004-2005 PROPOSED SCOPE OF WORK**
(Duchesne nonnative fish management)

Project No.: 124

Lead Agency: Fish and Wildlife Service
Colorado River Fishery Project
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February 24, 2003; February 28, 2003, April 16, 2003
April 9, 2003 by Mark Fuller
May 16, 2003; 6/18/03; 10/7/03 by Pat Nelson
February 9, 2004 by Mark Fuller; 2/17/04 by Pat Nelaon.

<u>Category:</u>	<u>Expected Funding Source</u>
<input type="checkbox"/> Ongoing project	<input checked="" type="checkbox"/> Annual funds
<input checked="" type="checkbox"/> Ongoing-revised project	<input type="checkbox"/> Capital Funds
<input type="checkbox"/> Requested project	<input type="checkbox"/> Other
<input type="checkbox"/> Unsolicited proposal	

I. Title of Proposal: **Nonnative fish removal in the Duchesne River.**

II. Relationship to RIPRAP:

Green River Action Plan: Duchesne River

III.A.3. Implement and evaluate the effects of viable measures to control negative interactions from nonnative fishes.

III. Study Background/Rationale and Hypotheses

Smallmouth bass *Micropterus dolomieu*, channel catfish *Ictalurus punctatus*, and northern pike *Esox lucius* are exotic, predatory fishes common to abundant in the Duchesne River (Tyus et al. 1982; Cranney 1993). Smallmouth bass were introduced

into the Unita River in 1970 by the U.S. Fish and Wildlife Service, with concurrence from the state of Utah and the Ute Indian Tribe, to provide recreational fishing opportunity (Mullan 1969, 1970). Channel catfish were introduced in the Colorado River Basin in the late nineteenth century and are established in both the mainstem and major tributaries throughout the Green River subbasin (Karp and Tyus 1990). Northern pike were introduced as a gamefish into Elkhead Reservoir in 1977 and have since become established in the Yampa and Green Rivers. Smallmouth bass have been reported to be significant predators on Colorado pikeminnow *Ptychocheilus lucius* in the middle Green River (Crowl 1995) and channel catfish have been identified as a major threat to the recovery of endangered fishes throughout the Upper Colorado River Basin (Tyus and Saunders 1996, Hawkins and Nesler 1991). Smallmouth bass, channel catfish and northern pike in the Duchesne River represent a strategic threat because they provide a source of nonnative predators to a significant portion of the Colorado pikeminnow and razorback sucker *Xyrauchen texanus* nursery habitat in the middle Green River.

In recent years, the Upper Colorado River Endangered Fish Recovery Program has initiated nonnative fish control efforts to reduce the impacts on native fishes. Fish reduction efforts for smallmouth bass have been approved for the lower Yampa, Colorado and Green Rivers. In addition, northern pike and smallmouth bass removal has been approved for the middle Yampa River. The timing of this proposal creates a complimentary nonnative fish removal effort (i.e., northern pike *Esox lucius* and channel catfish) with the work planned for the middle Green River.

IV. Study Goals, Objectives, End Product:

Goal

Improve survival of endangered fish in the Duchesne and Green rivers.

Objectives

1. Reduce the abundance of adult smallmouth bass, channel catfish, and northern pike in the Duchesne River reach between the Myton Diversion (rmi 41) and the confluence of the Green River.
2. Maintain public support for the Recovery Program by providing angling opportunity to the Ute Tribes' Elders Pond with nonnative fish removed from the Duchesne River.

End Products: Annual reports due 11/04; 11/05.

V. Study area: Lower Duchesne River (Myton Diversion, rmi 41) to confluence of the Green River.

VI. Study Methods/Approach:

Three electrofishing passes will be made from just below the Myton Diversion (rmi 40.3) to the confluence of the Green River during the spring months when flows permit either hard bottom boat or raft electrofishing of each shoreline (i.e., >500 cfs). The Duchesne River study area will be divided into four reaches in which all bass, catfish, and positively identified **male** northern pike will be removed and made available to the Ute Tribe to stock into the Tribal Elders' Pond. in accordance with the RIP Nonnative Stocking Procedures. If fish are not requested for stocking they will be euthanized and discarded in a manner acceptable to the Ute Tribe and the Utah Division of Wildlife Resources.

All smallmouth bass, channel catfish and northern pike captured will be measured (TL) and weighed. Catch per unit of effort will be monitored in all reaches to determine the efficiency of the control program. All endangered fish captured will be measured (TL), weighed, and scanned to determine the presence of a PIT-tag. Fish not tagged will be implanted with a new tag.

Ute Tribal involvement will include support for field operations and coordination required to insure access permits to Tribal land on the Duchesne River. Access to and from the Duchesne River will be coordinated with both Utah Division of Wildlife Resources and the Ute Tribe. Because removal of nonnative game fish may become a controversial issue in Utah, we will participate in and assist with any Utah Division of Wildlife Resources or Ute Tribal public informational meetings to provide information relating to game fish removal in the Duchesne and Green rivers. All capture and length data on smallmouth bass, and channel catfish collected during the sampling effort will be turned over to the Ute Tribe and Utah Division of Wildlife Resources. A brief summary report will be produced after sampling is completed that summarizes catch rates, size frequencies by trip and will be distributed through the Recovery Program's annual reporting process.

VII. Task Description and Schedule

- Task 1. April through July 2004 and 2005: Complete three electrofishing passes along the Duchesne River each year. Make available smallmouth bass, channel catfish, and **male** northern pike removed from the Duchesne River to the Ute Tribe for translocation in accordance with the Nonnative Stocking Procedures.
- Task 2. November 2004 and 2005: Prepare annual report to be provided on the date set by program directors office.

VIII. FY-2004 Work

Deliverables/Due Dates: Annual report 11/04

Task 1.

Labor

Ute Tribe (see note below)	5,250
Fish biologist (GS-9, 10-hour days, 3.5 weeks at \$1,305/week)	4,568
5 technicians (GS-5, 10-hour days, 3 weeks at \$788/week/technician)	11,813

Travel	1,754
Equipment: 2 Boat Motors 9.9-hp each	2,909

Sampling will occur during the descending limb of the hydrograph, involving low flows and the need for motorized rafts.

Task 2.

Labor

Fisheries biologist (GS-9, 8-hour days, 2.5 weeks at \$983/week)	2,458
Total:	28,752

FY-2005 Work

Deliverables/Due Dates: Annual report 11/05

Task 1.

Labor

Ute Tribe (see note below)	5,513
Fish biologist (GS-9, 10-hour days, 3.5 weeks at \$1,770/week)	6,195
5 technicians (GS-5, 10-hour days, 3 weeks at \$840/week)	12,600

Travel	1,785
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Task 2.

Labor

Fisheries biologist (GS-9, 8-hour days, 2.5 weeks at \$1,032/week) 2,581

Total: 28,674

Note: Ute Tribal involvement will include support for field operations and coordination required to insure access permits to Tribal land on the Duchesne River. One or more Tribal members will both escort and assist in each of the three 41-mile, 5- to 7-day passes each year.

IX. Budget Summary

FY-2004 \$28,752

FY-2005 \$28,674

X. References

Cranney, S.J. 1993. Lower Duchesne River fishery investigations - 1993. Draft Report. Utah Division of Wildlife Resources, Vernal, Utah

Crowl, T.W. 1995. Nonnative fish control report for the Green and Duchesne rivers. RIP Annual Report Meeting. Grand Junction, Colorado

Hawkins, J. A., and T. P. Nesler. 1991. Nonnative fishes in the upper Colorado River basin: an issue paper. Final Report. Colorado State University Larval Fish Laboratory and Colorado Division of Wildlife, Fort Collins.

Karp, C.A., and H.M. Tyus. 1990. Humpback chub (*Gila cypha*) in the Yampa and Green Rivers, Dinosaur National Monument, with observations on roundtail chub (*G. robusta*) and other sympatric fishes. Great Basin Naturalist 50(3):257-264.

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