

Lead Agency: U.S. Fish and Wildlife Service

Submitted by: Jana Mohrman
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<u>Category:</u>	<u>Expected Funding Source:</u>
<input checked="" type="checkbox"/> Ongoing project	<input type="checkbox"/> Annual funds
<input type="checkbox"/> Ongoing-revised project	<input type="checkbox"/> Capital funds
<input type="checkbox"/> Requested new project	<input checked="" type="checkbox"/> O&M funds
<input type="checkbox"/> Unsolicited proposal	<input checked="" type="checkbox"/> Other ()

I. Title of Proposal: Operation and Maintenance of Gages Important to the Recovery Implementation Program.

II. Relationship to RIPRAP:

<u>Task #</u>	<u>Task Description</u>
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Colorado River Action Plan

I.A.5 Provide and legally protect instream flows pursuant to the Colorado River PBO.

Green River Action Plan

I.A.3 Deliver identified flows

Yampa River Action Plan

I.B.2a.(2)(b) Elkhead Reservoir delivery flows for endangered fish

I.A.1.f Install and/or operate gages

Duchesne River Action Plan

I.C. Legally protect and deliver identified flows.

I.D. Coordinate reservoir operation

III. Study Background/Rationale and Hypotheses:

Over the years, the Recovery Program has identified a need to expand flow gaging in the basin to support development of flow recommendations, quantify sediment movement, and administer water secured for endangered fish. This scope of work covers the Recovery Program gaging program and identifies the contributions of cooperating agencies. Cooperators are USGS, the Colorado State Engineers Office and the Central Utah Water Conservancy District. Utah gages are funded with Program O&M funds that are passed through to cooperating agencies. Colorado gages are funded directly by the Recovery Program by funds administered by the Bureau of Reclamation.

IV. Study Goals, Objectives, End Products:

Provide a basis for refining the flow recommendations for the important stream reaches of the Colorado, Yampa, Price and Duchesne Rivers.

Provide a benchmark for future monitoring by video or aerial photography.

Gages will be used to aid scheduling releases from Ruedi, Wolford, Williams Fork, Elkhead and Green Mountain Reservoirs and other water sources which may be acquired by the Recovery Program.

Provide basic information for sediment modeling for the Little Snake and Yampa Rivers.

Upgrade gaging to provide reliable system for monitoring flows along the lower Duchesne River.

- V. Study Area:
Colorado, Green, Yampa, and Duchesne Rivers.

- VI. Study Methods/Approach:

The Recovery Program will work with cooperators to contract with for the operation of gages important to the Recovery Program.

The USGS Colorado and Utah Water Science Centers independently estimate their program costs for the Recovery Program largely based on local salary structure and logistical factors specific to the networks they each operate; however, their cost-estimate methodology is reasonably consistent. The percentage of operation and maintenance costs for the stream gages 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 %

- VII. Task Description and Schedule:

- A. Operate and maintain the Palisade (15-Mile Reach) gage installed in FY-90 by the Recovery Program.
- B. Operate and maintain the two gages installed on the Yampa River installed in FY-97 by the Recovery Program. Recent funding shortfalls have resulted in the Recovery Program funding 1/4 of the cost of the Craig gage on the Yampa River. The gage on the Yampa River above Elkhead Creek and the gage on Williams Fork are needed to administer releases from the enlarged Elkhead Reservoir.
- C. Operate and maintain the gages installed on the Duchesne and Uinta Rivers installed in FY-97 by the Central Utah Water Conservancy District. The Recovery Program will cost-share in the operation of this gage.

- D. Operate and maintain the temperature equipment installed on the Duchesne and Uinta Rivers installed in FY-97 by the Central Utah Water Conservancy District. The Recovery Program will cost-share in the operation of this gage.
- E. Operate and maintain the temperature equipment installed on the Jensen Utah gage installed in FY-98 for the Recovery Program. The Recovery Program will cost-share in the operation of this gage.
- F. Operate and maintain the gage installed on the Price River during the summer of 2000. The gage was requested by the Biology Committee. River stage/flow and temperature will be collected. The Recovery Program will cost-share in the operation of this gage.

VIII. Study Schedule: Typically gages are operated on an October to September Water/Fiscal year. Due to the change to direct funding by Reclamation, 2007 Operation of the Colorado gages began January 1, of 2007, and continued through September 30, 2008.

Real time provisional data is available on the web at:

<http://waterdata.usgs.gov/co/nwis/current/?type=flow><http://www.usgs/nwis.gov> The data is published in March of each year and is available in USGS annual water resource data reports. Historic data is also available on the web but usually lags two years because of quality assurance procedures and the volume of data which must be processed by USGS.

The temperature for Lodore, Jensen and Deerlodge is available at:

http://waterdata.usgs.gov/nwis/uv?multiple_site_no=404417108524900%0D%0A09260050%0D%0A09261000&search_site_no_match_type=exact&index_pmcode_00010=5&index_pmcode_82292

IX 2012 Budget

COLORADO	COST	UCREFRP	USGS		
Funds to CO State Engineers Office Steamboat Springs					
Williams Fork Creek near Craig	\$10,286	\$7,714	\$0	\$2,572	CWCB/SEO
Funds go to USGS Grand Junction					
Yampa and Lodore Temperature	\$9,220	\$9,220	\$0		
Yampa River Near Craig ¼ of O/M	\$4,050	\$4,050	\$0		
Colorado River Near Palisade	\$16,200	\$16,200	\$0		
Yampa River Above Elkhead Creek	\$16,200	\$16,200	\$0		
Yampa River Below Little Snake	\$16,200	\$6,770	\$0	\$9,430	USBR
TOTAL	\$72,156	\$60,154	\$0	\$12,002	
UTAH					
Funds go to Central Utah Project					
	COST	UCREFRP	USGS		
Green River near Jensen (DCP & Temp)	\$5,130	\$2,822	\$2,309		
Duchesne River near Randlett	\$15,493	\$8,516	\$6,977		
Duchesne River above Randlett	\$2,565	\$1,411	\$1,154		
Uinta River at Randlett	\$15,493	\$8,516	\$6,977		
Duchesne River near Randlett (Temp)	\$15,493	\$8,516	\$6,977		
Price River Flow and (Temp)	\$23,239	\$12,779	\$10,460		
Duchesne R. at Myton	\$15,493	\$8,516	\$6,977		
Green River at Ouray NWR	\$15,493	\$9,296	\$6,197		
TOTAL:	\$108,397	\$60,370	\$48,027		
Grand Total FY 12	\$180,553				

X 2013 Budget

COLORADO	COST	UCREFRP	USGS		
Funds to Colorado State Engineers Office Steamboat Springs					
Williams Fork Creek near Craig	\$10,595	\$7,946	\$0	\$2,649	CWCB/SEO
Funds go to USGS Grand Junction					
Yampa and Lodore Temperature	\$9,400	\$9,400	\$0		
Yampa River Near Craig ¼ of O/M	\$4,150	\$4,150	\$0		
Colorado River Near Palisade	\$16,600	\$16,600	\$0		
Yampa River Above Elkhead Creek	\$16,600	\$16,600	\$0		
Yampa River Below Little Snake	\$16,600	\$6,940		\$9,660	USBR
TOTAL	\$73,945	\$61,636	\$0	\$12,309	
UTAH					
Funds go to Central Utah Project					
	COST	UCREFRP	USGS		
Green River near Jensen (Temp)	\$5,160	\$2,838	\$2,322		
Duchesne River near Randlett	\$15,583	\$8,566	\$7,018		
Duchesne River near Randlett (Temp)	\$2,580	\$1,419	\$1,161		
Uinta River at Randlett	\$15,583	\$8,566	\$7,018		
Duchesne River above Uinta River	\$15,583	\$8,566	\$7,018		
Price River Flow and Temp	\$23,375	\$12,853	\$10,521		
Duchesne R. at Myton	\$15,583	\$8,566	\$7,018		
Green River at Ouray NWR	\$15,583	\$9,350	\$6,233		
TOTAL:	\$109,031	\$60,723	\$48,308		
Grand Total for FY 2013	\$182,976				

FY 2012 budget summary by target:

CQ State Engineers Office: \$2,572

USBR: \$9430

USGS: \$48,027

UCREFRP FY2012: \$120,524

FY 2013 budget summary by target:

CQ State Engineers Office: \$2,649

USBR: \$9,660

USGS: \$48,308

UCREFRP FY2013: \$122,359

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Contact Information

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USBR Salt Lake City funds ½ of the Yampa River below Little Snake River gage

XI Reviewers: Recovery Program Staff.