

**UPPER COLORADO RIVER
ENDANGERED FISH
RECOVERY PROGRAM**

**FISCAL YEAR 2004 & 2005
PROGRAM GUIDANCE**

April 9, 2003

FY 2004 & 2005 PROGRAM GUIDANCE
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INTRODUCTION

This is the guidance for development of the Recovery Program's FY 2004-2005 Work Plan. The Program Director's office developed this guidance on the basis of the Recovery Program's Recovery Action Plan (RIPRAP) and input from Program participants. The guidance was subsequently reviewed, modified, and approved by the Program's technical, Management, and Implementation 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. Projects to be completed in or discontinued after FY 2003 also are listed. 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.

This FY 2004-2005 guidance requests proposals for FY 2004-2005 activities; proposed scopes of work are requested for each of the projects listed in this guidance. Scopes of work should be prepared according to the format in the appendices. Please review this format carefully, especially the explanatory text printed in italics. Scopes of work which do not contain the information and budget detail requested will be returned to the principal investigator for revision. This could prevent the scope from receiving FY 2004-2005 funding consideration because of the tight work plan development schedule.

Scopes of work for new, ongoing and ongoing-revised biological and water acquisition projects (under recovery elements I_V) are due NO LATER THAN May 16, 2003 (this includes scopes of work for capital-funded projects). Submit new, ongoing-revised, and ongoing scopes of work for these projects to the appropriate Program coordinator (see list at end of this page) in WordPerfect or Word format by electronic mail. IN ADDITION, submit a courtesy electronic or hard copy of new and ongoing-revised biological scopes of work to each member of the Biology Committee and water acquisition scopes of work to each member of the Water Acquisition Committee. If you wish, you may provide this courtesy copy by posting it to the fws-coloriver listserv. (The technical committees do not need to see ongoing scopes of work until later in the work plan review process, and these will be sent to them by the Program Director's office.)

For your information, the evaluation form that will be used by the Recovery Program in evaluating new scopes of work, the evaluation form used by the Recovery Program in reviewing and commenting on final draft project reports, the proper format for final draft reports that are submitted to the Biology Committee for review and approval, and the Biology Committee review process for final draft reports may all be found at <http://www.r6.fws.gov/crrip/rfdoc.htm>.

Scopes of work for information & education projects (under recovery element VI) also are due May 16, 2003, and should be submitted in WordPerfect or Word format to Debbie Felker (debbie_felker@fws.gov).

Program management scopes of work (under recovery element VII) are due by July 1, 2003 (in WordPerfect or Word format by electronic mail to angela_kantola@fws.gov).

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 20. Technical committee comments are then due to the Program Director and the Management Committee by July 21. 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 in early August to discuss the recommended work plans and approve projects for the Draft FY 2004-2005 Work Plan. The Draft Work Plan will be submitted to the Implementation Committee for review by August 25. The Implementation Committee will meet in September and the final FY 2004-2005 Work Plan and final scopes of work will be distributed in the first quarter of FY 2004. If you have any questions about this guidance or the FY 2004-2005 work plan development process, please contact Angela Kantola at 303/969-7322, ext 221, or the appropriate coordinator:

Instream flow protection -

Biological studies: Gerry Roehm 303/969_7322 ext. 272, gerry_roehm@fws.gov;

Water acquisition activities: George Smith 303/236-5322 ext. 235, george_smith@fws.gov

Habitat restoration and nonnative fish control - Pat Nelson 303/969-7322 ext. 226,
pat_nelson@fws.gov

Genetics and propagation, monitoring/research/life history - Tom Czaplá 303/969-7322 ext. 228,
tom_czapla@fws.gov

Information, education, and public involvement - Debbie Felker 303/969-7322 ext. 227,
debbie_felker@fws.gov

Program management - Angela Kantola 303/969-7322 ext. 221, angela_kantola@fws.gov

I. INSTREAM FLOW IDENTIFICATION AND PROTECTION

Instream flow activities in FY 2004 and 2005 will be directed toward: 1) ongoing flow, temperature, and channel/sediment monitoring (as identified in the Strategic Plan for Geomorphological Research and Monitoring); 2) augmenting flows in the Colorado, Yampa and Gunnison rivers to help meet Service flow targets; and 3) continued determination of flow needs and available flows.

<u>PROJECT NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 04/05 BUDGET</u>
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ONGOING PROJECTS

8	RECOVERY PROGRAM GAGE O&M	\$56,000 / \$58,000
	Supports several actions to identify, deliver, and protect instream flows on the Colorado, Green, Yampa, Duchesne, and Price rivers.	

8a	GUNNISON RIVER TRANSIT LOSSES	Funded outside the Recovery Program
	Complete estimation of stream-flow transit losses in the Gunnison River from station 09152500 downstream to the Redlands Canal diversion dam. (Program contributed \$10,000 in FY 03.)	

9	WATER RIGHT ACQUISITION CONSULTANT	Up to \$10,000/year
	Supports actions as needed to identify and protect flows on the Colorado, Green, and Yampa rivers.	

C-4C	REDLANDS GAGE O&M	\$10,000 / \$10,000
	Reclamation's support of continued operation of the Redlands Fish passage structure and provision of data for minimum flow requirements.	

71	COLORADO RIVER DECISION SUPPORT SYS.	\$150,000 / \$150,000
	CWCB uses CRDSS to assess legal and physical availability of water and Compact considerations for protection of instream flows in the Colorado and Yampa river basins.	

C-11	GRAND VALLEY WATER MANAGEMENT	\$1,098,000 / \$0
	Completion of construction on the Grand Valley Water Management Project to provide additional water for the 15-Mile Reach of the Colorado River.	

C-14/ PIP-12C	COORDINATED RESERVOIR OPERATION	Any funds required will be shown in Section VI
	Voluntary coordination of reservoirs in the upper reaches of the Colorado River to provide spring peak flows to the 15-Mile Reach.	

- 19B BIOLOGY HYDROLOGY SUPPORT** \$69,000 / \$72,500
The Service's Division of Water Resources provides hydrology and temperature data used by Program investigators working to develop and refine instream flow recommendations.
- 86 GEOMORPHOLOGY PEER REVIEW** Up to \$10,000/FY
As-needed peer review of scopes of work and draft final reports containing a geomorphological component.
- 113 GUNNISON RIVER CONSULTATION PROCESS** Funded under Program Mgmt.
Identify an appropriate means by which to consult on depletions from the Gunnison River basin. Quantify foreseeable future depletions and identify a volume of existing and future depletions to be covered under the consultation.
- 114 TRIBUTARY MGMT. PLAN(S)/PBO(S)** Funded under Program Mgmt.
Identify which, if any, significant tributaries are not covered by existing/pending biological opinions and develop management plan(s) for those tributaries to quantify existing and foreseeable future depletions to be covered under programmatic biological opinion(s) and identify management actions to offset impacts of depletions.
- 115 FLAMING GORGE FLOW RECOMMENDATIONS** \$22,000 / \$0
Determine the effect of recent (1997-2001) Flaming Gorge releases on the fish community in Lodore Canyon and develop a process to monitor the effect of future Flaming Gorge operations in Lodore and Whirlpool Canyons. Characterize the humpback chub community in Whirlpool Canyon, which will direct monitoring in the future.

ONGOING PROJECTS NEEDING REVISION

- 19H WATER ACQUISITION HYDROLOGY SUPPORT** \$59,000 / \$61,500
The Service's Division of Water Resources collects hydrology data, administers contracts, and develops data used by the Water Acquisition Committee to assess instream flow protection. Add tasks to collect data required under 15-Mile Reach PBO.
- 70 COLORADO INSTREAM FLOW PROTECTION** \$30,000 / \$30,000
CWCB activities to protect instream flows in the Colorado and Yampa river basins. Needs revision to incorporate 5-year review of progress under PBO to determine if instream flow filings are necessary in FY 04 (RIPRAP Colorado River Action Plan items #I.A.4.a.&b.(3)) and provide depletion accounting report as outlined in the PBO (consumptive use and losses report using CRDSS) by 12/05 (RIPRAP Colorado River Action Plan item #I.A.3.a.&b.).

PLACEHOLDERS

67 STEAMBOAT LAKE WATER LEASE

TBD

This project is pending the outcome of the Yampa River Management Plan. Steamboat Lake is one of several potential sources of water to augment late summer flows in the Yampa River. The terms and cost of the lease must be renegotiated; but the Program would pay only for the amount of water actually released for instream flow augmentation.

C-9 YAMPA RIVER MANAGEMENT PLAN/PBO

\$3,281,000 / \$3,885,000

A placeholder of roughly \$7M has been reserved for FY 2004–05 to implement a structural augmentation water supply alternative, if necessary, pending selection of a water supply option through the Yampa River NEPA process.

114a TRIBUTARY WATER DEMAND

TBD

Placeholder for one or more depletion estimates for significant tributaries found to lacking adequate coverage under existing biological opinions. FY 2002 scope of work was not implemented pending identification of affected tributaries. We anticipate that Colorado (CWCB) and/or Utah (UDWR) would be responsible for this activity.

GEOMORPHIC RESEARCH/CHANNEL & SEDIMENT MONITORING

\$378,000 / \$378,000

This placeholder represents one or more projects that may be recommended for implementation in the Strategic Plan for Geomorphological Research and Monitoring.

Ongoing projects that may be considered for continuation once the strategic plan is completed are:

85c UPPER COLORADO RIVER CHANNEL MONITORING

A placeholder of \$19,000/FY has been reserved, pending the completion of the geomorphological research strategic plan. This ongoing project would monitor the embeddedness of gravel and cobble substrates in the upper Colorado River and sample invertebrates to quantify the biological link between physical substrate characteristics and food-base production.

85d GREEN RIVER DEPOSITION AND EROSION MONITORING

A placeholder of \$20,000/FY has been reserved, pending the completion of the geomorphological research strategic plan. This ongoing project involves time-series monitoring of deposition and erosion at the Jensen razorback sucker spawning bar on the Green River to quantify sediment dynamics and relate them to physical and biological processes creating razorback sucker habitat.

85e GUNNISON RIVER DEPOSITION AND EROSION MONITORING

A placeholder of \$44,000/FY has been reserved, pending the completion of the geomorphological research strategic plan. This project would involve time-series monitoring of deposition and erosion to quantify sediment dynamics to help determine the timing and duration of flows needed to create and maintain habitat for endangered fish in the Gunnison River.

85f GUNNISON RIVER SEDIMENT MONITORING

A placeholder of \$45,000/FY has been reserved, pending the completion of the geomorphological research strategic plan. This project would evaluate the dynamics of sediment movement and evaluate the effects of the flows and sediment movement on the morphometric and bed material characteristics of the Gunnison River.

COMPLETED OR DISCONTINUED PROJECTS

104 FLUCTUATING FLOW EFFECTS ON YOUNG OVERWINTERING PIKEMINNOW

This project to estimate of over-winter survival and movement of age-0 Colorado pikeminnow as related to stage fluctuations in the Green River below Flaming Gorge dam will be completed in FY 2003.

107 GUNNISON RIVER TEMPERATURE MODEL

Phase II (modeling) of this project to determine if temperature modification is feasible on the Gunnison River downstream from the Aspinall Unit will be completed in FY 2003.

108 WINTER USE & SEASONAL FLOW NEEDS OF PIKEMINNOW IN THE PRICE RIVER

Development of year-round flow recommendations to protect Colorado pikeminnow in the Price River at their current levels is scheduled for completion in FY 2003.

II. HABITAT RESTORATION

The goal of Habitat Restoration is to provide and protect habitat necessary to both achieve and sustain endangered fish recovery. Currently there are three major thrusts under this element of the Recovery Program.

1. Re-open access to historically-occupied river sections by restoring fish passage at the following migration barriers:
 - a. Redlands Diversion Dam (completed 6/96)
 - b. Hartland Diversion Dam (on hold pending reassessment of need)
 - c. Grand Valley Irrigation Company Diversion (completed 1/98)
 - d. Price-Stubb Diversion Dam
 - e. Grand Valley Project Diversion Dam
 - f. Tusher Wash Diversion Dam (dropped from further consideration; deemed unnecessary)
 - g. Yampa River diversion structures, if deemed necessary

2. Install fish screens to prevent entrainment of endangered fishes into diversion canals.
 - a. Redlands Diversion Dam
 - b. Hartland Diversion Dam (on hold pending assessment of need for fish passage)
 - c. Grand Valley Irrigation Company Diversion (completed 4/02)
 - d. Grand Valley Project Diversion Dam
 - e. Tusher Wash Diversion Dam
 - f. Yampa River diversion structures, if deemed necessary

3. Restore or enhance natural floodplain functions that support endangered fish recovery.

<u>PROJECT</u>		<u>PROJECTED</u>
<u>NUMBER</u>	<u>TITLE</u>	<u>FY 04/05 BUDGET</u>

ONGOING PROJECTS

C-4b REDLANDS FISH PASSAGE O&M		\$26,160 / \$26,160
Fish & Wildlife Service monitoring of the fish trap at the Redlands fish passage (sorting, examining and enumerating all fish; cleaning trash and debris from the trash racks, bar screens, fish trap, and fishway entrance).		
C-5 PRICE-STUBB FISH PASSAGE		\$1,405,000 / \$1,070,000
Begin construction of fish passage at the Price-Stubb Diversion Dam on the Colorado River.		
C-23 GRAND VALLEY PROJECT FISH PASSAGE		\$1,000,000 / \$1,575,000
Construct fish passage at the Grand Valley Project Diversion Dam (aka "Roller Dam") on the Colorado River.		

C-23 GRAND VALLEY PROJECT FISH SCREEN \$3,200,000 / \$0
Complete construction of fish screen at the Grand Valley Project Diversion Dam (aka “Roller Dam”) on the Colorado River.

C-29 GVIC PASSAGE AND SCREEN O&M \$93,600 / \$93,600
Operation and maintenance of passage and screen facilities at the GVIC Diversion Dam on the Colorado River near Palisade.

116 REDLANDS SCREEN \$1,250,000 / \$2,400,000
Construct fish screen at the Redlands Diversion Dam canal on the Gunnison River near Whitewater. Operation and maintenance funds also expected to be needed in FY 05.

NEW PROJECTS

C-29a GVIC SCREEN EVALUATION \$10,000 / \$10,000
Evaluation of screen’s ability to prevent fish entrainment into diversion canal.

COLORADO PIKEMINNOW ENTRAINMENT INTO YAMPA RIVER DIVERSION CANALS \$10,000 / \$10,000
Assessment and evaluation of Colorado pikeminnow entrainment into diversion canals adjacent to the Yampa River. Efforts will focus on the largest diversions (i.e., Patrick Sweeney and Maybell).

C-6 EVALUATION OF RAZORBACK SUCKER MIGRATION AND RECRUITMENT FROM FLOODPLAIN DEPRESSIONS INTO THE MAINSTEM MIDDLE GREEN RIVER \$72,000 / \$52,000
Evaluation of the size and age at which razorback suckers stocked as larvae migrate from floodplain depressions into the mainstem river (and of environmental cues related to this migration).

PLACEHOLDERS

C-26a HARTLAND FISH PASSAGE \$0 / \$75,000
Construction of fish passage at the Hartland Diversion Dam. (On hold pending determination of need [Gunnison River /Aspinall temperature modeling report will be complete in September 2003.])

C-26b HARTLAND FISH SCREEN \$0 / \$45,000
Construction of fish screen at the Hartland Diversion canal. (On hold pending determination of need [Gunnison River /Aspinall temperature modeling report will be complete in September 2003.])

C-6 FLOODPLAIN HABITAT RESTORATION PROGRAM - The floodplain habitat restoration program is undergoing assessment, thus continuation and cost of acquisition/assessment activities is unknown until that assessment is complete. The habitat restoration program and a proposal for sub-basin and site-specific management plans will be discussed at upcoming Biology and Management committee meetings.

- Screen sites for contaminants (#C-6 umb)
- Hydrology/Geomorphology (#C-6 hyd)
 - a. Pre- and post-restoration assessments
 - b. Development of design options for restoration
 - c. Construction oversight
- Site and Sub-basin management plan implementation
- Land acquisition activities (#C-6 land)
- Easement and weed management (O&M) (#C-6 easement)
- Levee removal construction (#C-6 umb)
- Evaluation of razorbacks stocked into depressions (#C-6 rz)
- Evaluation of bonytail stocked into depressions (#C-6 bt)
- Evaluation of larval entrainment (#C-6 rz entrainment)
- Floodplain restoration (#75)
- Stewart Lake management plan (#117) (On hold pending results of selenium remediation efforts.)

COMPLETED/DISCONTINUED PROJECTS

C-6rz model RAZORBACK SUCKER HABITAT MODEL

The habitat model is scheduled for completion in March 2003.

III. NONNATIVE FISH CONTROL

Nonnative fish control activities in FY 2004–2005 will be directed toward: 1) removal/control of problematic nonnative fishes from river reaches occupied by the endangered fishes; 2) identification of centrarchid source areas; 3) evaluation and control of escapement of nonnative fishes from reservoirs that serve as chronic sources of nonnative fishes into river reaches occupied by the endangered fishes; and 4) evaluation of nonnative fish stocking regulations.

<u>PROJECT NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 04/05 BUDGET</u>
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ONGOING PROJECTS

C-18/19	CENTRARCHID SOURCES	\$122,900 / \$0
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Isotope study to identify sources of centrarchids found in the Colorado River.

ONGOING PROJECTS NEEDING REVISION

As all of these nonnative fish control activities are fairly new, they may require revision based on the outcome of previous years' work.

98a	MIDDLE YAMPA RIVER PIKE TRANSLOCATION	\$73,000 / \$75,000
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Removal and translocation of northern pike from the middle Yampa River.

98b	UPPER YAMPA NONNATIVE FISH TRANSLOCATION	\$86,100 / \$90,000
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Removal and translocation of northern pike, smallmouth bass, and channel catfish from the upper Yampa River.

109	MIDDLE GREEN NORTHERN PIKE REMOVAL	\$48,300 / \$50,000
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Continuation of the removal of northern pike from the middle Green River which was begun in FY 2001.

110	LOWER YAMPA CATFISH REMOVAL	\$140,000 / \$145,000
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Removal of catfish from the lower Yampa River to sufficiently reduce their abundance and minimize predatory and competitive impacts on growth, recruitment, and survival of resident humpback chub.

123	GREEN RIVER NONNATIVE FISH REMOVAL	\$186,500 / \$195,800
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Removal of channel catfish, smallmouth bass, and northern pike from the Green River.

124	DUCHESNE RIVER NONNATIVE FISH REMOVAL	\$28,700 / \$30,000
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Removal of channel catfish, smallmouth bass, and northern pike from the Duchesne River.

125	MIDDLE YAMPA BASS AND CATFISH TRANSLOCATION	\$36,000 / \$40,000
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Removal and translocation of smallmouth bass and channel catfish from the middle Yampa River.

126 COLORADO RIVER CATFISH REMOVAL

\$77,700 / \$78,100

Removal of channel catfish from the Colorado River.

NEW PROJECTS:

EVALUATE NATIVE FISH RESPONSE TO NONNATIVE FISH CONTROL EFFORTS

Program guidance to be developed by Colorado and Program Director's office.

PLACEHOLDERS:

C-20 HIGHLINE LAKE SCREENING :

- REPLACEMENT NET

~\$200,000 / \$0

- O&M

\$8,000 / \$8,000

Need for replacement and operation and maintenance of the nonnative fish net barrier at Highline Lake will be discussed by Biology and Management committees. (O&M from Colorado additional in-kind funds).

C-31 NORTHERN PIKE EXCLUSION ASSESSMENT

\$? / \$?

Exclude northern pike from spawning habitats adjacent and connected to the Yampa River to reduce the abundance of northern pike in critical habitat for endangered fish downstream.

119 ESCAPEMENT FROM STARVATION RESERVOIR

Evaluation of sportfish escapement from Starvation Reservoir. If flows adequate for evaluation are not available in FY 03; FY 03 funds may carry forward to FY 04.

C-9 ELKHEAD SCREEN

On hold pending determination of need.

COMPLETED/DISCONTINUED PROJECTS:

118 EVALUATION OF ESCAPEMENT FROM ELKHEAD

Results of studies to determine levels of nonnative warmwater sportfish escapement from Elkhead Reservoir expected by early FY 04.

106 NONNATIVE STOCKING REGS. EVAL.

Final report on evaluation of the effectiveness of (biological response to) Colorado's fish stocking regulations due 6/30/03.

IV. PROPAGATION & GENETICS MANAGEMENT

The goals of Propagation and Genetics management are: to prevent immediate extinction of any endangered Colorado River fish stocks; to conserve genetic diversity of wild endangered fish stocks through recovery efforts; to maintain genetic diversity in captive-reared endangered fish broodstock that is similar to that of the wild stock used as founders; and to produce genetically sound offspring for augmentation efforts.

<u>PROJECT NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 04/05 BUDGET</u>
<i><u>ONGOING PROJECTS</u></i>		
C-7	PROPAGATION FACILITIES	\$240,000 / \$210,000
	Construction and leasing of additional growout ponds to produce endangered fish for stocking and purchase of necessary tags and tagging equipment.	
	GREEN RIVER SUBBASIN GROWOUT PONDS PIT TAGGING EQUIPMENT FOR BROODSTOCK AND AUGMENTATION FISH	\$30,000 / \$0 \$210,000 / \$210,000

ONGOING PROJECTS NEEDING REVISION

29 O&M OF PROPAGATION FACILITIES

Operation and maintenance of Program hatchery facilities to produce endangered fish for stocking according to approved stocking plans. Revise to add funds for raising fish at Colorado's native species hatchery.

29a	GRAND VALLEY END. FISH FACILITY	\$357,000 / \$375,000
29b	WAHWEAP STATE FISH HATCHERY	\$235,900 / \$248,000
29c	OURAY ENDANGERED FISH FACILITY	\$440,000 / \$462,000
0	OURAY WELL-FIELD DEVELOPMENT/ REPAIR	\$40,000 / \$45,000
29d	COLORADO NATIVE SPECIES HATCHERY	\$73,500 / \$77,200

V. RESEARCH, MONITORING, & DATA MANAGEMENT

The goals of Research, Monitoring and Data Management are to provide the necessary information in life histories of endangered fishes to aid in the implementation of other Program activities, to determine the status and trends of the natural stocks, and to actively maintain the data in a useable format for researchers. The objective is to use this information in deciding the course of other Program management actions to recover the endangered fish.

<u>PROJECT NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 04/05 BUDGET</u>
<i><u>ONGOING PROJECTS</u></i>		
15	LARVAL FISHES IDENTIFICATION Processing of collections under project #22F, backlog cataloging, and maintenance curation of existing specimens.	\$45,600 / \$47,900
22F	YAMPA & MIDDLE GREEN COLO. PIKEMINNOW & RAZORBACK SUCKER LARVAL ABUNDANCE “Real-time” larval razorback and pikeminnow monitoring to determine optimal dam operations.	\$94,500 / \$99,200
127	UPPER COLORADO RIVER PIKEMINNOW EST Second and third years of Analysis and write up of final report for population estimate of Colorado pikeminnow in the lower Green River.	\$106,100 / \$112,800
128b (22J)	LOWER GREEN PIKEMINNOW EST. Analysis and write up of final report for population estimate of Colorado pikeminnow in the lower Green River.	\$50,000 / \$0
129 (22K)	DESO/GREY HUMPBACK EST. Analysis and write up of final report for population estimate of humpback chub in Desolation/Grey Canyons of the Green River. During FY03 sampling is being moved from the summer to fall, drought conditions and/or poor comparison to earlier years because of the seasonal change may require further years of estimates (FY04/05).	\$12,000 / \$0
130	CATARACT CANYON HUMPBACK CHUB EST. Delayed due to low flows in FY02. First year begins in FY03 (if flows allow)	\$90,000 / \$110,000
131	BLACK ROCKS HUMPBACK CHUB EST. Overlaps of Fiscal years, some sampling to be done in FY05 with report writing.	\$46,100 / \$49,000
132	WESTWATER CANYON HUMPBACK CHUB EST. Overlaps of Fiscal years, some sampling to be done in FY05 with report writing.	\$67,900 / \$83,500

133 YAMPA CANYON HUMPBACK CHUB EST. \$96,900 / \$30,000
FY04 is second year of sampling. Final report due in FY05.

ONGOING PROJECTS NEEDING REVISION

16 DATABASE MANAGEMENT \$35,000 / \$36,800
The Service compiles, manages, and maintain all research and monitoring data collected by the Recovery Program. Also includes all stocking information from the various hatcheries.

121 SURVEY OF LARVAL RAZORBACK SUCKER IN THE UPPER COLORADO RIVER SUBBASIN \$91,200 / \$76,300
Second of larval razorback sucker monitoring in the Gunnison River. This scope of work should be revised to incorporate the sites in the Upper Colorado River that were identified in FY04/05 Early Program Guidance, the search for congregations of spawning adults and the location of spawning bars.

NEW PROJECTS

(111) TITLE: RAZORBACK SUCKER AND BONYTAIL STOCKING EVALUATION

RIPRAP Item Number:

Green River Action Plan: Mainstem

IV.A.1.d. Evaluate stocking success as identified in monitoring plan for stocked fish
Green River Action Plan: Yampa and Little Snake Rivers

IV.A.1.b. Evaluate stocking success as identified in monitoring plan for stocked fish
Colorado River Action Plan: Mainstem

IV.A.3-6.c Evaluate stocking success as identified in monitoring plan for stocked fish
Colorado River Action Plan: Gunnison River

IV.A.3.c. Evaluate stocking success as identified in monitoring plan for stocked fish

Rationale/Problem Statement:

Based on the recommendation from a workshop on designing methods to evaluate stocked fish (Muth and Czaplá 2003), this project will initially analyze data from other ongoing projects (i.e., nonnative fish control and population estimates) to determine survival, distribution, movement and growth of stocked fish while at large in the Green River and Upper Colorado River subbasins. This information is necessary to determine the success of the stocked fish and to allow for potential adjustments to the integrated stocking plan. A portion of this work should also determine additional sampling that may be required as projects are completed or have a 2-year hiatus (population estimates).

Project Goals and Objectives:

1. Determine survival, distribution, movement and growth of stocked fish.
2. Determine additional sampling needs.

Expected Products:

A report that identifies survival estimates, distribution, movement and growth of stocked fish. The report should also make recommendations on other sampling that may be required in out years.

Recommended Approach/Methods:

The database management project (#16) will integrate all the various FY03 projects in the Upper Basin which have information on stocked fish and PIT-tag information provided by hatcheries (FY02–FY03). The principle investigator will use various computer software and statistical programs to analyze the data and write a report.

Schedule:

- (1/15/04 Project #16 has received all data from other investigators)
- (1/15–3/1 Principle investigator on #16 integrates all pertinent information)
- 3/1–5/1 Data analyzed for survival, distribution, movement and growth
- 5/1–6/1 Write draft report
- 6/1/04 Draft report submitted to Program Coordinator (so information can be used in planning FY 05 work)

Cost Range: \$25,000–\$30,000

Literature Cited:

Muth, R.T., and T.E. Czapl. 2003. Workshop summary: designing methods to evaluate stocked fish in the Upper Colorado River, Green River and San Juan River subbasins. Program Director’s Office, Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.

TITLE: YOUNG-OF-THE-YEAR COLORADO PIKEMINNOW MONITORING

(Program guidance to be developed.)

PLACEHOLDERS

MONITORING STOCKED RAZORBACK SUCKER AND BONYTAIL

\$0 / \$60,000

An additional sampling effort may be needed in FY 2005 to monitor stocked razorback and bonytail where Colorado pikeminnow and humpback chub population estimates will not be conducted that year. This may entail a one-pass electrofishing survey in the Green River, plus some additional trammel netting.

DEVELOPMENT OF A COMPUTER-INTERACTIVE KEY TO IDENTIFY CYPRINID LARVAE AND EARLY JUVENILES

\$40,600 / \$89,900

The Larval Fishes Laboratory at CSU has proposed to develop this key, similar to the one developed to identify razorback sucker larvae. This is currently considered a placeholder as the report for the sucker key is not yet complete and or its utility yet fully tested. The Recovery Program would also be interested in finding other entities who might share the cost of this work.

COMPLETED/DISCONTINUED PROJECTS

128a (22i) MIDDLE GREEN PIKEMINNOW EST.

Report writing and finalized during FY04, funds were provided in FY03. Additional funds may be required to integrate data with the lower Green River Colorado pikeminnow population estimate.

VI. INFORMATION, EDUCATION, & PUBLIC INVOLVEMENT

A strategic, multi-faceted information and education program is being implemented to: develop public involvement strategies at the beginning of any and all projects; educate target audiences (including the public and elected officials) about endangered fish and increase their understanding of and support for the recovery of these fish at local, state and national levels; provide opportunities for the public to participate in activities that support recovery; and improve communication and cooperation among members of the Recovery Program.

<u>PROJECT NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 04/05 BUDGET</u>
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ONGOING PROJECTS

12 INFORMATION AND EDUCATION	\$50,000 / \$50,000
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The Information and Education Program scope of work is a comprehensive communications plan that addresses goals, objectives and strategies for all aspects of the Recovery Program. Project-specific plans are included as subsets to the comprehensive plan. This method of planning and evaluating I&E activities is designed to improve both internal and external communication. The I&E Committee reviews and evaluates the plans and updates and changes them as needed to address changes in Program activities.

The following projects have scopes of work that contain public involvement activities which are considered subsets of the comprehensive I&E communication plan:

PIP-12B GRAND VALLEY PROJECTS	\$35,000 / \$35,000
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This SOW is ongoing and addresses public involvement related to: restoring fish passage at the abandoned, privately-owned Price-Stubb Dam, the Grand Valley Project and the privately-owned Hartland Dam; and the Gunnison River biological opinion and NEPA compliance. These activities include, but are not limited to, public meetings, news releases, one-on-one meetings with affected interests, distribution of literature and provision of regular updates to local congressional staff.

PIP-12H INTERPRETIVE SIGNS AND EXHIBITS	\$30,000 / \$30,000
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The Recovery Program is working to install interpretive signs and exhibits in key locations in the Upper Colorado River Basin to provide information about the endangered fishes and the Recovery Program. Plans for FY 04/05 include completing an exhibit at the Vernal Museum (shared with the Ouray National Wildlife Refuge) and possibly establishing a permanent exhibit at the Lake Powell Visitor's Center in FY 05 (which might require additional funds).

PIP-12I RUEDI RESERVOIR	Funded outside Recovery Program
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Since 1990, Reclamation has released water from Ruedi Reservoir to benefit endangered fish species in the 15-Mile Reach of the Colorado River. Local businesses and residents of Basalt, Colorado, remain concerned about the effects these releases will have on the Fryngpan River's gold-medal fishery. The Bureau handles all public involvement issues

related to this project including hosting public meetings, sending news releases, maintaining a 1-800 information line; and e-mailing updates to interested parties.

PIP 12J INTERACTIVE BASINWIDE MAP \$5,000 / \$5,000

An interactive, computerized map of the Colorado River Basin will enable the Recovery Program to provide customized information for specific audience needs. The map will be available in both electronic and print formats and will be used at public meetings, on the Program website, in Program publications, and to provide to print and broadcast news media. Researchers will also have access to the map to highlight specific projects they are involved with. In FY 2002, \$20,000 was provided to the Colorado River District to oversee production of the base map by Southwest Data Center. Of that amount, \$3,000 would go toward development of the base map and the remainder to customize the graphic for Recovery Program use. An annual budget is required to update the map.

ONGOING PROJECTS NEEDING REVISION

PIP 12K TRIBUTARIES \$4,000 / \$4,000

The Recovery Program is developing management plans / consultation processes for significant tributaries of the Upper Colorado River Basin. The Yampa and Gunnison rivers are of primary focus in FY 04/05.

PIP 12L NONNATIVE FISH MANAGEMENT \$5,000 / \$5,000

The Recovery Program is expanding its efforts to minimize the adverse effects certain species of nonnative fish have on the endangered fishes. As work includes removal of popular sportfish species in more publicly visible sections of the Colorado River and its tributaries, public involvement issues will also increase. A comprehensive strategic communications plan was prepared in FY 02 and will be implemented in FY 03 and beyond to ensure that accurate, timely messages are delivered to target audiences.

PLACEHOLDERS

PIP 12E FLOODPLAIN RESTORATION (Funds within C-6)

This work addresses public involvement related to habitat restoration along the Colorado mainstem and its tributaries. Activities include, but are not limited to, one-on-one meetings with affected landowners, involving potentially affected interests in decision-making processes, informing the public through news releases, distribution of literature and public meetings as appropriate.

PIP 12C COORDINATED RESERVOIR OPERATIONS \$0 / \$43,800

This work addresses public involvement related to coordinated operation of reservoirs in the upper reaches of the Colorado River to increase spring peak flows in the 15-Mile Reach of the Colorado River. Activities include, but are not limited to, informing the public through news releases and direct mailings as necessary of any decisions to adjust reservoir operations and bypasses made to enhance flows for endangered fish purposes. Due to the drought, there will likely not be enough water in reservoirs in 2004 to coordinate operations. Funds should be made available in 2005, however, in the event that water conditions make this SOW possible.

PIP 12F POND RECLAMATION

(Funds within C-18/19)

Pond reclamation has been put on hold until work is completed to identify centrarchid sources. Public involvement will be needed at some point to gain access to property from private landowners and to inform the public regarding the nature of any Program actions that will occur.

VII. PROGRAM MANAGEMENT

Program management activities for FY 2004-2005 focus on continued planning and coordination of Program activities by the Program Director and staff and by Utah, Colorado, Wyoming, and the Bureau of Reclamation.

<u>PROJECT NUMBER</u>	<u>TITLE</u>	<u>PROJECTED FY 04/05 BUDGET</u>
<i><u>ONGOING PROJECTS</u></i>		
1	UTAH PROGRAM MANAGEMENT	\$92,000 / \$94,700
2	BUREAU OF RECLAMATION PROGRAM MGMT.	\$150,000 / \$150,000
3	SERVICE PROGRAM MANAGEMENT	\$905,000 / \$932,200
4	COLORADO PROGRAM MANAGEMENT	\$110,000 / \$110,000
5	WYOMING PROGRAM MANAGEMENT	\$36,900 / \$37,600
	CAP21 CAPITAL PROJECTS COORDINATION	\$250,000 / \$200,000

COLORADO RIVER RECOVERY PROGRAM
FY-2004–2005 PROPOSED SCOPE OF WORK for:
(Show brief title of project here)

Project No.: _____

Lead Agency:

Submitted by: *[Give name of project manager, give name, address, phone, fax, and e-mail of principal investigator]*

Date:

Category:

Expected Funding

Source:

- | | |
|--|--|
| <input type="checkbox"/> Ongoing project | <input type="checkbox"/> Annual funds |
| <input type="checkbox"/> Ongoing-revised project | <input type="checkbox"/> Capital funds |
| <input type="checkbox"/> Requested new project | <input type="checkbox"/> Other (explain) |
| <input type="checkbox"/> Unsolicited proposal | |

I. Title of Proposal:

II. Relationship to RIPRAP: *[Action plan(s), task number(s) and title(s) in the most recent RIPRAP which are correlated with this project]*

III. Study Background/Rationale and Hypotheses: *[If applicable] [Include description of expected study results and how those results will be integrated into the overall recovery effort.]*

IV. Study Goals, Objectives, End Product: *[Include measurable outcomes and their expected due dates.]*

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 and Schedule

VIII. FY-2004 Work

- Deliverables/Due Dates
- Budget *[Broken out by task and funding target; see budget detail example requirements, attached]*
 - Labor
 - Travel
 - Equipment
 - Other
 - Total

FY-2005 Work (for multi-year study)

- Deliverables/Due Dates
- Budget [*Broken out by task and funding target; see budget detail example requirements, attached*]
 - Labor
 - Travel
 - Equipment
 - Other
 - Total

FY-2006 etc. (for multi-year study)

IX. Budget Summary [*Provide total AND break-out by funding target (e.g. station)*]*

FY-2004

FY-2005

FY-2006

Total:

X. Reviewers [*For new projects or ongoing-revised projects, list name, affiliation, phone, and address of people who have reviewed this proposal.*]

XI. References

* Do NOT include overhead costs on funds transferred from Reclamation to the Service.

Scope of Work Budget Detail Requirements

Budgets should be broken down by task, category (at least labor, travel, supplies, and equipment) and funding target. Under "labor," please identify: the type of labor (e.g., project manager, technician, secretary, etc.), the labor rate (per day, per week, or whatever calculation your office uses), and the expected amount of effort (expressed in terms of hours or weeks). If supplies exceed 5% of the project budget, please explain those costs. All equipment expenses for any single item \geq \$1,000 should be itemized and justified.

Example:

FY 2004 Costs:

<u>Task 1</u>	<u>Agency A</u>	<u>Agency B</u>	<u>Contractor</u>	<u>Total</u>
Labor				
Proj. mgr (\$1833/wk; 3 wks @ agency A, \$1800/wk; 2 wks @ agency B)	\$5,500	\$3,600	\$0	\$9,100
Technicians (10 wks per agency; \$810/wk @ agency A; \$900/wk @ agency B)	\$8,100	\$9,000	\$0	\$17,100
Travel				
Per diem (20 days)	\$600	\$700	\$0	\$1,300
Vehicle (20 days)	\$1,200	\$1,500	\$0	\$2,700
*Equipment				
Boat	\$0	\$12,000	\$0	\$12,000
Trailer	\$0	\$6,000	\$0	\$6,000
Motor	\$0	\$2,000	\$0	\$2,000
Electrofishing Unit	\$0	\$4,000	\$0	\$4,000
Supplies	\$700	\$800	\$0	\$1,500
Task subtotal	\$16,100	\$39,600	\$0	\$55,700

*Justification: Additional outfitted electrofishing boat and trailer needed for concurrent sampling in two river reaches as required by population estimate protocol. Current equipment inventory of agency B includes only one outfitted electrofishing boat and trailer.

Task 2

Labor				
Biologist (2 wks; \$1500/wk @agency B; contractor \$2000/wk)	\$0	\$3,000	\$4,000	\$7,000
Technician (3.5 wks @ \$900/wk)	\$0	\$3,150	\$0	\$3,150
Task subtotal	\$0	\$6,150	\$4,000	\$10,150
FY 2004 TOTAL	\$16,100	\$45,750	\$4,000	\$65,850

FY 2005 Costs:

	Agency A	Agency B	Contractor	Total
Task 2				
Labor				
Proj. leader (2 wks @ Agency B @ \$1800/wk; 3 wks contractor @\$2500/wk)	\$0	\$3,600	\$7,500	\$11,100
Biologist (5 wks at each: \$1500/wk @ agency B; \$2000/wk contractor)	\$0	\$7,500	\$10,000	\$17,500
Task subtotal	\$0	\$11,100	\$17,500	\$28,600
Task 3				
Labor				
Biologist (4 wks @ each: \$1500/wk @ agency A&B; \$2000/wk contractor)	\$6,000	\$6,000	\$8,000	\$20,000
Proj. leader (2 wks @ each: \$1833/wk @ agency A; \$1800/wk @ agency B)	\$3,700	\$3,600	\$5,000	\$12,300
Travel				
Vehicle (5 days)	\$300	\$350	\$300	\$950
Airfare (1 trip)	\$500	\$700	\$650	\$1,850
Per diem (7 days)	\$210	\$245	\$210	\$665
Equipment	\$0	\$0	\$0	\$0
Supplies				
Tags		\$1,150		\$1,150
Glassware		\$250		\$250
Sample bottles		\$100		\$100
Task subtotal	\$10,710	\$12,395	\$14,160	\$37,265
FY 2005 TOTAL	\$10,710	\$23,495	\$31,660	\$65,865