



**Upper Colorado River Basin Fish and Wildlife Mitigation
Program**

Fiscal Years 1999 – 2003

Prepared by:

**Central Utah Project Completion Act Office
Provo, Utah**

**A program funded by Section 314(c) of the Central Utah Project Completion Act
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EXECUTIVE SUMMARY

This report presents accomplishments of the Upper Colorado River Basin Fish and Wildlife Mitigation Program (Program) authorized by Section 314(c) of the Central Utah Project Completion Act (CUPCA) (P.L. 102-575) for Federal Fiscal Years 1999 through 2003. This is the second Program report; an earlier report, dated May 2002, summarized the first five years of the Program activities, from 1994 – 1999¹ and is available upon request at the address below.

The purpose of the Program is to benefit fish and wildlife resources adversely affected by the construction and operation of Federal water resource developments authorized by the Colorado River Storage Project Act of 1956 (P.L. 84-485). This report documents progress toward achieving fish and wildlife habitat improvements in accordance with the goals and criteria established by CUPCA.

Pursuant to Section 314(c) of CUPCA, the Program receives a portion of funds appropriated to the Utah Reclamation Mitigation and Conservation Commission (Commission), a Federal Commission also created by CUPCA to implement the mitigation obligations of the Central Utah Project in Utah.

For the period under review, the Program expended \$1.56 million to complete 25 projects in four states of the upper Colorado River basin. Federal and state agencies, universities, Indian tribes, and private groups have been funded for projects that comply with Program criteria established by the enabling legislation.

A summary of expenditures by state indicates that Colorado (14 projects) received 66 percent of Program funds; Arizona (4 projects) received 7 percent; Wyoming (4 projects) received 10 percent, and New Mexico (3 projects) received 17 percent. No applications were received from Nevada. Utah is not eligible to receive funding under the Program.

Funding expended by project type was: Wetland/Riparian 58 percent; Non-game Wildlife/Endangered Species 13 percent; Aquatics 16 percent; Migratory Birds/Waterfowl 13 percent.

Program information, including applications, evaluation criteria, and additional copies of this report, is available at:

Central Utah Project Completion Act Office
302 East 1860 South
Provo, Utah 84606
801/379-1254
e-mail: rswanson@uc.usbr.gov

¹ Central Utah Project Completion Act Office. 2002. Upper Colorado River Basin Fish and Wildlife Mitigation Program, Fiscal Years 1994-1998. May 2002. 8 pp. + App.

PROGRAM HIGHLIGHTS – 1999 THROUGH 2003

- Total Program appropriations were slightly reduced compared to 1994 - 1998 (\$1.49 million versus \$1.52 million). See Table 1.
- Total Program expenditures increased compared to 1994 - 1998 (\$1.56 million versus \$1.43 million). Over the 10-year period of operations reported to date, the Program has expended 99 percent of appropriations received. See Table 1.
- Fewer projects were completed compared to 1994 -1998 (25 projects versus 35). However, several projects were large habitat restoration/creation efforts, often requiring 2-4 years to complete feasibility, design, and construction. Also, these projects were necessarily more costly. Examples are APS Pumphouse Wetlands, Tillman-Bishop State Wildlife Area, and the Escalante State Wildlife Area. These projects were also among the most successful fish and wildlife mitigation projects in terms of habitat enhancement and cost effectiveness. See Appendix C for details on these and all other completed projects.
- About 26 percent of funds were allocated to field and laboratory research resulting in direct resource benefits. Research focused on conservation of the Colorado River cutthroat trout, a species for which a three-State Conservation Agreement has been developed among Colorado, Utah and Wyoming. These research projects supported efforts to avoid the need to list the cutthroat trout under the Federal Endangered Species Act.
- The Program increased support for projects combating exotic species, particularly the invasive plants tamarisk (*Tamarisk ramocissima*) and Russian olive (*Elaeagnus angustifolia*). Control of invasive species is an emerging priority concern for many western state resource agencies.

INTRODUCTION

This report provides details on the funding and accomplishments of the Upper Colorado River Fish and Wildlife Mitigation Program (Program) for the period 1999 – 2003.

The Program was authorized by Congress in 1992 as part of the Central Utah Project Completion Act, Public Law 102-575 (CUPCA). Under this new program, a portion of funds allocated for completion of the Central Utah Project is directed to fish and wildlife mitigation/enhancement projects in the other upper Colorado River basin states.² The intent of the Program is to conserve, mitigate and enhance fish, wildlife and recreation resources to offset the adverse effects of construction and operation of Federal Colorado River Storage Project (CRSP)³ facilities. The Program supplements the historic mitigation efforts that have occurred and expands those efforts to address unforeseen circumstances and otherwise benefit wildlife habitat and public interests therein.

The Central Utah Project Completion Act Office (CUPCAO) of the Department of the Interior, located in Provo, Utah, operates the Program and administers all funds. The CUPCAO solicits project proposals in September of each year from state and federal agencies, local wildlife improvement organizations and the public at large. With the assistance of the U.S. Fish and Wildlife Service (Salt Lake City, Utah Field Office), proposals are ranked in accordance with the program criteria established by CUPCA (see below) and award decisions are announced in December. The Fish and Wildlife Service reviews and advises on mitigation proposals from the perspective of the Fish and Wildlife Coordination Act (16 USC 661 *et seq.*). As needed, selected proposals are coordinated with other offices of the Bureau of Reclamation (Reclamation) and the Service elsewhere in the Colorado River basin to ensure consistency with mitigation objectives. Administrative files and reports on all projects are maintained in the CUPCAO. Continual efforts are made to expand the target audience of possible grant recipients.

On rare occasions, opportunities have arisen to address upper basin water development project impacts by means of mitigation measures implemented in the lower Colorado River basin. An example is the Program support for the pond culture of the critically endangered bonytail (fish) (Project 03-FC-CU-FW010, Appendix C), believed extirpated from its native range in the upper basin in large part by the main stem water development projects of the CRSP. The best remaining chances for recovery of the species are believed to be in the lower Colorado River and

² Per Section 314c of CUPCA, Utah, an upper Colorado River basin state, is excluded from receiving funds under the Program. The Utah Reclamation Mitigation and Conservation Commission, a Federal Commission created by Title III of CUPCA, receives separate appropriations to fund environmental mitigation measures necessary to address impacts of the Central Utah Project and other Federal Reclamation projects in Utah.

³ The Colorado River Storage Project (CRSP) was authorized by the Act of April 11, 1956 (70 Stat. 105, Ch. 203; 43 USC 620 *et seq.*; P.L. 84-485). The CRSP consists of four main storage reservoirs on the Colorado River and its tributaries upstream from Lee's Ferry, Arizona, plus a number of "participating projects: constructed at various locations in the Upper Colorado River Basin. The purpose of CRSP is comprehensive development of the water resources of the Upper Colorado River Basin for irrigation, river regulation, hydropower generation, and flood control. The Central Utah Project is the largest participating project in the CRSP.

tributaries. This action has been deemed sufficiently important to the mitigation objectives associated with Colorado River water projects to warrant Program participation. All work has been conducted in conformance with the approved Recovery Plan for the bonytail. If culture and stocking in the lower river proves successful, perhaps it can be extended to the upper basin. In general, out-of-basin projects have been limited and individually approved on merit.

PROGRAM PURPOSES AND PROJECT CRITERIA

Section 314 of CUPCA established the standards used to evaluate and select proposals for funding. Consistent with CUPCA, the Department has focused the Program on those ecosystems in the upper Colorado River basin that have substantial potential for producing fish, wildlife and recreation benefits.

Program Eligibility

All Federal, state and local government agencies, as well as private groups and individuals are eligible to receive funding under the Program. Typically, recipients have been Federal or state natural resource agencies (state fish and game agencies), and private non-profit groups such as The Nature Conservancy. Criteria for evaluating proposals and ranking applications for funding have been developed by CUPCAO consistent with the legislative guidance for the Program. These criteria may be revised from time to time by CUPCAO. See Appendix D for a list of the current criteria.

Public lands and waters receive priority consideration for Program expenditures. However, opportunities to implement projects with private entities or Indian tribes willing to offer public benefits, such as public access for recreation and education, are also considered.

Projects and associated funding are approved by the CUPCA Program Director following evaluation and recommendation of staff. CUPCAO monitors progress on all projects,

- (1) restore damaged natural ecosystems on public lands and waterways affected by the Federal Reclamation program;
- (2) acquire, from willing sellers only, other lands and properties, including water rights, or appropriate interests therein, with restorable damaged natural ecosystems, and restore such ecosystems;
- (3) provide jobs and sustainable economic development in a manner that carries out the other purposes of this subsection;
- (4) provide expanded recreational opportunities; and
- (5) support and encourage research, training, and education in methods and technologies of ecosystem restoration.

In implementing the program, priority is accorded to proposals that will:

- (1) reconstitute natural biological diversity that has been diminished;
- (2) assist the recovery of species populations, communities, and ecosystems that are unable to survive on-site without intervention;
- (3) allow reintroduction and reoccupation by native flora and fauna;
- (4) control or eliminate exotic flora and fauna that are damaging natural ecosystems;
- (5) restore natural habitat for the recruitment and survival of fish, waterfowl, and other wildlife;
- (6) provide additional conservation values to state and local government lands;
- (7) add to structural and compositional values of existing ecological preserves or enhance the viability, defensibility, and manageability of ecological preserves; and
- (8) restore natural hydrological effects including sediment and erosion control, drainage, percolation, and other water quality improvement capacity.

Source: CUPCA Sections 314(d) and (e)

tracks funds and performs all administrative functions of the Program with the assistance of the Financial Management Division, Upper Colorado Region, Bureau of Reclamation.

Mitigation Objectives

Program funds are expended in a manner that will result in the greatest positive impact for fish and wildlife and their habitats, as well as improve public access to, and use and enjoyment of these resources. Generally, the Program has continued its priorities on restoration and enhancement of riparian and aquatic (wetland) habitats and dependent fish and wildlife species during 1999-2003. Riparian areas offer important habitats for both resident and migratory species of wildlife. The construction and operation of many CRSP projects has inundated and fragmented riparian communities (including wetlands). As a result, associated wildlife species and habitats have declined in distribution, abundance and vigor.

A major new focus of the Program during 1999-2003 has been assistance in the control of invasive or exotic (i.e., non-native) fish, wildlife or plant species. The invasion of non-native species has harmed native plants, wildlife and ecosystems as well as commercial, agricultural, or recreational activities dependent on these ecosystems. Humans have assisted with this invasion, sometimes intentionally. Many Federal Endangered and Threatened Species have been listed as a result of harmful interactions with non-native competitors and predators.

Program attention to invasive species has been focused on control of the tamarisk (*Tamarisk ramocissima*) and Russian olive (*Elaeagnus angustifolia*) plants, both deliberately introduced from Asia in the late 19th century. Both were widely planted in the western USA as windbreaks, for erosion control, and as desirable ornamentals. Tamarisk now covers over 1.6 million acres in all 17 western states where it displaces native vegetation and dominates otherwise valuable wildlife habitats, particularly in riparian areas. Where natural hydrology has already been modified (such as downstream of CRSP dams and reservoirs), tamarisk and Russian olive have succeeded in altering entire riparian ecosystems over many river miles and thousands of acres. These impacts were undoubtedly unforeseen at the time of project planning and construction.

Western land managers are seeking funds and technical support to begin campaigns to suppress, if not eradicate, tamarisk and Russian olive. The Program has supported several new projects that utilize working partnerships with local entities to implement on-the-ground projects while making the most efficient use of limited funds. The Program favors projects that address the primary factors that support the establishment and maintenance of tamarisk/Russian olive, and offer some hope to prevent reinvasion. Projects that physically remove tamarisk standing crop (including root stock), restore natural hydrology, replant native riparian species, and provide follow-up remedial action are more likely to succeed, at least on a local scale. The most successful tamarisk control projects have all been characterized by these elements.

Conversely, herbicide applications for tamarisk/Russian olive control are expensive, often kill surrounding native plants, and generally are not effective over the long term, when used alone. Moreover, they often pose health risks to humans. The Program has not supported projects that propose herbicides for tamarisk control without addressing other existing physical/biological processes that support tamarisk invasion.

FUNDING

Under CUPCA, the Department of the Interior was authorized \$4.35 million (1992 dollars) over the life of the Program. When this ceiling amount has been expended, the Program will end (absent further Congressional action).

The Program receives 3 percent of Federal funds appropriated to the Utah Reclamation Mitigation and Conservation Commission (Commission), an independent Federal Commission also created by CUPCA to plan and implement mitigation and conservation projects associated with the Central Utah Project (in Utah). Program funding is proportional to Commission appropriations, therefore, actual funding will depend on the amount that Congress appropriates to the Commission on an annual basis. Typically, about \$300,000 has been available each year to the Program.

Table 1
Program Expenditures 1999 – 2003 for Completed Projects

Fiscal Year	Appropriation	Expenditure	Cumulative Appropriations	Cumulative Expenditures	Percent*
1999	\$274,000	\$335,150			
2000	277,000	271,292	\$551,000	\$606,442	100+
2001	389,000	303,335	940,000	909,777	96
2002	260,000	349,512	1,200,000	1,259,289	100+
2003	297,000	306,634	1,497,000	1,565,923	100+
1994–1998**			1,524,500	1,433,944	94
Totals			\$3,021,500	\$2,999,867	99

*Cumulative expenditures as percent of cumulative appropriations. Expenditures exceed appropriations when funds are carried-over and spent in subsequent years.

** From May 2002 report.

Through 2003, just over \$3 million has been appropriated for Program activities, of which \$2.99 million, or 99 percent, has been expended.

Funds remaining under the authorization ceiling (unappropriated funds) are adjusted (i.e., increased) annually for inflation in accordance with a cost index specified in CUPCA.⁴ This helps to preserve the buying power of the original authorization and effectively extends the life of the Program. Based on the funds that remain to be appropriated under Title III, and the index adjustments since 1992, the Program expects to receive an additional \$2.145 million (estimate) before operations will end.

Appropriated funds are available until expended. Thus, unexpended funds can be carried over into subsequent fiscal years and remain available to the Program. This markedly improves the

⁴ CUPCA Sec. 201(a)1 - Bureau of Reclamation Construction Cost Index--Composite

efficiency of Program expenditures by eliminating administrative pressures to expend funds by arbitrary deadlines. Such pressures can encourage wasteful spending on low priority actions.

Applications from potential Program recipients typically exceed available funding each year. All applications are prioritized in accordance with legislative criteria (see above) and attempts are made to allocate all funds available each fiscal year.

For information purposes, Table 2 displays the funds status for 2004 and 2005 and will be updated as projects initiated in those years are completed and final expenditure data become available.

Table 2
Program Expenditures 2004 – 2005 for Projects Still in Progress

Fiscal Year	Appropriation	Expenditure	Cumulative Appropriations*	Cumulative Expenditures**	Percent**
2004	\$239,000	\$249,900	\$3,260,500		96
2005	\$313,000	\$ 96,200	\$3,573,500	\$346,100	31

* All years (1994 – 2005)

** 2004 and 2005 only

An overall accounting of funds for all years (1994 – 2005) shows total CUPCA Title III appropriations of \$115,693,600, with appropriations under Section 314c totaling \$3,573,500.⁵

Cost-Sharing

While cost-share from recipients is not a requirement, the Program attempts to maximize available funds by giving priority to cost-sharing partnerships. Cost-sharing improves program performance by increasing the “investment” of recipients in the success of a project. Cost-sharing can be a contribution of funds, in-kind staff time, project materials or equipment. Generally, it is expected that project sponsors will assume the responsibility to operate and maintain projects after construction to insure continuing benefits.

The level of cost sharing by recipients was particularly noteworthy during this reporting period. The Program estimates it has benefited from over \$1.4 million in additional cost-share contributions from project sponsors, nearly doubling the Program benefits. This estimate is conservative and probably does not fairly reflect the value of recipient staff time contributed to planning and implementation of projects. See Appendix A.

PROGRAM PERFORMANCE

Twenty-five (25) mitigation/enhancement projects were completed during the period under review (1999 – 2003). See Appendix C for a complete description of projects.

⁵ Title III Ceiling Table, Feb. 9, 2005. Prepared by CUPCA Office, Provo, Utah

Just over \$1.49 million was appropriated to the Program during 1999-2003; expenditures totaled \$1.56 million or 104 percent of appropriations. See Table 1. (Total expenditures include carry over funds remaining from prior fiscal years. See **Funding** discussion above.) All expenditures directly supported mitigation and conservation projects; no CUPCAO administrative overhead or other operating expenses were paid from the Program funds.

Table 3 shows the number of projects and expenditures by state in the Upper Colorado River basin eligible to receive funds under the Program.

Table 3
Completed Projects and Expenditures by State
1999 – 2003

State	Number of Projects	Expenditures*
Colorado	14	\$ 1,041,515
Wyoming	4	150,100
New Mexico	3	275,750
Arizona	4	98,300
Nevada	0	0
Totals	25	\$ 1,565,665

* Rounded

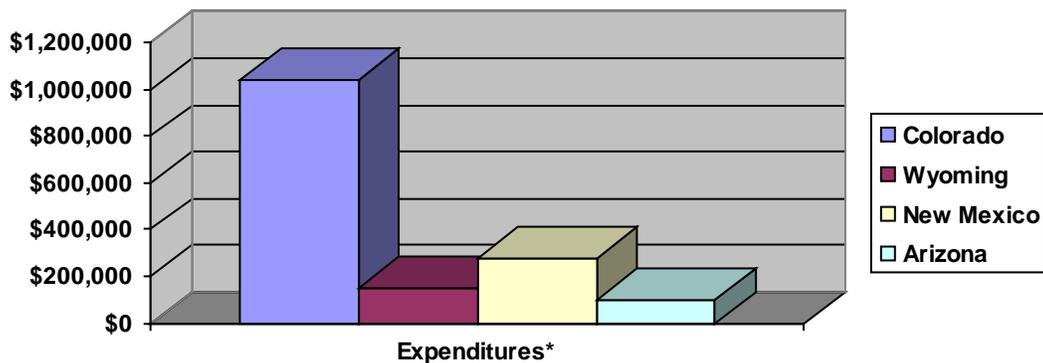


Figure 1. Expenditures by State 1999 – 2003

The State of Colorado was awarded the largest number of projects and received the majority of Program funding (see Table 3 and Figure 1). This reflects the aggressive nature of Colorado state agencies, primarily the Colorado Division of Wildlife and Colorado State University, in pursuing Program funding. It is noteworthy that Colorado, among the upper Colorado River basin states, has the largest number of CRSPA projects and, arguably, the greatest need for

remedial fish and wildlife mitigation. Nevertheless, the Program intends a more aggressive marketing effort in the other upper basin states in the years ahead.

Projects

To address mitigation objectives, the Program has funded projects in four broad categories: aquatics, wetlands and riparian habitat, migratory birds/waterfowl, and non-game including endangered species conservation. Table 4 and Figure 2 depict the distribution of expenditures among these categories and among the states.

**Table 4
Project Expenditures Summary
1999-2003**

Project Category	Wyoming	Colorado	Arizona	New Mexico	Totals
Aquatics	\$ 85,100	\$ 161,650			\$ 246,750
Wetlands/Riparian	65,000	545,115	\$25,700	\$275,750	911,565
Migratory Birds/Waterfowl		197,800			197,800
Non-Game/Endangered Species		136,950	72,600		209,550
Totals	\$150,100	\$1,041,515	\$98,300	\$275,750	\$1,565,665

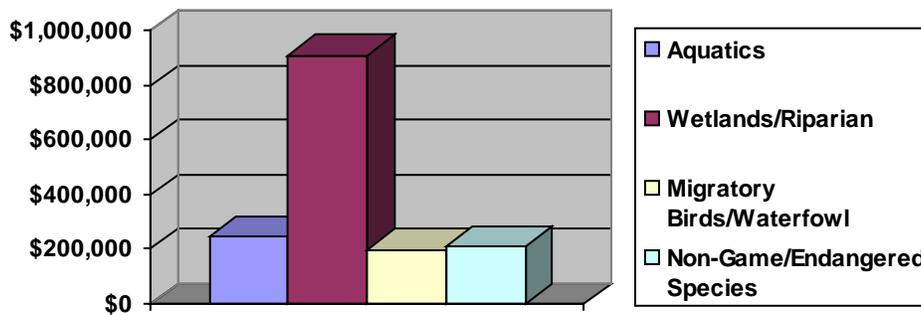


Figure 2. Expenditures by Project Type 1999 - 2003.

The majority of the Program funds have been spent on wetlands and riparian habitat mitigation and enhancement (58.2 percent) during this reporting period. Solicitation materials have emphasized priority in these areas (Appendix D) because of disparate CRSP impacts on these fish and wildlife habitat types as documented by reports prepared by the U.S. Fish and Wildlife Service under the Fish and Wildlife Coordination Act.

The Program seeks to fund, primarily, projects yielding direct resource benefits to fish and wildlife and associated habitats. However, research proposals that address important fish and wildlife management problems or that offer to improve knowledge of ecosystem restoration are

also considered. To conserve funds, the Program has limited its research support to projects that can be categorized as “applied research” as opposed to “pure research.” Applied research projects explore or test principles that can be immediately implemented to benefit fish and wildlife populations and habitats.

OUTREACH

Special outreach efforts to the upper Colorado River basin state fish and game agencies are a routine part of the Program advertisements. Some states have designated agency coordinators who interact regularly with the Program staff. These interagency communications ensure that state agency mitigation goals and objectives are effectively represented in the Program.

In addition to state agency contacts, efforts are made to ensure the widest possible distribution of the Program application materials. An extensive mailing list of potential recipients is maintained in an attempt to provide all interested parties with information about the Program and to distribute annual solicitation materials. Non-governmental organizations such as environmental and outdoor interest groups, land trusts, and fishing/hunting groups also make up a substantial portion of the mail list. Appendix D includes the solicitation materials and Program Requirements used during the 1999 – 2003 reporting period.

The Program mailing list maintained by the CUPCAO and is revised continually. Prospective recipients are invited to contact the CUPCAO at the address indicated in the Executive Summary to request inclusion on the mailing list.