

I. Project Title: General Hydrology Support for Water Acquisition Activities.

II. Principal Investigator:
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III. Project Summary:

The Service's Division of Water Resources provides support for activities undertaken by the Water Acquisition Committee (WAC) and the Recovery Program Director's Office in the areas of water acquisition and water scheduling and coordination. WAC support includes chairing the WAC, preparing agendas, preparing meeting summaries, developing Scopes of Work, preparing Annual Reports, and working on WAC-related projects. Other major tasks include participation in special projects such as Grand Valley Water Management, Coordinated Reservoir Operations, Yampa River Operation and Management Plan, and scheduling reservoir releases for flow support in the 15-Mile Reach and Yampa River.

IV. Study Schedule: Ongoing

V. Relationship to RIPRAP:

Colorado River Action Plan, Mainstem: I.A.5
Yampa River Action Plan: I.A.1, I.B.2

VI. Accomplishments of 2002 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

A. Gage Installation and Maintenance:

Water Rights Acquisition Committee Administrative Work: Scopes of Work and contracts were developed for the operation of the Palisade gage, two gages on the Yampa River, and two gages on the Duchesne River. The gages on the Colorado and Yampa rivers were funded cooperatively by the Recovery Program, Colorado River Water conservation District and USGS. The two gages on the Duchesne River were funded cooperatively by the Recovery Program, Central Utah Water Conservancy District, and USGS.

B. Hydrology Support for Water Acquisition Activities:

1. Assistance was provided to the Recovery Program Director with assistance in implementing the 2012 agreement for water from Ruedi Reservoir. The new lease modified and simplified reporting requirements, the service no longer must develop a special report documenting the benefits of the releases to the endangered fish in the 15-Mile Reach. To fulfill the reporting requirement a compendium of reports and Program Directors updates was provided to the Reclamation and the Colorado Water Conservation Board in March of 2005.

Water Year 2004 was a year where snowpack was near normal most of the winter and but crashed during periods of above normal temperatures and low perception in March. Ruedi came to within 9,000 acre feet of filling, Wolford and Williams Fork reservoirs did not fill, Green Mountain obtained a paper fill. The Service Water Resources staff participated in the following activities to help keep water in the Colorado, Green, and Yampa rivers to support endangered fish.

- . During the late summer, flows in the 15-Mile Reach were monitored on a daily basis and weekly conference calls were held to coordinate releases from Ruedi, and Williams Fork Reservoirs. Flows in the 15-Mile Reach remained below the Service dry year recommendations of 810 cfs during the beginning of the summer and a habitat maintenance target of 400 cfs was established in consultation with Service Biologists. When runoff conditions improved, the target was increased from 400 to 810 cfs during late summer. The final accounting is yet to be completed, but preliminary estimates are that just more than 25,000 acre-feet of water was released from Ruedi, and Williams Fork reservoirs. No water was available from Green Mountain Reservoir under the municipal lease. No water was available from the Wolford 5,412 acre-foot West slope pool because of shortage criteria. No water was requested from the 6,000 af fish pool in Wolford because water was being saved to help attain a fill in 2005. The use of fish pool water used to support endangered fish in the 15-Mile Reach will be documented in the Service's annual report to CWCB in March of 2005.
2. Water year 2004 was another dry year on the Yampa River. I monitored the flows on a daily basis and coordinated the release of 1,380 acre feet of water from Steamboat Lake in August and September to try and keep the Yampa River at Maybell above 93 cfs. I also coordinate with Tri-state Generation to coordinate water released from Stagecoach Reservoir to supplement river flows.
3. The geomorphology peer review panel was requested to review two important program reports. Reviews were completed for the report on Riverine Fish Flow Investigations(Anderson and Stewart 2003) and the "Mud" report by Mussetter and Miller. I prepared a draft letter summarizing peer review comments and helped finalize the Recovery Program staff comments on the Anderson Stewart report.

C. Yampa River Reservoir Studies:

1. Work continued in 2004 to negotiate a short term lease of water from Steamboat lake until water from Elk Head enlargement becomes available. A one year letter agreement was also developed for 2003 subject to be funded fund by Reclamation. The letter agreement did not meet Reclamations contracting standards and in the fall of 2004 a five year lease was completed to cover the period 2004 to 2009. Funds were included in the lease agreement to cover water released in 2003.
2. Considerable time was spent preparing draft sections of the Yampa River PBO and working with Program directors office and ES staff to finalize the PBO.

D. Coordinated Reservoir Operations and CFOPS:

No Coordinated Reservoir Operations discussions were held in 2004 because of the drought condition which persisted in the basin early in the spring of 2004.

E. General Support Activities:

1. I served as Chairman of the Water Acquisition Committee where the following tasks were performed: 1. prepared meeting summaries for all WAC meetings and reports to the Management Committee, 2. prepared annual reports to the Colorado Water Conservation Board on Ruedi flows and associated benefits to the 15-Mile Reach, and 3. prepared Scopes of Work and annual reports for the following projects:
 1. Water Right Consultant Services
 2. General gage operation and maintenance
 3. Steamboat Lake water lease
 4. Green Sediment Sampling
 5. Water acquisition Hydrology Support
 6. 15-Mile Reach Channel Monitoring
 7. Peer review of Geomorphology
2. As chairman of the Water Acquisition committee, I serve as coordinator for Grand Valley Water Management, Redlands Gage, Coordinated Reservoirs, and the two CWCB projects. Many of the tasks included attending meetings, reviewing reports, providing comments, and reporting to the Service and WAC. I also participated in discussions of Division 5 SWAT Group.
3. Provided support to the Program Directors office in updating the RIPRAP, developing Program Guidance, developing Program Directors updates and reviewing water related press releases and media products.
4. 15-Mile Reach PBO 5 year accounting started in 2004. Time was spent in gathering depletion data and condonation with CWCB staff. A spreadsheet of depletions was developed and forwarded to the CWCB Staff.

VII. Recommendations: Continue general hydrology support for Water Acquisition activities.

VIII. Project Status: The project is ongoing and changes each year to meet the changing objectives of the Recovery Program in securing, protecting, and delivering water for endangered-fish habitat.

IX. FY 2004 Budget Status:

A. Funds provided:	\$61,500
B. Funds expended:	<u>61,500</u>
C. Difference:	\$ 61,500

X. Status of Data Submission: Not applicable.

XI. Signed: George R Smith November 16, 2004
Principal Investigator Date

APPENDIX: Reports, on water right evaluations, and return flow analysis produced by the water rights consultant were submitted to the WAC. An annual report is produced on the benefits of Ruedi release for endangered fish each year by March 1, 2004. The U.S. Geological Survey publishes flow data on the Palisade gage in the annual water resource papers.

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