

I. Project Title: **Lower Green River Razorback Sucker larval and Young-of-Year Monitoring Pilot Study.**

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III. Project Summary: This study was designed to determine the presence/absence, distribution, and spawn timing of young of year Razorback suckers in the Green River downstream from the town of Green River. Sampling effort focused on potential habitats and historical sites including the Green River Valley, the area surrounding the San Rafael River confluence, and Millard Canyon.

This study was prompted by increasing Razorback sucker encounters, the presence of multiple age classes, and congregations of ripe Razorback suckers (2001-2003 and 2006-2008; UDWR unpublished data). Razorback suckers encountered during Colorado pikeminnow surveys have increased from an average of 9-10 captures per year in the 2001-2003 surveys to 320 captures per year during the 2006-2008 survey. In 2008 aggregates of ripe Razorback suckers were identified at two locations and an age 1+ Razorback sucker was captured suggesting successful recruitment.

Determining the location, timing, extent, and success of Razorback sucker spawning is essential for evaluating the effectiveness of the stocking program, identifying recruitment, and guiding future management. One hundred seventy eight larval Razorback sucker were captured during 2009 indicating successful spawning. Back calculations indicated spawning occurred between 21 April and 8 June. During this time main channel temperatures averaged 13.7 °C. Sampling in 2010 began when main channel temperatures reached 14 °C. One juvenile Razorback sucker was captured during the 2009 sampling suggesting low survival or a shift in habitat for this age class.

IV. Study Schedule: Initial year 2009, final year 2010. It is anticipated that a comprehensive razorback monitoring plan will be developed and initiated following 2010.

V. Relationship to RIPRAP:

Green River Action Plan: Mainstem: V.D. Conduct abundance estimate for razorback sucker. Develop plan in FY 09 (based, in part, on recommendations from evaluation of stocked razorback report).

VI. Accomplishment of FY 2010 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Task 1: Collect light trap samples – Light trap samples were collected in the Green River Valley between 16 May and 23 June 2010. Sampling began when main channel temperatures reached 14 °C. During the study main channel temperatures ranged from 13.5 °C to 20 °C with a mean of 16.5°C. Habitat temperatures ranged from 17.5°C to 24°C with a mean of 19.4°C. Forty eight light trap samples were collected from the Green River Valley. Of these, 27 were sent to the CSU larval fish lab.

Ninety four light trap samples were collected at downstream sites between river miles 105.4 and 19.5. Fifty seven samples were sent to the CSU larval fish lab for identification. Main channel temperatures ranged from 15°C to 20°C with a mean of 17.5°C. Habitat temperatures ranged from 16°C to 24°C with a mean of 19.3°C.

A 1 meter kick seine was used to collect 78 larval fish samples from flooded tributaries, side channels, backwaters, and embayments between 17 May 2010 and 24 June 2010. A total of 476 m<sup>2</sup> of suitable habitat was seined and 17 samples were sent to CSU larval fish lab to be identified. During this portion of the study, main channel temperatures ranged from 15°C to 20.5 °C with a mean of 16.9°C. Habitat temperatures ranged from 15°C to 25°C with a mean of 19.2°C.

Task 2: Sample for young of year and age 1+ Razorback sucker – A four meter seine was used to sample the lower 120 miles of the Green River during early August. Sampled habitat types included embayments, side channels, flooded tributaries, backwaters, and an isolated pool. Thirty four samples were collected totaling 1305.6 m<sup>2</sup> sampled. Of the thirty four, two samples were sent to the larval fish lab for identification. During this seining trip main channel temperatures ranged from 24°C to 25°C. Habitat temperatures ranged from 21°C to 33°C with a mean of 26.9°C.

Task 3: Preliminary sample identification and data entry – All data has been entered. Collected samples have been submitted to the CSU larval fish laboratory for identification.

Task 4: Annual reporting - This annual report will be updated and resubmitted upon completion of the larval fish identification.

VII. Recommendations: Pending the ID results provided by CSU.

VIII. Project Status: On track and on going.

IX. FY 2010 Budget Status

A.	Funds Provided:	\$54,430.00
B.	Funds Expended:	\$54,430.00
C.	Difference:	\$ 0.00
D.	Percent FY 2010 work completed:	100%
E.	Recovery Program funds spent for publication charges:	\$ 0.00

X. Status of Data Submission: All data will be submitted upon completion of larvae identification by CSU.

XI. Signed: Kenneth Breidinger                      11/9/2010  
Principal Investigator                                      Date