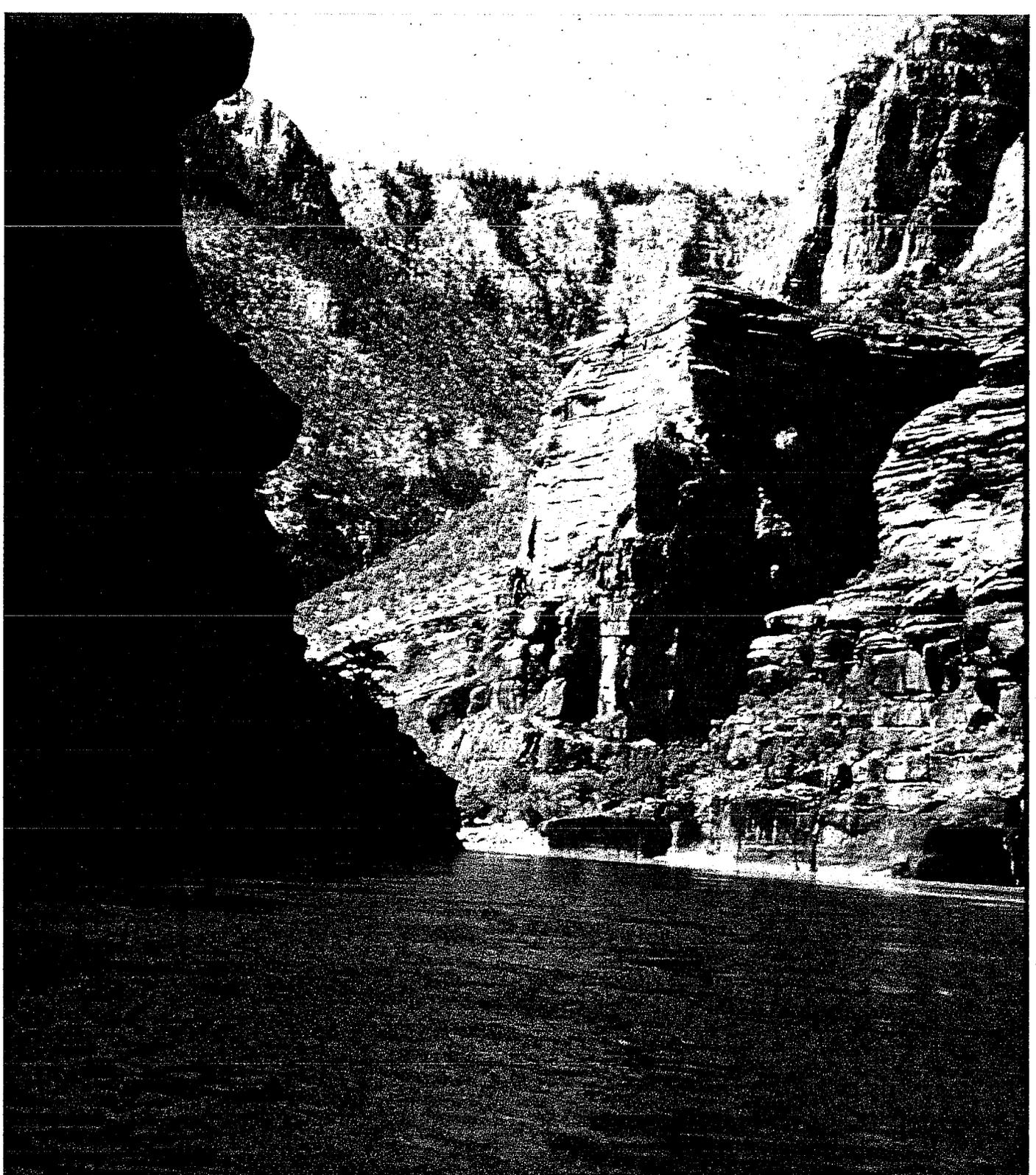


1994 WASHINGTON, D.C., BRIEFING

RECOVERY IMPLEMENTATION PROGRAM
FOR ENDANGERED FISH SPECIES
IN THE UPPER COLORADO RIVER BASIN



RECOVERY PROGRAM FOR
THE ENDANGERED FISHES
OF THE UPPER COLORADO

1994 WASHINGTON, D.C., BRIEFING PACKET

RECOVERY IMPLEMENTATION PROGRAM FOR ENDANGERED FISH SPECIES OF THE UPPER COLORADO RIVER BASIN

March 21 - March 25, 1994

CONTENTS:

Mission Statement and Program Participants

FY 95 Congressional Action Items

FY 95 Budget Analysis

Recovery Implementation Program Recovery Action Plan

Appendices:

- A. Summary of Recovery Implementation Program Expenditures
- B. Fish Population Status and Recovery Goals
- C. Recovery Program Washington, D.C., Trip Participants

▶ **MISSION STATEMENT & PROGRAM PARTICIPANTS** ◀

MISSION

The Recovery Program is an interagency consortium of Federal, State and private groups whose mission is to recover the endangered fish in the Upper Colorado River Basin while allowing future water development to proceed in compliance with the Endangered Species Act.

PROGRAM PARTICIPANTS

U.S. Fish and Wildlife Service

U.S. Bureau of Reclamation

Western Area Power Administration

State of Colorado

State of Utah

State of Wyoming

Colorado Water Congress

Utah Water Users Association

Wyoming Water Development Association

National Audubon Society

Environmental Defense Fund

Colorado Wildlife Federation

Wyoming Wildlife Federation

Colorado River Energy Distributors Association



Florence Barnes stands next to a Colorado squawfish caught in Lily Park during the early 1930s. Colorado squawfish once grew to five or more feet long and were called "Colorado salmon" or "white salmon."

► **FY 95 CONGRESSIONAL ACTION ITEMS** ◀

SUMMARY

Fish and Wildlife Service

- ✓ Support Service Funds for the Recovery Program (\$624,000-Recovery)
- ✓ Earmark Section 6 funds (\$200,000-Grants to States)
- ✓ Provide Hatchery Operation and Maintenance Funds for the Recovery Program (\$191,000-Hatchery Operation and Maintenance)

Bureau of Reclamation

- ✓ Support Bureau of Reclamation Funds for the Recovery Program (\$4,710,000-Construction Program)

► **FY 95 CONGRESSIONAL ACTION ITEMS** ◀

Fish and Wildlife Service

Background

The Fish and Wildlife Service contributes \$824,000 annually to the Recovery Program for implementing high priority recovery activities consistent with its funding commitment to the Recovery Program. In the past, \$624,000 have been in the form of endangered species recovery funds and \$200,000 in the form of Section 6 Endangered Species Act funds that have been provided to the States of Colorado and Utah. These funds have supported a variety of high priority recovery activities which are listed in Table 1. In addition, the Service has provided additional funds to operate hatchery facilities being used to support stocking, research, public education, and refugia purposes. (By "refugia" we mean ponds used to temporarily hold fish in protected settings to prevent them from becoming extinct in the wild.)

Support FWS Funds for the Recovery Program
(\$624,000-Recovery)

In FY 95, the President's proposed budget contains \$624,000 of Endangered Species recovery funds for the Service to participate in the Recovery Program. The Recovery Program fully supports this proposed appropriation.

Earmark \$200,000 Section 6 Funds
(\$200,000-Grants to States)

In FY 1992 and FY 1993, Congress earmarked \$200,000 of funds to the States pursuant to Section 6 of the Endangered Species Act for recovery of the endangered Colorado River fishes. No Section 6 funds are earmarked for the Recovery Program in the FY 95 budget. The Section 6 budget for all of Region 6 of the Service will be \$648,000 in FY 95; requests from the eight States in Region 6 for Section 6 funds in FY 95 are expected to total about \$2 million. Dedicating \$200,000 of the Section 6 funds to the Recovery Program from the Region's normal allocation will adversely and significantly impact the Service's ability to fund other high priority endangered species recovery efforts for the 67 listed species in Region 6.

Therefore, the Recovery Program requests that \$200,000 of Section 6 funds be earmarked for the Recovery Program before the Service's formula for allocating Section 6 funds among the Regions is applied. Language should be included in the appropriations bill specifying this.

Table 1. Recovery Program projects funded by the Fish and Wildlife Service's annual contribution in FY 94.

PROJECT TITLE	SERVICE FUNDING
Recovery Program Management	\$277,300.00
Information and Education Activities	\$ 20,000.00
Hydrology Evaluations	\$ 5,900.00
Population Monitoring	\$ 73,600.00*
Survey of Potential Sites for Flooded Bottomland Restoration	\$ 41,200.00
Gila (Chub) Taxonomy Studies	\$ 80,000.00
Coordination of Genetics and Propagation Activities	\$ 41,400.00
Propagation and Genetics Facilities Operation and Maintenance	\$ 76,200.00*
Assessment of 1993 Green River Flood Damage	\$ 15,000.00
Colorado and Gunnison River Flow, Geomorphology, and Food Web Studies	\$193,400.00*
TOTAL:	\$824,000.00

* Includes funding for States of Utah and/or Colorado (total = \$200,000).

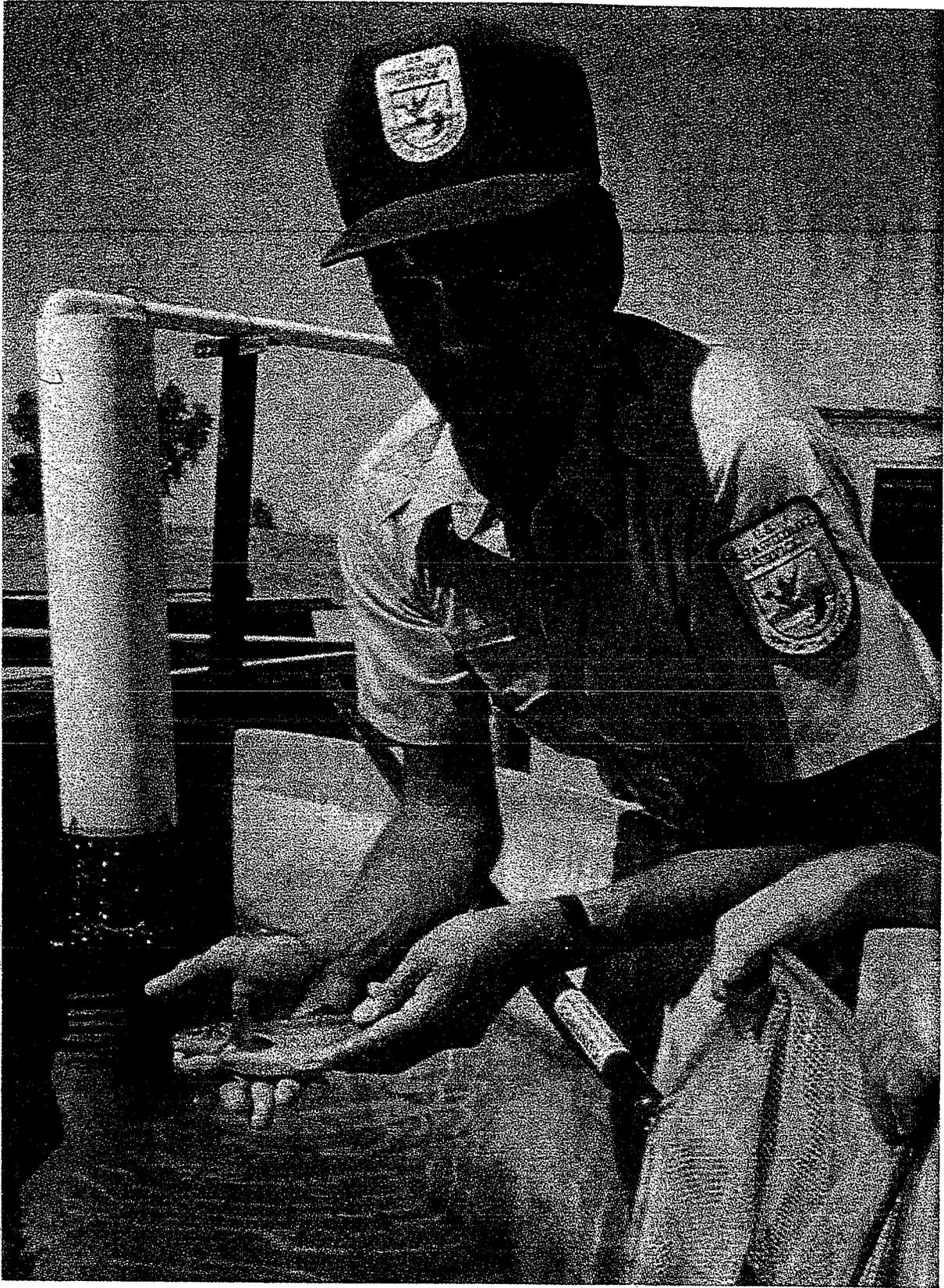
► **FY 95 CONGRESSIONAL ACTION ITEMS** ◀

Fish and Wildlife Service (Continued)

Operation Funds for Hatchery Facilities
(\$191,000/Hatchery Operations)

Funding is need to maintain hatchery facilities being used to hold captive or refuge populations of the endangered fishes. In FY 1994, Congress appropriated \$970,000 to construct ponds at the Ouray National Wildlife Refuge to hold captive or refuge populations of the endangered fishes, and \$220,000 to begin operations. In addition, the States of Utah and Colorado are currently holding captive populations of razorback suckers and bonytails at Bellevue Fish Research Center in Colorado and Wahweap Native Fish Ponds in Utah as part of the Recovery Program. The Service and State facilities will be used to raise genetically unique family lots of each fish species to support stocking, research, public education, and refugia purposes.

In FY 1995, costs for operation of the Service and State facilities being used to support Recovery Program activities will increase to \$411,000. The President's proposed budget includes \$220,000 for operation of the Ouray facility. An additional \$191,000 is needed to operate all of Service and State hatchery facilities being used to support Recovery Program activities.



Developing and maintaining "refuge" and hatchery facilities is a priority for the Recovery Program. Facilities such as this one on the National Wildlife Refuge at Ouray, Utah, can be used to raise genetically unique family lots of each species of endangered fish to support stocking, research, public education and refuge purposes.

► **FY 95 CONGRESSIONAL ACTION ITEMS** ◀

Bureau of Reclamation

Support Bureau of Reclamation Funds for the Recovery Program
(\$4,710,000/Construction Program)

A total of \$4,710,000 is included in the President's proposed FY 95 budget for the Bureau of Reclamation. The Recovery Program fully supports this requested appropriation. These funds are to be used for: (1) high priority recovery activities consistent with its annual funding commitment to the Recovery Program, and (2) a variety of water acquisition and capital construction projects to recover the endangered fish.

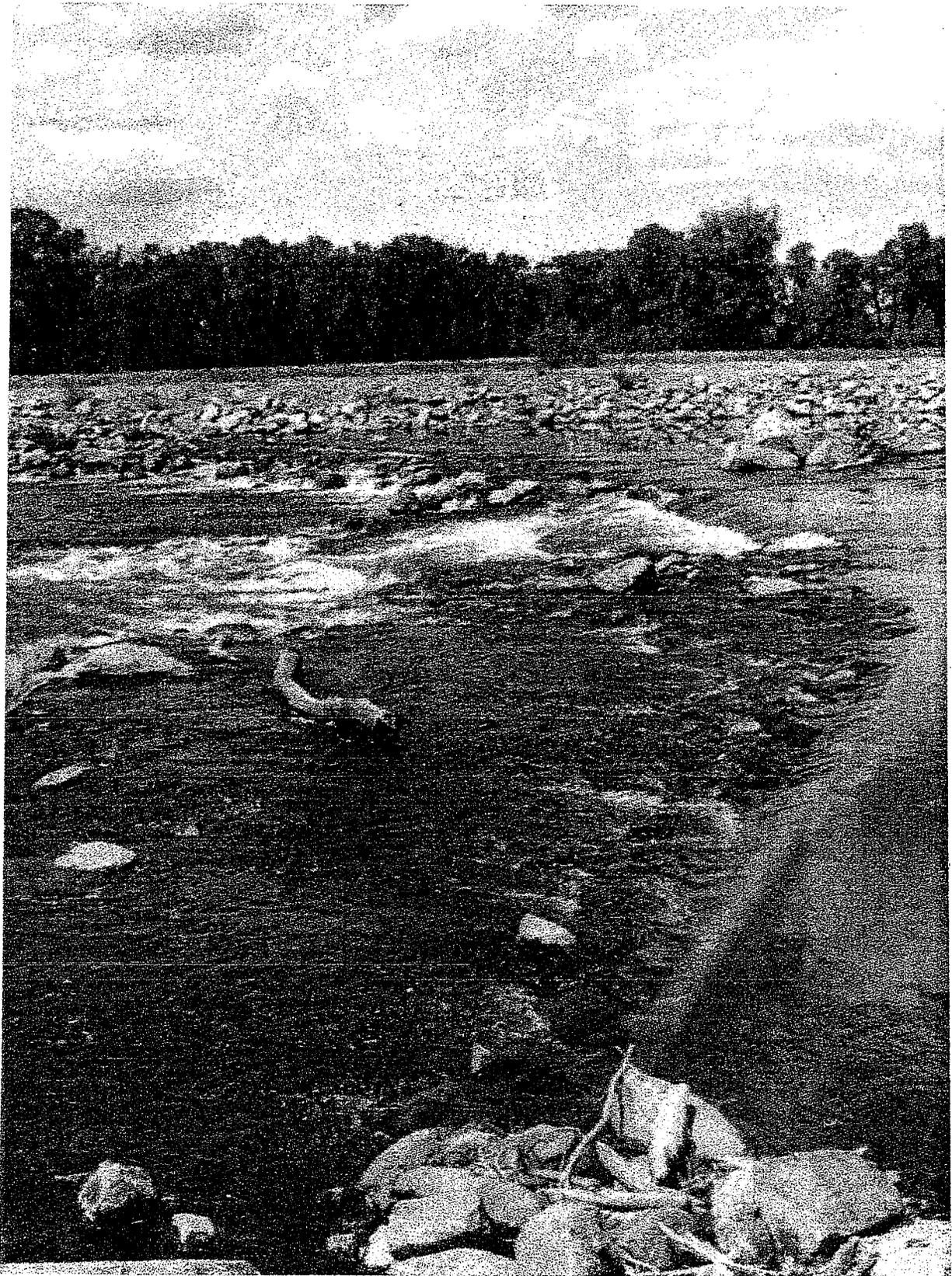
Annual Funding (\$1.98 Million)

In FY 95, Reclamation's \$1.98 million annual contribution to the Recovery Program will be used to fund a variety of high priority recovery activities (Table 2). In the past, these funds have been provided in the form of power revenues derived from the operation of the Colorado River Storage Projects. In FY 95, Reclamation proposes to fund its annual budget from appropriated funds.

Water Acquisition and Capital Projects (\$2.73 Million)

Reclamation will fund a variety of capital and projects to recover the endangered fish. These projects include:

- o Fish Passage - Reclamation will rehabilitate water diversion structures and build fish ladders at several locations on the Yampa, Gunnison, and Colorado rivers. These activities will benefit the migratory Colorado squawfish and razorback sucker by providing access to more than 100 miles of historic habitat to the endangered fish and by providing for unrestricted movement within their current range.
- o Water Acquisition - Reclamation will evaluate opportunities to acquire water from existing reclamation and private water projects to enhance habitat conditions for the endangered fish. Several initiatives in this area include:
 - a. Evaluating the feasibility of more efficiently operating irrigation projects in the Grand Valley, Colorado, and dedicating the "saved" water to the endangered fish;
 - b. Using water stored in several of Reclamation smaller reservoirs to enhance late summer flows in the Colorado River;
 - c. Evaluating the feasibility of coordinating the operation of Federal and private reservoirs in the headwaters of the Colorado River to enhance spring peak flows in the Colorado River; and
 - d. Evaluating the feasibility of enlarging Elkhead Reservoir in the Yampa River Basin in exchange for acquiring some large instream flow rights on the Yampa River.



This natural-looking structure actually is a diversion dam built by the City of Craig, Colo. Rather than blocking fish migration, this dam was specially designed to allow fish to swim through. Construction of fish ladders or other passageways is planned for agricultural diversion structures on the Yampa River and on existing small dams such as the Redlands Diversion Dam on the Gunnison River and the Price/Stubb Diversion Dam on the main-stem Colorado.

Table 2. Recovery Program projects funded by the Bureau of Reclamation's annual contribution in FY 94.

PROJECT TITLE	RECLAMATION FUNDING
Reclamation Recovery Program Management	\$ 110,000.00
Information and Education Activities	\$ 80,500.00
Upper Colorado River Squawfish Population Analysis	\$ 23,500.00
Larval Fishes Identification, Collection Maintenance	\$ 93,200.00
Channel Monitoring and Hydrology Evaluations	\$ 25,300.00
Population Monitoring and Database Management	\$ 85,700.00
Assessment of Colorado Squawfish in the White River	\$ 8,200.00
Survey of Sites for Flooded Bottomland Restoration	\$ 48,500.00
Effects and Potential Control of Nonnative Fishes at the Confluence of the Green and Duchesne Rivers.	\$ 42,000.00
Bonytail Reintroduction Plan	\$ 53,800.00
Gila (Chub) Taxonomy Studies	\$ 113,000.00
Coordination of Genetics and Propagation Activities	\$ 53,900.00
Propagation and Genetics Facilities Operation and Maintenance	\$ 158,500.00
Habitat Monitoring and Analysis (Video Imaging)	\$ 100,000.00
Evaluation of Migration, Imprinting, Olfaction, and Chemoreception in Colorado Squawfish and Razorback	\$ 87,800.00
Green River Flow and Geomorphology Studies	\$ 405,900.00
Colorado and Gunnison River Flow, Geomorphology, and Food Web Studies	\$ 213,500.00
Colorado Squawfish Spring Habitat Use and Availability in a Flooded Bottomland	\$ 11,800.00
Experimental Stocking of Adult Razorback Suckers in the Upper Colorado and Gunnison Rivers	\$ 59,400.00
Development of Interim Management Objectives for Endangered Fish Populations	\$ 42,700.00
Deliniation of Floodplain Boundaries for Nonnative Fish Stocking Procedures	\$ 20,000.00
Fish Species Composition in the Yampa and Little Snake Rivers	\$ 14,000.00
TOTAL:	\$1,851,200.00

► **FY 95 CONGRESSIONAL ACTION ITEMS** ◀

Bureau of Reclamation (Continued)

- o **Floodplain Restoration** - Historically, floodplains throughout the Upper Colorado River Basin were inundated each year by spring runoff, but today much of the river has become channelized by levees, dikes, rip-rap, and the invasion of the exotic plant, tamarisk. Numerous studies have documented the importance of flooding to the overall health of the river ecosystem and the associated fish community. Restoration of flooded bottomlands is thought to be especially important for the endangered razorback sucker and will provide benefits for a variety of wetland-dependent wildlife. Five sites (three in Utah and two in Colorado) are being evaluated in FY 94 for potential acquisition, restoration, and/or management. FY 94 funding is needed to implement management and restoration plans at the high priority sites.

- o **Endangered Fish Hatchery Construction** - Additional hatchery and research facilities are needed in the upper basin to prevent extinction of the endangered fishes, protect against the loss of unique genetic resources, produce fish for stocking/reintroduction efforts, and provide a laboratory for research on the endangered fishes. Current facilities are overtaxed and inadequate to meet anticipated needs. FY 94 funds are being used to conduct a feasibility study and prepare design specifications for hatchery sites at Craig, Colorado, Ouray National Wildlife Refuge, and Wahweap warmwater ponds, Utah. Construction is planned for these sites in FY 94.

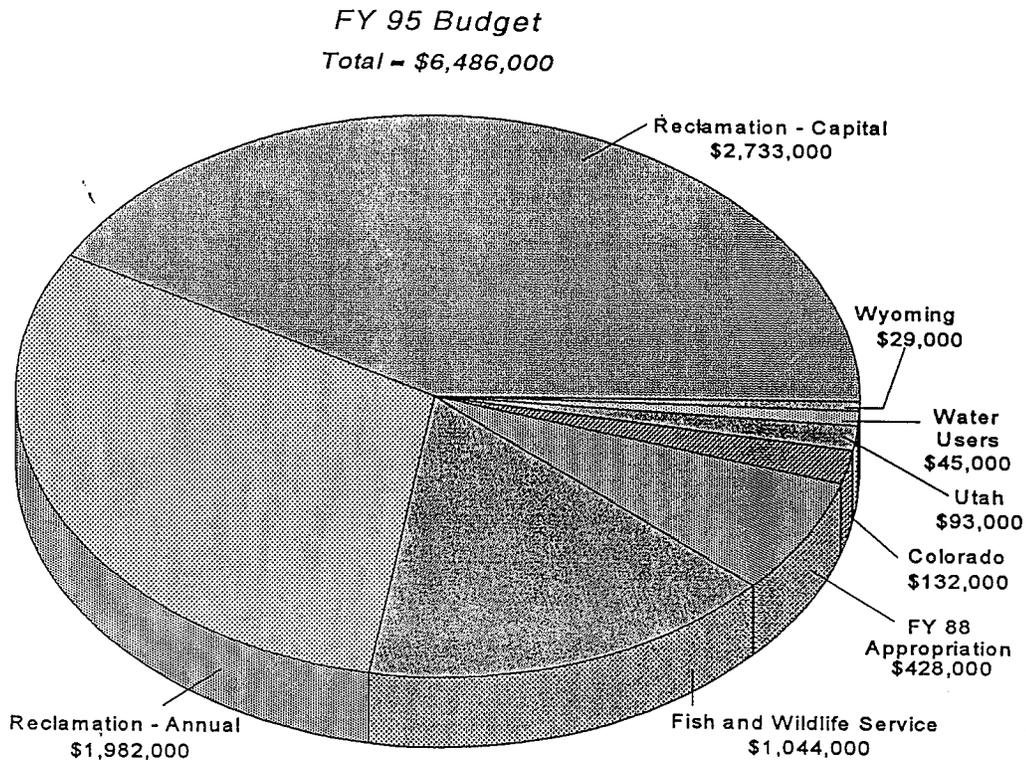
The President's proposed FY 95 budget contains \$2.73 million for implementing these projects. Water acquisition projects will be partially funded with the remaining funds (\$428,000) appropriated by Congress in 1988 for the Recovery Program.



Flooding of low-lying areas adjacent to the Green and Colorado rivers is believed essential for the recovery of endangered fish. The Recovery Program plans to acquire and restore this type of flooded bottomland habitat. Shown here is the National Wildlife Refuge at Ouray, Utah, during spring runoff.

► FY 95 BUDGET ANALYSIS ◀

Funding of the Recovery Program is a cooperative effort of all the Program participants, as illustrated below.



FY 95 funding is secure except that needed for capital projects. Reclamation capital funding (\$2,733,000) is \$2,200,000 less than the Recovery Program's FY 95 capital funding need of \$4,933,000. The Recovery Program plans to use the \$428,000 remaining of the FY 88 appropriation to compensate for a portion of this shortfall. This leaves a \$1,772,000 shortfall that will delay several capital projects by at least a year, resulting in missed deadlines in the Recovery Program's Recovery Action Plan (RIPRAP). Projects that will be delayed are:

1. Construction of a fish passage structure at Redlands Diversion Dam on the Gunnison River in Colorado will not be completed until FY 96, a delay of one year. (\$300,000 shortfall)
2. Coordination of Colorado River reservoir operations to provide increased flows in the 15-Mile Reach will be delayed by about half a year. (\$50,000 shortfall)
3. Operation of Rifle Gap (Silt) Reservoir to deliver storage water to the 15-Mile Reach will be delayed by about one year (\$35,000 shortfall).
4. Restoration of historically flooded bottomland habitats will be delayed by one year. Although restoration actions will be undertaken, no land will be acquired. (\$600,000 shortfall)
5. Design and construction of endangered fish augmentation facilities will be delayed by one year. (\$722,000 shortfall).

► RECOVERY PROGRAM RECOVERY ACTION PLAN ◀

The Colorado River Recovery Program announced on October 15, 1994, its 5-year Recovery Action Plan outlining all steps to be taken to recover the fish.

Along with the Recovery Action Plan is a draft agreement clarifying how the Endangered Species Act will be applied to new and existing water development projects in the Upper Colorado River Basin. Since its inception in 1988, the Recovery Program has served as the primary means of complying with Section 7 of the Endangered Species Act as it pertains to these fish in the Upper Colorado River Basin. (Section 7 prohibits Federal Agencies from taking actions likely to harm endangered species.)

The Service will use the Recovery Action Plan to measure Recovery Program accomplishments and to determine if enough progress has been made to allow water projects to proceed in compliance with Section 7. Without the new Section 7 agreement, operators of existing water projects would have sole responsibility to offset any harm their projects could cause endangered fish.

Recovery Priorities by River Basin

(Figure 1 shows the rivers and locations that will be the focus of recovery activities over the next five years.)

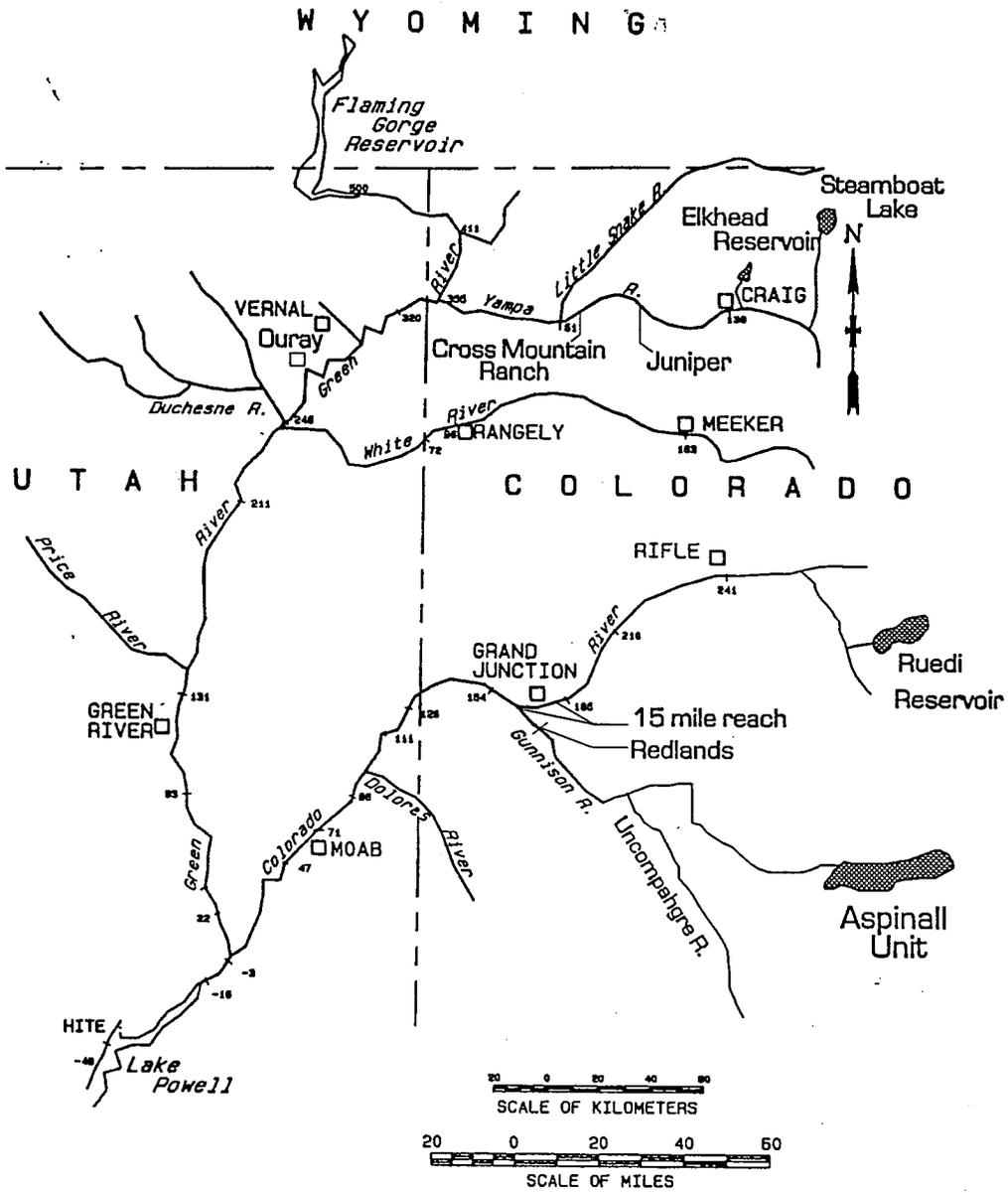
Green River

Operation of Flaming Gorge Dam is being changed to improve habitat for endangered fish. In 1991, a biological opinion was issued on the operation of Flaming Gorge Dam, giving flow recommendations for the Green River at Jensen, Utah, for July through October and a range of experimental flows for the remainder of the year. These experimental flows will be evaluated through 1997, at which time a final biological opinion will be issued. In general, recommendations for flows are to mimic historic high spring flows, which biologists believe the fish need to spawn, and low, relatively stable flows the rest of the year.

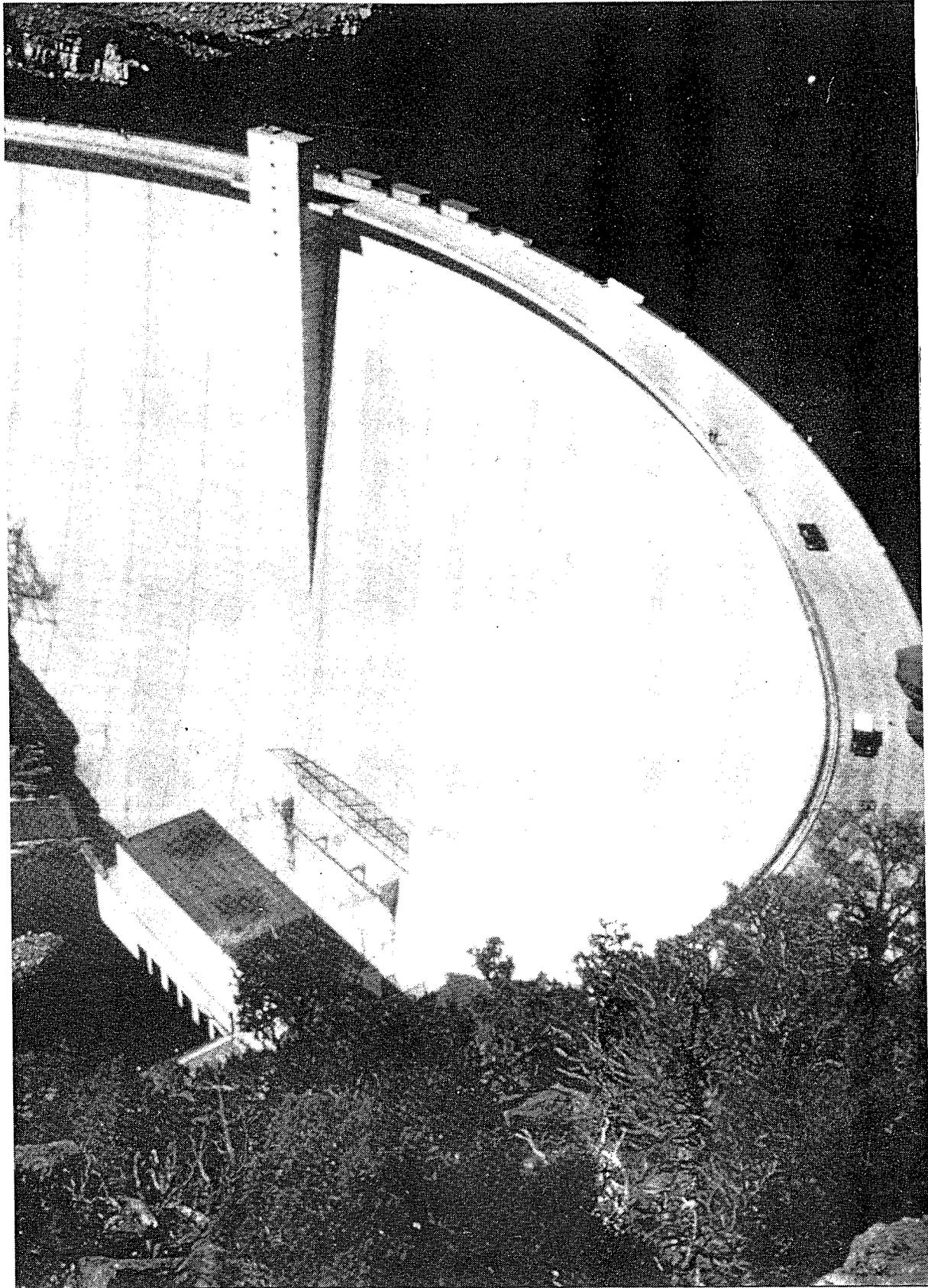
Razorback suckers collected from the Green River will be spawned and their offspring maintained at the hatchery in Ouray, Utah. A plan for stocking these fish in the Green River will be developed in 1994 and implemented in 1995 through 1998.

Other Green River activities involve restoring wetlands or bottomlands adjacent to the river for use by young endangered fish. Young native that use these nutrient-rich areas grow rapidly and become large enough to fend for themselves in the river.

FIGURE 1



Upper Colorado River Basin Recovery Program Activities



Operations of federal dams, such as Flaming Gorge Dam on the Green River in Utah, are being changed to benefit endangered fish. A key change involves higher releases of water during the spring spawning season. Lower, more stable flows are planned the rest of the year.

► RECOVERY PROGRAM RECOVERY ACTION PLAN ◀

Yampa and Little Snake Rivers

The Yampa River is essential for maintenance and recovery of endangered fish in the Green River Basin. Recovery actions in the Yampa River are focused on maintaining and legally protecting natural flows to recover endangered fish. To accomplish this, the Recovery Program is attempting to purchase the Juniper Dam water rights from the Colorado River Water Conservation District. These undeveloped water rights could control about 75 percent of the river's flows.

Plans also are under way to build fish passage structures around several low-height agricultural water diversion dams on the Yampa River.

Studies are planned to evaluate the importance of the Little Snake River to recovery of endangered fish.

Duchesne River

The Central Utah Water Conservancy District will fund several studies as part of a biological assessment of proposed water projects. The studies will evaluate the importance of the Duchesne River to endangered fish before determining which actions to take.

White River

A management plan for the White River will be developed in 1994. The plan will recommend specific recovery actions, including whether to provide fish passage at Taylor-Draw Dam.

Colorado River

Several actions are planned for the Colorado. The Bureau of Reclamation has been providing 20,000 acre feet of water from Ruedi Reservoir since 1990. The Colorado Water Conservation Board has an application before the State water court for a 581 cubic-feet-per-second in-stream flow right in the 15-Mile Reach for July, August, and September. The conservation board also plans to file for junior in-stream flow water rights for the 15-Mile Reach for the winter-spring period by December 1995.

The Bureau of Reclamation has initiated plans to provide for fish passage at the Price-Stubbs Dam and Government Highline Dam near Palisade, Colorado.

Beginning in 1994, the Service will experimentally stock razorback suckers in the Colorado River near Rifle and Grand Junction, Colorado. Broodstocks of Colorado squawfish, humpback chubs, and razorback suckers have been developed from wild Colorado River fish.

A gravel pit in the 15-Mile Reach that periodically floods in the spring is one of five flooded bottomland sites identified for restoration.

► RECOVERY PROGRAM RECOVERY ACTION PLAN ◀

Gunnison River

Recovery actions on the Gunnison River involve constructing a fish ladder at the Redlands Diversion Dam to allow endangered fish to reach more of their historic range, changing operation of the Aspinall Unit dams to mimic historic flow patterns, which would improve habitat for endangered fish, and restoring flooded bottomland habitats.

Beginning in 1994, the Service will experimentally stock razorback suckers in the Gunnison River near Delta. Biologists will evaluate the results of the stocking over the next 2 years. (Hatchery-raised endangered fish previously stocked in the Gunnison River have not survived. Biologists want to ensure that stocking will be successful before continuing.)

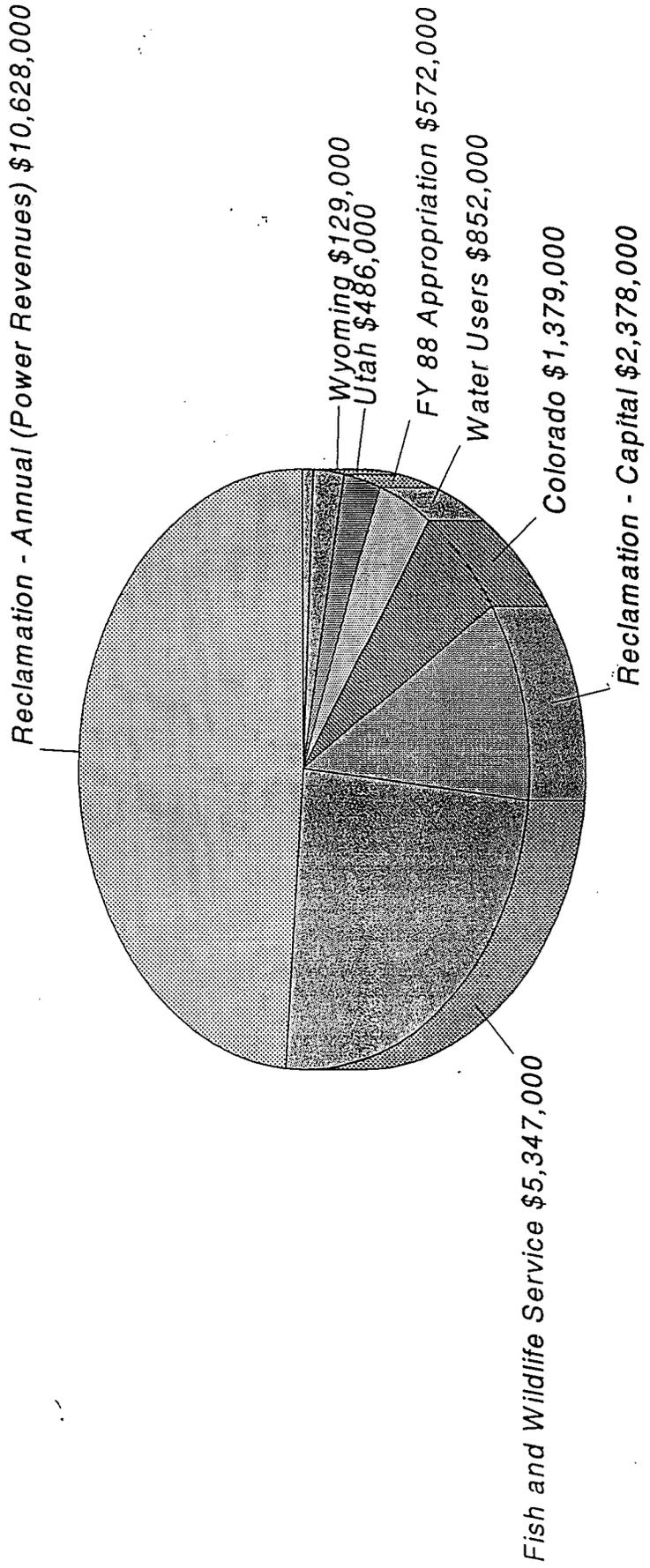
Dolores River

Recovery actions for the Dolores drainage currently are limited to preventing nonnative fish such as smallmouth bass, perch, and kokanee salmon from escaping from McPhee Reservoir.

▶ APPENDIX A ◀

FY 89-94 Program Expenditures

Total = \$21,771,000



► Appendix B ◀

Fish Population Status and Recovery Goals

Colorado Squawfish

The Green River populations of this fish species are the largest in the Colorado River Basin and are showing evidence of increasing. Elsewhere, Colorado squawfish populations are small. They may be declining in the Colorado River and appear to be stable in the Yampa River.

Recovery goals for this fish species are to establish naturally self-sustaining populations in the Green River and Colorado River subbasins.

Humpback Chub

In the Green and Yampa Rivers, humpback chub populations are very small. In the Colorado River near the Utah-Colorado State line, the population is relatively large and appears healthy.

Recovery goals are to establish five viable, self-sustaining wild populations and protect their habitat. Primary recovery areas in the Upper Basin include: the Black Rocks/Westwater Canyon of the Colorado River near the Colorado/Utah State line; the Yampa and Green Rivers in Dinosaur National Monument; Gray and Desolation Canyons in the Green River; and Cataract Canyon in the Colorado River.

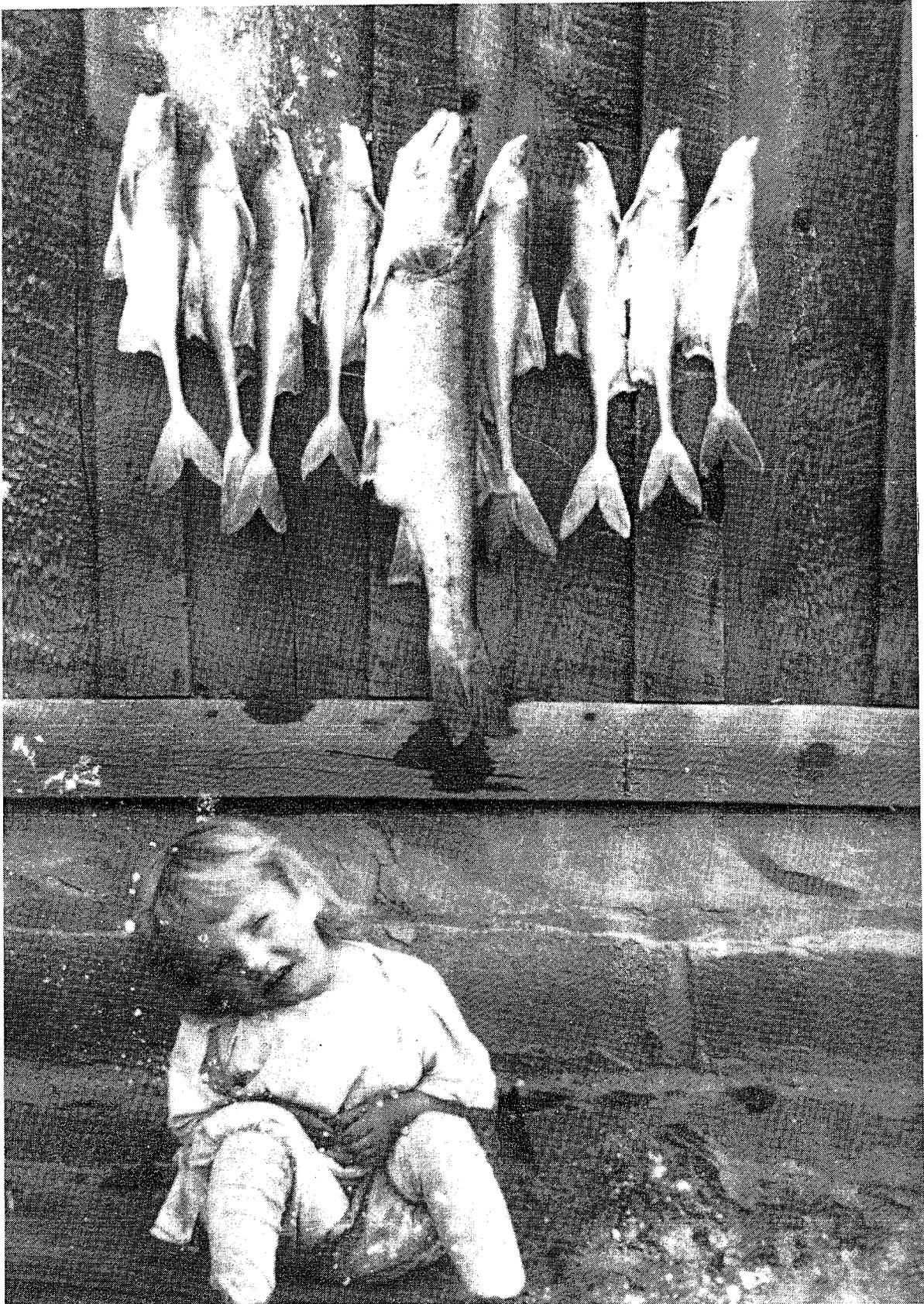
Razorback Sucker

Most razorbacks captured in recent years in the Green, Colorado, and Yampa Rivers are thought to be more than 20 years old and there is no known "recruitment" of young fish into the adult population. In other words, no young are surviving to adulthood. As a result razorback sucker populations are considered critical.

The first recovery priority for the razorback is to prevent their extinction in the wild.

Bonytail Chub

The bonytail chub is the most endangered of the four listed fish. The last confirmed sighting was in 1981 in the Colorado River near the Colorado-Utah State line. Captive populations of bonytail are being maintained at Dexter National Fish Hatchery (NM) and the Horsethief State Wildlife Area in Colorado. Like the razorback, the primary recovery goal is to prevent their extinction in the wild.



A young Mary Rutledge poses with a stringer of bonytail chubs and one Colorado squawfish caught near Moab, Utah, around 1920. In their natural habitat, bonytails are now nearly extinct. Biologists currently are developing a plan to reintroduce hatchery-raised bonytail chubs into the wild.

► Appendix C ◀

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