I. Project Title: **Nonnative Fish Control: Translocation of Northern Pike from the Yampa River.**

II. Principal Investigator(s):

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III. Project Summary:

Northern pike, *Esox lucius*, is a nonnative species introduced into the Yampa River system in the early 1980s. They have established a reproducing population in the upper Yampa River and expanded their number and range within the Yampa and Green rivers. Pike are voracious predators and are considered a threat as competitors and predators to endangered and other native or game fishes in the Yampa River. This project implements nonnative-fish management actions described in the Colorado Division of Wildlife Aquatic Wildlife Management Plan for the Yampa River Basin (CDOW 1998). Management activities in the Yampa Aquatic Plan recommend active trapping and translocation of northern pike, small-mouth bass, channel catfish, and white sucker. Previous sampling in 1999, resulted in the capture of 164 northern pike in both the Spawning Area near Hayden, Colorado and from backwaters in the Critical Habitat Reach, downstream of Craig, Colorado and the translocation of 80 northern pike to Yampa State Wildlife Area ponds. In 2000, 475 northern pike were captured in Critical Habitat and 350 moved to Rio Blanco Reservoir. In 2001, we focused on capturing northern pike that occupy critical habitat for Colorado pikeminnow which is downstream of Craig, Colorado and captured 268 northern pike during four sampling trips and transported them to Rio Blanco Reservoir. Sampling in Critical Habitat and translocation to Rio Blanco is planned again in 2002.

IV. Study Schedule: Initial Year: 1999
Final Year: 2002

V. Relationship to RIPRAP: *(Version: March 8, 2000)*

Green River Action Plan: Yampa and Little Snake rivers

III.A. Develop aquatic management plan (Colorado) to reduce nonnative fish impacts while providing sportfishing opportunities.

III.A.1. Implement Yampa Basin aquatic wildlife management plan.

III.A.1.b. Remove and translocate northern pike and other sportfish from Yampa River.

VI. Accomplishment of FY 2001 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Tasks:

Task 1. Locate private or public ponds for receiving translocated fish and obtain easements to these sites. (CDOW)

Task 2. Submit Stocking Management Plans for approval. (CDOW)

Task 3. Contact private landowners and obtain permission for property access for fish removal sampling. Field crew training and equipment preparation. (CDOW & CSU)

Task 4. Capture, remove, and translocate northern pike from the spawning reach. (CSU)

Task 5. Capture, remove, and translocate juvenile and adult northern pike from critical habitat reaches. (CSU)

Task 6. Data entry and analysis. (CSU)

Task 7. Prepare Recovery Program annual progress report and final report of first 2-years. (CSU)

Accomplishments and Shortcomings:

Rio Blanco Reservoir was determined the best acceptable location for receiving northern pike. The Stocking Management Plan for translocating northern pike to Rio Blanco Reservoir was reviewed and approved by Recovery Program cooperating States (Utah and Wyoming) and federal agencies (Tasks 1 & 2). County maps and Platt books were examined for location and ownership information of tributaries downstream of Craig, Colorado and an initial list of suitable sample sites was identified. Landowners of several key locations were contacted for permission to access sites from their property, otherwise land-based sampling only occurred on public lands (Tasks 3). Sampling was not conducted in the Spawning reach as planned in the SOW due to recommendations from the Northern Pike Workshop (Task 4; Nesler 2001). Four sampling trips were conducted in Critical Habitat during Spring runoff and northern pike were captured and

translocated (Task 5; Table 1). Participants at the Northern Pike Workshop suggested increasing sampling upstream an additional 10 miles above Milk Creek (Nesler 2001) but due to a low and short runoff and the importance and need to complete four thorough passes, sampling area was not expanded (Hawkins 2001). Other recommendations from the workshop included expanding effort by building another electrofishing boat in order to sample both sides of the river instead of just one side as was done in 2000. CSU configured another boat and substantially increased electrofishing effort in Critical Habitat. All fish capture data has been entered and partially analyzed and PIT Tag information for endangered fishes will be submitted to the FWS database manager in early 2002 (Task 6). A Summary Report for the work done to-date will be presented at the Nonnative Workshop scheduled for mid-February (Task 7).

Results:

We sampled 33 days during four sampling trips in Spring. Sample trips occurred on April 24-May 5, May 11-19, May 27-June 4, and June 12-19. Sampling occurred below Craig, Colorado between Milk Creek (River mile 119.2) and Deerlodge Park (River mile 46.5), about 73 river miles. We substantially increased effort expended to capture fish compared with effort expended in 2000 by adding an additional electrofishing boat so that both sides of the river were sampled concurrently. Effort included 177 hours of electrofishing shoreline and backwaters, almost three times the previous year's electrofishing effort of 61 hours. Fyke net sampling in backwaters in 2001 was 279 hours and was less than in 2000 when effort totaled 560 hours. All pike were tagged with a Floy tag under the dorsal fin and moved to Rio Blanco Reservoir in Rio Blanco County in the White River Basin. A total of 268 northern pike were captured and transported to Rio Blanco Reservoir (Table 1). This was almost half the number collected in 2000, when 475 northern pike were captured of which about 350 were transported to Rio Blanco. Average length of all pike caught in 2001 was 595 mm (range 230-896 mm).

Usually the only fish we tried to net when electrofishing were northern pike or Colorado pikeminnow. Most all other fish such as smallmouth bass or channel catfish were either not netted or if netted were returned alive to the river. We also caught 120 different Colorado pikeminnow in 2001.

VII. Recommendations:

Additional public information and education programs about the project are needed for local landowners, the boating and fishing public, and for other agencies such as Colorado State Parks which maintains several access points along the area sampled.

VIII. Project Status:

This project is on-track and on-going.

IX. FY 2001 Budget Status

A. Funds Provided: $74,300

B. Funds Expended: $42,000

C. Difference: $32,300, Includes costs to complete project described below.

D. Percent of the FY 2001 work completed, and projected costs to complete: 80% completed, Cost to complete= $21,300. Includes $14,800 for final data compilation, analysis, and equipment repair and $6,500 for replacement boat motor. Balance= $11,000.

E. Recovery Program funds spent for publication charges: *none*

X. Status of Data Submission (Where applicable):

PIT Tag records for endangered fishes captured and tagged in 2001 will be submitted in early 2002. Other fish capture records will be submitted with the final report.

XI. Signed: *John Hawkins* 12/10/01

Principal Investigator Date

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References:

CDOW (Colorado Division of Wildlife). 1998. Aquatic Wildlife Management Plan: Yampa River Basin, Colorado. Colorado Division of Wildlife, Aquatic Wildlife Section, Denver.

Hawkins, J. A. 2001. Northern Pike Sampling. Email to Biology Committee and Pike Workshop participants dated April 18, 2001.

Nesler, T. P. 2001. Northern Pike Workshop Summary. Attachment to email to participants and Biology Committee dated April 9, 2001.

Table 1. Number of northern pike captured from the Yampa River and moved to Rio Blanco Reservoir, 2001.

	Juniper	Maybell	Lily Park	Total # captured All Reaches
Pass 1	20	47	27	94
Pass 2	46	17	21	84
Pass 3	23	30	7	60
Pass 4	8	16	6	30
Total	97	110	61	268