Operation and Maintenance of Gages: Estimation of Gunnison streamflow transit losses

Lead Agency: U.S. Geological Survey

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Category: Expected Funding Source:
_ Ongoing project _ Annual funds
_ Ongoing-revised project _ Capital funds
_ Requested new project _X_ Section 7 funds
_ Unsolicited proposal

I. Title of Proposal:

Estimation of streamflow transit losses along the Gunnison River from Whitewater downstream to the Redlands Canal diversion dam, near Grand Junction, Colorado.

II. Relationship to RIPRAP:

<table>
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<th>Task #</th>
<th>Task Description</th>
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<tbody>
<tr>
<td>I.A.1</td>
<td>Identify flows needed for recovery.</td>
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<tr>
<td>I.C.3</td>
<td>Deliver identified flows</td>
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III. Study Background/Rationale and Hypotheses:

This scope of work represents a cooperative effort between the U.S. Geological Survey, Colorado River Water Conservation District, the Colorado Water Conservation Board and the Recovery Program.
IV. Study Goals, Objectives, End Products:

The objective of the proposed study is to determine (estimate) streamflow transit losses in the 12-mile reach of the Gunnison River from station 09152500 downstream to the Redlands Canal diversion dam. Some potential cooperators have expressed an interest in determining streamflow transit loss over the full range of discharge in the study reach, but at a minimum, streamflow transit loss should be determined for discharges up to about 2,000 ft³/s.

V. Description of Past Performance:

The U.S. Geological Survey has performed many studies of a similar nature in the past for the Recovery Program and currently operates the Palisade gage and two gages on the Yampa River for the Recovery Program.

VI. Study Area:

Gunnison River from Whitewater downstream to the Redlands Canal diversion dam, near Grand Junction, Colorado.

VII. Study Methods/Approach:

The Recovery Program will help fund a two year study of streamflow transit losses along the Gunnison River from Whitewater downstream to the Redlands Canal diversion dam, near Grand Junction, Colorado. Recovery program funds will be used for year one of the study to facilitate low-flow data collection in early 2003. Year two of the study will be funded by the Colorado River Water Conservation Board and will include additional data collection and report preparation.

VIII. Task Description and Schedule:

See attached U. S. Geological Survey study plan.

IX. Study Schedule: The study hopes to accomplish a river reconnaissance, two sets of streamflow measurements and the mass balance analysis in 2003. Work planned in 2004 includes 3 sets of stream flow measurements, report preparation and report publishing.

X. FY- 2002 Budget: $49,710*
   FY -2004 Budget     62,980
   Total                $112,690 **

* The Recovery Program will contribute $10,000 to the 2003 effort.
**A comprehensive budget break out is included in the attached USGS study plan.