

I. Project Title: Investigation of larval and juvenile razorback recruitment from riverine flood plains.

II. Principle Investigator:

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III. Project Summary:

Razorback suckers of various life stages were stocked into three flood plain depression sites of the Green River, Utah. The levees were breached at these sites for the Levee Removal study that was concluded in 1999. They are: The Stirrup (River mile 276.0), Baeser Bend (RM 273.0) and Above Brennan (RM 268.5). The purposes of this study were to: 1) determine if razorback suckers can survive flood plain depressions throughout the year in the presence of abundant non native fish populations; 2) evaluate growth of razorback suckers in flood plain depressions; 3) determine if fish will voluntarily leave the flood plain for the river during flows that connect the sites with the river; and 4) determine what factors trigger movement of fish from the flood plain to the river. Fish were first stocked and monitored under the original Levee Removal project in 1999. Stocked fish were monitored under this project for the first time in 2000 and 2001. A final report is due in March of 2002.

IV. Study Schedule:

- a. Initial year: 2000
- b. Final year: 2002

V. Relationship to RIPRAP:

Green River Action Plan: Mainstem  
II.A.3 Implement levee removal strategy at high priority sites.  
II.A.3.c. Evaluation

VI. Accomplishments of FY 01 Tasks and Deliverables, Discussion of Initial Findings and

Shortcomings:

Task 1: Stock Larval and Juvenile Fish in selected flood plain wetlands.

Larval fish were stocked into the Baeser Bend site in May. No Age I fish were available for stocking in 2001.

Tack 2: Field data collection

Field data collection for the 2001 field season began with a pre-runoff sampling trip to the three wetland sites. Sampling was conducted at Above Brennan and Baeser Bend to determine if razorback suckers that were present the previous fall had survived the winter. Sampling was conducted at The Stirrup to evaluate overwinter survival. Survival was not detected in The Stirrup site. Razorback suckers were not caught in Baeser Bend. Carp were the only fish caught in the site. There were an estimated 232 razorback suckers remaining in the Baeser Bend after removing 517 fish the previous fall. These fish were unable to survive through the winter. At Above Brennan 49 razorback suckers were caught. These were 1998 year class fish that were stocked in 1999. The average length and weight of these fish was 412 mm and 932 g. Many were ripe males but no ripe females were caught.

Traps to monitor movement of razorback suckers to the river were only set at Above Brennan in 2001 because it was the only site with razorback suckers. No fish were caught in the traps that were set. However, there were four other locations that fish could have used to leave the site. The three upstream breaches that were cut in 2000 and the natural inlet that already existed. Nets could not effectively be used at these sites because of the strong current. During late summer sampling no razorback suckers were caught in Above Brennan, indicating fish may have left for the river during connection. Another possibility is that they died during the summer. Future sampling in the river may help answer this question.

Sampling to determine if any of the stocked larval razorback suckers had survived in Baeser Bend was conducted in mid summer. This effort resulted in the capture of no razorback suckers and 162.0 kg of nonnative fish. The nonnative species composition was primarily YOY carp at 88.4%, followed by red shiners (7.5%), YOY green sunfish (1.5%), YOY black bullheads (1.2%), fathead minnows (<1%) and sand shiners (<1%). Sampling was conducted for 4 days with 11 fyke nets.

Task 3 - 4: Data analysis and report preparation

Annual report December 2000 and 2001 completed  
Final report due March 2002

VII . Recommendations:

1. Continue stocking razorback suckers (especially larval life-stage) into Green River flood plain sites, provided that average or better flows are expected.
2. Continue to evaluate growth, survival and movement into/out of the flood plain sites.
3. Water quality readings should be recorded weekly for 24 hour intervals beginning in late July or early August depending on summer weather conditions.

VIII . Project Status: On track

IX . FY 01 Budget:

- A. Funds budgeted: \$40,400
- B. Funds expended/obligated: \$40,400
- C. Difference: -0-
- D. Percent of FY 01 work completed: 100%
- E. Recovery Program funds spent for publication charges: \$0.00

X. Status of Data Submission: Data will be sent to database manager by March 2002

XI . Signed : Kevin D. Christopherson      December 10, 2001  
Project Manager                                      Date