

COLORADO RIVER RECOVERY PROGRAM  
2019 ANNUAL PROJECT REPORT

RECOVERY PROGRAM  
PROJECT NUMBER: FR-173

Project Title: Evaluation of Green River Flow and Temperature Recommendations

I. Bureau of Reclamation Agreement Number(s): R15PG00159  
Western Area Power Administration Agreement Number (s): 100012740-161,  
100012740-171

II. Principal Investigator(s):

Kirk LaGory  
Argonne National Laboratory  
4700 S. Cass Ave., Lemont, Illinois 60439  
Phone: (630) 252-3169  
Fax: (630) 252-6090

III. Abstract:

Flow and temperature recommendations for endangered fish in the Green River downstream of Flaming Gorge Dam were established by Muth et al. (2000). Since that time, multiple studies have been conducted to evaluate the effects of implementing those recommendations on endangered species and their habitat. The objectives of this project are to provide an overall evaluation and status assessment of the Green River flow and temperature recommendations based on operational, biological, and physical information collected from 2006 through summer 2014. The end product will be a report that summarizes this review, and provides the Recovery Program with clear recommended revisions of Muth et al, should the evaluation suggest that revisions are warranted.

IV. Study Schedule:

This project was initiated in FY 2015. The Green River Flow Evaluation and Assessment Team (GREAT) has been meeting regularly since that time. Initially, an 18-month effort was envisioned. However, the extensive modeling and analysis required to evaluate each of the various proposed experimental changes in flows (larval-triggered pulse flows, modified base flows, and early summer flow spikes) delayed completion. A draft report was provided for Program technical committee reviews and peer review in May 2019, and a final draft will be distributed in October 2019.

V. Relationship to RIPRAP:

*General I.A.1* - Review instream flow methodologies and assess the technical adequacy of current flow recommendations.

*Green River I.D.1.h* - Integrate and synthesize reports for evaluation and recommended revision of flow and temperature recommendations.

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

#FR-173 Green River Flow & Temperature Recommendations FY 2019 Ann. Rpt.

The GREAT held a face-to-face workshop in Lakewood, Colorado in October 2019 to collectively review and resolve various report issues, establish next steps, and assign follow-up tasks for completing the report. This was followed by regular team conference calls through the winter and spring to review progress, share completed assignments, and identify remaining report needs.

A draft GREAT report was distributed to the Recovery Program’s Biology Committee, Water Acquisition Committee, and two peer reviewers (Dr. Robert Muth and Dr. Charles Yackulic) in May 2019, for a 60-day period of review and comments. The PDO and the lead authors held two webinars for interested parties in June, at which time they reviewed the report structure, summarized the report’s major findings, and fielded reviewers’ questions.

Comments on the draft report were received in July. In addition to comments from the two peer reviewers, comments also were submitted by Western Resource Advocates and the Colorado Water Conservation Board. At the end of FY2019, the GREAT was finalizing its responses to comments and preparing a final draft for delivery to the Program in October 2019. That final draft has also undergone a thorough editorial review by staff at Argonne National Laboratory.

- VII. Additional noteworthy observations: N/A
- VIII. Recommendations: Distribute the final draft report (completed October 2019) to the Recovery Program technical committees and Management Committee, and hold a webinar to walk through that document with interested individuals in winter 2019-2020. If possible, finalize the report in early 2020.
- IX. Project Status: Ongoing. A final draft of the report is now available for distribution to the Program’s technical and Management committees. Final adoption of the report is anticipated in early 2020.
- X. Budget Status (from project start in FY15)

Argonne National Laboratory

|                    |                     |           |
|--------------------|---------------------|-----------|
| A. Funds provided: | Reclamation:        | \$63,053  |
|                    | WAPA (non-Program): | \$338,217 |
| B. Funds expended: | Reclamation:        | \$63,053  |
|                    | WAPA (non-Program): | \$338,217 |
| C. Difference:     | Reclamation:        | \$0       |
|                    | WAPA (non-Program): | \$0       |

Larval Fish Laboratory (the last of these funds were expended in FY 2016)

|                    |              |          |
|--------------------|--------------|----------|
| A. Funds provided: | Reclamation: | \$66,668 |
| B. Funds expended: | Reclamation: | \$66,668 |
| C. Difference:     | Reclamation: | \$0      |

XI. Status of Data Submission (Where applicable): N/A

XII. Signed: Kirk LaGory 10/25/19  
Principal Investigator Date