

**COLORADO RIVER RECOVERY PROGRAM
FY-99 ANNUAL PROJECT REPORT**

**RECOVERY PROGRAM
PROJECT NO. Yampa Plan**

I. Project Title: Green and Yampa River Basin Sediment Monitoring Program

II. Principal Investigator: Ed Vail
U.S. Geological Survey
Phone: 970-245-5257 ex 29
Fax: 970-245-1026
E-mail: jevaill@usgs.gov

III. Project Summary:

The Recovery Program has identified a need to better define the requirements, appropriate methodologies and levels of effort for a sediment monitoring program, to help define habitat requirements for endangered native fish in the Yampa, Little Snake, and Green Rivers. To meet that need, an independent peer review panel was formed to review historical data, review the status of ongoing data collection efforts, identify sediment issues as they relate to recovery of endangered fishes, and develop recommendations for future sediment work to support Recovery Program efforts. Based upon peer review recommendations, an initiative to collect sediment data was started in 1998. During 1998, 25 suspended sediment and bedload samples were collected at the two Yampa River sites and one Green River site between May 6 and June 30, 1998. The data were published in Water Resources Data for Colorado, 1998 vol. 2 (Water-Data Report Co-98-2). During the second year of data collection (1999) 14 samples were collected at the two Yampa River sites and the Green River site between March 31 and June 24. In addition, 18 suspended and bedload samples were collected on the Green River above Canyon of Lodore during varied reservoir releases from Flaming Gorge under the scope of work for a separate project. The data will be summarized and published in the annual data report for the 1999 water year.

IV. Study Schedule: Initial year - 1998, Final year - 2008

V. Relationship to RIPRAP:

Yampa River Action Plan: Yampa and Little Snake Rivers 1.A.4.a(3)
Yampa River Operation and Management Plan

VI. Accomplishments:

Preliminary analysis of existing data for the Yampa River at Deerlodge Park and the Little Snake River near Lily indicates the highest suspended-sediment concentrations occur during early spring flushes associated with low elevation snowmelt. The majority of material collected during these early samples is finer than 0.062mm (fine sands, silts, clays). Suspended sediment

concentrations tend to remain high during the rising limb of the spring peak and gradually decrease during the recession. Isolated summer thunderstorms can contribute high suspended-sediment concentrations that have high percentages of material finer than 0.062. Higher bedload discharges occur during the rising limb of the spring peak also and during the rising limb of summer storms. Suspended sediment concentration and bedload load discharge computations have been received from the lab and are being summarized for publication.

The sampling schedule for 2000 is tentatively planned for mid-March through the end of June. A detailed progress report for the 1998-99 data will be prepared in January 2000.

VII. Recommendations: Continue to collect data as recommended by the peer review panel.

VIII. Project Status: Ongoing, the current study runs from 1998 to 2001.

IX. FY-99 Budget:

- A. Funds Provided: \$31,600
- B. Funds Expended: \$31,600
- C. Difference: \$ 0 All funds were expended in 1999.

The USGS has provided \$25,000 of match for this project to do additional analysis and correlation with data collected earlier in the century.

X. Status of Data Submission: Not applicable, 1998 was the first year of the project and no formal reports are required. A summary report of the data will be made available in January 2000.

XI. Signed: George Smith, for Ed Vail December 16, 1999
Principal Investigator Date