

COLORADO RIVER RECOVERY PROGRAM
FY 2013 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: 98b

I. Project Title: Management of northern pike from the Yampa River upstream of Craig, Colorado.

II. Bureau of Reclamation Agreement Number(s): R11PG40024, R11PG40043

Project/Grant Period: Start date (9/16/2011):
End date: (9/30/2016):
Reporting period end date: 9/30/2013
Is this the final report? Yes _____ No X

III. Principal Investigator:

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IV. Project Summary:

The objective of this study is to remove as many northern pike, smallmouth bass, and white suckers as possible from the Yampa River from Hayden to Craig, CO. We use electrofishing boats and sample this reach seven times a year during spring and early summer. We euthanize all smallmouth bass, white suckers, and any northern pike < 20 inches (508 mm). Northern pike > 20 in. are taken to the Yampa River State Park headquarters pond for angling opportunities for the public.

V Study Schedule: 2004-ongoing.

VI. Relationship to RIPRAP:
GREEN RIVER ACTION PLAN: YAMPA AND LITTLE SNAKE RIVERS
III.A.1.b Control northern pike.
III.B.2 Control nonnative fishes via mechanical removal
III.B.2.e. Remove smallmouth bass

VII. Accomplishment of FY 2013 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Northern Pike Removal

We conducted at least 6 electrofishing passes through each of three sections within our 38-mile study section of the upper Yampa River from Hayden to Craig. We removed one pass from the upper section and allocated it to the lower section in order to target spawning bass. As a result we conducted 8 passes in the lower section (RMI 141-135), 7 passes in the middle section (RMI 151-141) and 6 passes in the upper section (RMI 171-151). All passes were used as removal passes.

We removed 673 northern pike from the study section in 2013. We consider fish < 300mm juveniles, fish >300mm adults, and fish >450mm as piscivores. Of the 673 fish removed in 2013, 24 were juveniles, and 649 were adults, of which 463 were piscivores. This was more than we removed in 2012, when we removed 467 fish (75 juveniles, 392 adults of which 266 were piscivores). We translocated 328 northern pike to the Yampa River State Park headquarters pond for angling opportunities, and the remaining 345 were euthanized, including 31 which were sent to the Colorado Parks and Wildlife for an on-going study.

Length-frequency of pike captured in 2013 showed small and large size classes present (Figure 1). The majority of the fish captured were adults, ranging from 400-650 mm. However, younger fish were well-represented in the sample, indicating successful spawning and recruitment in the last few years. We did observe reduced catches of pike in later passes (Figures 2 and 3). As in past years, we observed some reaches contained more northern pike than others, most notably RMI 151 (Figure 4). The overall catch per unit effort in 2013 was higher than the last two years, but is comparable to efforts since 2006 (Figure 5).

Northern Pike Foreign Tags

One northern pike was captured that had a foreign floy tag. It was originally tagged by CPW approximately 71 miles downstream as part of a 2012 population estimate marking pass.

Smallmouth Bass

Forty-six smallmouth bass (120-419 mm; 2 juveniles < 200 mm, 44 adults \geq 200 mm, 25 piscivores \geq 325 mm) were captured in this study compared to 139 (61-412 mm) in 2012. The length frequency of these fish indicated that our catch was primarily an adult population, with few fish less than 200 mm (Figure 6). None were tagged and all fish were removed.

White Sucker

We removed 1,838 white suckers (68-592 mm) in 2013, compared to 1,168 white suckers (48-588 mm) in 2012. Of these, 198 measured < 200 mm and 1,641 measured \geq 200 mm

compared to 445 and 723 in 2012 respectively. We saw no depletion from our efforts (Figure 7 and 8).

VIII. Additional noteworthy observations:

- The Elkhead and Yampa River confluence was noted in 2012 as a smallmouth bass spawning location. We confirmed spawning activity in 2013 and captured ripe fish again at that location.
- We captured 2 bluehead suckers as far upstream as RMI 145 and 2 flannelmouth suckers as far upstream as RMI 167. We also captured 1 bluehead x flannelmouth hybrid.

IX. Recommendations:

We recommend conducting 5 passes as early as possible in the spring to remove as many northern pike as possible, and conducting 2 passes at lower flows later in the summer to target the smallmouth bass spawn.

We recommend eliminating translocation of northern pike. The Yampa River State Park pond is close to the Yampa River, making it a potential source for the introduction of pike into the river.

X. Project Status: The project is on track and ongoing.

XI. FY 2013 Budget Status:

- A. Funds Provided: \$163,984
- B. Funds Expended: \$163,984
- C. Difference: 0
- D. Percent of the FY 2013 work completed, and projected costs to complete:100
- E. Recovery Program funds spent for publication charges:0

XII. Status of Data Submission: Data was submitted September 11, 2013 to Travis Francis, USFWS-Grand Junction CRFP.

XIII. Signed: Aaron Webber October 1, 2013
Principal Investigator Date

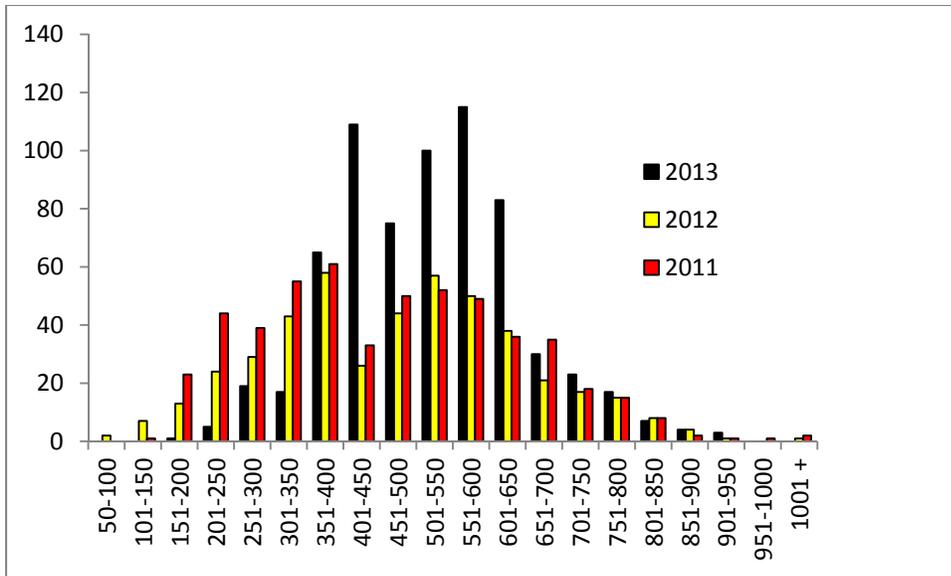


Figure 1. Length frequency (TL mm) of Yampa River northern pike captured 2011-2013.

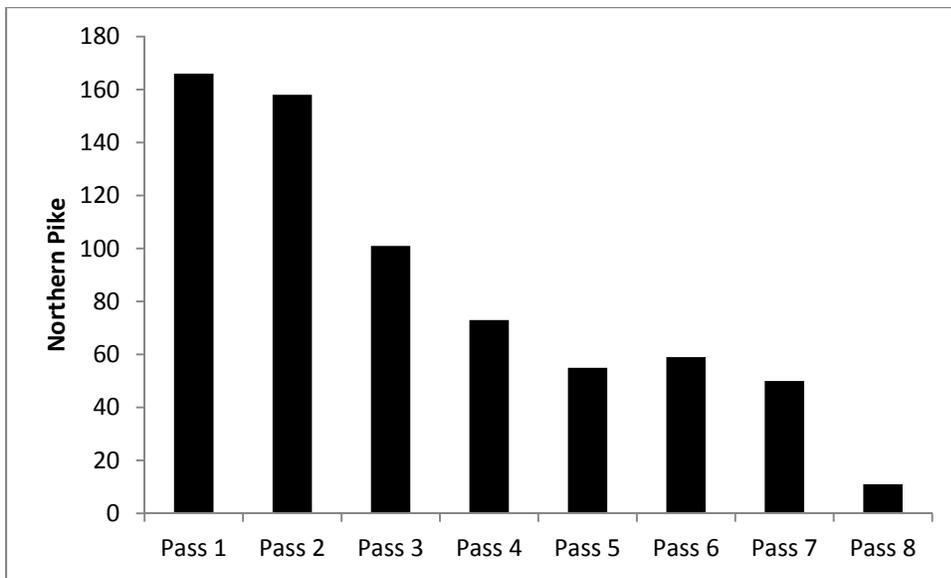


Figure 2. Northern pike captured by pass in the Yampa River, 2013 in project 98b.

*Note: Pass 7 and Pass 8 have lower effort - The entire study area (RM 171-135) was sampled in passes 1-6; pass 7 consisted of RM 151-135, and pass 8 consisted of RM 141-135.

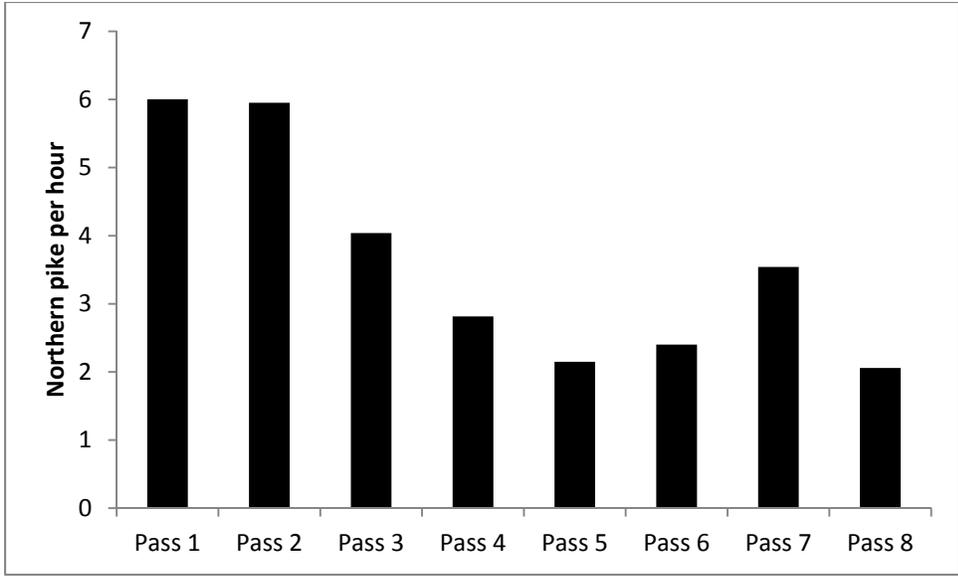


Figure 3. Northern pike captured per hour by pass, Yampa River 2013 in project 98b. The entire study area (RM 171-135) was sampled in passes 1-6; pass 7 consisted of RM 151-135, and pass 8 consisted of RM 141-135.

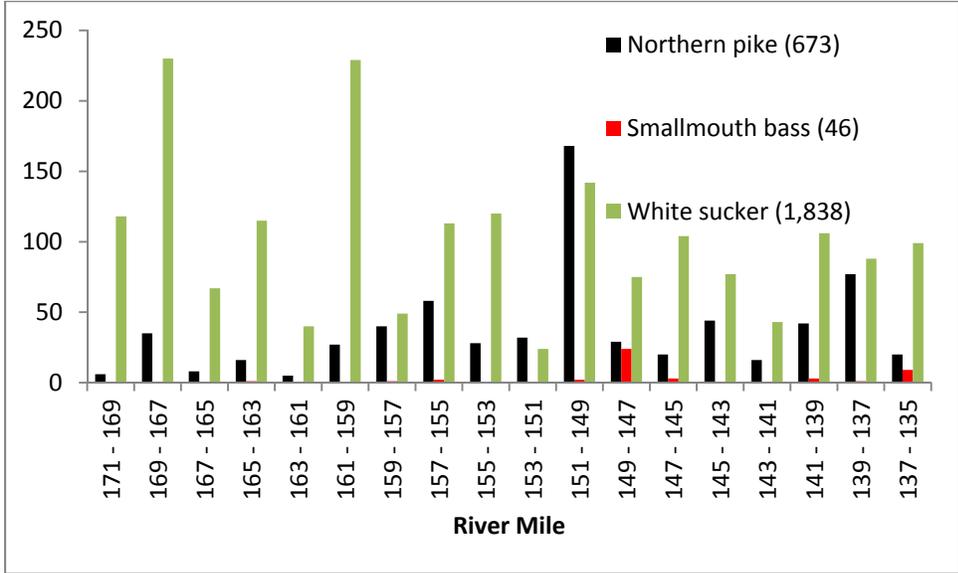


Figure 4. Total number of northern pike, smallmouth bass, and white sucker captured by river mile reach, Yampa River 2013 in project 98b.

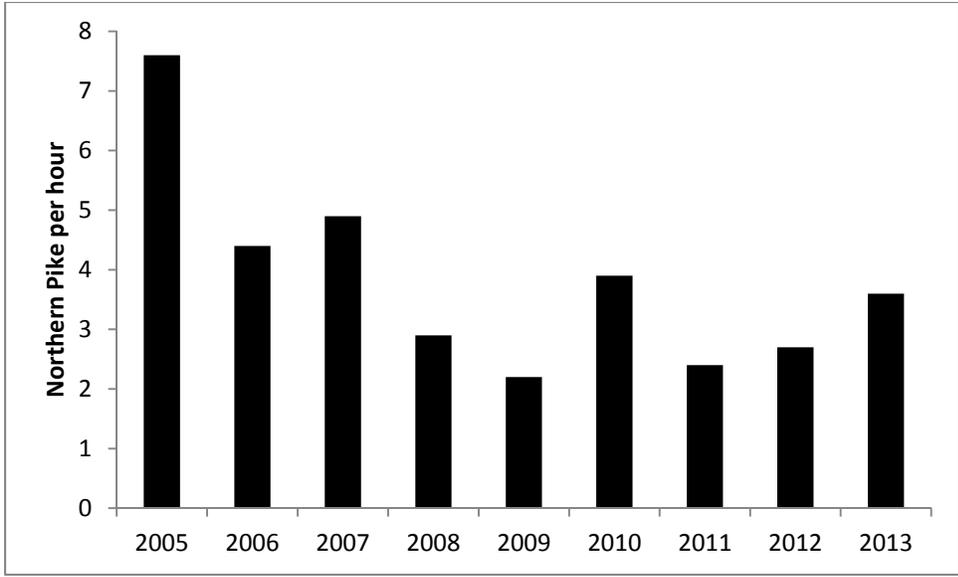


Figure 5. Overall northern pike catch rates by hour, 2005-2013 for project 98b.

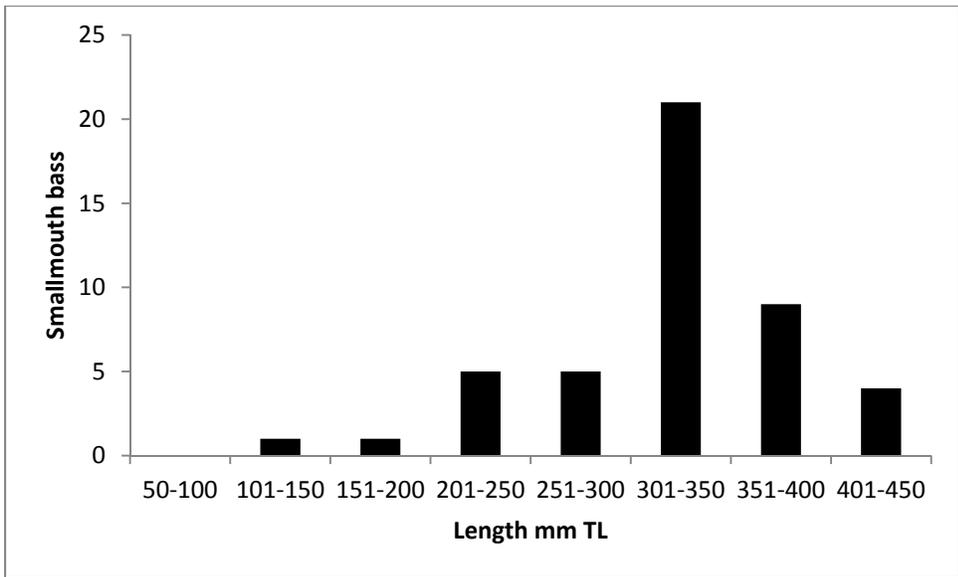


Figure 6. Length frequency of 46 smallmouth bass captured during project 98b in 2013.

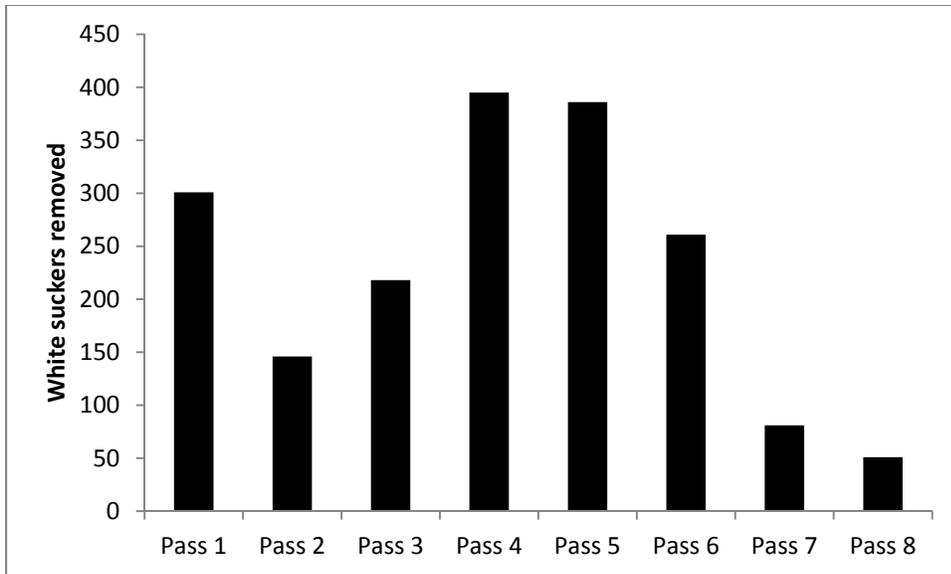


Figure 7. Number of white suckers removed by pass from the Yampa River between Hayden and Craig during 2013 in project 98b.

*Note: Pass 7 and 8 have lower effort - The entire study area (RM 171-135) was sampled in passes 1-6; pass 7 consisted of RM 151-135, and pass 8 consisted of RM 141-135.

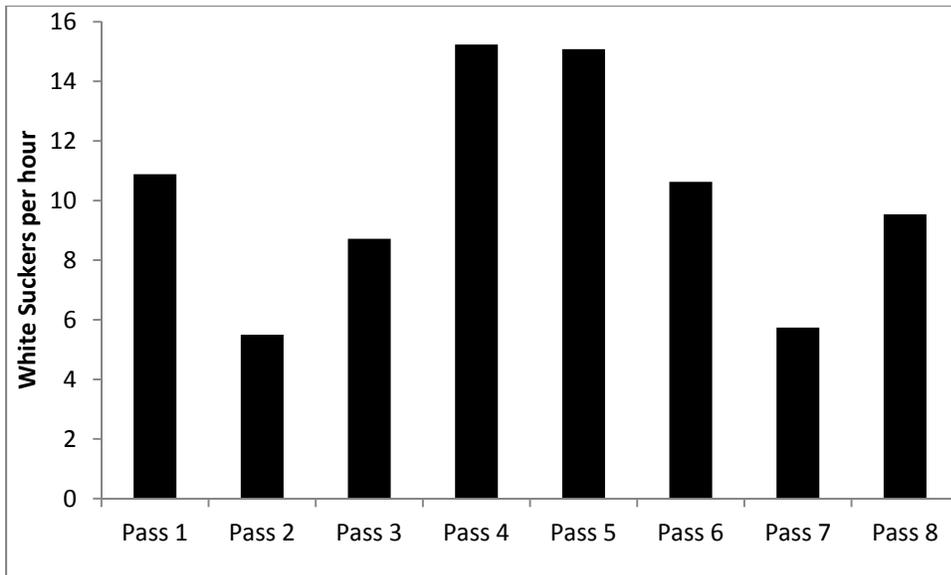


Figure 8. Number of white suckers per hour removed by pass from the Yampa River between Hayden and Craig during 2013 in project 98b. The entire study area (RM 171-135) was sampled in passes 1-6; pass 7 consisted of RM 151-135, and pass 8 consisted of RM 141-135.