

- I. Project Title: Geomorphology Work
- II. Bureau of Reclamation Agreement Number(s): N/A
- III. Principal Investigator(s): Jana Mohrman
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- IV. Abstract: Refining flow recommendations and channel monitoring is becoming increasingly important as the Recovery Program moves from a research-oriented program to implementing flow protection through projects such as coordinated reservoir operations, re-operation of dams, instream flow protection, and levee removal. To ensure that future geomorphology and channel monitoring projects are designed properly, the Recovery Program established a peer review process/panel.

In 2014 the Geomorphology Subcommittee provided a summary of up-to-date techniques to evaluate the health of river geomorphology as it relates to flow recommendations. The group provided a ranking of which reaches were most important to recovery and what elements needed to be evaluated.

Committee members:

Kirk LaGory	Chairman (Argonne Labs)	Tom Pitts (Water Users)
Jack Schmidt	(USGS)	Tom Chart (PDO)
Toby Minear	(USGS)	Dan Luecke (WRA)
Paul Grams	(USGS)	John Pitlick (CU)
Cory Williams	(USGS)	Bob Mussetter (Tetrtech)
David Lytle	(USGS)	Jana Mohrman (FWS)
David Topping	(USGS)	

- V. Study Schedule: A Peak Flow Technical Supplement report is being reviewed by the Biology and Water Acquisition committees describing up-to-date methods to collect data for monitoring and detecting the health of river geomorphology. These techniques will be applied in the future to evaluate flow recommendations in the rivers as needed.
- VI. Relationship to RIPRAP: General Recovery Program Support Action Plan I. Provide and Protect Instream Flows
- VII. Accomplishment of FY 2014 Tasks and Deliverables: Toby Minear of the USGS

conducted a proof-of-concept level hydrophone reconnaissance in the Gunnison River on the peak and ascending limb of the hydrograph. It was fortunate that USGS was able to quickly move equipment from their San Joaquin project and the Recovery Program was able to fund travel for this project. Preliminary results affirmed that John Pitlick's original work targeting bankfull flows successfully mobilize bedload material.

The Peak Flow Technical Supplement report is in draft and will be reviewed by the Biology (BC) and Water Acquisition (WAC) committees. It ranks major stream reaches that need evaluation and describes a collection of up-to-date methods to collect data for monitoring and detecting the health of river geomorphology.

VIII. Additional noteworthy observations: None.

IX. Recommendations:

The Peak Flow Technical Supplement report is being finalized with eventual incorporation into the RIPRAP. It offers a range of study approaches and prioritizes river reaches to evaluate the peak flow aspects of the Recovery Program's flow recommendations. Its first application is to supplement the existing study plans for the Green River and Gunnison and Colorado Rivers.

Depending on 2015 runoff conditions (average to wet) consider another year of hydrophone work and perhaps an embeddedness study on the lower Gunnison River and the 15-Mile Reach.

X. Project Status: The Technical Supplement is being considered for use in the Gunnison and Green River evaluations.

XI. FY 2014 Budget Status

A. Funds provided: up to \$10,000 in Section 7 funds/year

B. Funds expended: \$4,200 travel for hydrophone project was covered by Recovery Program Project # 3
(FWS Program Management) budget.

C. Difference: Not applicable

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

XIII. Signed: Jana Mohrman 10/27/2014
Principal Investigator Date