

COLORADO RIVER RECOVERY PROGRAM
FY 2018 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: 158

I. Project Title: Assessment of larval Colorado pikeminnow presence and survival in low velocity habitats in the middle Green River

II. Bureau of Reclamation Agreement Number(s): R14AP00007
Project/Grant Period: Start date: (Mo/Day/Yr): 05/01/2014
End date: (Mo/Day/Yr): 09/30/2019
Reporting period end date: 09/30/2018
Is this the final report? Yes _____ No X

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IV. Abstract:
This study seeks to monitor the arrival and entrainment of larval Colorado pikeminnow into backwaters in the alluvial section of the Green River between Jensen, Utah and the Duchesne River confluence. This monitoring effort involves sampling with drift nets at Split Mountain once Colorado pikeminnow larvae are detected and subsequently seining backwaters during the baseflow period. Drift nets were used to determine the arrival date and estimate transport abundance of larval Colorado pikeminnow during the descending limb of 2018 runoff. Backwaters in the middle Green River were sampled with seines in July. Data collected in 2018 is preliminary and will be analyzed and reported after all samples are identified to species.

V. Study Schedule: 2008 - 2018

VI. Relationship to RIPRAP:

GENERAL RECOVERY PROGRAM SUPPORT ACTION PLAN

- III. Reduce negative impacts of nonnative fishes and sportfish management activities (nonnative and sportfish management).
- III.A. Reduce negative interactions between nonnative and endangered fishes.
- III.A.2. Identify and implement viable active control measures.
- III.A.2.c. Implement and evaluate the effectiveness of viable active control measures.
- III.A.2.f. Develop control program for removal of small nonnative cyprinids in backwaters and other low velocity habitats.

GREEN RIVER ACTION PLAN: MAINSTEM

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

- III.A.4. Develop and implement control programs for nonnative fishes in river reaches occupied by the endangered fishes to identify require levels of control.
- III.A.4.b. Nonnative cyprinids and centrarchids in nursery habitats.
- III.A.4.b.(1) Small nonnative cyprinids from backwaters and other low velocity habitats in the lower Green River.
- V. Monitor populations and habitat and conduct research to support recovery plan actions- - research, monitoring, and data management.
- V.A. Conduct research to acquire life history information and enhance scientific techniques required to complete recovery actions.

VII. Accomplishment of FY 2018 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Task 1. Determine abundance of larval Colorado pikeminnow present in drift at Split Mountain and arriving in backwaters in the Ouray reach.

Larval Colorado pikeminnow (CPM) monitoring in the Green River at the Split Mountain campground was conducted daily with three drift nets from 26 June through 27 July 2018. Average daily discharge at the USGS Green River at Jensen gage ranged from 2,190 to 2,690 cfs. A total of 52 samples were collected, cleaned of debris, preserved in ethanol, and delivered to the Colorado State University Larval Fish Lab (LFL) for identification. Results will be available pending identification of the larvae within these samples at a future date.

Backwater seining was conducted from 18 July to 27 July 2018. A total of 46 backwaters were sampled representing many different types of backwaters, including shallow ephemeral backwaters a few meters long to a cutoff side channel 214 meters long. Forty-nine samples were collected, cleaned of debris and obvious nonnative cyprinids, preserved in ethanol, and delivered to LFL, which will identify these samples and report fish species and total length (mm). Results will be available and reported in the future.

VIII. Additional noteworthy observations:

Task 2. Deplete nonnative fish in backwaters prior to larval CPM drift and apply backwater blocking treatments.

Funding was not obligated to this task in 2018, so Utah Division of Wildlife Resources (UDWR) Vernal crews did not conduct this fieldwork.

Task 3. Determine fish community composition in manipulated and control backwaters throughout the summer base flow period.

Funding was not obligated to this task in 2018, so UDWR Vernal crews did not conduct this fieldwork or data analysis.

Task 4. Data analysis and reporting.

Data analysis for this project was not conducted in 2018 because samples have yet to be identified by LFL. Samples were delivered to LFL in July 2018; this year's results and corresponding analysis will be included in a future report.

Task 5. Field support for Argonne backwater topography data collection.

Funding was not obligated for this task in 2018, as reflected in section XI. FY 2018 Budget Status (see below), so fieldwork was not conducted.

IX. Recommendations:

- Continue monitoring larval Colorado pikeminnow with drift nets at Split Mountain and young-of-year CPM with seines in backwaters along the middle Green River. Data collected from this effort provides an estimate of larval transport abundance in the Green River as well as young-of-year growth, occupancy, and life history information.
- Coordinate with Colorado State University Larval Fish Lab to estimate when the first pulse of larval CPM might be detected in drift nets on the Yampa River. This would help ensure that our efforts at Split Mountain are appropriately timed.
- If possible, improve field identification of early life stage Colorado pikeminnow. This could provide benefits such as allowing the identification of physical characteristics of backwaters CPM have either drifted into or selected.
- Explore the possibility of using newer physical habitat surveying methods while sampling backwaters with seines. Survey grade quality data collection has become faster with modern equipment and, in some cases, less expensive. Although directly correlating biological (fish) data with physical data in backwaters has been difficult to date, it might be achieved if there is also temporal linkage.

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

XI. FY 2018 Budget Status

- A. Funds Provided: \$50,360
- B. Funds Expended: \$50,360
- C. Difference: \$0
- D. Percent of the FY 2018 work completed: 100%
- E. Recovery Program funds spent for publication charges: \$0

XII. Status of Data Submission: Samples are being processed, and data is not yet available.

XIII. Signed: M. Tildon Jones 16 November, 2018
Principal Investigator Date