

I. Project Title: Endangered Fish Recovery and Water Management Plans for Tributary Basins

II. Principal Investigator:

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III. Project Summary:

The purpose of the management plans is to maintain and recover the endangered fishes of the Upper Colorado River Basin and protect other native fish and wildlife resources in the Yampa and Gunnison rivers and other tributaries to the Colorado River while water development continues to serve existing and foreseeable future human needs.

Yampa River Basin

The original strategy was to meet this dual purpose in the Yampa River Basin was by evaluating a variety of stream flow augmentation alternatives within the framework of a National Environmental Policy Act (NEPA) review process. A contractor was hired to prepare NEPA documents and to handle public involvement. However, this approach was abandoned due to a perceived lack of a clearly defined federal action. Moreover, there has been some opposition within the Recovery Program to construct or enlarge a reservoir specifically, or in part, to augment flows for fish. An enlargement of Elkhead Reservoir had been proposed for that purpose in 1995, based on flow recommendations derived from a statistical analysis of historic stream flows, rather than based on biological or physical needs of the fishes. A subsequent study (Modde et al. 1998) determined that lower flows were sufficient to meet the needs of the fishes, and stream flow augmentation requirements were adjusted accordingly.

Also, there was a perception, both within and outside the Yampa River Basin, that the Basin was being treated differently from other subbasins of the Upper Colorado River. To achieve some measure of equity among the subbasins, the Recovery Program adopted an approach similar to that taken in the Colorado River upstream from Grand Junction, Colorado, the so-called "15-mile reach," for which a programmatic biological opinion was recently completed pursuant to Section 7 of the Endangered Species Act (ESA). It was agreed that the same approach should be used for the Gunnison and other tributaries, as well.

A workgroup consisting of representatives from state and federal agencies, environmental organizations and local stakeholders was assembled to develop a management plan for the Yampa River Basin. The plan would identify current and future human water needs, as well as outline those recovery actions considered necessary to offset potential adverse effects of depletions on the endangered fishes. It will serve as the basis for an intra-Service Section 7 consultation, the product of which will be a programmatic biological opinion (PBO) for the Basin. The federal action that requires Section 7 consultation, as well as compliance with the NEPA, is the intent of the FWS to enter into a Cooperative Agreement with the states of Colorado and Wyoming to implement the plan.

A Water Subcommittee of the larger PBO workgroup was formed to address some of the technical issues concerning depletions and the augmentation needs of the fishes. This group's role was expanded during the process of developing the management plan to address other issues on an *ad hoc* basis. The subcommittee identified, evaluated and presented 11 alternatives to the PBO workgroup for its consideration.

A plan was drafted and submitted to the PBO workgroup in August 2000 for review and comment prior to a meeting of the workgroup in Craig, Colorado. During that 2-day meeting a twelfth alternative was identified and recommended as the proposed action. However, for the purposes of fulfilling ESA and NEPA requirements, each of the 12 alternatives will be given equal consideration.

These alternatives use either a single water source or combination of sources to provide 6,000 AF of stream flow augmentation during the baseflow period (July–February). These sources include Steamboat Lake, Stagecoach Reservoir, Elkhead Reservoir, supply interruption contracts with water users, and new tributary reservoir(s).

Eight of these alternatives were evaluated for impacts to peak flows, resulting from spring storage. This preliminary analysis indicated that impacts were greatest if Steamboat Lake were the only reservoir used for augmentation, because it stored water only during April through June, with the greatest storage (i.e., reduction in peak flows) in May. Elkhead-only options impacted the ascending limb of the spring hydrograph (March–April), while Stagecoach-only options distributed storage more evenly over a broad peak-flow period (March–July), thereby reducing the magnitude of impacts in any single month. Multiple-source options also distributed storage over a broader period. All but the Steamboat-only option exhibited some potential for winter storage, particularly Stagecoach, which has the most reliable winter inflows.

Subsequent to the August 2000 conference, there was further discussion as to the size of the increment of future depletions to be covered by the management plan and PBO. Modeling with the Colorado Decision Support System (CDSS) determined that average annual depletions would reach ~155 KAF in Colorado by 2045, representing an increase of ~30 KAF over a current depletions of ~125 KAF. However, water users in Colorado sought to secure 50 KAF for future development. After further discussion, the workgroup agreed to take an incremental approach, going forward with a 30-KAF increment initially, but recognizing that a second increment of 20 KAF could be developed in the future, as needed. However, there is too little information currently available to assess the impacts

of the second increment, so additional impact analyses would be required at that time. Wyoming developed its estimate of future depletions, ~66 KAF, which represents an increase of ~31 KAF over current depletions of ~35 KAF. The Colorado Water Conservation Board (CWCB) worked with the Wyoming State Engineer's staff to evaluate basin-wide impacts of depletions. More work needs to be done in FY 2002.

A third draft of the management plan was issued in April 2001, and a final draft was completed in October 2001. Public meetings were scheduled in November 2001, and comments on the final draft were due December 14, 2001.

Gunnison River Basin

A similar PBO workgroup was assembled to develop a management plan for the Gunnison River Basin. This workgroup met several times during FY 2001 to discuss process-related issues. Three prerequisites were identified as essential to this process:

1. Flow recommendations for the Gunnison River (FWS)
2. Estimate of future water demands in the Gunnison River Basin (USBR)
3. Settlement of water rights claim for the Black Canyon of the Gunnison National Park (NPS)

Flow recommendations developed by the FWS were accepted by 7 of 10 Biology Committee members. The three dissenting parties submitted a minority report, raising a number of technical and policy issues, and have been working with the FWS to try to resolve their differences. However, resolution is not expected until early in FY 2002.

The U.S. Bureau of Reclamation (USBR) developed an estimate of future depletions based largely on 50-year projections of the human population growth in the basin. Their estimate (11,000 acre-feet) was challenged by some members of the workgroup as too low, considering that storage projects are planned for which the USBR did not account. Also, there is unallocated storage available in Ridgway Reservoir that could be utilized in the future.

A related issue that arose out of this discussion was a concern among in-basin water users that setting too large an increment of depletions would encourage, or at least allow, trans-basin diversions to the Front Range. They wanted to limit the PBO to in-basin depletions only or allocate depletions between upper and lower basins. Both the USBR and FWS stated that they have no control over water allocation between basins, and that whatever increment is agreed to would be available to anyone with a need for it, in priority, per Colorado water law and interstate compact. The USBR asked that water users decide on what they need, and the USBR would consult on it. Comments are due by January 2002.

In 1978, the National Park Service (NPS) was granted a 1933 reserve water right for the Black Canyon of the Gunnison. At that time, NPS was instructed to quantify its water right, which the NPS quantified in FY 2001. The number of objectors (383) set a record. A negotiated settlement may be years away.

For these reasons, the workgroup agreed to table further discussion of the management plan until the outcome of these three elements became clearer. In the interim, the FWS would continue to work with the minority to produce flow recommendations for the Gunnison. The USBR would revise its demand estimate based on input from water users and submit a second draft by March 2002. If these two pieces come together, the USBR and CWCB can begin modeling with Riverware and StateMod to determine the extent to which the Aspinall Unit can meet FWS flow recommendations.

IV. Study Schedule:

Initial year: 1996

Final year: 2002 (Yampa only; separate FY 2002-03 SOWs were prepared for the Gunnison and the White/Dolores river basins.)

V. Relationship to RIPRAP:

Green River Action Plan: Yampa and Little Snake Rivers
I.A.4.a.(3) Yampa River management plan

Colorado River Action Plan: Gunnison River

VI. Accomplishment of FY 2000 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Tasks 1-6, 8 and 10. Postponed until significant issues are resolved. These tasks will have their own FY 2002-03 SOW predicated on timely resolution of issues.

Task 7. Prepare final Yampa Management Plan: The Instream Flow Coordinator drafted and distributed a management plan for the Yampa River in April 2001 with direction from and review by other members of the PBO workgroup. A final draft, revised pursuant to comments received, was posted to the Yampa PBO and Colorado River listservers, as well as the Recovery Program website in October 2001. Printed copies also were sent to members of the PBO workgroup, Management Committee, Implementation Committee, and steering committee of the Yampa River Basin Partnership. Publication of the final draft was delayed due to the need to reconcile contradictory procedural and legal points of view with respect to regulatory compliance. As a result, the impact analysis in the August 2000 draft that had been removed from the April 2001 draft was restored and augmented in the October 2001 draft.

Tasks 9. Determine NEPA and ESA requirements: The Regional Solicitor for the Department of the Interior (DOI) provided guidance as to the nature of the federal action that would require compliance with both the NEPA and ESA— that action being the intent of the FWS to enter into a Cooperative Agreement to implement the plan. The FWS, as the federal action agency, must satisfy NEPA and ESA requirements before it commits to implementing the plan by signing the Agreement. To satisfy the NEPA, the FWS will prepare a programmatic environmental assessment (EA) for the plan. Individual actions proposed to be implemented under the plan, such as any reservoir enlargement or other

construction activity, would undergo a separate NEPA review to satisfy federal permit requirements (e.g., Clean Water Act, Section 404; rights-of-way and/or land use permits). In such cases, the permit(s) would provide the federal nexus, and the U.S. Army Corps of Engineers or affected land management agency would likely be the federal action agency. In addition, FWS will initiate intra-Service consultation pursuant to Section 7 of the ESA, the product of which will be a programmatic biological opinion similar to that completed in December 1999 for the 15-mile reach (U.S. Fish and Wildlife Service 1999).

Tasks 11. Develop Cooperative Agreements to implement the Management Plans: The CWCB developed a draft Cooperative Agreement between the FWS, Colorado and Wyoming to implement the Yampa Plan. The agreement does not outline the plan, but cites it and spells out the respective roles of the signatories in implementing the plan. Workgroup members, FWS and the DOI Regional Solicitor submitted comments, and a second draft was submitted. A final agreement will be completed and signed in FY 2002.

Task 12. Public Involvement: Activities included issuing press releases, advertizing public meetings in local newspapers, preparing for and conducting public meetings and making presentations at regular meetings of the Yampa River Basin Partnership.

Task 13. Hydrology support: The CWCB continued to provide hydrology support, using the CDSS hydrologic model for the Yampa River.

Task 14. Program Management: The Instream Flow Coordinator arranged meetings, presented reports to the BC, MC and IC, as appropriate, provided guidance to the CWCB in designing CDSS Yampa River model runs, and used CDSS outputs to estimate stream flow augmentation needs and analyze impacts of storage on peak flows. He also prepared FY 2000 annual reports and FY 2002-03 scopes of work, and coordinated with research personnel and the Yampa River workgroup to produce and revise a management plan for the Yampa River and attended meetings of the Gunnison PBO workgroup and SWAT4.

VII. Recommendations:

A management plan for the Yampa River is vital to the recovery of listed fish species while providing certainty to water users that their needs will be met in the future. An effective and implementable agreement with water users is needed to protect instream flows and aquatic habitat for native fishes now and into the future. This project provides a framework by which to develop a management plan to meet these dual objectives.

VIII. Project Status:

Ongoing and on-track. Expected completion date is July 2002, when the Cooperative Agreement would be signed. Activities under this management plan would continue indefinitely, unless and until the Recovery Program decides to terminate them. Activities related to development of management plans for the Gunnison River and other tributaries will be covered under separate FY 2002-03 SOWs.

IX. FY 2001 Budget Status:

- A. Funds Provided: \$ 87,000
- B. Funds Expended: \$ 87,000
- C. Difference: \$ 0
- D. Percent of the FY 2001 work completed: 100%
Projected costs to complete: \$0
- E. Recovery Program funds spent for publication charges: None

X. Status of Data Submission: Not applicable.

XI. Signed: Gerry Roehm December 10, 2001
Principal Investigator Date