

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

II. Principal Investigator: George Smith
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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 2000 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 River and Yampa River were funded cooperatively by the Recovery Program, Colorado Division of Wildlife, and USGS. The two gages on the Duchesne River were funded cooperatively by the Recovery Program, Central Utah Water Conservancy District, and USGS. Matching funds for the gages were provide from non-federal funds, which are held by the National Fish and Wildlife Foundation.

B. Hydrology Support for Water Acquisition activities:

Assistance was provided to the Recovery Program Director in development of criteria for Ruedi releases, and coordination of the annual public meetings for Ruedi releases and Coordinated Reservoirs. Water Year 2000 was a year where snowpack was low, the spring peak flows were short lived and followed by a dry summer and a long dry fall. The Service Water Resources staff participated in the following activities in support of meeting Service flow recommendations on the Colorado, Green, and Yampa rivers:

1. 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, Green Mountain, Wolford, Dillion, Williams Fork, and Granby reservoirs. Flows in the 15-mile Reach remained above Service recommendations of 810 cfs for most of the summer and fall with flow support from participating reservoirs based upon agreements worked out in the Colorado River PBO. The final accounting is yet to be completed, but preliminary estimates are that 50 to 60 thousand acre-feet of water was released from Ruedi, Green Mountain, Wolford, and Williams Fork reservoirs to support endangered fish. The use of water for flow support will be documented in the Service's annual report to CWCB in March of 2000.
2. The late summer flows in the Yampa were monitored closely and when flows dropped significantly on August 17, 2000, Colorado Division of Parks was notified to begin releasing water from Steamboat Lake at the rate of 25 cfs. The lease of water from Steamboat Lake is useful in helping to stabilize late summer flows in the Yampa River to maintain habitat for Colorado pikeminnow. The release of water was monitored by the Division Engineer, Parks, and Service.
3. The geomorphology peer review panel was supported and the panel was used to review two important program reports. The problems with the panel in past years have been overcome by a decision by the WAC to add three additional reviews to those of the review panel. The reviews would be suggested by the Principal Investigator and approved by the Program Director's Office on an as-needed basis. Criteria for selection as a reviewer will be similar to the criteria used by the Biology Committee. The Principal Investigator would be responsible for securing comments from individuals suggested.

C. Yampa River Reservoir Studies:

Yampa Operation and Management Plan: The Division of Water Resources staff participated in the Yampa River PBO Water Subcommittee by attending meetings, reviewing documents, and providing comments on documents developed by the Yampa River/Tributary Coordinator.

D. Coordinated Reservoir Operations:

Assistance was provided to the Bureau of Reclamation and CWCB staff in developing the coordinated reservoir annual operation plans with and without coordination. Once the plan for coordination was completed, it was presented at two public meetings. Staff from Water Resources representing the Service/Recovery Program presented information on the Recovery Program and the need for high spring flows periodically. The participants in the Coordinated Reservoir Operations planning process attempted to coordinate reservoir bypasses in 2000. A public meeting was held in early May in Basalt, presentations were made by Reclamation and Service staff. Coordination meetings were held weekly beginning the first week in May. When snowpack conditions did not improve by mid-May, Coordinated Reservoir Operations were canceled on May 15, 2000. In retrospect, the cancellation was a good call because it may have made more water available for late summer augmentation. A brief peak occurred at Palisade on May 31, 2000, when flows rose to 13,500 cfs, but quickly dropped substantially below the recommended minimum peak flow of 12,900 cfs.

E. General Support Activities:

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. Yampa/Green Sediment Sampling
5. Water acquisition Hydrology Support
6. 15-mile Reach Channel Monitoring
7. Peer review of Geomorphology

As chairman of the WAC, I serve as coordinator for Grand Valley Water Management, Redlands Gage, Coordinated Reservoirs, and the three CWCB projects. Many of the tasks included attending meetings, reviewing reports, providing comments, and reporting to the Service and WAC.

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 2000 Budget Status:

A. Funds provided:	\$47,500
B. Funds expended:	<u>47,500</u>
C. Difference:	\$ 0

X. Status of Data Submission: Not applicable.

XI. Signed: George Smith December 21, 2000
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, 2000. The U.S. Geological Survey publishes flow data from the Palisade gage in the annual water resource papers.