

I. Project Title: **Translocation of northern pike from the upper Yampa River (Craig, CO and upstream).**

II. Principal Investigator(s):

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III. Project Summary:

Northern pike *Esox lucius* is an exotic, predatory species that has become established in the Yampa River. It escaped from Elkhead Reservoir (a reservoir on Elkhead Creek, which is tributary to the Yampa River near Craig, CO) where it was originally stocked to provide sportfishing. Since its escapement, it has established a large, reproducing population in the upper Yampa River (Nesler 1995). This large population provides a source for continual movement of northern pike into the lower Yampa River and further downstream into the Green River where they coexist with three endangered fishes — Colorado pikeminnow *Ptychocheilus lucius*, razorback sucker *Xyrauchen texanus*, and humpback chub *Gila cypha*. Northern pike provide a significant predatory risk to these species, especially juveniles and small adults of Colorado pikeminnow and razorback sucker, and all age classes of humpback chub. They also present a significant predatory risk to other native species in the basin (e.g., flannelmouth sucker *Catostomus latipinnis* and roundtail chub *G. robusta*) that have been considered for listing under the Endangered Species Act in the past (Martinez 1995; Nesler 1995). Northern pike was identified as a significant risk to the endangered fishes by a majority of upper basin researchers in surveys conducted during the late 1980s (Hawkins and Nesler 1991).

The Recovery Program has established an active program to control nonnative fishes in the main rivers of the upper basin to assist in recovery of the endangered fishes found there. Reduction of the northern pike population in the Yampa River while continuing to provide fishing opportunity for local anglers is a priority for the program. Temporarily reducing the pike population through mechanical means appears to be a viable option for the rivers of the upper basin (Lentsch et al. 1996), although complete eradication is unlikely. A small, non-reproducing population of northern pike in the

Gunnison River was reduced with relatively little effort applied at a time when pike were vulnerable (McAda 1997).

The aquatic management plan for the Yampa River includes trapping northern pike in the river and transporting them to ponds in the Yampa Valley that qualify under the Nonnative Stocking Procedures (CDOW 1998). Preliminary efforts in 2001 showed that large numbers of anglers were attracted to the ponds at Yampa SWA when northern pike were stocked there (personal observation). Translocation of pike may reduce the numbers of northern pike in the Yampa River to benefit endangered fishes and still provide recreational opportunities for anglers

This study was conducted in conjunction with SOW 98a, prepared by the Colorado Division of Wildlife and Colorado State University. It is intended to assess the feasibility of reducing the negative impacts of northern pike on the endangered fishes in the Yampa River.

IV. Study Schedule: FY-01 to FY-02

V. Relationship to RIPRAP:

General Recovery Program Support Action Plan

III.A.2.c. Evaluate the effectiveness and develop an integrated viable active nonnative fish control program

Green River Action Plan: Yampa and Little Snake rivers

III.A.1.b(1) Remove and translocate northern pike and other sportfishes from Yampa River.

III.A.1.b(2) Reduce northern pike reproduction in the Yampa River.

VI. Accomplishment of FY 01 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

The Yampa River upstream from Craig, CO was sampled from April 25 through June 7, 2001. Sampling consisted of placing fyke nets in backwaters and other quiet water habitats that might attract northern pike. Sampling was restricted to river reaches contained within the Colorado Division of Wildlife's Yampa State Wildlife Area (SWA) and the Nature Conservancy's Carpenter Ranch. Fyke nets were run every day except for weekends. Fyke nets were moved when habitat conditions changed or catch rates of northern pike decreased.

A total of 230 northern pike were captured and removed from the river (Figure 1). Catch rates were highest in the river near Carpenter Ranch where 195 fish were captured. A total of 35 northern pike were removed from Yampa SWA. A large slough on Yampa SWA that contained large numbers of pike was not sampled at the request of

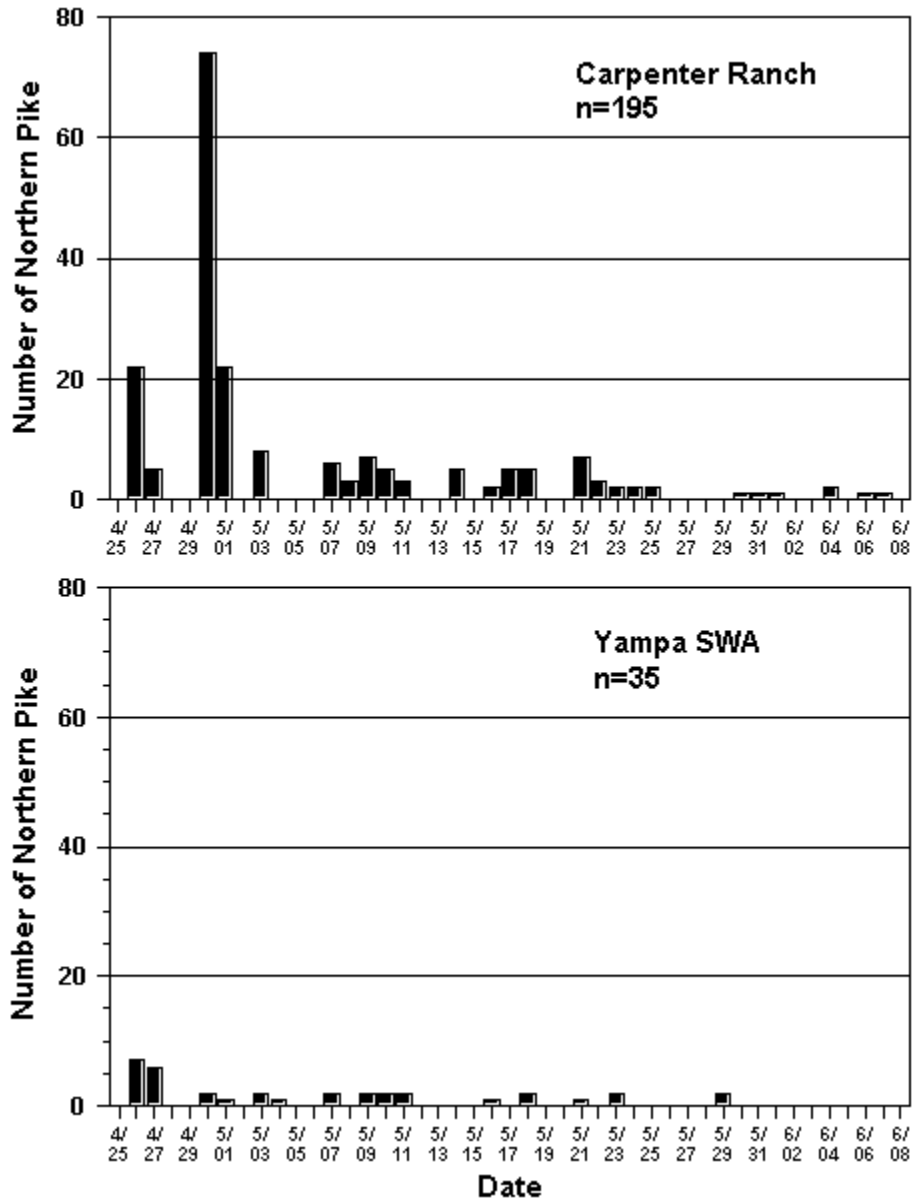


Figure 1. Total number of northern pike captured per day. Northern pike numbers represent the total number of fish captured per day using trap nets (number of trap nets varied among days and reaches) at the Nature Conservancy’s Carpenter Ranch (top) and CDOW’s Yampa River SWA (bottom). Trap nets were set on 4/25 and pulled on 6/7; they were not run on weekends (4/28-29, 5/5-6, 5/12-13, 5/19-20, 5/26-28, 6/2-3).

CDOW to avoid conflicts with heavy angling use there. A total of 40 pike were sacrificed by CDOW for food habits analysis. The remainder of the fish (excluding four mortalities) were stocked into ponds in the SWA. Local anglers were notified that the fish were being placed in the ponds and they subsequently received a lot of angling pressure.

In addition to sampling with fyke nets, field crews transported northern pike removed by the CDOW/CSU field crew to Rio Blanco Reservoir. A total of seven trips were made to Rio Blanco Reservoir to transport a total of about 190 northern pike.

- VII. Recommendations: Continue removal of northern pike from the Yampa River.
- VIII. Project Status: Field work for FY 01 was completed on schedule. Expanded field work is proposed for FY 02. Implementation of the proposed work will be discussed at a workshop in February.
- IX. FY 01 Budget Status
  - A. Funds Provided: 19,000
  - B. Funds Expended: 19,000
  - C. Difference: 0
  - D. Percent of FY 01 work completed: N/A
  - E. Publication Charges 0
- X. Status of Data Submission: All data were submitted to the Recovery Program data base.
- XI. Signed: C.W. McAda, December 7, 2001

#### References

- CDOW (Colorado Division of Wildlife). 1998. Aquatic Wildlife Management Plan: Yampa River Basin. Aquatic Wildlife Section, Denver.
- 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.
- Lentsch, L. D., R. T. Muth, P. D. Thompson, B. G. Hoskins, and T. A. Crowl. 1996. Options for selective control of nonnative fishes in the upper Colorado River basin. Final Report to the Recovery Program for the Endangered Fishes of the Upper Colorado River. Publication 96-14, Utah Division of Wildlife Resources, Salt Lake City, Utah.
- Martinez, P. J. 1995. Coldwater Reservoir Ecology. Colorado Division of Wildlife, Federal Aid in Fish and Wildlife Restoration Project F-242R-2, Job Final Report, Fort Collins.
- McAda, C. W. 1997. Mechanical removal of northern pike from the Gunnison River, 1995–1996. Final Report to the Recovery Program for the Endangered Fishes of the Upper Colorado River, Project 58. U. S. Fish and Wildlife Service, Grand Junction, Colorado.
- Nesler, T.P. 1995. Interactions between endangered fishes and introduced gamefishes in the

Yampa River, Colorado, 1987-1991. Final Report, Federal Aid Project SE-3. Colorado Division of Wildlife, Fort Collins.