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INTRODUCTION

This is the guidance for development of the Recovery Program's FY 96 Work Plan. The guidance was developed on the basis of the Recovery Program's Recovery Action Plan (RIPRAP) and input from the technical and Management committees. The RIPRAP identifies all the activities currently believed necessary and feasible to recover the endangered fish in the Upper Basin. Thus, annual Program guidance is closely tied to the RIPRAP.

Like the RIPRAP, the guidance is organized by recovery element. Within each recovery element, guidance is provided for ongoing, ongoing-revised, and new projects. Ongoing projects are those previously approved for out-year funding for which goals/objectives, methods, cost, and expected outcome have not changed significantly. Scopes of work for these projects should require only minor updates. Ongoing-revised projects are those previously approved for out-year funding for which goals, objectives, methods, cost, or expected outcome have changed significantly (as outlined in the guidance), thus their scopes of work may require more changes. New projects are those not previously approved for out-year funding and completely new scopes of work will be developed for these.

The expected FY 96 budget is generally identified for each project. Recommended principal investigators are typically identified for new projects. The Program Director and his staff will consider the following factors in recommending principal investigators to conduct work under the FY 96 Work Plan: 1) investigator's past experience in the subject; 2) investigator's availability to do the work; 3) investigator's past performance (quality and timeliness of products); 4) relationship of project to other work being conducted by the investigator; 5) availability of State and Federal staff to conduct the work; and 6) funding and contract limitations.

The FY 96 guidance is a request for proposals for FY 96 activities; proposed scopes-of-work are requested for each of the projects listed herein. Scopes of work should be prepared according to the format in Appendix B. The format is available electronically by request to kantolaa@fws.gov. Scopes of work for technical projects (Recovery Elements I-VI) are due NO LATER THAN May 12, 1995 (this includes scopes of work for capital funding projects). Program management scopes of work are due by July 1, 1995. Scopes of work should be submitted on disk or by electronic mail in WordPerfect 5.1 format to Angela Kantola. Through April 30, Angela's e-mail address is kantolaa@fws.gov. Beginning May 1, Angela's e-mail address is angela_kantola@fws.gov. If you cannot submit your scope of work in WordPerfect 5.1 format, contact Angela Kantola (303/236-2985, ext 221) to determine the next best format to use.

Upon receipt of the proposed scopes of work, the Program Director's office will begin working (with technical advisory panels and principal investigators) to review and refine the scopes of work and develop a recommended technical annual work plan. This recommended work plan and refined scopes of work will be submitted by the Program Director to the technical committees for review on June 23. Technical committee comments are then due to the Program Director and Management Committee members, consultants, and interested parties by July 20. The recommended program management work plan also is due from the Program Director to the Management Committee at this time. The Management Committee will meet on August 2-3 to discuss the recommended work plans and approve projects for the Draft FY 96 Work Plan. The Draft Work Plan will be submitted to the Implementation Committee for review by August 25. The Implementation Committee will meet on September 7, the final FY 96 Work Plan will be distributed to Program participants by October 1, and final scopes of work will be distributed by October 15.

This schedule and process for development of the FY 96 work plan are different from previous years. The new process reflects the changes in the Program Organization and Mission document which calls for Program staff to develop work planning products and for technical committees to serve in an advisory capacity. Under this new process, technical committees will receive much more refined scopes of work than they have in previous years, and will comment on these scopes of work, but will not rank them as they have in the past.

If you have any questions about this guidance or the FY 96 work plan development process, please contact John Hamill or Angela Kantola at 303/236-2985, ext 223 or 221, respectively.

I. INSTREAM FLOW IDENTIFICATION AND PROTECTION:

ONGOING PROJECTS

PROJECTED FY 96		
<u>NUMBER</u>	<u>TITLE</u>	<u>BUDGET</u>
7	HMG/9296 RETURN FLOW GAGE OP/DATA ANAL.	0
	Funds included under #9 (estimate 8.0K)	
8	HMG/90-- 15-MILE REACH GAGE OP. & MAINT	4.0
	No major changes to project scope or budget expected.	
9	HMG/91-- WATER RIGHT ACQ. CONSULTANT	40.0
	No major changes to project scope or budget expected.	
19H	HMG/85-- WATER ACQ. HYDROLOGY SUPPORT	33.0
	No major changes to project scope or budget expected.	
67	CAP/92-- STEAMBOAT LAKE WATER LEASE	32.0
	No major changes to project scope or budget expected.	
19B	HMG/85-- BIOLOGY HYDROLOGY SUPPORT	50.0
	Support activities should be similar to those in FY 95 (e.g. temperature data and collection, hydrology support for Aspinall and Flaming Gorge studies, hydrology support for development of flow recommendations, etc.)	
30	HMG/86-- REMOTE SENSING SUPPORT	100.0
	Currently supported studies (FG & Aspinall) are ongoing through FY 96. PI recommends: 1) assessing overall remote sensing needs of the Recovery Program; and 2) considering putting all data (or selected subset) in a GIS (as GCES has done). Staff recommendation: in coordination with PI and other researchers, new Instream Flow Coordinator should assess overall remote sensing needs and determine utility of putting data into a GIS by 1/96 (so recommendations can be incorporated into FY 97 work plan development).	
32	HMG/8696 FG1: CSF REPRO. & LARVAL ASSMT	98.0
	No major changes to project scope or budget expected.	
36	HMG/8696 FG5: WINTER/SPRING FLOW EFF.	53.0
	PI's recommend coordinating with #35 to look for marked fish in both the upper and lower Green River (however #35 ends in FY 95, so this would not apply to the FY 96 SOW).	
37	HMG/8696 FG6: FG ROLE IN AQ. HAB. CHNG.	24.2
	No major changes to project scope or budget expected.	
39	HMG/8696 FG8: GILA & CSF REPRO. & RECRU	69.5
	No major changes to project scope or budget expected.	

PROJECTED FY 96

NUMBER TITLE BUDGET

40 HMG/8696 FG9: EVAL. OF UPPER GREEN R. 25.0

PI recommends increased spring sampling to detect any fish moving into the Green River during pre- and post-runoff periods. Also, if permits allow, PI recommends collecting stomach samples from selected predaceous nonnative fishes to document food habits. These refinements are not likely to significantly change the scope or budget of this project.

41 HMG/8696 FG10 : FLOW & ICE EFF. ON CSF 44.1

No major changes to project scope or budget expected.

53 HMG/9497 FG-I: TECH. INTEGR. & SYNTH. 80.0

PI's recommend full funding for FY 95 (\$60K was requested, but only \$10.7K was programmed, so an additional \$49.3 is needed). Staff recommendation: this synthesis will be critical to meeting RIPRAP deadlines for Green River flow recommendations. Thus, providing as much of the needed \$49.3K as possible should be a very high priority for any remaining FY 95 funds. Also, need to be sure this is fully funded in FY 96.

43 HMG/9297 ASP-A: FLOW EFF. ON LARVAL CS 114.5

PI recommends expanding sampling in Colorado by 15 days and adding a larval sampling site to the Colorado River near Connected Lakes. Previous year funds will cover most of this expansion, so this is a minor refinement that will not substantially change the project scope or budget.

44 HMG/9297 ASP-B: FLOW EFF. ON NURS. HAB 71.5

No major changes to project scope or budget expected.

45 HMG/9296 ASP-C: FLOW EFF. ON YOY CSF,, 30.0

No major changes to project scope or budget expected.

46 HMG/9297 ASP-D: FLOW EFF. ON HBC IN WW 45.0

No major changes to project scope or budget expected.

47 HMG/9297 ASP-E: GUNN. R. HABITAT QUANT 20.0

No major changes to project scope or budget expected.

48 HMG/9297 ASP-F: FLOW/GEOMORPH. FOOD WEB 121.6

PI's recommend additional funding for stomach sample analysis in FY 95 (\$6,500) and FY 96 (\$11,000). Stomach sampling was approved in the scope of work, but the budget was mistakenly left out. Staff recommendation: \$6,500 for stomach sampling should be a high priority for any available FY 95 funds. Stomach sampling for \$11,000 should be considered ongoing for FY 96.

54 HMG/9597 ASP-G: ASP. STUDIES SYNTHESIS 25.0

No major changes to project scope or budget expected.

ONGOING PROJECTS NEEDING REVISION

PROJECTED FY 96

NUMBER TITLE BUDGET

(4 PMG) CO. INSTREAM FLOW PROTECTION Unknown

Colorado needs to segregate important instream protection activities (as reflected in the RIPRAP) from their general program management scope of work. Colorado also needs to determine if any Recovery Program funding will be needed for this work in FY 96.

33 HMG/8696 FG2: GREEN R. CSF NURSERY HAB. 83.4

PI recommends adding an evaluation of quality (production-related) to this study. This evaluation appears to have been included in the FY 95 scope of work. If this recommendation would require significant changes for FY 96, the Flaming Gorge Research Team will need to consider it.

34 HMG/8696 FG3: RBS SPAWNING, LARVAL DIST 46.7

PI's recommend eliminating use of electrofishing to determine congregations of ripe razorbacks on spawning bars (or use less harmful electrofishing fields). This change will be implemented in FY 95. PI's also recommend providing funding to: 1) continue DNA analysis of suspected razorback larvae; and 2) age collected razorback larvae by otoliths. Implementing the second recommendation would likely increase the project budget significantly and will need to be considered by the Flaming Gorge Research Team.

(FLAMING GORGE UMBRELLA)

Any other recommended changes (such as correlating all early life history sampling with some measure of habitat availability [aerial video-imagery], as recommended by the PI's under the Colorado squawfish overwinter survival study [#35]), will be considered by the Flaming Gorge Research Team as they develop the umbrella proposal for FY 96.

Reclamation should develop a public involvement plan for Flaming Gorge and Aspinall releases as part of its FY 1996 scopes of work. The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

65 HMG/95?? DEV. WHITE RIVER FLOW RECS. Unknown

Considered "ongoing needing revision" because the FY 95 scope of work has not yet been approved.

CAP-9 YAMPA OP. & MANAGEMENT PLAN 1,800.0

Revise scope of work to reflect results of feasibility study and clearly outline FY 96 work (and beyond). FY 96 activities will include: 1) NEPA compliance on Elkhead Reservoir enlargement and Yampa River operation & management; 2) administrative and legal activities regarding water rights conversion, NEPA compliance and funding agreements; and 3) preliminary design/engineering for Elkhead enlargement.

The lead agency should develop a public involvement plan as part of the FY 1996 scope of work. The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

CAP-11 GRAND VALLEY WATER MANAGEMENT 500.0

Several technical issues were discussed at the recent Water Acquisition Committee meeting and Reclamation was asked to prepare a status report on this project. A draft

report has been received and is under review. The scope of work should be revised to reflect current progress and budget requirements.

Reclamation should develop a public involvement plan as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

CAP-12 COLLBRAN OPERATION PLAN Unknown

The project has reached the point where the next step is to begin to acquire water for the 15-mile reach. It is not currently known if funding for water acquisition will be needed in FY 96. A report on this project is due.

Reclamation should develop a public involvement plan as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

CAP-13 SILT OPERATION PLAN 65.0

The work is on schedule but the Program has not received a progress report or appraisal report as called for in the scope of work. The scope needs to be revised to reflect additional public involvement work mentioned in the annual report.

Reclamation should develop a public involvement plan as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

COLORADO COMPACT ALLOCATION Unknown

The public participation part of this project is behind schedule; 3 meetings have been held and additional information has been requested by the public. The review of the period of record has been completed. Development of the undepleted flow database has been delayed because of the volume of material to be reviewed and revised. The delays in the project may cause delays in Colorado instream flow filings. A new scope of work needs to be developed to reflect how the slippage in this activity will affect other RIPRAP tasks (instream flow filings).

CAP 14 COORDINATED RESERVOIR OP. 200.0

Work on this has been delayed because of ongoing studies and negotiation associated with the Orchard Mesa Check case. The scope of work needs to be revised to reflect the current situation and anticipated level of effort. The budget also needs to be revised to realistically reflect tasks in the revised scope of work.

Reclamation should develop a public involvement plan as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

NEW PROJECTS

MINERAL BOTTOM GAGE

RIPRAP Item Number: Green River Action Plan: Mainstem, I.A.1 & 1.B.1., Initially identify year-round flows needed for recovery while providing experimental flows.

General Project Title: Install & maintain a temporary gage in the Mineral Bottom, Canyonlands, reach of the Green River.

Rationale/Problem Statement: Flows in this reach of the river need to be monitored to help researchers determine flows required to flood and maintain habitats used by razorback sucker larvae.

Project Goals and Objectives: Provide river stage and flow information which can be used to identify flows needed to maintain backwater habitats.

Expected Product: River flow and stage information.

Recommended Approach/Method: Hire contractor to install a temporary gage in the area of Mineral Bottom to Canyonlands reach. River cross sections will be measured several times during the year to develop a stage discharge rating table. The gage will need to be checked every two weeks during the runoff period to assure that data is being collected during this critical period when larvae are in the backwaters.

Schedule: Install the gage during the spring of 1996 and operate for 3 years.

Cost Range: \$ 8,000 to \$10,000/year. The gage will be expensive to maintain because of its remote location.

Recommended Principal Investigators: National Park Service

YAMPA RIVER FLOW RECOMMENDATIONS EVALUATION/REFINEMENT

RIPRAP Item Number: Green River Action Plan: Yampa/Little Snake Rivers, I.A.2. and I.B.2 (Yampa River above and below the Little Snake River), Conduct studies to evaluate and refine year-round flows needed for recovery.

General Project Title: Yampa River flow recommendations evaluation and refinement.

Rationale/Problem Statement: Although the Recovery Program considers the Yampa River is very high priority for water acquisition, no instream flow data have been collected since 1988. Flow recommendations developed at that time need to be evaluated and refined in light of recommended methodology and new techniques for developing flow recommendations.

Project Goals and Objectives: Conduct studies to evaluate and refine Yampa River flow recommendations.

Expected Product: Refined year-round flow recommendations for endangered fish recovery in the Yampa River.

Recommended Approach/Methods: Review and evaluate existing flow recommendations for the Yampa River. Develop work plan to refine these flow recommendations in light of new methodologies and information. Methods should be consistent with recommendations in Jack Stanford's report. Conduct 2-3 years of field studies. Write flow recommendations report.

Schedule: FY 96-FY 2000

Cost Range: Unknown at this time.

Recommended Principal Investigators: Fish and Wildlife Service Vernal Colorado River Fish Project Office; John Hawkins, Larval Fish Laboratory; Colorado Division of Wildlife; and a geomorphological investigator.

LITTLE SNAKE RIVER FLOW RECOMMENDATIONS

RIPRAP Item Number: Green River Action Plan: Yampa/Little Snake Rivers, I.C.2.b. (Little Snake River), Identify flows.

General Project Title: Little Snake River flow recommendations.

Rationale/Problem Statement: The Recovery Program has identified Little Snake River flows as a priority for flow protection. The FY 95 Little Snake River project (#56) will develop a Management Action Plan (to be sent out for review by 1/31 and final revision written by 2/28) and an instream flow work plan (to be written by 3/15 and revised by 4/15). These plans will develop FY 96 scopes of work for Little Snake River flow recommendations.

Project Goals and Objectives: Conduct studies to identify Little Snake River flows needed for endangered fish recovery.

Expected Product: Year-round flow recommendations for the Little Snake River.

Recommended Approach/Methods: Methods should be consistent with recommendations in Jack Stanford's report and recommendations in the Management Action and Instream Flow Work plans.

Schedule: To be determined.

Cost Range: Unknown at this time.

Recommended Principal Investigators: Fish and Wildlife Service Vernal Colorado River Fish Project Office; John Hawkins, Larval Fish Laboratory; Colorado Division of Wildlife; and a geomorphological investigator. Anyone interested in participating in the development of the Management Action and Instream Flow Work plans should contact John Hawkins.

DUCHESNE RIVER COORDINATED RESERVOIR OPERATIONS

RIPRAP Item Number: Green River Action Plan: Duchesne River, I.C.2.a. Conduct coordinated reservoir operations study.

General Project Title: Duchesne River coordinated reservoir operations study.

Rationale/Problem Statement: The Recovery Program has identified Duchesne River flows as a priority for flow augmentation to restore a natural hydrograph. To accomplish this augmentation, a comprehensive review of reservoir operations is needed that identifies options for reoperation for of Duchesne River reservoirs to augment peak flows. This study will provide useful information for ensuring that the Recovery Program can serve as a reasonable and prudent alternative for several projects in the Duchesne River basin.

Project Goals and Objectives: Conduct studies to identify and recommend options to enhance spring flows in the Duchesne River.

Expected Product: Report outlining options and recommendations for reoperation of Duchesne River reservoirs.

Recommended Approach/Methods: Hire a consultant to review the operational constraints associated with Duchesne River reservoirs and develop a plan to operate the reservoirs in mass to augment spring peak flows.

Schedule: 1996-1997

Cost Range: \$75,000 to \$100,000

Recommended Principal Investigators: To be determined.

UPPER COLORADO RIVER FLOW RECOMMENDATIONS

RIPRAP Item Number: Colorado River Action Plan: Mainstem, I.A.1.a.&b. Initially identify year-round flows needed for recovery, Rifle to Roller Dam and Roller Dam to 15-Mile Reach.

General Project Title: Development of Upper Colorado River Flow Recommendations.

Rationale/Problem Statement: The Colorado River above Palisade has three major diversion structures (including Palisade) and is not currently occupied by endangered fish. However fish passage structures are proposed for the Grand Valley (Palisade) diversion (4/96), the Price-Stubb Diversion (beyond FY 2000), and the Roller Dam (9/99). These passage structures will provide access to approximately 50 miles of the Colorado River historically used by Colorado squawfish and razorback suckers. Recommendations for reintroduction or augmentation of these fish above Palisade will be developed by 12/95. Flows required to sustain the habitat endangered fish need to be determined.

Project Goals and Objectives: Develop year-round flow recommendations for the Colorado River from Palisade to Rifle based on maintenance of physical habitat.

Expected Product: Year-round flow recommendations for the Colorado River between Rifle and the top of the 15-Mile Reach. (Separate recommendations would likely be made for the reach above the Roller Dam, the reach between the Roller Dam and the Price-Stubb diversion, and the reach between Price-Stubb and the Grand Valley [Palisade] diversion.)

Recommended Approach/Methods: This reach is not currently occupied by endangered fishes, so endangered fish use data cannot be collected. Therefore, flow recommendations will have to be based primarily on physical data. Studies to develop flow recommendations should concentrate on floodplain habitat and flushing flows necessary to maintain habitat complexity in the study area. Work should build on habitat studies conducted by the Colorado Division of Wildlife in FY 93 and 94. Transects should be established in areas of important floodplain habitat to determine flow levels necessary to flood these areas on a regular basis. Additional transects should be established in representative reaches and measurements taken to establish flow levels necessary to move various particle sizes and maintain the existing habitat. This work will be dependant on having at least an average water year to make the appropriate measurements. A high water year would be preferable, but high flows required to inundate the floodplain can be projected from average water year data. Geomorphological evaluation will be included in the approach. The deadlines outlined in the RIPRAP allow only one year (FY 96) of data collection. Low runoff in 1996 could require extrapolation beyond the observed data.

Schedule: Start: FY 96. Complete flow recommendations by 2/97.

Cost Range: Unknown at this time.

Recommended Principal Investigators: Frank Pfeifer, U.S. Fish and Wildlife Service and Rick Anderson, Colorado Division of Wildlife.

UPGRADE REDLANDS DIVERSION GAGE

RIPRAP Item Number: Colorado River Action Plan: Gunnison River, II.B.1.e, Identify and secure minimum flows below Redlands Diversion Dam

General Project Title: Upgrade gage below Redlands diversion

Rationale/Problem Statement: Flows below Redlands are of great interest to the Recovery Program and water users. The existing gage needs to be upgraded to provide quick access to the data needed to develop recommendations for passage through the reach and monitor flows the Service has requested to bypass the Redlands diversion.

Project Goals and Objectives: Provide access to and document flow data below the Redlands diversion.

Expected Product: Realtime and published flow data for use by water managers and biologists.

Recommended Approach/Method: Reclamation currently operates a temporary gage below Redlands. The proposal is to provide funds to upgrade the equipment and to install a DCP or land line so data from the gage can be accessed via the Watertalk system.

Schedule: System should be operational by March 1996 or sooner.

Cost Range: \$10,000 to \$15,000, plus ongoing outyear costs for operation and maintenance of the gage.

Recommended Principal Investigator: Bob Norman, USBR, Grand Junction Project Office.

II. HABITAT RESTORATION:

ONGOING PROJECTS

<u>NUMBER</u>	<u>PROJECTED FY 96 TITLE</u>	<u>BUDGET</u>
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CAP6	CAP/9399 FLOODPLAIN RESTORATION PGM	389.0
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The umbrella proposal and individual proposals have been revised several times since February 1994. Program review and input will be solicited annually from Recovery Program participants, to assist in evaluating and directing Program activities. Following are the ongoing Program activities:

- Screen sites for potential acquisition/restoration (50.0K).
Ongoing; screening for contaminants problems and landowner cooperation (hydrologic, geomorphologic, and biologic screening has been dropped).
- Conduct environmental compliance for floodplain restoration (20.0K).
Environmental compliance documents will be developed for specific candidate restoration sites in FY 96 as needed, as site selection/acquisition/restoration continues.
- Floodplain contaminants impacts on razorbacks (319.0K).
Work at Adobe Creek, Walter Walker, and Horsethief; ongoing through 3/97, when final report due. FY 96 budget includes construction at Walter Walker.

CAP4	CAP/9396 REDLANDS FISH PASSAGE	325.0
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Prior to the addition of "a fish entrainment preclusion structure" to the RIPRAP, an agreement had been reached that the need to design and install such a structure would be revisited after operation and evaluation of the Redlands passage structure (which begins in April 1996). The RIPRAP has been modified to reflect this agreement. The FY 96 scope of work should include evaluation of the structure (\$25K). This evaluation should be a joint effort between the Bureau of Reclamation and the Service's CRFP office in Grand Junction.

Reclamation should develop a public involvement plan for Redlands passage and Aspinall flows as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

57	HMG/9596	PASSAGE FLOWS BELOW REDLANDS	6.5
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No major changes to project scope or budget expected. Final report due 3/96.

ONGOING PROJECTS NEEDING REVISION

PROJECTED FY 96

NUMBER TITLE BUDGET

CAP6 CAP/9399 FLOODPLAIN RESTORATION PGM 2150.0

The umbrella proposal and individual proposals have been revised several times since February 1994. Program review and input will be solicited annually from Recovery Program participants, to assist in evaluating and directing Program activities. Following are the ongoing-revised Program activities:

PUBLIC INVOLVEMENT PLAN

The Flooded Bottomland Coordinator should develop a public involvement plan as part of the FY 1996 scope of work (specifically for site restoration and contaminant issues). The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

OLD CHARLIE WASH (50K)

The ultimate goal of the Floodplain Habitat Restoration Program is to restore natural floodplain functions that support recovery of the endangered fishes. It is hoped that each restored site will require only one or two years of intensive management and evaluation, to determine that site design and construction are sound, that structures are holding up, that everything is functioning properly; that the site/area hydrology, geomorphology, chemistry, and biology are behaving as predicted; and that the site has value in supporting recovery of endangered fishes.

For each site, however, some amount of money will be required for annual operations (e.g., for filling, draining, and harvesting fish), inspections, management, monitoring, and evaluation; and for any repairs that may be required. If structural or operational problems are encountered, or if the site appears not to be helping endangered fishes, then corrective measures will need to be taken. It is too early in the Program to know how much annual operation and maintenance will necessary maintain and manage restored sites.

A long-term annual Operation and Maintenance Plan (with schedule and costs) needs to be developed for Old Charlie Wash which includes provisions for annual site inspection; annual operations (e.g., filling and draining, harvest and transport of fishes, etc.); annual maintenance; annual monitoring and evaluation (e.g., basic water quality, food, species composition, etc.). FWS-Vernal (both CRFP and Refuges) and BR-Provo should participate in development of such a plan in FY 96 (with BR-Provo taking the lead).

LEOTA L-7 (500K)

The Ouray National Wildlife Refuge, which includes Johnson Bottom, Leota Bottom, Wyasket Bottom, Sheppard Bottom, and Old Charlie Wash, consists of over 3,750 acres of floodplain habitat within a 16-mile segment of the Green River. Leota L-7 is one of the several units which makes up Leota Bottom, the largest of the Ouray bottomlands at approximately 1,350 acres. Subject to approval by the Biology and Management committees, this unit will be constructed such that it is floodable and drainable, with outlet control structures, and a kettle for fish harvest; and managed as a nursery habitat for larval razorback suckers. FY 96 scopes of work are needed for short-term (1-2 years) monitoring and evaluation, and long-term operation and maintenance. BR-Provo should take the lead in developing a detailed plan (with schedule and costs) for design, construction, monitoring, and evaluation (e.g., structural integrity, operations, water quality, food, species composition, etc.) of Leota L-7, as well as the long-term annual operation and maintenance plan, with input from FWS-Vernal (both CRFP and Refuges).

WYASKET BOTTOM (50K)

The Ouray National Wildlife Refuge, which includes Johnson Bottom, Leota Bottom, Wyasket Bottom, Sheppard Bottom, and Old Charlie Wash, consists of over 3,750 acres of floodplain habitat within a 16-mile segment of the Green River. Wyasket Bottom is a large floodplain depression of approximately 850 acres. This site is being proposed for construction and management as a nursery habitat for larval razorback suckers, subject to approval by the Biology and Management committees. FY 96 scopes of work are needed for site design and environmental compliance. Recommend that BR-Provo and FWS (CRFP and Refuges) develop the scope (with schedule and costs) to identify design options, and BR-GJ conduct environmental compliance.

JOHNSON BOTTOM (50K)

The Ouray National Wildlife Refuge, which includes Johnson Bottom, Leota Bottom, Wyasket Bottom, Sheppard Bottom, and Old Charlie Wash, consists of over 3,750 acres of floodplain habitat within a 16-mile segment of the Green River. Johnson Bottom is a large floodplain depression of approximately 250 acres. This site is being proposed for construction and management as a nursery habitat for larval razorback suckers, subject to approval by the Biology and Management committees. FY 96 scopes of work are needed for site design and environmental compliance. Recommend that BR-Provo and FWS (CRFP and Refuges) develop the scope (with schedule and costs) to identify design options, and BR-GJ conduct environmental compliance.

SHEPPARD BOTTOM S-3 (50K)

The Ouray National Wildlife Refuge, which includes Johnson Bottom, Leota Bottom, Wyasket Bottom, Sheppard Bottom, and Old Charlie Wash, consists of over 3,750 acres of floodplain habitat within a 16-mile segment of the Green River. Sheppard Bottom is a large floodplain depression of approximately 720 acres. Unit S-3 of this site is being proposed for construction and management as a nursery habitat for larval razorback suckers, subject to approval by the Biology and Management committees. FY 96 scopes of work are needed for site design and environmental compliance. Recommend that BR-Provo and FWS (CRFP and Refuges) develop the scope (with schedule and costs) to identify design options, and BR-GJ conduct environmental compliance.

LAND ACQUISITION ACTIVITIES (1,100K)

The FY 96 scope of work will need to identify the properties for which specified interests are to be acquired (e.g., agreements, easements, leases, fee title, etc.); size and location of properties; when the interests will be acquired and for how much; what restoration activities are planned; and who will take over long-term operation and maintenance. The FY 96 scope should be developed jointly by BR-Salt Lake City, FWS-Vernal, UDWR-Vernal, and FWS-Denver, with input from the Land Acquisition Group, Work Group, and Biology Committee.

GRAVEL PIT AT 29 5/8 ROAD (50K)

Probably the most common type of floodplain depression within the Grand Valley of the upper Colorado River is the gravel pit. There are estimated to be at least 40 gravel pits within the 15-mile reach alone. A need exists to determine if gravel pits have potential for assisting in reestablishment of self-sustaining razorback populations (razorbacks were historically common to abundant in this area).

A channel will be excavated (during FY 95) between the Gravel Pit at 29 5/8 Road and the main channel of the Colorado River so that the site connects with the river during spring flows. The site should be constructed and operated with some means for fish harvest, and some means for preventing escapement of nonnative fishes into the river. Fish use of the site will be monitored using a variety of techniques. If the site becomes a haven for nonnative fishes, then rotenone may be considered as a management tool.

FY 96 scopes of work are needed for short-term (1-2 years) monitoring and evaluation (e.g., structural integrity, operations, water quality, food, species composition, etc.), and long-term operation and maintenance. The scope (with schedule and costs) should be developed jointly by BR-GJ, FWS-GJ, and CDPOR, to operate and maintain, monitor and evaluate the site, make repairs and/or modifications if necessary, with BR-GJ in the lead.

TUSHER WASH DIVERSION FISH PASSAGE

10.0

Except during high spring flows, the Tusher Wash Diversion Dam forms a complete barrier to the upstream movement of fishes. The dam is located on the Green Rive (RM 128.5), 8 miles upstream of the town of Green River, Utah. Larvae of both razorback suckers and Colorado squawfish drift through this area. Assuming some of them survive and wish to recruit into the upstream populations, they would be unable to negotiate passage except during spring runoff.

BR-GJ, with FWS-Vernal and FWS-Denver, needs to develop an FY 96 scope of work for finishing a report on the biological merits of restoring fish passage at the Tusher Wash Diversion Dam as part of endangered species' recovery in the upper Colorado River basin; and for a design/feasibility study for restoring passage, with costs and schedules.

CAP-10 YAMPA RIVER STRUCTURES

430.0

Revise scope of work to reflect planned remediation activities at Maybell Irrigation Co. and Patrick-Sweeney diversion structures. FY 96 activities will include: 1) NEPA compliance; 2) preliminary design and geotechnical exploration; and 3) administrative activities to develop agreements with structure owners.

NEW PROJECTS

BASIN-WIDE EVALUATION OF RAZORBACK RESTORATION ACTIVITIES

RIPRAP Item Numbers: General Recovery Program Support Action Plan: V.A. Measure and document population and habitat parameters to determine status and biological response to recovery actions.

General Project Title: Basin-wide evaluation of Green and Colorado river razorback sucker restoration activities.

Rationale/Problem Statement: Restoration of razorback suckers in the Green and Colorado river systems will focus initially on restoring and managing floodplain habitats to favor razorback suckers over nonnative fishes, and will employ both flow and nonflow alternatives; reoperation of Flaming Gorge Dam to provide favorable flow regimes; control of nonnative fishes; and stocking of razorback suckers. Site-specific evaluations will tell us if the intensively-managed floodplain habitat sites can support razorback suckers, but they will not tell us if razorbacks are successfully recruiting into the adult population and successfully reproducing. A basin-wide monitoring program is needed to determine if our efforts are helping the Green River razorback population; or helping populations of nonnative species; and/or adversely affecting channel and floodplain stability and geomorphology.

Project Goals and Objectives: To monitor biological and physical response of the Green and Colorado river systems to razorback sucker restoration activities.

Expected Product: Annual report similar to ISMP reports, which includes results of implementation of a standardized monitoring program for razorback suckers. Report will focus on the status and trends of razorbacks; on the status and trends of populations of "problematic" nonnative species; and on annual trends in selected physical habitat parameters.

Recommended Approach/Methods: A prototype long-term monitoring and evaluation program for razorback sucker restoration activities will be developed during FY 95. Selected monitoring and evaluation sites will be sampled, and strategies tested to describe response of selected parameters (e.g., species composition and abundance, food, hydrology, geomorphology, vegetative cover, etc.) to various recovery activities.

Schedule (Start/End Years): FY 96/99

Cost Range: \$100-200K

Recommended Principal Investigators: Utah, the Service, the National Park Service, CSU, and USU will cooperate to implement the monitoring program in FY 96.

FLOODPLAIN ISSUE PAPER

RIPRAP Item Numbers: General Recovery Program Support Action Plan: II.C. Develop an issue paper on the desirability and practicability of restoring and protecting certain portions of the floodplain for endangered fishes. II.C.1. Identify what restoration and protection are needed; II.C.2. Identify how to conduct restoration and protection.

General Project Title: Floodplain Issue Paper

Rationale/Problem Statement: The upper Colorado River basin has lost much of its floodplain due to levees, rip-rap, and reduced spring flood flows. Loss of floodplain habitats is believed to have contributed to the decline of the endangered fishes. The Floodplain Habitat Restoration Program is beginning to restore floodplain habitats for use by endangered fishes. However, as sites are restored (at great expense), floodplain development continues (e.g., construction of gravel pits, dikes, levees, jetties, rip-rap, etc.).

An FY 96 scope of work is needed for developing an issue paper which addresses biological merits of floodplain restoration; priority geographic areas; legal/institutional/political restoration and protection tools, approaches, and options; costs and funding strategies; and implementation steps and schedules. Phase I (due in May 1996) will explore the desirability and practicality. Phase II (due in December 1996) will outline strategies for legal/institutional/political restoration and protection of the floodplain.

Project Goals and Objectives: To factor endangered fishes into floodplain management and protection policies.

Expected Product: A strategy paper and action plan on floodplain restoration, management, and protection which outlines recommended courses of action.

Recommended Approach/Methods: A contractor should be hired to interact with Recovery Program participants as well as local, State, and federal agencies and organizations which develop and administer policies governing floodplain management in the Upper Basin.

Schedule (Start/End Years): The work will begin in FY 95 and end in FY 96.

Cost Range: FY 96: 50-100K should be sufficient to identify opportunities and strategies for floodplain restoration and protection.

Recommended Principal Investigators: A private contractor.

III. REDUCE NONNATIVE FISH AND SPORTFISH IMPACTS:

ONGOING PROJECTS

	PROJECTED FY 96	
<u>NUMBER</u>	<u>TITLE</u>	<u>BUDGET</u>
58	NNA9597 GUNNISON NONNATIVE REMOVAL	15.0

No major changes to project scope or budget expected.

The Service and Colorado should develop a public involvement plan as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

ONGOING PROJECTS NEEDING REVISION

59 NNA9596 GREEN R. NONNATIVE FISH MGMT. 40.0
Continue to evaluate effectiveness of mechanical fish control methods on nonnative fishes. Revise to include removal of other nonnative fishes in addition to smallmouth bass.

-- NNA95 YAMPA NONNATIVE REMOVAL

Public input will be obtained during FY 95 to aid in the development of a scope of work for removal (i.e., control) of northern pike in the Yampa River because of the controversy related to impacting this sport fishery. The FY 95 work is being done with existing funds. A scope of work will be prepared to remove northern pike from the Yampa River in FY 96.

The Service and Colorado should develop a public involvement plan as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

NEW PROJECTS

NONNATIVE FISH CONTROL STRATEGIC PLAN & AGREEMENT

RIPRAP Item Number: General Recovery Program Support Action Plan, III.A.2.b, Review options and develop agreement with States on strategies and locations for implementing control options, III.A.2.c., Implement and evaluate the effectiveness of viable active control measures.

General Project Title: Review Options and Develop Strategic Plan and Agreement for Control of Nonnative Fish

Rationale/Problem Statement: Nonnative fishes constitute 76% of all fish species (42 of 55 species) in the Upper Colorado River Basin. Nonnative fishes comprise about 95+% by number and over 90% by biomass. The extinctions of nearly 70% of native North American freshwater fishes that became extinct during the past century were attributed to the detrimental impacts of introduced fish species. Management (including control) of nonnative fishes is one of five major Recovery Program elements. Low, or the complete lack of, recruitment is the major bottleneck to endangered fish recovery. Control of nonnative fish species will be a major factor in recovery of the endangered fishes and will play a key role in efforts to augment endangered fish stocks and in enhancement/restoration of nursery habitats.

Project Goals and Objectives:

1. Review various control methods and identify options that may have potential for controlling the nonnative fishes that pose the greatest adverse impacts to the endangered fishes. (This will build upon, not duplicate Utah's technical review of control methods.)
2. Identify strategies (i.e., fish species and control methods to be used by river reach) and develop consensus for implementing measures for controlling nonnative fish species.
3. Develop a cooperative agreement between the Service and the States for implementation of the strategic plan to control nonnative fishes.
4. Develop scopes of work for field experiments with specific objectives, timeframe, and evaluations to be used in testing various control measures.

Expected Products: A strategic plan summarizing methods for controlling nonnative, warmwater fish species by river reach. The plan will provide timeframes for experimental evaluation and estimated costs for control of priority nonnative fishes by river reach. A cooperative agreement then will be developed between the Service and the States for implementation of the strategic plan. Scopes of work for field experiments will be developed.

Recommended Approach/Methods: Two reports for control of nonnative fishes are in preparation by the Colorado Division of Wildlife and the Utah Division of Wildlife Resources. These reports will provide the basis for a work group of biologists to discuss options, further literature review, and/or personal contacts to fill in gaps in our knowledge about specific species or control methods, and to develop a strategic plan for controlling nonnative fishes in the upper basin. The strategic plan and cooperative agreement between the Service and the States will be developed during FY 1995 with existing funds. During 1996, scopes of work will be refined and field experiments implemented to evaluate control measures (specific river reaches to be determined).

Schedule: FY 95-98 (FY 95: develop strategic plan and cooperative agreement; FY 96-98 implement control options).

Cost Range: \$25K

Recommended Principal Investigators: The Propagation and Nonnative Fish Coordinator will take the lead to develop a strategic plan. The Coordinator will work closely with State personnel. Scopes of work to implement control options will be continued to conduct experiments on control options.

OURAY REFUGE NONNATIVE FISH ESCAPEMENT CONTROL

RIPRAP Item Number: Green River Action Plan: Mainstem, III.A.1., Control escapement of nonnative fishes from Ouray National Wildlife Refuge.

General Project Title: Control of Nonnative Fish Escapement into the Green River from the Ouray National Wildlife Refuge

Rationale/Problem Statement: Researchers and participants in the Recovery Program agree that predation and competition by established, self-sustaining populations of

nonnative fishes and chronic escapement of nonnative fishes from off-channel impoundments are factors associated with mortality that limits recruitment of endangered fishes. Water from Pelican Lake, Utah, supplies the Leota Bottom Complex of wetlands through a pipeline. The pipeline was constructed to contain water from Pelican Lake so that selenium leaching could be controlled. Water from Pelican Lake that enters the Leota Bottom Complex contains nonnative fishes such as largemouth bass and bluegill that can enter the Green River from the Leota Bottom Complex effluent.

Project Goals and Objectives:

1. Review options for controlling nonnative fish in the effluent from the Leota Bottom Complex, select a viable option for the Complex effluent, and design/construct an adequate fish control structure or device.
2. Construct or install control structure or device to prevent nonnative, warmwater fish escapement from the Leota Bottom Complex.
3. Monitor and evaluate effectiveness of control structure.

Expected Product: Action taken by the U.S. Fish and Wildlife Service, Division of Refuges & Wildlife to design and install a structure or device to prevent the potential escapement of nonnative, warmwater fishes from the Ouray National Wildlife Refuge, Utah.

Recommended Approach/Methods: Inventory the Leota Bottom Complex to determine the discharge pattern from the impoundments. Conduct literature survey and make personal contacts to identify options for controlling escapement of fish. Complete engineering design and environmental compliance by appropriate methods. In FY 95, escapement will be prevented by control of water releases.

Schedule: 1995-1996 (Review options and identify preferred action in FY 95; construct or install control option by April 30, 1996.)

Cost Range: No cost to Recovery Program expected.

Recommended Principal Investigators: The Divisions of Refuges & Wildlife and Engineering, Fish and Wildlife Service will determine the most appropriate option for controlling escapement of nonnative fish and design an appropriate structure/device for the control.

ELKHEAD RESERVOIR NONNATIVE FISH ESCAPEMENT CONTROL (see also HIGHLINE RESERVOIR NONNATIVE FISH ESCAPEMENT CONTROL)

RIPRAP Item Number: Green River Action Plan: Yampa River, III.B.2., Evaluate control options and implement measures to control nonnative fish escapement from Elkhead Reservoir.

General Project Title: Evaluate and Implement Options For Controlling Nonnative Fish Escapement from Elkhead Reservoir

Rationale/Problem Statement: Researchers and participants in the Recovery Program agree that predation and competition by established, self-sustaining populations of nonnative fishes and chronic escapement of nonnative fishes from off-channel impoundments are factors associated with mortality that limits recruitment of endangered

fishes. Escapement of nonnative fish from Elkhead Reservoir into the Yampa River has been documented by Recovery Program researchers. The Colorado Division of Wildlife has the responsibility to provide recreational fishing opportunities and has been directed by the Colorado Wildlife Commission to provide diversity in angling opportunities (i.e., warmwater fisheries) on the West Slope. Elkhead Reservoir is being managed as a warmwater fishery. However, escapement of warmwater sportfishes into the Yampa River and the Green River can contribute to mortality of endangered fishes. Installation of a device such as a fish trap below the dam will help to control the escapement of nonnative fishes into the Yampa River and allow the Colorado Division of Wildlife to provide warmwater fishing opportunities on the west slope.

Project Goals and Objectives:

1. Conduct a feasibility study for controlling escapement of nonnative, warmwater sportfishes from Elkhead Reservoir, Colorado.
2. Develop a scope of work for construction or installation of a fish control structure or device below the dam at Elkhead Reservoir.
3. Implement/construct control option.
4. Monitor and evaluate effectiveness of control structure.

Expected Product: A report that evaluates options and feasibility for controlling the escapement of nonnative, warmwater sportfishes from Elkhead Reservoir into the Yampa and Green rivers. The report will identify the appropriate structure or device that would control escapement of nonnative fish and provide an estimate of cost for construction or installation. If construction or installation of a fish control structure or device is feasible, a scope of work will be prepared for the design and construction of an appropriate structure or device with an estimate of costs. The control option implemented (and the schedule for construction) will depend on whether Elkhead Reservoir is enlarged or not.

Recommended Approach/Methods: Work should be conducted in conjunction with similar work on Highline Reservoir. Conduct a literature review and contact persons familiar with the construction of fish control structures or devices. Write a report summarizing various options and feasibility of each and the recommended option with estimated cost to control escapement of nonnative, warmwater fishes from Elkhead Reservoir. Implement appropriate control options.

Schedule: 1996-1998.

Cost Range: \$10K to conduct a feasibility study and develop a scope of work. Engineering/design and construction costs to be determined.

Recommended Principal Investigators: Colorado Division of Wildlife and the City of Craig, Colorado. (Feasibility study and scope of work to be done in conjunction with same for Highline Reservoir nonnative fish control.)

COLORADO RIVER POND FISHERY RECLAMATION

RIPRAP Item Number: Colorado River Action Plan: Mainstem, III.B., Replace warmwater nonnative fish with salmonids in selected ponds between Rifle and Loma.

General Project Title: Replacement of Nonnative, Warmwater Fish Species with Salmonids in Ponds Along the Colorado River.

Rationale/Problem Statement: Nonnative fishes constitute 76% of all fish species (42 of 55 species) in the Upper Colorado River Basin. Nonnative fishes constitute a large percentage (95+%) by number and over 90% by biomass. Researchers and participants in the Recovery Program agree that predation and competition by established, self-sustaining populations of nonnative fishes and chronic escapement of nonnative fishes from off-channel impoundments are factors associated with mortality that limits recruitment of endangered fishes. Management (including control) of nonnative fishes is one of five major Recovery Program elements. Control of nonnative fish species will be a major factor in recovery of the endangered fishes and will play a key role in efforts to augment endangered fish stocks and in enhancement/restoration of nursery habitats. Numerous gravel-pit ponds occur along the Colorado River between Rifle and Loma, Colorado that contain nonnative, warmwater fish species. Replacement of these fisheries with salmonid fisheries would reduce the chronic escapement of nonnative, warmwater fishes from ponds having a direct connection to the river. The main goal is to reduce predation and competition by nonnative, warmwater fishes on the endangered fishes in backwaters, embayments, and flooded bottomland habitats.

Project Goals and Objectives:

1. Contact State and private landowners who manage or own ponds having direct connections to the Colorado River from Rifle and Loma, Colorado, to determine the feasibility of replacing nonnative, warmwater fisheries with salmonid fisheries.
2. Develop cooperative agreements with willing State and private landowners for implementing the replacement of nonnative, warmwater fisheries with salmonid fisheries.
3. Develop a scope of work to implement replacement of selected fisheries.
4. Replace selected warmwater fisheries with salmonids.
5. Follow-up evaluation to ensure warmwater fish have been eliminated and salmonid fishery is successful.

Expected Product: A report summarizing the feasibility for replacing nonnative, warmwater fisheries with salmonid fisheries. Cooperative agreements with landowners who are willing to replace existing nonnative, warmwater fisheries with salmonid fisheries. Warmwater fisheries replaced with salmonids.

Recommended Approach/Methods: The inventory of ponds having a direct connection to the Colorado River will be made from aerial photographs during 1995. Methods used in the flooded bottomland inventory will be used to determine the sizes of the ponds. Public agencies with ownership of ponds will be identified through personal contacts with land management agencies. Landowners of ponds on private property will be determined from County Clerk records. Personal contacts with private landowners will be made to determine if the owners are willing to convert nonnative, warmwater fisheries with salmonid fisheries.

Schedule: 1996

Cost range: \$15 K

Recommended Principal Investigators: Colorado Division of Wildlife to contact landowners, develop cooperative agreements with willing landowners, and develop a scope of work that implements replacement of nonnative, warmwater fisheries with salmonid fisheries.

HIGHLINE RESERVOIR NONNATIVE FISH ESCAPEMENT CONTROL (see also ELKHEAD RESERVOIR NONNATIVE FISH ESCAPEMENT CONTROL)

RIPRAP Item Number: Colorado River Action Plan: Mainstem, III.D. Implement measures to preclude escapement of nonnative fish from Highline Reservoir

General Project Title: Feasibility Study to Evaluate Options for Controlling Nonnative Fish Escapement from Highline Reservoir

Rationale/Problem Statement: Researchers and participants in the Recovery Program agree that predation and competition by established, self-sustaining populations of nonnative fishes and chronic escapement of nonnative fishes from off-channel impoundments are factors associated with mortality the limits recruitment of endangered fishes. Highline Reservoir has a direct connection with the Colorado River that allows escapement of nonnative, warmwater fish species.

Project Goals and Objectives: Control escapement of nonnative, warmwater sportfish into the Colorado River that will aid in the recovery of the endangered Colorado River fishes.

1. Conduct a feasibility study for controlling escapement of nonnative, warmwater sportfish from Highline Reservoir, Colorado.
2. Develop a scope of work for construction or installation of a fish control structure or device below the dam at Highline Reservoir.
3. Design and construct control options.
4. Monitor and evaluate effectiveness of control structure.

Expected Product: A report that evaluates options and feasibility for controlling the escapement of nonnative, warmwater sportfish from Highline Reservoir into the Colorado River. Scope of work to implement construction or installation of a fish control structure or device at the outlet of Highline Reservoir. Construct/install control structure or device.

Recommended Approach/Methods: Work should be conducted in conjunction with similar work on Elkhead Reservoir. Conduct a literature review and contact persons familiar with the construction of fish control structures or devices. Write a summary report that compares various options and the feasibility of these options. The report will identify the preferred option to control nonnative fish escapement from the reservoir. A scope of work for design and construction will be prepared based on the summary report. Appropriate environmental compliance documents will be prepared as a part of the scope of work before construction or alteration of the outlet is made at Highline Reservoir. This reservoir may be drained in 1995 to repair the dam and outlet structure. If drained, appropriate steps should be taken to prevent flushing the nonnative, warmwater sportfish into the Colorado River.

Schedule: 1995-1998

Cost Range: \$10K to conduct a feasibility study and develop a scope of work.

Recommended Principal Investigators: Colorado Division of Wildlife (Feasibility study and scope of work to be done in conjunction with same for Elkhead nonnative fish control.)

IV. PROPAGATION & GENETICS MANAGEMENT:

ONGOING PROJECTS

<u>NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 96 BUDGET</u>
27 RMD8997	<u>GILA TAXONOMY: MTDNA</u>	122.0

FY 96 work consists of Reclamation allocation of \$122K for mtDNA study through Arizona State University. Staff recommendation: Continue funding to complete project. mtDNA work for FY 96 is under an existing contract. The study will provide information related to speciation and hybridization within the genus Gila. The results will be compared with allozyme and morphometric data from the same fish.

63 RMD9596	RAZORBACK BATCH-MARKING	11.5
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No major changes to project scope or budget expected.

ONGOING PROJECTS NEEDING REVISION

28 STK89--	PROP./NONNATIVE FISH COORD.	120.0
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Additional funds (\$20K) will be needed to purchase of PIT-tags to mark razorback suckers for Middle Green River and Upper Colorado River broodstocks.

The Coordinator should develop a public involvement plan as part of the FY 1996 scope of work to cover such things as nonnative fish stocking procedures and plans, endangered fish stocking, hatchery construction, and surplus fish disposition, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

29 STK91--	PROP. FACILITIES O&M	310.0
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Discontinue funding of \$36.5K for Research Fish Hatchery at Bellvue, CO. Add \$20K for operation and maintenance at the Wahweap State Fish Hatchery, UT. Scopes of work for operation and maintenance of propagation facilities during FY 1996 at the Ouray Endangered Fish Facility (Responsibility: Fish and Wildlife Service), Horsethief State Wildlife Area (Responsibility: Fish and Wildlife Service), and Wahweap State Fish Hatchery (Responsibility: Utah Division of Wildlife Resources) will be compiled by the Propagation and Nonnative Fish Coordinator into an overall propagation operation and maintenance scope of work. It is assumed that \$220K for operation and maintenance of the Ouray Endangered Fish Facility will be provided by the Fish and Wildlife Service.

31 RMD9100	CHEMORECEPTION	80.2
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Revise scope of work to reflect changes in procedures to correct problems with growing fish to maturity (some fish will be placed at Wahweap). Imprinting responses of mature Colorado squawfish and razorback suckers will be tested in the spring and summer of 1996; a report summarizing the results will be due December 15, 1996.

50 STK9496 EXPERIMENTAL RAZORBACK STOCKING 25.0

Revise scope of work to reflect reduced effort in tracking radio-tagged fish and additional work to monitor razorback suckers released in FY 95 to evaluate survival related to size at time of release.

CAP7 CAP9498 PROP. FACILITIES CONSTR. 2,500.0

Scopes of work for development of propagation facilities will be revised based on feasibility/engineering design studies. Scopes for the Ouray Endangered Fish Facility (responsibility: Fish and Wildlife Service), Craig Municipal Facilities (responsibility: City of Craig), and Wahweap State Fish Hatchery (responsibility: Utah Division of Wildlife Resources) will be compiled by the Propagation and Nonnative Fish Coordinator into an overall endangered fish propagation facilities construction scope of work.

V. RESEARCH, MONITORING, & DATA MANAGEMENT:

ONGOING PROJECTS

	PROJECTED FY 96		
<u>NUMBER</u>	<u>TITLE</u>	<u>BUDGET</u>	
15	RMD/89-- LARVAL FISH IDENTIFICATION	70.0	
16	RMD/85-- DATA MANAGEMENT	27.4	
22	RMD/85-- STANDARDIZED MONITORING PROGRAM	128.3	

ONGOING PROJECTS NEEDING REVISION

55 RMD/9495 INTERIM MGMT. OBJECTIVES Unknown
According to the FY 95 proposal, the continuation of this study will begin 1/1/95 and end 12/1/95, at a cost of \$44,630. An FY 96 scope of work needs to be developed to for the portion of the project that will extend beyond September 30, 1995, and any revisions in the schedule will need to be identified. The Program Director's Office (i.e., the new instream flow coordinator) will be taking over responsibility for this project.

IMO's should be developed for nonnative species as well. Status indices are needed for "problematic" nonnative species (e.g., red shiners), to evaluate recovery activities. An ideal recovery action would benefit the endangered fishes at the expense of nonnative species.

ID DEFICIENCIES IN LIFE HISTORY INFO. Unknown
Data have been collected for a number of years in attempts to describe the life history requirements of the endangered fishes. Results have given us a clearer picture of those species' and the factors which may have contributed to their decline. Assuming that IMO's are developed which will help us monitor the status and trends of Upper Basin fishes, and evaluate recovery activities, a need exists to develop an FY 96 scope of work to identify deficiencies in life history information which will address the IMO's.

VI. INFORMATION, EDUCATION, & PUBLIC INVOLVEMENT:

ONGOING PROJECTS

<u>NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 96 BUDGET</u>
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12 NNA/89-- GENERAL INFORMATION AND EDUCATION 85.0

Ongoing activities of the I&E program include newsletter production and distribution, managing media relations, writing news releases and op-ed pieces (guest editorials), arranging public meetings and presentations, maintenance and coordination of signs and displays, reprinting of the brochure and possibly the poster and creating the annual Congressional briefing packet. Also will explore feasibility of working with the new Denver aquarium to produce an exhibit on endangered fish. (Contractors will be used to produce some of these products, in order to devote 25 percent of the I&E Coordinator's time to project-specific public involvement activities as described below.)

12A NNA/89-- PROJECT-SPECIFIC PUBLIC INVOLVEMENT 20.0

For the activities identified below, the Information and Education Coordinator will work with the designated lead agencies to develop and implement public involvement plans, which will be reviewed by the I&E Committee. This budget item covers 25 percent of the I&E Coordinator's time, plus necessary travel and expenses involved in working with lead agencies on these projects, which are as follows:

- * Flooded bottomland restoration (site restoration, contaminant issues).
Lead: Recovery Program, flooded bottomland coordinator.
- * Non-native fish stocking (stocking procedures, stocking plans).
Lead: Fish and Wildlife Service; Colorado, Utah and Wyoming wildlife agencies.
- * Endangered fish propagation (fish stocking, hatchery construction, fish disposition).
Lead: Recovery Program, endangered fish propagation coordinator.
- * Yampa River/Elkhead Reservoir issues.
Lead: Colorado River Water Conservation District.
- * Ruedi Reservoir water allocation.
Lead: Bureau of Reclamation, Loveland office.
- * 15-mile reach/Grand Valley fish passage.
Lead: Bureau of Reclamation.
- * Aspinall/Blue Mesa releases/Redlands fish ladder.
Lead: Bureau of Reclamation.
- * Non-native fish removal, Gunnison River.
Lead: Fish and Wildlife Service, Colorado Division of Wildlife.
- * Non-native fish removal, Yampa River.
Lead: Fish and Wildlife Service, Colorado Division of Wildlife.
- * Flaming Gorge Dam releases.
Lead: Bureau of Reclamation.

- * Colorado in-stream flow appropriations.
Lead: Colorado Water Conservation Board.
- * Utah in-stream flow appropriations.
Lead: Utah Division of Wildlife Resources.
- * Coordinated reservoir operations, upper Colorado River.
Lead: Bureau of Reclamation.
- * Grand Valley water management.
Lead: Bureau of Reclamation.
- * Silt operations.
Lead: Bureau of Reclamation.
- * Collbran operations.
Lead: Bureau of Reclamation.
- * Recovery Program management (funding/legislation).
Lead: Recovery Program Director.

VII. PROGRAM MANAGEMENT:

ONGOING PROJECTS

<u>NUMBER</u>	<u>PROJECTED FY 96 TITLE</u>	<u>BUDGET</u>
5	PMG/94-- WYOMING PROGRAM MANAGEMENT	13.9

PI recommends developing a mechanism to prioritize the RIPRAP.

ONGOING PROJECTS NEEDING REVISION

1	PMG/88-- UTAH PROGRAM MANAGEMENT	61.8
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Utah should develop a public involvement plan for Utah instream flow protection as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

2	PMG/88-- B. RECLAMATION PROGRAM MGMT.	150.0
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Reclamation (Loveland office) should develop public involvement plans for Ruedi releases as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

3	PMG/88-- SERVICE PROGRAM MANAGEMENT	470.0 (estimate)
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PI's recommend at least a 1/2-time budget assistant to support Program Director's Office which is being moved from Regional Office which currently provides minimal support. FY 96 budget estimate revised from original 490K estimate based on: no cost for moving office or moving instream flow coordinator in FY 96, expected reduced peer review costs (~\$10K) in FY 96, addition of 1/2-time budget asst., 5% cost-of-living increase. Scope of work also should address implementation and management of an electronic communication system for the Recovery Program.

The Program Director's office should develop a public involvement plan for long-term funding and legislation as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

4	PMG/88-- COLORADO PROGRAM MANAGEMENT	297.4¹
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The Colorado Water Conservation Board should develop a public involvement plan for Colorado instream flow protection activities as part of the FY 1996 scope of work, The information and education coordinator is available to assist in developing this plan prior to April 30. Thereafter, the I&E Committee will review the draft plan and make suggestions before it is finalized by the lead agency.

¹ FY 95 amount. No FY 96 funding estimate was provided in the FY 95 scope of work. Flow protection activities should be put in separate scope of work in FY 96, so a smaller amount should be shown for Program Management in FY 96.

APPENDIX A: DIRECTIONS FOR PUBLIC INVOLVMENT PLAN PREPARATION

Each public involvement plan should include the following sections (*the following may be revised following review by the public involvement trainer):

1. Issue: Please briefly describe the Recovery Program activity/project.
2. Background: Identify the affected publics, and their concerns and needs and describe the public involvement activities that have taken place so far.
3. Goals, objectives and tactics:

Goal: Please identify the overall goal of the Recovery Program activity or project, such as, "To contribute to recovery of endangered fish by constructing a fish ladder at Redlands Diversion Dam."

Objective: The objective should identify the results desired in terms of public involvement/public relations, such as, "To increase support for the fish ladder by implementing at least two actions requested by the Redlands Board by summer 1995."

Strategy: Identify the methods that will be used to involve the public or publics. Examples include public meetings, individual meetings, open house, direct mail, newsletter article, media relations, etc.

Tactics: Describe the specific activities to be conducted for each identified strategy. For example, "Present status reports on the fish ladder construction and environmental assessment at Redlands' Board meetings."
4. Schedule: Specify dates for accomplishing each tactic.
5. Coordinator: Identify the person from your agency who will coordinate this tactic.
6. Budget: List the costs associated with this activity for which funding is requested from the Recovery Program.
7. Evaluation: Describe how this plan will be evaluated. Methods include specific actions taken; public attendance at meetings and open houses; results of written surveys or evaluations by targeted publics; content of citizen letters and letters to the editor; positive news stories; etc. The point is to try to answer the question "How did we do?"

**COLORADO RIVER RECOVERY PROGRAM
FY-1996 PROPOSED SCOPE-OF-WORK**

Project No.: _____
(Use FY95 # or leave blank)

Lead Agency: _____
Submitted by: _____
Address: _____ _ Ongoing-revised project
Phone: _____ Requested new start
FAX: _____
E-Mail: _____

Category (check one):
_ Ongoing project

Date: _____ _ Unsolicited project

- I. Title of Proposal:
- II. Relationship to RIPRAP: *[Action plan(s), task number(s) and title(s) in the March 7, 1995 RIPRAP which are correlated with this project]*
- III. Study Goals, Objectives, End Product:
- IV. Description of past performance on this or similar projects:
- V. Study area (including river miles and sampling dates, if appropriate)
- VI. Study Methods/Approach (provide a clear description of sampling methods, gear types, numbers and life stages of fish to be collected, statistical analyses to be used, etc.)
- VII. Task Description (FY-1996)
- VIII. Study Schedule (start/end by task)
- IX. FY-96 Work
 - Description of work
 - Deliverables (due date)
 - Budget (**by task**)
 - Labor
 - Travel
 - Equipment
 - Other
 - Total

FY-97 Work (for multi-year study) - not to exceed 2 paragraphs

 - Brief description of work
 - Deliverables
 - Budget estimate

FY-98 etc. (for multi-year study) - not to exceed 2 paragraphs
- X. Budget Summary* *[Be sure to clearly show funding targets]*

FY-1996 \$ _____
FY-1997 \$ _____
FY-1998 \$ _____

Total: \$ _____

* Do not include BR-FWS transfer overhead costs