

FY-2001 PROPOSED SCOPE OF WORK for:
Redlands Gage O&M

Project #: CAP-4C

Lead Agency: U.S. Bureau of Reclamation

Submitted by: Brent Uilenberg
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| <u>Category:</u> | <u>Expected Funding Sources:</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 | |

I. Title of Proposal:

Operate Gunnison River gage below Redlands Diversion Dam and gage in the Redlands Fish ladder and Maintain the Redlands Fish ladder

II. Relationship to RIPRAP:

-Colorado River Action Plan: Gunnison River
II.B.1.e. Identify and secure minimum flows below Redlands Diversion Dam

III. Study Background/Rationale and Hypotheses:

Proposed work is to support the program's continued operation of the Redlands Fish Passage Structure and to provide flow data for minimum flow requirements.

Since the gage is on the State of Colorado system daily flow can be obtained by the HYDROMET system or through WATERTALK. Both of these systems use the rating table prepared by the State of Colorado. Procedural differences used by Reclamation and the State differ somewhat. The procedure used by Reclamation is the same as that used by the USGS and is thought, by some, to be a little more accurate at low flows. Consequently, the annual report for this SOW will include the flow data based upon Reclamation's rating table.

Current operation of the fish ladder requires the installation of all trash racks before the impeller meter can be installed in the bypass pipeline. Since the trash racks require additional operation and maintenance the strategy has been to install the trash racks and impeller meter only during periods of low flow in the Gunnison River. Therefore, when the flow in the Gunnison River falls below 1,000 cfs, the Fish and Wildlife Service will install and operate the trash racks and USBR will install and operate the impeller meter.

IV. Study Goals, Objectives, End Product:

The gaging station on the Gunnison River below the Redlands Diversion Dam is necessary to evaluate the effects of the releases on occupied habitat of endangered fish in the Gunnison River. Flow measurement in the Redlands Fish Ladder and bypass pipeline is used for operation and for river administration.

Several small items on the fish ladder also require maintenance.

V. Description of past performance on this or similar projects:

N/A

VI. Study area:

Gunnison River below Redlands Diversion Dam.
Redlands Fish Ladder

VII. Study Methods/Approach:

VII. Task Description and Schedule:

Gunnison River Gage activities

Monthly visit

Rate 2 x /yr (high flow and low flow)

Change tank 2 x /yr

Maintain equipment

Annual Report by 12/10 each year to include average daily flow

Fish ladder activities

Start-up

Install position analog transmitter

Install logger

Monthly

Clean silt from stilling well

Change data card

Check meter impeller

Rate open channel 2 x /year

Low flow periods (Gunnison River at Whitewater below 1,000 cfs)

Install all trash racks (Fish and Wildlife Service)

Install impeller meter

End of Year close down

Remove impeller meter

Remove position analog transmitter

Remove data logger
 Remove data from logger

Winter

Service equipment
 Annual Report by 12/10 each year to include average daily flow for the fish ladder and the pipeline

Operation and Maintenance Cost Estimate for Redlands Fish Passageway Facilities

| Activity | Cost |
|---|----------------|
| Remove corrosion on gates at the fish entrance structure and repaint these problem areas to prevent further deterioration | \$600 |
| Remove sediment and debris accumulation in the vicinity of the forebay structure inlet | 2,400 |
| Rewire electric circuits in the storage building such that the light switch does not turn off the power to the flow instrumentation data logger | 200 |
| Store stoplogs in a protected area | 600 |
| Determine whether the security lights are working at nighttime | 0 |
| Reattach metal conduit to the chute wall | 600 |
| Pump out the fish entrance structure and perform inspection | 3,000 |
| Institute a gate exercising program which includes gate stem lubrication | 0 |
| Remove corrosion on the base of the crane and paint these problem areas to prevent further corrosion | 300 |
| Total | \$7,700 |

IX. FY-2001 Work:

| | |
|---------------------------------|--------------|
| Labor - for gage and meter | \$6,000 |
| Equipment repair/replacement | 700 |
| Operation and maintenance costs | <u>7,700</u> |
| Total | \$14,400 |
| Request in this SOW | \$10,000 |

X. Budget Summary:

FY-2001 through life of gage \$10,000

XI. Reviewers:

- | | | | |
|----|-----------------|-------|----------|
| 1. | Bob Norman | BR-GJ | 248-0634 |
| 2. | Brent Uilenberg | BR-GJ | 248-0641 |
| 3. | Glenn Stone | BR-GJ | 248-0675 |

XII. References: