

COLORADO RIVER RECOVERY PROGRAM
FY 2010 ANNUAL PROJECT REPORT

RECOVERY PROGRAM
PROJECT NUMBER: 8

I. Project Title: Basin Wide Stream Gage Operation & Maintenance

II. Principal Investigator:

Jana Mohrman

P.O. Box 25486, Denver, CO 80225-0486

E-mail: Jana_Mohrman@fws.gov

Phone: (303) 236-4486

Fax: (303) 236-4224

III. Project Summary:

In 1990, the Recovery Program first identified a need for a permanent USGS gage in the 15-Mile Reach of the Colorado River below the GVIC diversion. The gage was installed during the summer of 1991 and became operational on October 1, 1991. The gage was to ensure that water secured under the Recovery Program is delivered to the 15-Mile Reach. In 1996, the Recovery Program again identified a need for gages on the Yampa River, and the USGS installed gages above and below the confluence with the Little Snake River. Annual gage operation and maintenance are provided by USGS under contract with Reclamation. The Palisade gage on the Colorado River was very helpful in managing reservoir releases in 2008 in the absence of a Shoshone call for the second year in a row during the late summer season. Releases from Colorado River mainstem reservoirs such as Ruedi, Green Mountain and Williams Fork were closely monitored.

The USGS as a part of the transit loss study on Elkhead Creek relocated an existing streamflow-gage, Elkhead Creek below Maynard Gulch, moved near the mouth of Elkhead Creek to the US 40 bridge (paid by CWCB). By pairing a study and the relocation of a gage, the water managers will have the information needed to shepherd Recovery Program releases. Incorporating a streamflow gage near the mouth of Elkhead Creek will also aide in the monitoring of diversion on Elkhead Creek to ensure that the releases are shepherded properly along Elkhead as well as downstream in the Yampa.

USFWS requested a late-summer flow for the Yampa River to benefit ongoing research on smallmouth bass conducted by CSU. The objective of this request was to maintain a daily mean target of 300 cfs at the Maybell gage through September to see if the cooler water temperatures and higher flow impede smallmouth bass survival. This is a substantially higher base-flow condition compared to the previous 5 years of research. The gages on the Yampa River were used for monitoring river conditions and the 5,000 acre feet of water released from Elkhead Reservoir.

The Recovery Program is also a cooperator in the operation of 3 gages on the Duchesne River to facilitate water deliveries to the lower reaches of the river. These gages are used to monitor peak flow and late summer flows. The current gaging station layout along the lower Duchesne River has been in place, as a whole, for approximately 5 years. The four gaging stations have respective periods-of-record as follows: The four Upper Colorado Recovery Implementation Program

(UCRIP) gages were also relied upon to quantify transit losses and assure water was delivered to the critical reach.

Duchesne River at Myton 96 years
Duchesne River above Uinta River near Randlett 9 years
Uinta River at Randlett 14 years
Duchesne River near Randlett 65 years

Two of these stations, Duchesne River at Myton and Duchesne River near Randlett, have been in place since before any Central Utah Project facilities were constructed. These two stations have been funded in recent years through Central Utah Project Completion Act (CUPCA) budgets for hydrologic studies and monitoring relating to CUPCA activities in the Uinta Basin. With the Uinta Basin Replacement Project (UBRP) portion of CUPCA activities drawing to a close, funding for these stations under CUPCA budgets was terminated in October 2004. Since these two gaging stations provide important monitoring for target flows the CRRIP has provided CUPCA with matching support of these gages using Section 7 funding.

The other two stations, Duchesne River above Uinta River near Randlett and Uintah River near Randlett, were put in place to monitor stream flows for CRRIP activities. They have been funded in recent years by matching support by the UCRIP, and, along with the two aforementioned gaging stations, provide important target flow monitoring points along the lower Duchesne River.

The 2007 upgrading these latter two gaging stations to the capabilities listed above, under a "One-Time Cost Items," brought all four stations to a comparable, state-of-the-art status, and will provide a reliable, balanced system for monitoring target flows along the lower Duchesne River.

IV. Study Schedule: Initial Year - 1990, Final Year - Ongoing

V. Relationship to RIPRAP:

Colorado River Action Plan: Mainstem; I.A.5; Provide and legally protect instream flows pursuant to Colorado River PBO Green River Action Plan: Duchesne River; I.A; ID Year-round flow needs for recovery Yampa River; I.A.1; ID fish habitat and flow needs

VI. Accomplishments of 2010 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

The USGS operates and maintains the gages as specified in their Cooperative Agreement with the CDOW. USGS produces daily flow and temperature records, which will be published in the annual Water Resource paper for Colorado. Interim data are available by FAX from the Grand Junction USGS office, 970-245-5257. Near real-time data from the gages can also be found on the Internet @ <http://waterdata.usgs.gov/co/nwis/current/?type=flow>.

The Recovery Program has consolidating gage operation and maintenance with one agency in every State. This has made it easier to track contracts, invoices and payments.

The new Doppler gage on the Green River near the Ouray NWR was reinstated and has been queried on the internet for multiple purposes.

VIII. Project Status: On track and ongoing. The gages are operational and information is available from the Internet, Watertalk, and the USGS Water Resource paper for Colorado and Utah.

XI 2010 Budget

COLORADO	COST	UCRIP	USGS	CWCB/SEO	
Funds go to Colorado State Engineers Office Steamboat Springs					
Williams Fork Creek near Craig	\$9,702	\$7,276	\$0	\$2,426	
Funds go to USGS Grand Junction					
Yampa and Lodore Temperature	\$8,820	\$8,820	\$0		
Yampa River Near Craig ¼ of O/M	\$3,980	\$3,980	\$0		
Colorado River Near Palisade	\$15,908	\$15,908	\$0		
Yampa River Above Elkhead Creek	\$15,908	\$15,908	\$0		
				\$6,604	USBR
Yampa River Below Little Snake	\$15,908	\$6,604	\$0	\$2,700	NPS*
TOTAL	\$70,224	\$58,496		\$11,730	

UTAH

		CUWCD	USGS
Funds go to Central Utah Project			
Green River near Jensen (DCP & Temp)	\$5,127	\$2,820	\$2,307
Duchesne River near Randlett	\$14,900	\$8,195	\$6,705
Duchesne River above Randlett	\$14,900	\$8,195	\$6,705
Uinta River at Randlett	\$14,900	\$8,195	\$6,705
Duchesne River near Randlett (Temp)	\$2,517	\$1,384	\$1,133
Price River Flow and (Temp)	\$17,416	\$9,579	\$7,837
Duchesne R. at Myton	\$14,900	\$8,195	\$6,705
Green River at Ouray NWR	\$14,900	\$14,900	
TOTAL:	\$99,560	\$61,463	\$38,097

Grand Total **\$169,784** **\$119,959**

The USGS Colorado and Utah Water Science Center independently estimate their program costs for the Recovery Program largely based on local salary structure and logistical factors specific to the networks we each operate; however, there exists reasonable consistency in our cost-estimate methodology. The percentage of operation and maintenance costs for the streamgages and temperature monitors operated by the USGS for the Recovery Program is typically distributed among the following activities:

- Labor for field and office: 41%
- Administrative support: 25 %
- Building and Utilities: 10 %
- Field Equipment: 10 %
- Data Management and Data Delivery: 7 %
- Vehicles: 5 %
- Travel (lodging and per diem): 2 %

Please note, that Federal salaries account for approximately 70 percent of our monitoring O&M costs, therefore, any increases in salaries or benefits have a substantial effect on the magnitude of the year-to-year changes in program costs.

IV. FY- 2010 \$119,959 Recovery Program Cost

X. Status of Data Submissions: Not applicable.

XI. Signed: Jana Mohrman
Principle Investigator

January 18, 2011
Date