

- I. Project Title: Evaluating effects of non-native predator removal on native fishes in the Yampa River, Colorado

- II. Principal Investigator(s): Larval Fish Laboratory
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- III. Project Summary: Control actions for several non-native fish predators have been implemented in several rivers of the upper Colorado River Basin but effects of those removals on restoration of native fishes is unknown. Understanding the response of the native fish community to predator removal is needed to understand if removal programs are having the desired effect. Therefore, the objective of this project is to document fish community changes in response to predaceous fish removals in a reach of the Yampa River, Colorado.

- IV. Study Schedule: *2004 to unknown*

- V. Relationship to RIPRAP:

REDUCE NEGATIVE IMPACTS OF NONNATIVE FISHES AND SPORTFISH
MANAGEMENT ACTIVITIES (NONNATIVE AND SPORTFISH MANAGEMENT)

Green River Action Plan: Yampa and Little Snake Rivers

III.A.1. Implement Yampa Basin aquatic wildlife management plan to develop nonnative fish control programs in reaches of the Yampa River occupied by endangered fishes. Each control activity will be evaluated for effectiveness and then continued as needed.

Green River Action Plan: Mainstem

III. Reduce negative impacts of nonnative fishes and sportfish management activities (Nonnative and sportfish management)

III.A.2.c Evaluate the effectiveness (e.g., nonnative and native fish response) and develop and implement an integrated, viable active control program.

- VI. Accomplishment of FY 2009 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

In 2009, we sampled control and treatment reaches of Little Yampa Canyon and in Lily Park, with an effort similar to 2008 (n = 187 samples). All data are not yet available because we only recently finished sampling and samples remain to be sorted. Like 2008,

native fishes were again widespread in 2009, even in the main channel. This is compared to 2003-2007, when native fishes were found only in isolated pools with few predators. We plan to report result of 2009 sampling at the December Non-native fish workshop in Grand Junction and at the 2010 Researchers Meeting.

We continue to make excellent progress on analysis of smallmouth bass otoliths collected from the Yampa River. This is being done to better understand effects of streamflow and water temperature on timing and duration of smallmouth bass spawning and hatching dates and growth rates. This was conducted with FY 08 and 09 funds since we only received a portion of the annual budget in FY 07. This analysis is complementary to a similar effort in the Green River under project 115, and one which will also include analysis of smallmouth bass from the Colorado River.

VII. Recommendations: We will present a more complete summary of data in autumn 2009 in FY 2010 at the Non-native fish workshop, and at the 2010 Researchers Meeting.

VIII. Project Status: On track and ongoing.

IX. FY 2009 Budget Status

- A. Funds Provided: \$80,101
- B. Funds Expended: \$60,120
- C. Difference: \$ 19,981
- D. Percent of the FY 2009 work completed, and projected costs to complete: 75% of FY09 complete.
- E. Recovery Program funds spent for publication charges: 0

X. Status of Data Submission (Where applicable): *[Indicate what data have been submitted to the database manager.]Data submitted spring 2009*

XI. Signed: Kevin R. Bestgen 11 November 2009
Principal Investigator Date

(Just put name and date here, since you will be submitting the report electronically)

APPENDIX: *[More comprehensive/final project reports (NOT to be used in place of a complete annual report.). If distributed previously, simply reference the document or report.]*