I. Project Title: Population abundance and dynamics of introduced northern pike, Yampa River, Colorado

II. Bureau of Reclamation Agreement Number(s): R11AP40060

Project/Grant Period:  
Start date (Mo/Day/Yr): 8 August 2011  
End date (Mo/Day/Yr): 30 Sept. 2016  
Reporting period end date: 30 Sept. 2012  
Is this the final report? Yes ___ No ___ X ___

III. Principal Investigator(s):  
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IV. Abstract: Research to better understand abundance and population dynamics of northern pike in the Upper Colorado River Basin needed for managers to proceed with effective control strategies. Our basic approach will be to conduct comprehensive abundance estimates at appropriate geographic scales, which when coupled with movement data, should allow for a more comprehensive understanding of abundance dynamics of pike populations in the Yampa River. This understanding will allow managers to assess the role of the buffer removal area in the vicinity of Hayden, Colorado, on pike populations in downstream critical habitat and will also aid assessment of immigration from sources upstream of there, and explore more effective means to achieve recovery of native fishes. Influence of important environmental factors on northern pike abundance dynamics, such as stream flow levels and subsequent reproductive effort, will allow simultaneous assessment of trajectories of pike populations under different levels of removal effort. This information should increase the ability of managers to understand effectiveness of removal programs and formulate a comprehensive control strategy that will effectively reduce populations of northern pike and enhance prospects for recovery of native fish populations.

V. Study Schedule: Initial Year 2011  
Final year 2013

VI. Relationship to RIPRAP: 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.

VII. Accomplishment of FY 2012 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings: We have gathered and begun to organize northern pike capture-recapture data. Data available was useful but has required much sorting and checking to determine the utility of the information. As a result, only since August has more in-depth analyses begun in terms of beginning to group data into useful categories (e.g., sampling passes) and to construct the capture histories needed for meaningful data analysis in the form of parameter estimation. We began that stage of analysis after consultation with the Program office, recognizing that many errors and discrepancies remain in the data, but that we needed to stop correcting those not affecting the main analysis so we could proceed. Also, only recently has sampling data for pike from upstream river reaches become available and many questions remain about aspects of those data. An update on that progress was presented at the non-native fish workshop in early December 2011 and another will be given in 2012.

VIII. Recommendations: We are continuing to make progress as quickly as possible, given the many issues related to data reliability and errors.

IX. Project Status: On track and ongoing.

X. FY 2012 Budget Status

A. Funds Provided: $120,000
B. Funds Expended: $63,026
C. Difference: $56,974
D. Percent of the FY 2012 work completed, and projected costs to complete: 45% expended.
E. Recovery Program funds spent for publication charges: 0

XI. Status of Data Submission (Where applicable): NA

XII. Signed: Kevin R. Bestgen and Koreen Zelasko 6 November 2012

Principal Investigator Date