

I. Project Title: General Hydrology Support

II. Principal Investigator:
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III. Project Summary:

The Service's Division of Water Resources provides basic hydrology support to Recovery Program researchers and undertakes tasks to support the Recovery Program in basic data collection and monitoring projects. Accomplishments during FY 2008 include: 1) collecting temperature data at 10 sites on the Green River and four sites on the Gunnison River, and assembling a temperature database for use by Recovery Program researchers; 2) coordinating development of a sediment monitoring program; 3) providing technical hydrology support for a wide range of Recovery Program activities on a year-to-year basis; and 4) coordinating other Recovery Program efforts relating to hydrology and temperature analysis.

IV. Study Schedule: Initial Year - 1990, Final Year - Ongoing.

V. Relationship to RIPRAP:

General Recovery Program Support Action Plan
I.A.4.b. Conduct needed Geomorphology research and monitoring.

Green River Action Plan: Mainstem
I.A.3. Deliver identified flows

Colorado River Action Plan: Mainstem
I.E. Evaluate and revise as needed flow regimes to benefit endangered fish populations.

Colorado River Action Plan: Gunnison River
I.D. Evaluate and revise as needed flow regimes to benefit endangered fish populations.

VI. Accomplishments of FY 2005 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

A. Temperature Data Collection

Temperature data collection went well during FY-2005. Thermographs will be installed at four locations on the Gunnison River, five locations on the Colorado River, and seven

locations on the Green River. The thermographs will be checked periodically and calibrated with on-site temperature readings. Temperature data collection on the Colorado River by CRFP was consolidated in this Scope of Work beginning in FY- 99 and a separate budget table is included for this work, the information for these gages can be found at: <http://www.r6.fws.gov/riverdata/>

Presented a climate change talk on effects on Service land to the Regional Director and others.

B. Hydrology Support for Biological Opinion Development and Monitoring

Monitor water releases from Flaming Gorge, Ruedi, and the Aspinall Unit for endangered fish during the spring runoff and baseflow period.

Negotiated year round subordination to the date of the PBO for the Recovery Program flows on the Green River above Jensen, UT. Began working with Utah's State Engineer's office on mechanisms (extending the existing subordination) to protect year-round flows in the Green River below the Duchesne River to the Colorado River confluence.

For the draft Aspinall EIS reviewed and commented on how Reclamation, the Service, and Western Area Power Administration and other cooperators will better manage Aspinall units to mimic a natural hydrograph to recover endangered fish needs within existing operational procedures

Worked with Recovery Program staff and CWCB to set up procedures and accounting methods for tracking depletions under the Colorado River Programmatic Biological Opinion (PBO).

Oversaw project to put Fish Pit tag sightings and GIS on a web page and updating the web page that displays the temperature and channel monitoring data collected by the Colorado River Recovery Program.

Obtained a temporary water right from Utah with an Ouray NWR claim to fill grow-out ponds for endangered fish.

Chaired the Water Acquisition Committee for the Colorado River Recovery Program (CRRP). Coordinated comments on the first 5 year depletion report from the State of Colorado and the comments for the meeting notes which will clarify the PBO's intent.

C. Hydrology Support for Development of Flow Recommendations

Represents CRRP in a group that is negotiating Coordinated Facilities Operation for peak flow releases and HUP calls for baseflows. 2008 was a high snowpack year but with little precipitation this summer which made river operations fairly easy, with the exception of the flooding concerns during spring runoff and the Shoshone power plant was off line and a "virtual call" had to be coordinated with major water users and their

lawyers, it was the highest volume released during operation of baseflow releases.

Became the FWS Federal Family representative for Service on NPS Black Canyon water right negotiations group. Designed summary tables for a lot of data, which simplified the choice for the ARD for ES's preferred option.

Reviewed and worked up data for flow recommendations for the White, Yampa and the Price River. The work emphasizes timely completion of outstanding flow recommendations in the upper basin.

Service representative for the 10,825 Project which is to have agreements signed with the Service prior to December 2009 committing east slope and west slope water users to permanent sources of Ruedi 10825 ac-ft replacement water, as required by the Colorado River programmatic biological opinion.

VII. Recommendations:

The work undertaken by Service's Region 6 Division of Water Resources is, for the most part, in support of other research projects or activities such as flow delivery, flow quantification, and habitat restoration, all of which have a direct impact on the recovery of the Colorado River endangered fish. The direct quantification of the success of many of the activities is difficult because most of the activities are long-term in nature.

VIII. Project Status: Ongoing and on-track.

IX. FY 2008 Budget Status:

- A. Funds provided: \$154,443
- B. Funds expended: \$112,065
- C. Difference: \$ 42,378

X. Status of Data Submission: Not applicable.

XI. Signed: Jana Mohrman
Principal Investigator

November 16, 2008
Date: