



Utah Reclamation Mitigation & Conservation Commission
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COMMISSIONERS
Brad T. Barber, Chair
Don A. Christiansen

October 28, 2016

Dear Reader:

Thank you for your interest in the activities of the Utah Reclamation Mitigation and Conservation Commission (Commission). I am pleased to announce the availability of the combined 2016 Mitigation Plan and 2005-2015 Annual Report. The document describes the program and priorities used by the Commission to guide implementation of fish, wildlife and recreation mitigation measures required under the Central Utah Project Completion Act (CUPCA), as well as progress in completing those measures. The Plan and Report, as well as many of the reports and studies referred to in the document, is available to view and/or download on the Commission's website at www.mitigationcommission.gov.

Chapter 1 contains an introduction and brief explanation of the Commission's planning and reporting process. Chapter 2 contains the main body of the document with an overview of each of the Commission's planning watersheds, description and status of each watershed's Program Elements, our accomplishments, as well as future plans. Chapter 3 lists the Program Elements that compose the Commission's 2016 five-year Plan; the priority of each Program Element and estimated costs are also identified. Chapter 4 lists the comments received on the Draft Plan and Report and responses to those comments.

Appendix A contains the expenditure report for fiscal years 2005 – 2015. Appendix B contains an overview of funding from FY1994 - FY2015 of the entire CUPCA Program and of the Commission. Appendix C contains estimated costs of implementing the Mitigation Plan and anticipated management of the Commission's Title IV Account for fiscal years 2016 – 2020. Appendix D contains a table summarizing the status of over 100 environmental commitments that the Commission is responsible for completing (some are joint responsibilities with either the Central Utah Water Conservancy District or the Department of the Interior's CUPCA Office).

Thank you for your participation in the Commission's work.

Sincerely,

Brad Barber
Chair

Mitigation & Conservation Plan 2016

and

Annual Report 2005-2015



October 2016

UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

The Utah Reclamation Mitigation
& Conservation Commission's
2016 Mitigation & Conservation Plan
And
2005-2015 Annual Report

October 2016

Table of Contents

List of Acronyms.....	iii
Foreword.....	v
Chapter 1 Introduction	
Introduction.....	1.1
Chapter 2 Mitigation and Conservation Program by Watershed	
Provo River/Utah Lake Watershed.....	2-3
Overview and Problem Statement	2-3
Desired Future Condition	2-5
Program Description.....	2-11
Diamond Fork Watershed.....	2-21
Overview and Problem Statement	2-21
Desired Future Condition	2-22
Program Description.....	2-26
Strawberry/Duchesne Watershed.....	2-30
Overview and Problem Statement	2-30
Desired Future Condition	2-32
Program Description.....	2-38
Great Salt Lake Watershed	2-47
Overview and Problem Statement	2-47
Desired Future Condition	2-48
Program Description.....	2-51
Jordan River Watershed.....	2-54
Overview and Problem Statement	2-54
Desired Future Condition	2-49
Program Description.....	2-54
Statewide Program.....	2-56
Overview and Problem Statement	2-56
Desired Future Condition	2-57
Program Description.....	2-59
Chapter 3 Proposed Program Elements and Estimated Costs FY2016-FY2020	
Commission Program Summary FY2016-FY2020	3-1
Watersheds Program Elements and Assigned Priority	3-2
Estimated Costs to Implement the Five-Year Plan.....	3-5
Chapter 4 Comments and Responses	
Comments and Responses	4-1

Appendices

Appendix A Financial Supplement FY2005-2015.....	A-1
Appendix B CUPCA Program & Commission Funding FY1994-2015	B-1
Appendix C Funding Needs & Title IV Management FY2016-2020.....	C-1
Appendix D Status of Bonneville Unit Environmental Commitments	D-1
Appendix E References.....	E-1

Figures

Figure 2-1 Historic and Existing Provo River Delta.....	2-3
Figure 2-2 Delta Ecosystem Habitat Zones.....	2-3
Figure 2-3 Provo River Delta Project Area.....	2-14
Figure 2-4 Diamond Fork System.....	2-21
Figure B-1 CUPCA Federal Funding History.....	B-4
Figure B-2 CUPCA Request vs. Enabled	B-5
Figure B-3 Mitigation Commission Annual Funding FY1997-2015.....	B-6
Figure B-4 Annual Title IV Distributions and DOI Appropriations.....	B-9
Figure C-1 Annual Title IV Account Balance	C-5
Figure C-2 Effects of Title IV Account Distributions.....	C-6

Tables

Table 2-1 Diamond Fork & Sixth Water Minimum Instream Flows.....	2-27
Table 2-2 State Fish Hatcheries Annual Production in Pounds	2-59
Table 3-1 Estimated Costs to Implement the Plan FY2016-FY2020.....	3-6
Table 3-2 Estimated Costs to Provide Lower Provo Instream Flows	3-7
Table 3-3 Schedule and Estimates of Title IV Account Interest.....	3-8
Table B-1 Contributions to Title IV Account by Source	B-7
Table B-2 Summary of Title IV Account Investments	B-8
Table C-1 Estimated Costs of Implementing Mitigation Plan FY2016-2020.....	C-3
Table C-2 Predicted Interest Payments and Title IV Account Balance	C-4

Maps

Map 1. Mitigation Plan Watershed and Program Elements	2-2
Map 2. Provo River/Utah Lake Watershed Program Elements	2-10
Map 3. Utah Lake Wetland Preserve Goshen Unit Land Status	2-18
Map 4. Utah Lake Wetland Preserve Benjamin Unit Land Status.....	2-18
Map 5. Diamond Fork Watershed Program Elements	2-25
Map 6. Diamond Fork Restoration Projects.....	2-28
Map 7. Strawberry/Duchesne Oil & Gas Development	2-35
Map 8. Strawberry/Duchesne Watershed Program Elements	2-37
Map 9. SACS Angler Access and Wildlife Mitigation Areas.....	2-39
Map 10. Sage Grouse Utilization in Strawberry Valley.....	2-42
Map 11. Jordan River/Great Salt Lake Watershed Programs	2-50

List of Acronyms

Abbreviation	Full Title
AD	Angler Days
BOR	U.S. Bureau of Reclamation (Reclamation)
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CUP	Central Utah Project
CUPCA	Central Utah Project Completion Act
CUWCD	Central Utah Water Conservancy District (District)
CRSPA	Colorado River Storage Project Act
DOI	U.S. Department of the Interior (Interior)
DPR	Definite Plan Report
DRACR	Duchesne River Area Canal Rehabilitation Program
DRP	Daniels Replacement Pipeline
DEIS	Draft Environmental Impact Statement
EA	Environmental Assessment
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
GGSLWE	Greater Great Salt Lake Wetlands Ecosystem
GSL	Great Salt Lake
GSLA	Great Salt Lake Audubon
IBAT	Interagency Aquatic Biological Assessment Team
JORNAC	Jordan River Natural Areas Conservation Corridor
JSRIP	June Sucker Recovery Implementation Program
LDWP	Lower Duchesne Wetlands Mitigation Project
M&I	Municipal & Industrial
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
O&M	Operation & Maintenance

List of Acronyms

Abbreviation	Full Title
O&M&R	Operation and Maintenance and Replacement
OMB	President's Office of Management and Budget
PRRP	Provo River Restoration Project
PRDRP	Provo River Delta Restoration Project
ROD	Record of Decision
SAMP	Special Area Management Plan
SACS	Strawberry Aqueduct and Collection System
SFH	State Fish Hatchery
TNC	The Nature Conservancy
UBC	Utah Botanical Center
UBRP	Uinta Basin Replacement Project
UDWR	Utah Division of Wildlife Resources (Division)
UDOT	Utah Department of Transportation
ULS	Utah Lake Drainage Basin Water Delivery System
ULWP	Utah Lake Wetland Preserve
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service (Fish & Wildlife Service)
USFS	United States Forest Service (Forest Service)
UWIN	Utah Wetlands Interpretive Network
WCWEP	Wasatch County Water Efficiency Project
WEED	Wetlands Ecosystem Education Plan
WMA	Wildlife Management Area

Foreword

Thank you for taking the time to read this 2005-2015 Annual Report and 2016 Mitigation Plan. Its purpose is to summarize the actions and accomplishments of the Utah Reclamation Mitigation and Conservation Commission (Commission) from 2005 through 2015, and to provide a clear picture of the agency's priorities and plans to implement those priorities from 2016 through 2020.

The Central Utah Project Completion Act authorized the establishment of the Commission under the Reclamation Act of 1902, as amended, in 1992. It was the intent of Congress to balance the environmental mitigation debt resulting from federal reclamation water development projects within Utah by establishing the Commission and authorizing its programs. The Commission was also created in part to provide the opportunity to design and implement a comprehensive and integrated program for mitigation and conservation of fish and wildlife resources. The Commission's primary responsibility is to mitigate for adverse environmental effects, particularly on fish and wildlife resources, of the Bonneville Unit of the Central Utah Project.

The first quorum of Commissioners was appointed by the President of the United States late in 1994, with the Executive Director and staff added beginning in February 1995. This document represents an opportunity for a comprehensive look back at the Commission's accomplishments over its first twenty years. The extensive table in Appendix D is one means of tracking Commission progress. The narrative of Chapters 2 and 3 provide additional detail and information. I also encourage you to review the agency's website, at www.mitigationcommission.gov, for further information.

The Commission's successes over the past 20 years are due in large part to the vision, wisdom, integrity and support of the men and woman who served as Commissioners during that time. To a person, they have been creative in their thinking, steadfast in their commitment to the conservation and improvement of fish, wildlife, and environmental resources of the State and the nation, and unwavering in their support of the Executive Director and staff in carrying out the agency's mission. This document is, in large measure, a testament to the service of the following Commission members:

D. Wayne Owens	July 1994 to July 1999
Robert K. Nelson	September 1994 to December 1997
Don A. Christiansen	November 1994 to Present
Hugh H. Hogle	September 1994 to May 1995
Robert G. Valentine	November 1994 to June 2003
Jody L. Williams	January 1996 to December 2014
Cullen Battle	June 1999 to June 2003
John W. Kimball	June 1999 to June 2003
Dallin W. Jensen	June 2003 to November 2015
Kevin Conway	June 2003 to September 2004
Brad T. Barber	June 2003 to Present
James F. Karpowitz	June 2007 to December 2012

The Commission also has been successful because of the extensive network of partners who cooperate with the Commission in implementing its projects. Key among those are U.S. Department of the Interior – Central Utah Project Completion Act Office, Central Utah Water Conservancy District, U.S. Bureau of Reclamation, and the Utah Division of Wildlife Resources. U.S. Fish and Wildlife Service, U.S. Forest Service, Ute Indian Tribe, The Nature Conservancy of Utah, National Audubon Society, and many local governments and other entities too numerous to mention have all contributed substantially to its success.

There is always some inherent risk in singling out an individual when acknowledging significant contributors to a collective effort. Vince Lombardi, famous football coach, once said: “Individual commitment to a group effort - that is what makes a team work, a company work, a society work, a civilization work”. I believe that is true. No individual, past or present, has been more committed to making the Commission work than Michael C. Weland, Executive Director of the Commission from February 1995 through May 2015. Mike’s vision of what the agency should be, his high standards of excellence, and his adherence to the principles of integrity and accountability, are the cornerstones upon which the agency was established, and continues to serve. Mike’s contributions cannot be overstated. Finally, the staff that Mike assembled is without peer, and they deserve credit for the accomplishments detailed in these pages.



Mark Holden,
Executive Director
Utah Reclamation Mitigation and
Conservation Commission
October 2016

Chapter 1

INTRODUCTION

This document combines the 2016 Mitigation and Conservation Plan with the Annual Report of Commission activities from 2005 through 2015. The Mitigation and Conservation Plan (Mitigation Plan *or* Plan) describes a 5-year program for restoring, protecting and conserving fish, wildlife and related recreation resources in Utah that were impacted by federal water development projects authorized under the Reclamation Act of 1902, as amended, particularly the Bonneville Unit of the Central Utah Project (CUP). These types of resources were impacted over a number of years.

Our mandate was enacted by Congress and the President in 1992 through the Central Utah Project Completion Act (CUPCA; Public Law 102-575). It was Congress' intent to balance the water development mitigation debt within Utah by establishing the Utah Reclamation Mitigation and Conservation Commission (Commission) and authorizing its programs. The Commission was also created to provide the opportunity to design and implement a comprehensive and integrated resource protection program, rather than spreading mitigation responsibilities among different agencies.

The Commission's primary responsibility is to mitigate for adverse effects of CUP's Bonneville Unit. A major impetus for the environmental programs established under CUPCA was awareness that prior mitigation efforts had lagged behind CUP construction, or were inadequate when measured against modern environmental standards. While implementing Mitigation Plan projects provides significant benefits to fish, wildlife and related recreation resources in the central portion of the State, the program will never replace all of the fish, wildlife and recreation losses resulting from Reclamation water developments.

The Commission is authorized to expend federal funds to carry out its mandate. Actual funding depends primarily on the amount Congress appropriates on an annual basis. Since 2014, the Commission has been authorized to expend interest earned from the Utah Reclamation Mitigation and Conservation Commission Account established under Title IV of CUPCA (Title IV Account). Management goals for the Title IV Account are determined by the Commission and implemented by its Executive Director. Investment strategies may differ from year to year, depending on the amount of interest needed to support adequate and effective Commission programs.

The Commission's program relies on partnerships with the larger natural resource community. The Mitigation Plan encourages formation of partnerships by presenting desired future conditions for fish, wildlife and related recreation resources in Utah watersheds, which are supported by programs in the Plan.

This document is intended to inform the public and to be used as a guide by the Commission as it carries out its responsibilities under CUPCA from 2016 through 2020. It is organized as follows:

- **Chapter 1** contains an introduction and brief explanation of the Commission's planning process;
- **Chapter 2** contains the main body of the five-year Mitigation Plan; it also describes the status and progress of each program element in the Commission's Plan from 2005 through 2015, which constitutes the 2015 Annual Report. The Plan portion of Chapter 2 combines some Program Elements for the future, while the Annual Report portion is organized according to past program elements;
- **Chapter 3** lists the new Program Elements that compose the Commission's 2016 Plan. The priority of each Program Element and estimated costs are also identified;

- **Chapter 4** contains comments received on the draft Plan, and our responses to them;
- **Appendix A** contains the Financial Supplement for fiscal years 2005 – 2015;
- **Appendix B** contains an overview of CUPCA Program and Commission funding FY1994 - FY2015;
- **Appendix C** contains estimated costs of implementing the Mitigation Plan and anticipated management of the Commission’s Title IV Account for fiscal years 2016 - 2020; and,
- **Appendix D** contains a table summarizing the status of over 100 environmental commitments that the Commission is responsible for completing (some are joint responsibilities with either the Central Utah Water Conservancy District or the Department of the Interior’s CUP Completion Act Office).

DIRECTION FROM CONGRESS

Congress specified the Commission’s program focus on four key factors. The program should employ:

- ⇒ An Ecosystem Approach
- ⇒ Public Involvement
- ⇒ Measures Based on Best Available Scientific Knowledge
- ⇒ Partnerships

CUPCA also directed the planning process be guided by priorities established by the Commission.

OVERVIEW OF THE PLANNING PROCESS

The Commission developed a Planning Rule (43 CFR Chapter III and Part 10000), based on Congressional direction, to define the process the Commission would use to develop the Mitigation Plan, and to provide information to other agencies and the public regarding how they might participate. The planning process involves three steps: solicitation, evaluation and public review.

The Commission accepts recommendations for new programs, program direction, or potential projects throughout the year. The Commission meets formally on approximately a quarterly basis. The public is notified in advance of meetings and agenda items. The public is invited to comment on proposed Commission activities at its monthly meetings. In addition, the Commission invites proposals from the public and partner agencies when it distributes its annual report, describing prior years progress.

Draft Plan

Prior to being adopted, the Commission distributes a draft Plan which is available for public comment for 60 days. Emailed and written comments are accepted during this time and comments are responded to in a final Plan. In addition to the Plan and Report, much supporting information regarding the Commission’s programs is available on our website at www.mitigationcommission.gov.

THE PLAN AS A BUDGET AID

The Mitigation Plan does not constitute a commitment of resources for any given project. The commitment to expend resources is dependent upon Congressional appropriation and, since 2014, on Title IV Account interest earnings. Following receipt of annual funds, Commission approval of specific projects is required; this occurs during public Commission meetings, as previously described. The Commission will rely on the Mitigation Plan as the primary source of information for developing its annual budget request; however, any agency’s budget request may undergo substantial alteration and adjustment before the appropriation process is completed. The President’s budget and subsequent Congressional appropriation statute enacted each year establishes the appropriated funding levels for that year’s Mitigation Plan implementation.

The Commission has more discretion regarding the Title IV Account interest earnings. By choosing which investments to make with the Title IV Account corpus, the Commission can garner higher than prevailing interest rates, which results in higher interest payments that can be retained for program expenditure. Generally, higher interest rate investments require either a greater length of investment (i.e. 2+ years), or higher initial premium payment to “buy in” to a particular investment, or both. In this way, the Title IV Account can be managed to produce high interest payments, which can be expended to accomplish Commission programs. The effect on the Title IV Account, though, may be a reduced corpus value. Further explanation of the Title IV Account is provided in Appendices B and C.

PLAN AMENDMENTS

The Commission recognizes three types of revisions to its Mitigation Plans: Comprehensive, Substantive or Technical. The public may also petition the Commission to open the plan to amendment.

Comprehensive Revision

At the end of each 5-year period or as otherwise needed, the Commission undertakes a comprehensive review of the Plan to determine its adequacy and need for revision. Comprehensive revisions may be undertaken before the 5-year period, if the Commission deems it appropriate.

Since the last Plan review, Commission priorities have not changed (see “Commission Priorities” at the end of this chapter for more detail). Progress on the Commission’s programs, as documented in the Commission’s 2015 Annual Report in Chapter 2 indicate steady progress in achieving Commission priorities. *Therefore, the Commission finds there is no need for a comprehensive revision to the 2016 Mitigation Plan. However, the scope of the Commission’s program for the next 5 years is restricted, due to present and anticipated future funding limitations.*

Substantive Revision

From time to time a substantive change to the Mitigation Plan may be needed. The Commission considers the need for substantive amendments on at least an annual basis. Typically this would take the form of substituting one Plan element with another, making changes to a specific Plan element, or making significant modifications to a program. If the Commission determines there is a need for such substantive changes, a formal announcement is made and interested parties given the opportunity to provide recommendations. Portions of the Plan proposed for modification are released in draft form, with the public given 30 days to provide comments prior to formal adoption by the Commission.

The 2016 Mitigation Plan is considered a Substantive Revision. This is due partly to Program Element adjustments.

Technical Revision

Technical revisions include changes that correct inadvertent errors, provide current information or other minor revisions that do not substantively modify the Plan. Technical revisions do not constitute a formal amendment to the Plan and do not require the notification and reporting procedures of a formal amendment. Affected agencies and interests will, however, be consulted and the rationale for making the technical revision documented.

Public Petitions

Agencies and members of the public have the right, at any time, to petition the Commission to open the plan to comprehensive or substantive amendments. Petitions must be made in writing and should state the specific reason why the action is requested. Petitions will be reviewed by the Commission, and if accepted, will be subject to the review procedures established for the 5-year plan (see Section 1005.21 (b) of the Planning Rule (43 CFR 10005)). Proposals for technical amendments do not require a formal petition. Written requests for technical amendments will be acted upon by the Commission in a timely manner.

IMPLEMENTING PROJECTS

The Commission implements its Plan through its approval of specific projects. For proposals determined to be within the scope of the Mitigation Plan, the Commission develops specific project agreements that contain detailed scopes of work and budgets. Agreements are presented at public Commission meetings usually one session prior to being voted upon and approved for implementation.

Partnerships are important in moving projects forward, and the Commission generally gives priority to cost-share partners. Cost-sharing can be contributions of funds, in-kind staff time, and/or long-term operation and maintenance responsibility and funding.

COMMISSION PRIORITIES

The Commission established four distinct priorities for completing the environmental program under CUPCA. The priorities were first articulated in the 1996 Mitigation and Conservation Plan. The Commission has reviewed the priorities and determined they are still appropriate guiding definitions.

Commission Priorities are as follows:

Priority 1 Complete unfulfilled mitigation commitments of the Bonneville Unit of the Central Utah Project as per the 1988 Definite Plan Report (1988 DPR). The Definite Plan Report was revised in 2004.

Priority 2 Implement mitigation and conservation measures required as a result of the environmental review (NEPA) process and Fish and Wildlife Coordination Act or Endangered Species Act compliance for Bonneville Unit Project features constructed pursuant to Title II or Title III of CUPCA.

Priority 3 Implement mitigation and conservation projects, within the Bonneville Unit area, that restore fish and wildlife habitats and species populations and that provide related outdoor recreation opportunities.

Priority 4 Implement mitigation and conservation projects that lie outside the Bonneville Unit. These projects should have substantial potential to restore fish and wildlife habitats and species' populations and provide related outdoor recreation opportunities similar to those habitats, populations and recreation opportunities lost in the Bonneville Unit area from development of the Central Utah Project.

Note that the Commission's inclusion of recreation projects in the Mitigation Plan is limited to those that are compatible with conservation of biological resources and natural systems.

These four priorities have been slightly re-defined for the 2016 Mitigation Plan. As of 2015, nearly all items from the 1988 DPR have been completed or are substantially underway. Minor language revision to the wording of "Priority 2" clarifies that any environmental commitments made by the Commission, whether for a project constructed pursuant to Title II or Title III of CUPCA, are high priority items for the Commission.

Program Elements to be carried forward in the 2016 through 2020 planning period are listed in Chapter 3, along with their priority. Obviously, Priority 1 programs will receive the greatest emphasis during the next five years; Priority 2 programs would be next; and so on.

However, the Commission recognizes that some program elements may have portions that address different priorities. Additionally, some sources of funding available to the Commission can only be used for certain activities. Program elements that are of a lower priority may be implemented during the next five years, while another program element of higher priority, may not. This may be due to extraordinary or limited opportunity to accomplish a lower priority element, particularly if substantial partnerships are

involved, or because a specific funding source can only be used for certain purposes satisfied by a lower priority project. In general though, the Commission emphasizes accomplishing program elements in order of priority.

ANNUAL REPORT

The Commission is required to annually report on its activities undertaken or to be undertaken, the effectiveness of the measures taken, and potential revisions to its Mitigation and Conservation Plan.

FUTURE ANNUAL REPORTS AND PLANS

The intent of the language in CUPCA regarding annual reports and plans was for the Commission to provide information on what was being done and its future direction. The intended audiences were Executive Branch agencies, especially the President's Office of Management and Budget and U.S. Department of the Interior, but also U.S. Fish and Wildlife Service, U.S. Forest Service; State and local agencies, such as Central Utah Water Conservancy District, Utah Division of Wildlife Resources, cities and counties; Congress, especially the appropriations subcommittees; conservation groups; and, the public.

“The report shall describe

the **actions taken and to be taken . . .**,

the **effectiveness** of . . . measures implemented **to date**,
and

potential revisions or modifications to the applicable [current] plan.”

In other words, what we've done, how it's working, and what we'll be doing.

In the 20+ years since passage of CUPCA, advances in electronic communication, especially the Internet, have drastically changed the way information is provided, both within the Federal government and to the public, to the point that the hard-copy reports and plans contemplated in CUPCA are now less relevant and less practical. The need to communicate with the audiences listed above is still there, but the most efficient means of doing so is different.

We therefore intend to take advantage of our web page to provide the detail about what we do and what we have accomplished. The Annual Report will be made available on our web site and hard copies will be provided only to OMB, Interior, and Congress, or upon special request. The Mitigation and Conservation Plan will be posted on the website with a brief description of the priorities and funding sources for the Fiscal Year, plus a statement of the general direction over the next 5 years.

Chapter 2

Mitigation and Conservation Program By Watershed

This chapter identifies each program element of our Mitigation Plan and is organized into the following Watershed units identified by the Commission for planning purposes: **Provo River/Utah Lake, Strawberry/Duchesne, Diamond Fork, Great Salt Lake** and **Jordan River**. There is also a **Statewide** program for projects found across watershed boundaries (see Map 1 on the following page.).

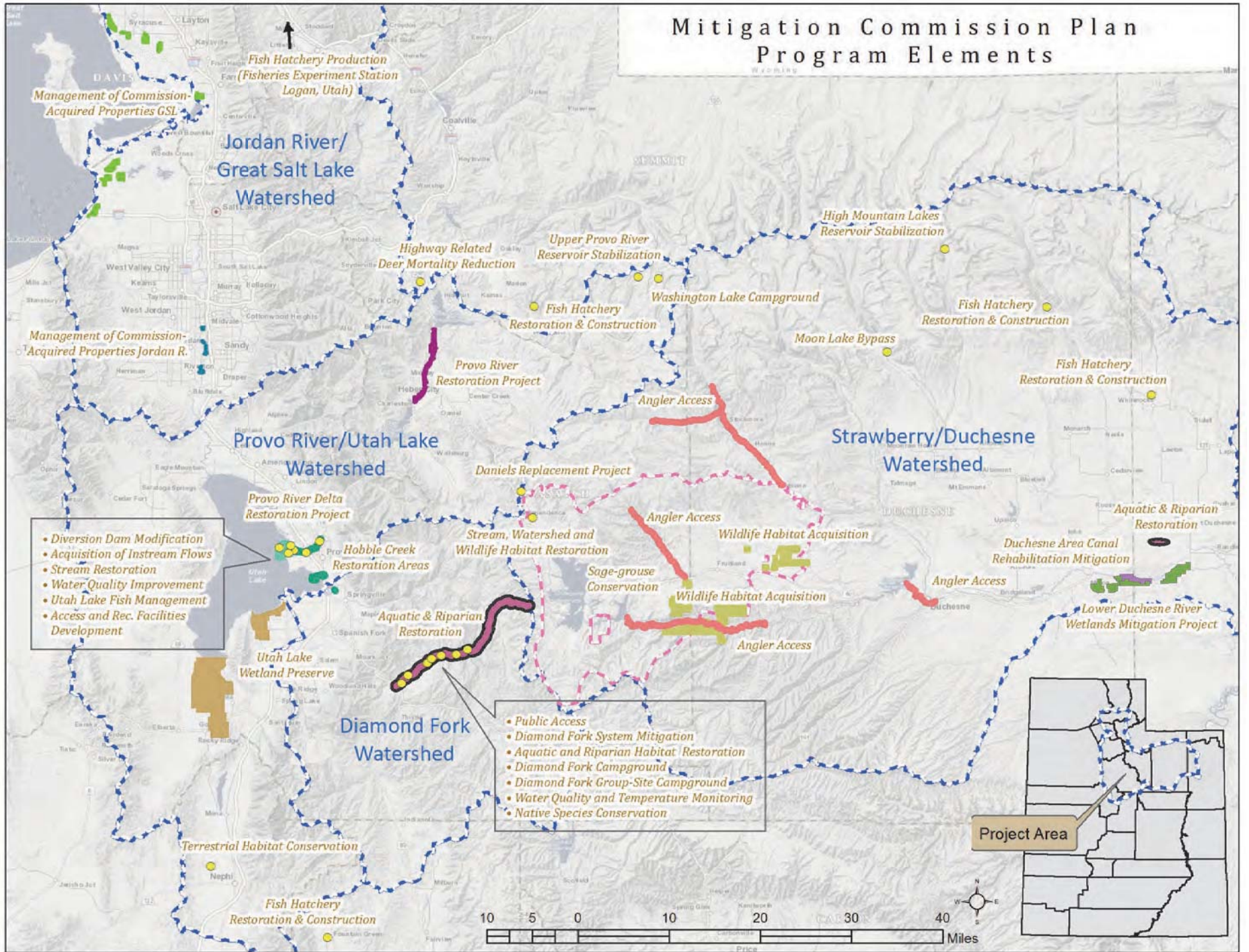
Watershed objectives are stated in terms of desired future conditions. Our vision of desired futures is not static. The Commission embraces the concept of adaptive management, so desired futures may be refined as more is learned through project implementation and monitoring. Collectively, these desired future conditions create a vision the mitigation program is targeting. While the Commission's program may not fully achieve the vision by implementing the Mitigation Plan, program elements cumulatively contribute to realizing the vision over time. Clearly many partners, through complementary programs, are also needed.

What follows is an overview of each watershed including a problem statement, desired future condition, and progress towards that goal. Each Program Element within the watershed is then described, including accomplishments to date and status.

In implementing the Mitigation Plan over the last twenty-one years, many programs are moving towards completion, or have been completed. Appendix D contains the status of over one hundred environmental commitments for which the Commission is responsible. Chapter 3 identifies new Program Elements for the Commission's 2016 to 2020 Plan, and identifies funding needs and goals to implement and complete all Plan elements.

Mitigation Commission Plan Program Elements

Map 1. Mitigation Plan Watersheds and Program Elements



Provo River/Utah Lake Watershed

OVERVIEW AND PROBLEM STATEMENT

Lower Provo

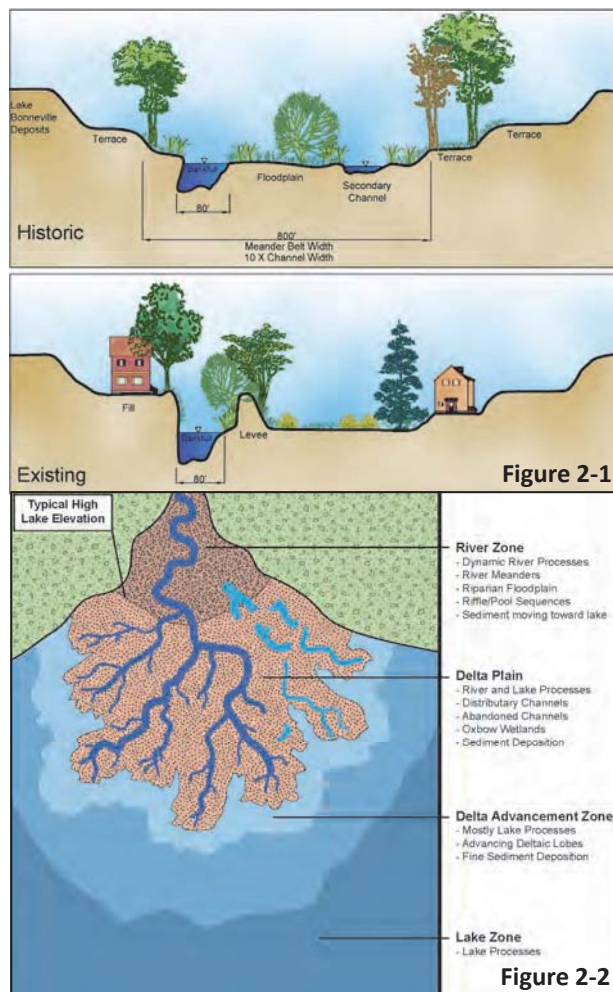
The Provo River and its adjacent riparian and wetland habitat historically supported a diversity of wildlife species. However, since settlement in Utah Valley by European pioneers in 1849, the River has been significantly altered throughout most of its 75-mile length. Numerous segments of the Provo River serve as a transportation channel for municipal, irrigation and industrial water and flood waters. The river is also impacted in many areas by irrigation diversions, highways, railroads, reservoirs and urban encroachment. In the past, little consideration was given to native fish and wildlife populations dependent on the riverine habitat as more pressing demands of commerce, flood control and agriculture were given priority. As a result, a natural riverine system remains only in a few short sections of stream.

Impacts to the lower river section have contributed to the significant decline of the endangered June sucker. Historically, a broad delta and floodplain (vegetated with cottonwoods, willows, etc.) once dominated the lower Provo River/Utah Lake interface (see Figure 2-1). Similar conditions would have existed at the mouths of most Utah Lake tributaries. The historic river channel would have broadened into a delta ecosystem at its interface with Utah Lake with all of the typical habitat zones illustrated in Figure 2-2. As the river zone leveled out, suspended sediments would drop out of the river flow, resulting in threaded channels over time. Threaded channels in the delta zone would have shifted position from season to season providing a diversity of habitat types including off-channel, shallow, warmer habitats with greater food resources and refuge from predatory fish. Such interdependent habitat zones are critical to support larval June sucker survival, development and recruitment to more developed life stages (USFWS 1999). The lack of these conditions through many years of dredging and channelization of the lower Provo River have significantly limited the recruitment of June sucker.

Middle Provo

Fish and wildlife habitat in and along the middle reach of the Provo River in Heber Valley was altered and degraded by the Provo River Channel Revision Project constructed by the U.S. Bureau of Reclamation as a component of the Provo River Project in the 1950s. The channel revision project was constructed to increase the channel capacity of the Provo River, while creating dikes and securing flood easements to protect Heber Valley from flooding. The project was essential to developing water supply for the Provo River Project under valid existing water rights, and local water users are repaying project costs to the Federal government in accordance with Reclamation law.

A substantial portion of the Provo River Project's water supply is provided by transbasin diversions of water to the Provo River drainage from the Weber River and the North Fork Duchesne River. The Weber-Provo Diversion was completed in 1948 and the Duchesne tunnel was completed in 1954. These importations at times occurred on top of flood flows originating in the Provo River drainage.



As a result of channel revision and other man-made changes, the river system morphology was completely altered. The river was straightened and long sections were diked. Some sections of river were dredged on an annual basis to isolate adjacent lands from natural and artificial flood flows. With completion of Deer Creek Dam in 1941 and the Weber and Duchesne diversions, many miles of the Provo River and its associated wildlife habitat upstream from Deer Creek Reservoir were inundated or severely damaged. The completion of Jordanelle Reservoir in 1993 inundated another 5 miles of stream.

Irrigation diversions on the middle Provo River were capable of completely dewatering sections of the river during part of the year. The Valeo and Wasatch Canal diversions, Midway and Island Ditch diversions, and others historically dewatered several stream miles. Following the filling of Jordanelle Reservoir in 1996, requirements to maintain minimum instream flows of 125 cfs in the river between Jordanelle Dam and Deer Creek Reservoir went into effect. Water managers faced many challenges in administering water deliveries and diversions while bypassing instream flows.

Until the Mitigation Commission began its program in this area, the middle Provo River flowed through mostly private land. Recreational and angler use was restricted by private landowners in most areas.

Upper Provo

Many natural lake basins in the upper Provo River drainage of the Uinta Mountains were dammed in the early 1900s to provide water storage. Management of these reservoirs for water supply and delivery caused extreme fluctuations, making fisheries management difficult and creating unsightly mudflats when the reservoirs were drawn down. The fluctuations inhibited growth of aquatic plants needed to provide cover and food for fish and other aquatic life. Low oxygen concentrations in the winter, caused in part by low water levels, resulted in winter fish kills in some reservoirs. Cumulative impacts from decades of reservoir operation severely degraded many watersheds and riparian areas below the dams. Typically, dams were closed in winter, allowing little or no flow to the downstream channel, and then opened fully in the summer with flows often exceeding channel capacity. Streams downstream from the dams suffered from extensive bank and channel erosion, loss of instream structure and increased width-depth ratios resulting in loss of fish habitat, degradation of water quality, and damage and loss of riparian wetlands. Additionally, like the middle Provo, the upper Provo was channelized downstream from the Duchesne tunnel.

Construction of Jordanelle Dam in the 1990s required relocating segments of two State highways and a segment of U.S. Highway 40. The new highway segments were placed higher on the foothills of adjacent mountain ranges in order to remove them from the valley floor and the reservoir basin. The new highway segments traverse terrestrial habitats used by large game animals, particularly mule deer. Collisions with motor vehicles resulted in significant loss of big game animals and increased risk of human injury.

Utah Lake

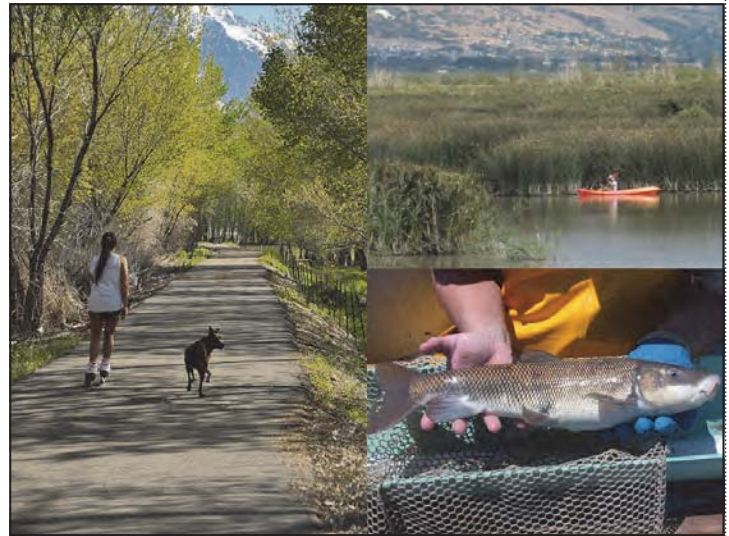
Utah Lake in Central Utah is the largest naturally occurring freshwater lake in the western United States. Its wetlands have long been recognized locally and nationally for their critical importance to fish and wildlife resources. The Utah Lake wetland ecosystem is nationally important as a breeding area and stopover for many migratory birds in the Pacific Flyway. Approximately 226 species of birds are known to use Utah Lake wetlands, as well as 49 mammalian species, 16 species of amphibians and reptiles and 18 species of fish. Utah Lake also provides feeding areas for birds nesting on the Great Salt Lake.

Wetlands that adjoin the Utah Lake environment are, for the most part, privately owned, whereas the bed of the lake is owned by the State of Utah. Current private ownership and management for non-wildlife purposes often conflicts with wildlife use and habitat protection goals and constrains public access and enjoyment of the area. This ownership pattern has resulted in wetland losses in the past. Remaining wetlands continue to be threatened by proposed residential developments, diking, airport expansions, new highways and recreational developments.

Desired Future Condition: Provo River/Utah Lake Watershed

“Riparian and aquatic habitats and dependent species affected by construction and operation of CUP and other Reclamation projects are restored along the lower Provo. The public is provided access to the river where there are adequate facilities to support this use.”

The Commission, U.S. Department of the Interior and Central Utah Water Conservancy District finalized an Environmental Impact Statement (EIS) and signed Records of Decision in 2015, approving the Provo River Delta Restoration Project (PRDRP). The PRDRP will restore a more natural interface (a delta) of Provo River and Utah Lake by relocating the lower 1.5 miles of Provo River to the north, and removing a dike along the eastern shoreline of Utah Lake. Public access and recreation facilities compatible with habitat restoration work will be provided. The project is into final design stage and is anticipated to be complete by the end of 2021.



“The Commission actively cooperates with other resource management agencies to coordinate management of water resources in the drainage to benefit fish, wildlife and recreation resources. Water conservation and efficiency improvement projects are implemented which integrate fish, wildlife and recreation objectives.”

The Record of Decision for the Utah Lake Drainage Basin Water Delivery System (ULS System) EIS included commitments for delivering an annual supply of 12,165 acre-feet of conserved water to the lower Provo River, in addition to delivery of an average of 16,000 acre-feet (range from 0 to 34,601 acre-feet) of

exchange water, and up to 3,300 acre-feet of purchased water, for a total annual average delivery of 31,465 acre-feet of supplemental water to Provo River to support June sucker recovery and other instream uses. Up to 4,500 acre-feet of additional conserved water could be incorporated into the total supplemental water supply available for the lower Provo River to help meet target flows.

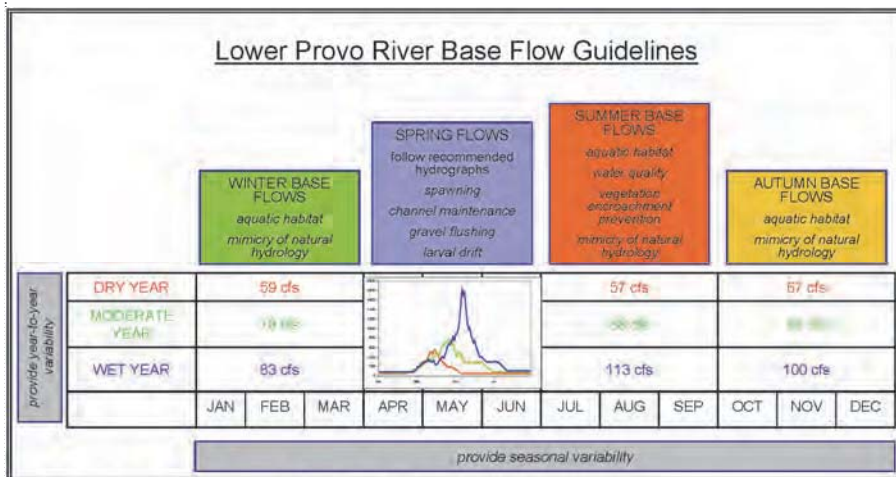


Figure 8.1. Lower Provo River base flow guidelines.



Reconstruction and restoration of the lower Hobbble Creek channel where it enters Utah Lake was completed in late summer 2008. The restored area allows delivery of recommended supplemental flows through lower Hobbble Creek and to Utah Lake.

Each year the June Sucker Flow Work Group meets to discuss the flow outlook for the upcoming water year. The Flow Work Group is a multi-agency group comprised of water users and stakeholders in the Provo River and Hobbble Creek drainages. The Flow Work Group is a subcommittee of the June Sucker Recovery Implementation Program (JSRIP) and advises JSRIP regarding supplemental water amounts and projections for the upcoming water year.

The JSRIP discusses June sucker needs, taking into account target flow recommendations, available water supplies, and respective commitments for water delivery to the Provo River and Hobbble Creek. Supplemental water is allocated toward flow regime targets recommended in the Lower Provo River Ecosystem Flow Recommendations Final Report.

season, as shown in the Report’s Figure 8-1 (Figure shown on previous page).

The Flow Recommendations Report provides seasonal flow recommendations and specific target release patterns for average, wet, and dry years by

Flow regimes are intended to be adaptive, but efforts would be made on an ongoing basis to coordinate use of all supplemental water sources to achieve target flows. Based on these factors, the JSRIP recommends a flow pattern to the U.S. Department of the Interior.

The amount of water added to Provo River in any given year varies depending on weather conditions, local water use, amounts available, need for delivery of exchange water, and delivery system capacity availability.

The Flow Recommendations Report provides seasonal flow recommendations and specific target release patterns for average, wet, and dry years by

“Formerly fragmented habitat features, such as reaches of the middle Provo River previously isolated by dewatering or by large diversions, provide continuous habitat for fish and wildlife species. Minimum instream flows are provided and potentially damaging unnatural high flows downstream of reservoirs are reduced. Instream migration barriers are removed and adequate water quality, temperature and other suitable habitat factors exist which aid recovery of fish and wildlife populations.”



Provo River Restoration Project aerial photo of “Reach 2” , located on the middle Provo River between Midway and Charleston, Wasatch County, Utah. June 26, 2005

Reconstruction of the middle Provo River and floodplain, Provo River Restoration Project (PRRP) began in 1999 and was completed in 2007. The river now has access to the floodplain in many locations. All reaches of the river are connected, habitat is continuous and fish populations are strong. The area supports a highly productive and heavily-used recreational opportunity for anglers, wildlife watchers, and hikers. Flows are managed in concert with the Deer Creek-Jordanelle Operating Agreement in consideration of Commission recommendations based on the 2004 Provo River Flow Study Report.



Public access to the middle Provo River corridor is designated at seven constructed parking areas that include restrooms, trash receptacles and educational displays. Two of the sites also provide accessible fishing platforms.



“Opportunities for public access have been provided to mitigation and conservation features where compatible with fish and wildlife resource objectives, as well as opportunities for public education and interpretation. The middle Provo River corridor is managed to be a ‘good neighbor’ in Wasatch County. Facilities are maintained, the public is guided in their use of the corridor, and adjacent landowners are not unduly inconvenienced by the presence of the public corridor.”

With more than 1,100 acres of Federal land ownership along the 10 linear miles of the middle Provo River, the Commission and U.S. Bureau of Reclamation administer the lands to protect the natural values of the restored areas, but also to be regarded as an asset to the local community. The Commission participates with the local cooperative weed control program, controls mosquito populations, and provides recreational opportunities.



Stone monuments mark entrances to PRRP access areas



“Deer mortality on highways around Jordanelle Reservoir is mitigated. High mountain reservoirs and drainages have been rehabilitated and stabilized to provide fish habitat, recreation opportunities and public safety. Further recreation opportunities that are compatible with the conservation of natural systems are provided.”

The Mitigation Commission has acquired several thousand acres of valuable terrestrial habitats in Wasatch and Duchesne Counties as mitigation for impacts to big game and their habitats around Jordanelle Reservoir (see more information in Strawberry/Duchesne Watershed). Since that time, the Utah Department of Transportation and Utah Division of Wildlife Resources have collaborated on a project to erect deer-proof fencing along most of the highways surrounding Jordanelle Reservoir.



Washington Lake Campground

Twelve high mountain lakes that were converted to storage reservoirs in the early 1900s have been stabilized and restored to their natural hydrologic pattern.

In response to anticipated heavy recreational use in the upper Provo River drainage resulting from the lake stabilization project, a 40-unit campground was constructed near Washington Lake called the Washington Lake Campground.



“Utah Lake has a more naturally functioning hydrologic regime that supports the lake and its connected wetlands. Inlet and outlet channels mimic natural hydrologic function, provide aquatic habitat and provide spawning and rearing habitats. Shoreline habitat is improved by the reduction of fluctuating water levels and the presence of aquatic vegetation. Existing water rights are recognized and met while developing cooperative approaches to achieve water management objectives.”



Utah Lake

A Utah Lake Water Level Fluctuation Study was produced in 2007 by the Central Utah Water Conservancy District, with assistance of Steven M. Thurin, HDR Engineering. This study provides an analysis of Utah Lake water level fluctuations, based on available Utah Lake water rights, water operations and computer simulation model data and assumptions to estimate Utah Lake water levels and salinity under natural, current and potential future conditions.



“The Utah Lake Wetland Preserve assures that wildlife habitat, wetland hydrology and access for compatible recreational pursuits are preserved in perpetuity. The public is provided opportunities for public education and interpretation. Migratory birds, wildlife habitat and wetland values are protected in a manner compatible with the surrounding farmlands, orchards and agricultural production areas.”

The Utah Lake Wetland Preserve, including the Benjamin Slough and Goshen Bay units, encompasses up to about 21,750 acres. About 15,782 acres are under management of project cooperators: (Mitigation Commission, 7,113 acres; Bureau of Land Management, 4,150 acres; State of Utah, 4,500 acres; and Utah County, 19 acres). The rest is privately owned.

The management objective for the Utah Lake Wetland Preserve is to manage the lands for wildlife values in a way that minimizes conflicts with neighboring traditional land uses. This objective is achieved through the use of farming agreements to provide desired vegetation conditions, seasonal employees, and the use of volunteer groups, such as Dedicated Hunters and Pheasants Forever for specific projects, such as tree and shrub plantings, placement of nest structures, or maintenance of irrigation facilities.

The annual programs needed to meet the management objective are: weed control, irrigation, facility and equipment maintenance, such as fences and walk-in access structures, education, and recreation.

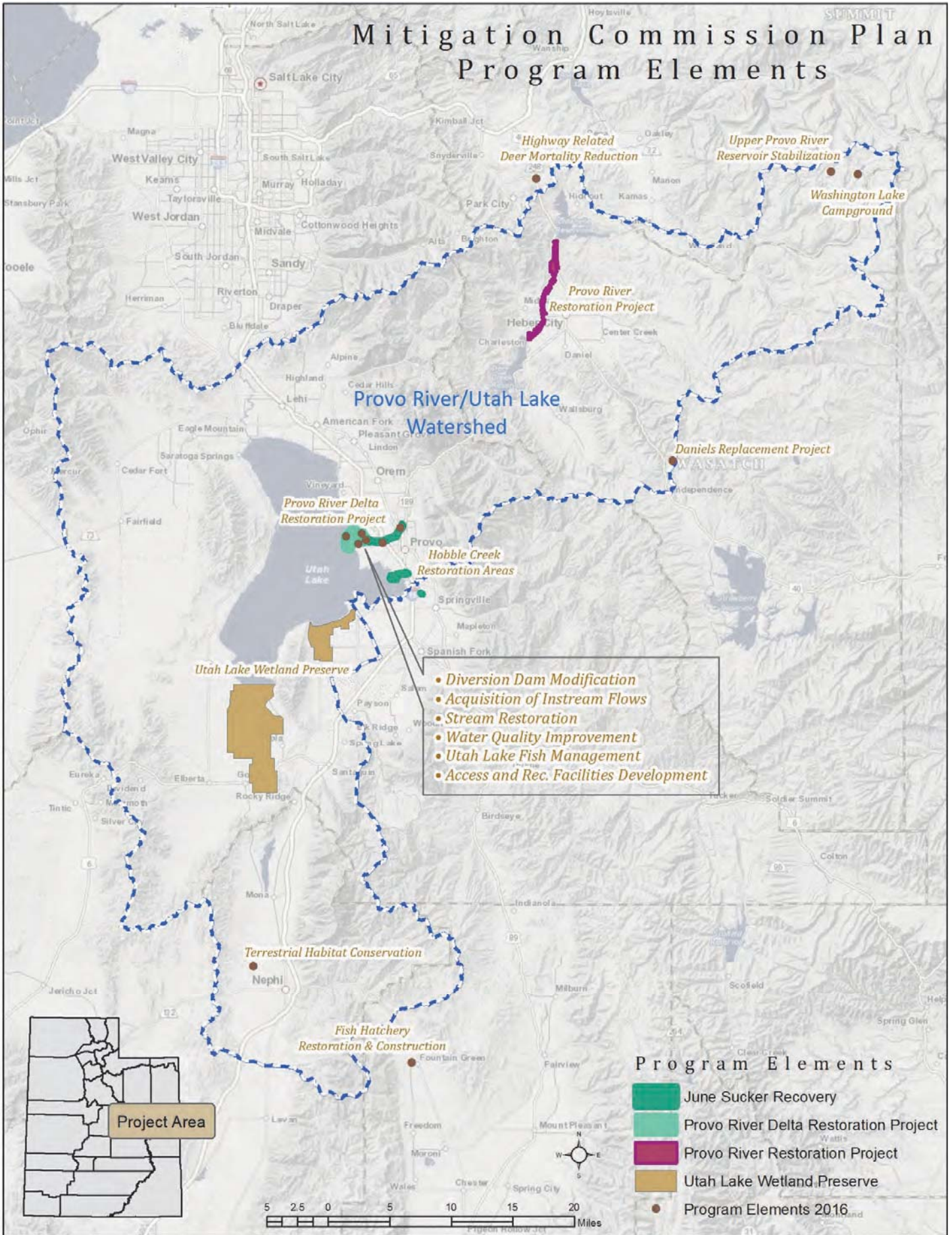


Grassland management with co-op farmer on the Utah Lake Wetland Preserve. Unharvested area on the left; on the right, regrowth in area that was harvested one year previous.



Cooperative Farming Agreement holders provided assistance and/or equipment for the following activities on the Utah Lake Wetland Preserve—starting top left, going right: Bush removal for fenceline maintenance; planting grainfield to be used as a foodplot; irrigation ditch maintenance; installing goose nest structures; and, Tamarisk removal.

Map 2. Provo River/Utah Lake Watershed Program Elements



PROGRAM DESCRIPTION FOR PROVO RIVER/UTAH LAKE

The Provo River/Utah Lake watershed is a high priority resource area for the Commission. Despite the many ecological problems described above, portions of this watershed still support abundant fish and wildlife resources, with high potential for restoration and recovery. Priority goals are to complete unfulfilled mitigation requirements of the Bonneville Unit and ongoing water resource development features and projects authorized by Title II of CUPCA and to implement other measures that are complementary. An ecosystem approach is utilized to develop the Commission's program for fish, wildlife and related recreation mitigation and conservation. In order to facilitate planning for this program, the basin is subdivided into four units. The Commission's program recognizes that these units are not in fact discrete and isolated, but are highly interrelated from a management and ecosystem perspective. The four areas are:

- Lower Provo River (Utah Lake to Deer Creek Dam)
- Middle Provo River (Deer Creek Dam to Jordanelle Dam)
- Upper Provo River (Jordanelle Dam to headwaters)
- Utah Lake and Connected Wetland Environments

In the next 5 years, most of the Commission's efforts will be focused on the lower Provo River near and including Utah Lake. As mentioned in Chapter 1, the 2016 Plan combines some Program Elements for the future, while the Annual Report portion of this chapter is organized according to past program elements. Refer to Chapter 3 for a complete listing of the new Program Elements going forward.

Lower Provo River - Deer Creek Dam to Utah Lake

The Commission's program for the lower Provo River contains a number of components: acquisition of water rights; June sucker recovery; stream restoration and changes to diversions; public access and facilities development; and water quality improvements. The Provo River Delta Restoration Project (PRDRP) integrates all these lower Provo River (and Utah Lake interface) program components. The Commission anticipates working cooperatively with the Central Utah Water Conservancy District, Department of the Interior – Central Utah Project Completion Act Office, the June Sucker Recovery Implementation Program and others to implement the Project. The Final Environmental Impact Statement was released in April 2015, and Records of Decision were signed by the U.S. Department of the Interior and the Commission on May 26, 2015. Program elements composing the PRDRP are discussed below.

June Sucker Recovery Supporting efforts to recover the June sucker is a Priority 1 program element for the Commission. Many other program elements in the Mitigation Plan directly or indirectly contribute to these efforts, such as acquisition of lower Provo River water rights; restoration and enhancement of river and riparian areas; Utah Lake Fish Management projects; and, and the planning and development of a native species fish hatchery. In addition, the Commission is directly involved in measures to recover the June sucker. The June Sucker Recovery Implementation Program was formed in 2002. Since then, the Commission has and will continue to work closely with this group over the next five years.

Implementation to Date & Future Actions In 1995, the Commission funded the U.S. Bureau of Reclamation to conduct studies required under the U.S. Fish and Wildlife Service's 1994 Biological Opinion¹. In 1996 and 1997, the Commission cost-shared with the U.S. Bureau of Reclamation, U.S.

¹This Biological Opinion was required in partial fulfillment of the environmental review process for the Deer Creek Reservoir/Jordanelle Reservoir Operating Agreement. The U.S. Fish and Wildlife Service issued a Biological Opinion on the Provo River Project in 1994 under authority of the Endangered Species Act. The Biological Opinion found that operation of the Provo River Project may jeopardize continued existence of the June sucker. A reasonable and prudent alternative was identified for the Provo River Project. The alternative required the Federal government to provide minimum instream flows during a 3-

Department of the Interior, Central Utah Water Conservancy District and Provo River Water Users Association for the second and third year of studies. The Commission contributed \$166,000 toward completion of those studies.

Additionally, studies funded under the Commission's Utah Lake Fish Management program element are primarily directed at June sucker. In May, 1994 the Commission signed its first agreement with the Utah Division of Wildlife Resources to fund such studies.

The Commission has also participated with the June Sucker Flow Workgroup to redraft the June Sucker Recovery Plan, which was first approved by the U.S. Fish and Wildlife Service in June, 1999. And, the Commission is a significant partner and participant in the June Sucker Recovery Implementation Program (JSRIP)². In its 1999 Record of Decision for the Diamond Fork System, the Mitigation Commission and the other joint lead agencies committed to support development and implementation of such a program.

The JSRIP is ongoing. The Commission contributed approximately \$3.4 million directly toward recovery of the June sucker prior to 2001, when the JSRIP was formed, and another \$12.2 million from 2001 through 2015 on similar efforts aimed at June sucker recovery. The Commission's funds have been used for June sucker brood stock development and management, hatchery development and stocking, diet development and other culture-related studies, water acquisition for instream flows, diversion dam modification, studies for developing instream flow recommendations, analysis and preparation of required NEPA compliance documents for the PRDRP, and several other JSRIP program elements. (Refer also to sections of this document discussing the following program elements: Acquisition of Instream Flows and Instream Flow Study; Utah Lake Fish Management; Stream Restoration and Diversion Dam Modification; and Fish Hatchery Restoration and Construction.)

Acquisition of Instream Flows This program element is to plan and implement actions that will provide instream flows in this reach of Provo River as authorized by CUPCA. The 1987 Final Supplement to the 1979 Final Environmental Statement for the Municipal and Industrial System of the Bonneville Unit (1987 Final Supplement) required minimum instream flows of 100 cubic feet per second (cfs) from Deer Creek to Olmstead Diversion year round, and 25 cfs from Olmstead Diversion to Utah Lake during the non-irrigation season. These minimum flows are provided by the yield and operating plans of the Bonneville Unit. The Central Utah Project Completion Act additionally authorized the acquisition of water rights in the lower Provo River, with the goal of providing a minimum flow of 75 cfs in the lower Provo River from Olmstead Diversion to Utah Lake.

Implementation to Date & Future Actions The Commission has worked with the Central Utah Water Conservancy District (CUWCD) to acquire water rights in the lower Provo River. To date, the District and Commission have acquired about 3,300 acre feet of water. A change application was filed that allows just over 1,000 acre feet (AF) to be used for instream flow purposes. This was accomplished during 2002. Change applications have not yet been filed on the other lower Provo River shares³, so additional instream flows have therefore not been realized.

year period and to complete studies during the 3-year period to define various flow-related aspects of June sucker life history requirements and habitat needs.

²The Recovery Implementation Program is expected to provide 1) identification of all threats to June sucker, not just Provo River spawning and nursery flows; 2) reasonable certainty of meeting the goals for participants; and, 3) shared recovery by all stakeholders. Participants include the U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, Mitigation Commission, Department of the Interior-CUPCA Office, Utah Department of Natural Resources, Central Utah Water Conservancy District, Provo River Water Users Association, Provo Reservoir Water Users Company, and an environmental/outdoor interests representative.

³The water has been acquired through the purchase of shares in several mutual water companies. Changing the use of this water from irrigation to instream flows requires approval by the water company. This approval has not yet been obtained on most of the shares acquired from various canal companies and is under negotiation.

Given competing demands and increased cost of water since passage of CUPCA, it is unlikely that funding authorized for purchasing water will be sufficient to fulfill the statutory goal of establishing a 75 cfs instream flow. The Commission believes that providing minimum instream flows of 75 cfs will not be achievable solely through purchase of water rights on a willing-seller basis. The Commission, CUWCD and Department of the Interior (Interior) therefore incorporated the objective of providing minimum instream flows of 75 cfs into the planning for the Utah Lake Drainage Basin Water Delivery System (ULS). The ULS Final Environmental Impact Statement (EIS) was issued September 30, 2004. Records of Decision were issued December 22, 2004 and January 27, 2005. Constructing and operating the ULS will provide an average of 16,000 acre-feet of supplemental water annually (range from 0 to 34,601) to be delivered to Utah Lake via the lower Provo River and will help accomplish the goal of providing a 75 cfs minimum instream flow in the lower Provo River.⁴ In its Record of Decision for the ULS, the CUWCD and Interior also committed to develop water conservation projects (in accordance with Section 207 of CUPCA) sufficient to be able to provide an additional 12,165 acre-feet of conserved water annually to be used for Provo River instream flows to support June sucker recovery.

The Commission will contribute \$15 million of budget authority (indexed amount as per fiscal year 2005 forward) as authorized under Section 302(a) of CUPCA) toward the proportionate share of the cost of those specific ULS facilities used to deliver instream flow water; Interior will provide additional funds to be allocated under Section 202(c) of CUPCA. This will “purchase” priority capacity of 35 cfs in the Spanish Fork-Provo Reservoir Canal Pipeline for delivery of water for instream flows when exchange water and/or conserved water needs to be delivered to Utah Lake. Approximately \$2.1 million (indexed amount as per fiscal year 2005) of authorization will remain available to purchase water rights, if they become available.

The Commission will continue to actively cooperate with the CUWCD, U.S. Bureau of Reclamation and other affected interests to acquire and provide water and take appropriate actions to achieve this 75 cfs instream flow objective. Strategies may include acquisition and exchange of water rights, water conservation and re-operation of water supplies in the basin.

Under CUPCA Section 207(b)(4), Interior provided funding for water conservation projects and conserved water has been made available for instream flow uses, for example, enclosure of the Provo Reservoir Canal, completed in spring of 2013. By contributing approximately \$50 million in funding to the enclosure project, Interior obtained 8,000 AF (of the 12,165 AF identified above) of conserved water, and that water will be contributed towards June sucker flows in the lower Provo River upon completion of the ULS System and issuance of a Block Notice by Interior (projected to occur in 2016). Since the ULS EIS was completed, Interior has been able to secure many other water conservation contracts that will yield up to an additional 4,500 acre-feet (over and beyond the 12,165 AF identified above) of conserved water annually that may be used in either Hobbie Creek or Provo River for instream flow purposes. (Further information is available in the East Hobbie Creek Restoration Project Environmental Assessment and PRDRP Final Environmental Impact Statement).

Instream Flow Studies Instream flow studies to quantify instream flow/habitat relationships and to investigate strategies for lowering high flow releases will be developed and conducted.

Implementation to Date & Future Actions The Commission released a final report on *instream flow requirements* for the lower Provo River in August, 2008, and for lower Hobbie Creek, in 2009.

⁴ULS will provide supplemental water for the lower Provo River in years when water is conveyed from Strawberry Reservoir to Utah Lake for purposes of making the CUP exchange to Jordanelle Reservoir, as part of the Municipal and Industrial System. This supplemental flow supply would be available in about 70% of the years. More information is available on the supplemental flow pattern in the Bonneville Unit Definite Plan Report 2004 Supplement, Water Supply Appendix, Volume 5, Chapter 6, Table P-8b-ii.

Through the NEPA processes for the Hobble Creek Restoration Environmental Assessment and for the PRDRP Final EIS, and by action of the JSRIP, the two Flow Recommendations Reports were adopted for use by the Commission, CUWCD and Interior, plus the other JSRIP partners, to help guide annual decisions implementing target flow regimes. As detailed in the Flow Recommendations Report, the flow regimes are intended to be adaptive.

Stream Restoration CUPCA provided the Commission funding authorization to implement stream restoration measures in lower Provo River. This component includes planning for and implementing actions to improve the biotic, hydraulic and geomorphic conditions of the riverine and riparian system. Through a six-year planning effort, the Commission and other partners identified the Provo River Delta Restoration Project (PRDRP) to provide the diversity of habitat conditions necessary in the lower river and delta to support a variety of life stages of the June sucker, especially young of year and juvenile lifestages.

In order for the restoration and enhancement of the Provo River riparian and aquatic resources to be successful, close coordination and cooperation must occur among the Commission and numerous governmental and private entities that own property and/or operate related facilities. The Commission, together with its partners in the JSRIP, will seek such cooperative ventures.

Implementation to Date & Future Actions Lower Provo River stream restoration and Utah Lake habitat restoration are parts of the June Sucker Recovery Plan. A study of potential habitat improvement alternatives, initiated under the JSRIP, was completed in 2002. In 2010, the Commission, together with the Interior and CUWCD, announced its intent to prepare an Environmental Impact Statement to analyze several alternatives for habitat alterations in the lower Provo River and its interface with Utah Lake for June sucker spawning, incubation and rearing. The planning effort was completed in 2015 with the release of the Provo River Delta Restoration Project Final EIS. Through Records of Decision signed by the Interior and the Commission on May 26, 2015, the decision to implement the PRDRP was made. The Project includes acquiring private lands to obtain the space needed for restoration of spawning and nursery rearing areas for young of year and juvenile June sucker. (See Figure 2.3 below) The Commission will seek to use its authorities and funds for implementing the PRDRP, in close coordination with the JSRIP, over the next five-year planning period.



Figure 2.3 Provo River Delta Restoration Project Area

The Commission also intends to participate with other JSRIP partners in restoring lower Hobbie Creek, a small tributary to Utah Lake located in Springville, Utah. Projects will be identified and planned as willing cooperators (landowners) are available. A project in and adjacent to Springville City's Community Park is currently under development. The Commission expended \$82,500 on design efforts for this project through 2015, and anticipates expending \$490,000 for construction and construction oversight in 2016.

Diversion Dam Modifications Section 302(c) of CUPCA authorizes measures to combine, relocate or redesign and reconstruct diversion dams on Provo River between Murdock Diversion and Utah Lake. Some potential water conservation projects carried out by others might involve combining diversions, resulting in elimination of one or more structures.

Implementation to Date & Future Actions A study to evaluate diversion dams on the lower Provo River for potential modification was completed in 2002. After many years of planning the Commission and CUWCD reconstructed the Fort Fields Diversion structure located in the reach designated as critical habitat for the June sucker on the lower Provo River. NEPA compliance was completed in 2007. The Commission partnered with CUWCD and the Interior to replace the Fort Field/Little Dry Creek diversion structure in 2009. Minor repairs were completed in 2012.

The Commission proposes to expand the scope of the CUPCA Section 302(c) authorization, as provided for under Section 301(h)(1) of CUPCA, to include modification of diversion dams on Hobbie Creek. The Hobbie Creek Restoration Project was completed in 2008. Adult June sucker ascended Hobbie Creek from Utah Lake in 2009 and spawned. Juvenile June sucker were collected in lower Hobbie Creek wetlands in 2010, demonstrating the first documented over-winter survival of naturally-produced June sucker since monitoring of the species began in the 1980s. Spawning has occurred every year since. However, irrigation diversions on lower Hobbie Creek can impede water deliveries, block access by spawners, and potentially block downstream migration of larval June sucker. By expanding the scope of Section 302(c) to include Hobbie Creek, diversion dams that interfere with JSRIP goals can be rehabilitated or eliminated with funding to be appropriated under this authorization. The Utah Lake System began delivering supplemental water to Hobbie Creek in 2013.

Public Access and Facilities Development Public access may be acquired and/or appropriate facilities constructed for public use of Provo River resources, made possible by the CUP or other Federal reclamation activities. Specific elements would be developed through NEPA analysis associated with the delta restoration project.

Implementation to Date & Future Actions The Commission will implement this element in concert with the Provo River Delta Restoration Project and East Hobbie Creek Restoration Project. There will be an integrated approach to habitat restoration and public access. Several trailheads, trails, and viewing towers are planned as part of the delta restoration project.

Water Quality Improvements The Commission will work cooperatively with the Provo River Water Users Association, U. S. Bureau of Reclamation, other water-user organizations and interested parties, in pursuit of agreements and measures to achieve better water quality in this reach of river. Measures may include recommendations to change the operation of Deer Creek Dam to increase dissolved oxygen content in water releases during the summer months, and measures to obtain and maintain minimum instream flows during summer low flow periods when high temperature and low dissolved oxygen content in the past has limited aquatic life in the lower Provo River.

Implementation to Date & Future Actions Water quality measures on the lower Provo River, affected by the operation of the hydroelectric plant on Deer Creek Reservoir, were put in effect in

2003. Measures included entrainment of additional air into releases through hydroelectric turbines in the dam outlet to increase dissolved oxygen concentrations in discharged water. The Commission has identified base flow levels in the lower Provo River during summer periods that, if implemented, would help alleviate problems with high temperature and low dissolved oxygen. As part of the Provo River Delta Restoration Project, the Commission will improve water quality in the existing lower Provo River by aeration of the water.

Middle Provo River - Deer Creek Reservoir to Jordanelle Dam

The Commission's program for the middle Provo River has been substantially completed. The Commission will continue cooperative efforts with the Central Utah Water Conservancy District, U.S. Bureau of Reclamation and others to assure instream flows and water quality requirements of the 1987 Final Supplement to the Final Environmental Impact Statement for the Municipal and Industrial System are achieved. Those requirements are incorporated in the following projects.

Wasatch County Water Efficiency Project (WCWEP) with Daniels Replacement Pipeline (DRP)

This program element has been completed.

This mitigation measure accomplishes more than one-fourth the required mitigation for aquatic resources impacted by CUP's Strawberry Aqueduct and Collection System (SACS) in the Bonneville Unit. Water conserved through irrigation efficiencies is provided to Daniels Irrigation Company, replacing water supplies previously diverted from Upper Strawberry River and several of its tributaries.

Additional water savings in Heber Valley are used to supplement instream flows in several stream segments within the valley, improving riparian and aquatic habitats. Downstream water rights and uses will be protected through project implementation.

Implementation to Date & Future Actions This project achieved 9,225 out of the required 34,090 mitigation credits (27%) for the SACS Aquatic Mitigation Plan.

The Mitigation Commission was a joint-lead agency with CUWCD and Interior's CUP Completion Act Office for NEPA compliance on a proposed enhanced program for operation, maintenance and replacement of facilities for the WCWEP Project. The resulting EA was completed in 2013 and laid a path for future work on the WCWEP facilities as land use and water uses change in the WCWEP service area.

The Commission is cooperating with the U.S. Forest Service and Utah Division of Wildlife Resources to monitor stream flows on the upper Strawberry River above Strawberry Reservoir. More information on this program is described under the Strawberry/Duchesne Watershed.

Provo River Restoration Project The Provo River Restoration Project (PRRP) is designed to restore the diversity and productivity of fish and wildlife habitat along the middle Provo River. It partially offsets losses of fish and wildlife values caused by the CUP and other federal reclamation projects in Utah. This project is substantially complete.

Implementation to Date & Future Actions Acquisition of property for habitat restoration and public access for the PRRP has been completed. Public access is available to about 10 continuous miles along the river. The public is required to access the corridor via seven parking areas constructed as part of the project. All of the public access parking areas include restrooms, trash pickup and information displays, and two sites include accessible fishing platforms. An additional four- to six-car parking lot may be constructed near the head of the Wasatch Canal/Rock Ditch system. Public access to about ½

mile of this stream was obtained through purchases made for the PRRP. Construction of this small parking area will reduce illegal parking along old Highway 40 near the Wasatch Diversion.

During the next five-year Mitigation Plan period, emphasis will remain toward developing management agreements for the PRRP corridor and securing the property against trespass, especially by ATVs and other motorized vehicles, and other prohibited activities. The Commission will also examine the role of sediment and sediment transport in forming geomorphic features in the restored river reaches.

Upper Provo River - Jordanelle Reservoir to Headwaters

The Commission's program for the upper Provo River drainage initially focused on completion of unfulfilled mitigation commitments of the Bonneville Unit. Of the three original upper Provo projects, one program element remains to be completed. With publication of this Plan and concurrence by U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources, this Program Element will also be completed.

Highway-Related Deer Mortality Reduction During early planning for the CUP Municipal and Industrial System, the Utah Division of Wildlife Resources and U.S. Fish and Wildlife Service estimated relocation of new highways around Jordanelle Reservoir would result in an increased mortality of approximately 12 deer per year from vehicle collisions. A study of deer movement patterns in 1991, the first year the new highways were in operation, documented the death of at least 174 deer from vehicle collisions. Subsequently, additional mitigative measures, including installation of 7-ft. high big game-proof fences and experimental crossing structures on selected segments of the highways, were constructed with funds provided by the U.S. Bureau of Reclamation. The Utah Department of Transportation provided funds to evaluate these measures and determined that deer mortalities were reduced about 30%. In July 1997, based on recommendations of the U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources, Commission funding of this evaluation was terminated.

Implementation to Date & Future Actions Consultation with the Utah Division of Wildlife Resources and U. S. Fish and Wildlife Service resulted in a joint decision to cease evaluating at-grade "deer crosswalks" on U.S. Highway 40 as a viable mitigation measure. The Commission, U.S. Fish and Wildlife Service, and Utah Division of Wildlife Resources have determined the most appropriate solution for mitigating impacts to deer and other big game is through off-site mitigation.

The Utah Division of Wildlife Resources identified high priority big game ranges in the area for acquisition and subsequent management for wildlife habitat values. Contacts were made with willing sellers in 2005, and appraisals were ordered in 2006. The Mitigation Commission has acquired approximately 7,700 acres in the Uintah Basin since 2006 to provide mitigation for big game, sage grouse, and other habitat types. Official consultation under the Fish and Wildlife Coordination Act is underway with the U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources; the acquired properties are anticipated to meet the need for mitigation of impacts of Jordanelle Reservoir and road construction on wildlife. (See Appendix D for complete report on status of all environmental commitments.)

Upper Provo River Reservoir Stabilization Project *This program element has been completed.*
Washington Lake Campground *This program element has been completed.*

Utah Lake

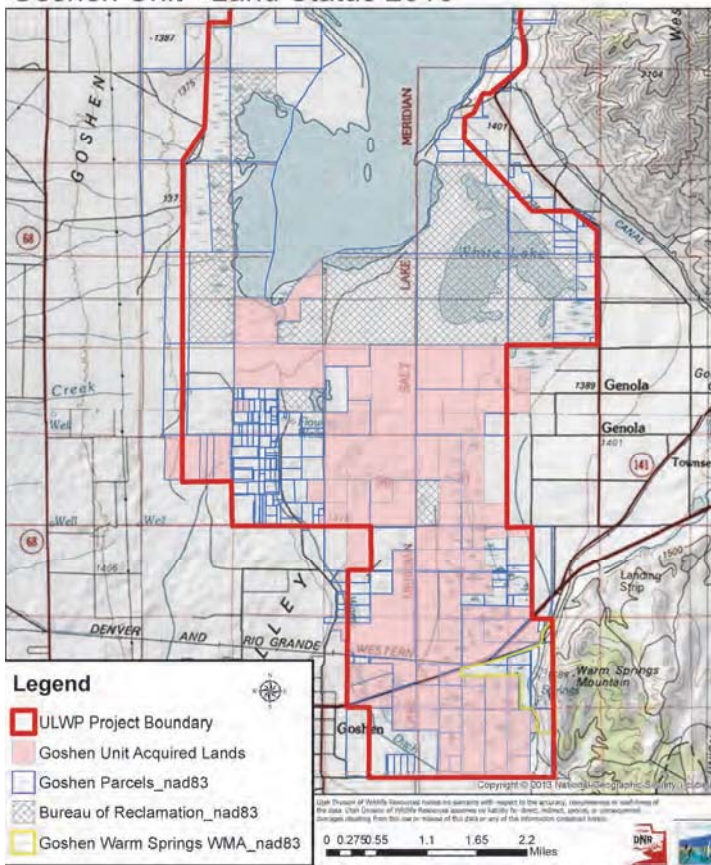
Utah Lake Fish Management and June Sucker Recovery The Commission will pursue and support operational strategies in the Provo River/Utah Lake watershed that (1) promote a more stable lake elevation and natural tributary inflow, and (2) implement measures to aid recovery of the Utah Lake ecosystem with emphasis on the endangered June sucker.

Implementation to Date & Future Actions Measures to aid June sucker recovery and other Utah Lake ecosystem components have been and will be based on recommendations of the June Sucker Recovery Implementation Program (JSRIP). In addition to providing support of the JSRIP, the Commission and other partners will implement the Provo River Delta Restoration Project to address this program element.

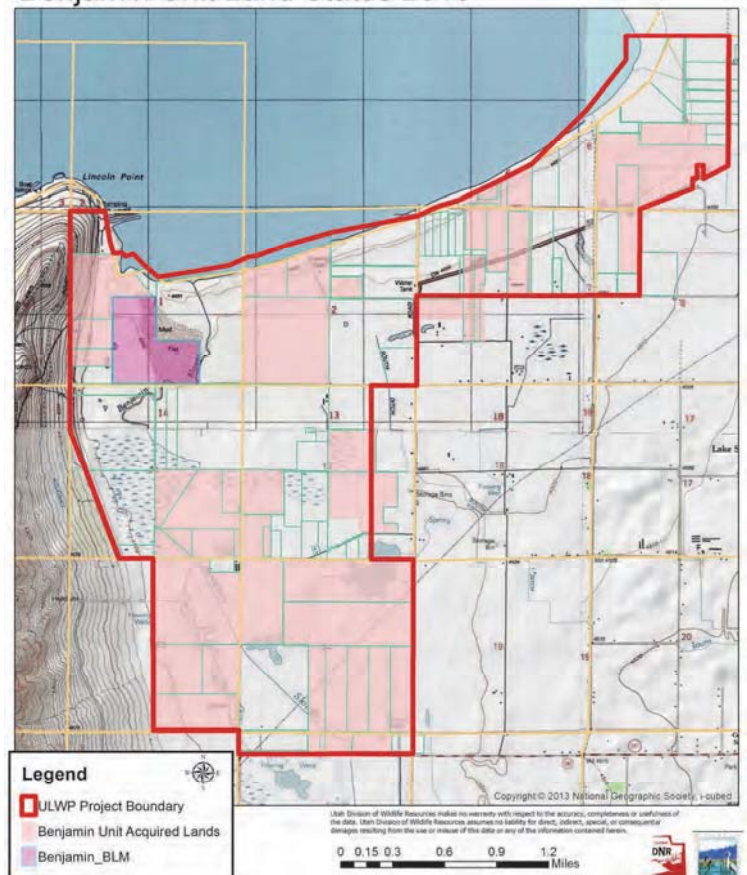
Utah Lake Wetland Preserve The Utah Lake Wetland Preserve, a network of wetland and interspersed upland habitats near the southern end of Utah Lake, is being established to partially mitigate for past and anticipated future impacts of CUP water development features and will provide habitat for many wetland and upland species in perpetuity. Initial efforts were focused on acquisition of land and water rights to establish the preserve. Although acquisitions will continue to be a strong program emphasis in the future, there will also be greater emphasis on planning for and implementing habitat restoration and development and long-term management of the Preserve. The Commission is pursuing acquisitions in partnership with Utah Division of Wildlife Resources and U.S. Bureau of Reclamation.

Implementation to Date & Future Actions The Utah Lake Wetland Preserve is being established and, in accordance with requirements of CUPCA, will be managed by the Utah Division of Wildlife Resources to protect migratory birds, wildlife habitat, and wetland values. The Utah Lake Wetland Preserve Land Acquisition and Protection Plan was completed in 1995. An Environmental Assessment and Finding of No Significant Impact for establishing the Preserve were finalized in May of 1996. The core of the Preserve’s Goshen Bay unit was the priority acquisition area for the first ten years, but recently emphasis has been placed on the Benjamin Slough Unit. Core properties there tie into properties owned by other state and federal agencies that were cooperators during development of the Utah Lake Wetland Preserve Plan.

Map 3.
Utah Lake Wetlands Preserve
Goshen Unit - Land Status 2016



Map 4.
Utah Lake Wetland Preserve
Benjamin Unit Land Status 2016



The Preserve contains about 21,750 acres. About 15,782 acres are under management of project cooperators (Mitigation Commission, 7,113 acres; Bureau of Land Management, 4,150 acres; State of Utah, 4,500 acres (most of this total acres are open water at normal lake elevation, e.g. Goshen Bay, and is administered by Utah Division of Forestry, Fire and State Lands); and Utah County, 19 acres). The rest is privately owned. Property was acquired from several land owners from 2006 to 2015, totaling 1,535 acres. While establishing the Preserve through land acquisition on a willing-seller basis is still a high priority, funding is expected to be limited over the next five years; therefore, emphasis will include development of a management plan.

The management objective for the Preserve is to manage the public lands for wildlife values in a way that minimizes conflicts with neighboring traditional land uses. This objective is achieved through the use of farming agreements to provide desired vegetation conditions, seasonal employees, and the use of volunteer groups, such as Dedicated Hunters and Pheasants Forever for specific projects, such as plantings, nest structures, or maintenance of irrigation facilities, and a pheasant release program. The annual programs needed to meet the management objective are: weed control, irrigation, facility and equipment maintenance, such as fences and walk-in access structures, education and recreation.

Development of a Preserve Plan will assure management in accordance with CUPCA and substantive requirements of the National Wildlife Refuge System Administration Act of 1966. The effort will also address items such as providing accessible opportunities for public with disabilities, areas open or closed to hunting, and other types of uses. The Preserve Plan will be reinitiated with opportunities for public involvement. Based on the final plan an operation and management agreement among U.S. Department of the Interior, U.S. Fish and Wildlife Service, Utah Division of Wildlife Resources and the Commission will be developed.

Utah Lake Drainage Basin Mitigation Commitments The Utah Lake Drainage Basin Water Delivery System (ULS), which represents completion of the major Bonneville Unit water development features, is in the implementation phase. The Commission is responsible for mitigating adverse impacts to fish and wildlife and was a joint lead agency with Interior and Central Utah Water Conservancy District (CUWCD) for the environmental impact assessment process. Mitigation commitments are completed (wetlands mitigation), or ongoing.

Implementation to Date & Future Actions The CUWCD, Interior, and Commission initiated informal scoping for the ULS with a public open house on September 28, 2000. A public scoping meeting regarding water needs and assessments was conducted in October 2001. Planning continued throughout 2003. A Final Environmental Impact Statement was issued on September 30, 2004, and Records of Decision issued December 22, 2004 and January 27, 2005. The Commission is responsible for carrying out environmental mitigation measures committed to during the environmental analysis. Commitments include: `

- Continue to acquire water shares from irrigation companies to provide flows in the lower Provo River to meet the 75 cfs target flow. [ongoing]
- Provide 3,300 acre-feet of irrigation company shares of water to flow unregulated toward the 75 cfs target flow in the lower Provo River. [ongoing]
- Provide 10 acres of the 85 acre Mona Springs Wetland Unit, which was acquired for wetlands protection as mitigation for 1.03 acres of non-jurisdictional permanent wetland loss and 0.27 acres of temporary wetland impacts. [complete]
- Initiate a study to determine the feasibility of providing fish passage or removing the Fort Field Diversion Dam on the lower Provo River for June sucker spawning and rearing; implement if feasible. [complete; the facility was reconstructed in 2009]

- Monitor Ute ladies'-tresses orchid in Spanish Fork Canyon for a number of years (to be determined jointly by the CUWCD, Mitigation Commission and Fish and Wildlife Service) similar to the pre-operation study in Diamond Fork. [under consultation with USFWS]
- If post-operation monitoring results in measured parameters exceeding pre-set critical values for Ute ladies'-tresses orchid populations in Spanish Fork Canyon, management guidelines presented in the 1999 Diamond Fork Biological Opinion may be implemented to compensate for impacts. [under consultation with USFWS]
- To offset potential impacts on leatherside chub, joint-lead agencies will support the Utah Division of Wildlife Resources in evaluating population and habitat status, or determining threats and/or identifying conservation actions that could protect and, where appropriate, enhance leatherside chub habitat. [ongoing]

The ULS Proposed Action will provide an average of 16,000 acre-feet of supplemental water annually to be delivered to Utah Lake via the lower Provo River. This will help accomplish the goal of providing a 75 cfs minimum instream flow in the lower Provo River. (A portion of the ULS features that enable this delivery for instream flow purposes will be constructed with funds authorized as Section 8 funds, under CRSPA. The Commission is responsible for operation and maintenance costs for features constructed pursuant to Section 8, under the authorization of CUPCA; therefore, a portion of the operation and maintenance costs for those facilities will be borne by the Commission.)

Utah Lake Recreation Facilities Under this program element, the Commission plans to expend remaining authorized funds (about \$1.5 million as of October 1, 2015) for recreation improvements around Utah Lake (CUPCA Section 312(a)). This program element is directed at utilizing this authorization to replace, modify, expand or construct recreation facilities directly associated with efforts to restore riverine and floodplain habitats of the lower Provo River at or near its interface with Utah Lake (the proposed Provo River Delta Restoration Project).

Implementation to Date & Future Actions The Provo River Delta Restoration Project (PRDRP) will include several recreation components and opportunities that are compatible with the restored delta. Preliminary planning for trails, viewing towers, and public access facilities will be further developed and finalized in the next few years as implementation of the PRDRP continues.

Terrestrial Habitat Conservation Section 305(b) of CUPCA authorized the Commission to construct big game crossings and wildlife escape ramps along various Wasatch Front canals in Utah County that were expected to be used as part of the Irrigation & Drainage System of the Bonneville Unit. However, the Proposed Action of the ULS Final EIS would not utilize any of these canals as Bonneville Unit facilities. Additionally, such measures have not proven to be necessary on the canals, or at least as high a priority as other actions the Commission could take to conserve wildlife habitat and big game populations.

Implementation to Date & Future Actions The Commission reallocated this authorization in 2005 (about \$1.5 million as of October 1, 2015) to other mitigation that will provide greater benefit to such resources, such as acquisition and/or restoration of sagebrush-steppe vegetative communities along the southern Wasatch Front. No projects were funded under this program element in 2006-2015 due to funding limitations. None are anticipated in the 2016-2020 time period.

Diamond Fork Watershed

OVERVIEW AND PROBLEM STATEMENT

The Diamond Fork watershed was used to transport water from Strawberry Reservoir to agricultural lands in Utah Valley since the Strawberry Valley Project was constructed in the early 1900s. The transbasin diversion of water from Strawberry Reservoir through the Strawberry Tunnel into Sixth Water and Diamond Fork Creeks provided a substantial water supply, but artificially high flows, in excess of 500 cfs during summer irrigation season, caused extensive deterioration of natural stream channels.

Between 1916 and 2004, streamflow in Diamond Fork was often high enough to mobilize the streambed for months at a time. In many areas, severe downcutting of the channel occurred, and the stream was effectively detached from its floodplain. In other locations, especially in the lower reaches, these high flows caused constant mobilization of the streambed material. The result was an extremely wide braided channel that was constantly shifting and moving. The activity of the channel bed prevented establishment of riparian vegetation in many areas because the surfaces where trees were germinating were reworked before the small trees could establish a firm root system. This all resulted in severely limited fish production, loss of soils, loss of riparian and wetland habitat, and greatly reduced recreational experiences.

With the completion of the Diamond Fork System in 2004 as shown in Figure 2.4 below, there is more opportunity to mitigate some of the impacts to the watershed. System facilities provide opportunities to reduce damaging high flows in the stream, which will help to stabilize stream banks and improve riparian and fisheries resources. The popularity of the area for recreation will likely increase.

The U. S. Forest Service manages the Diamond Fork drainage under its multiple use mandates which includes recreation, livestock grazing, and providing wildlife habitat.

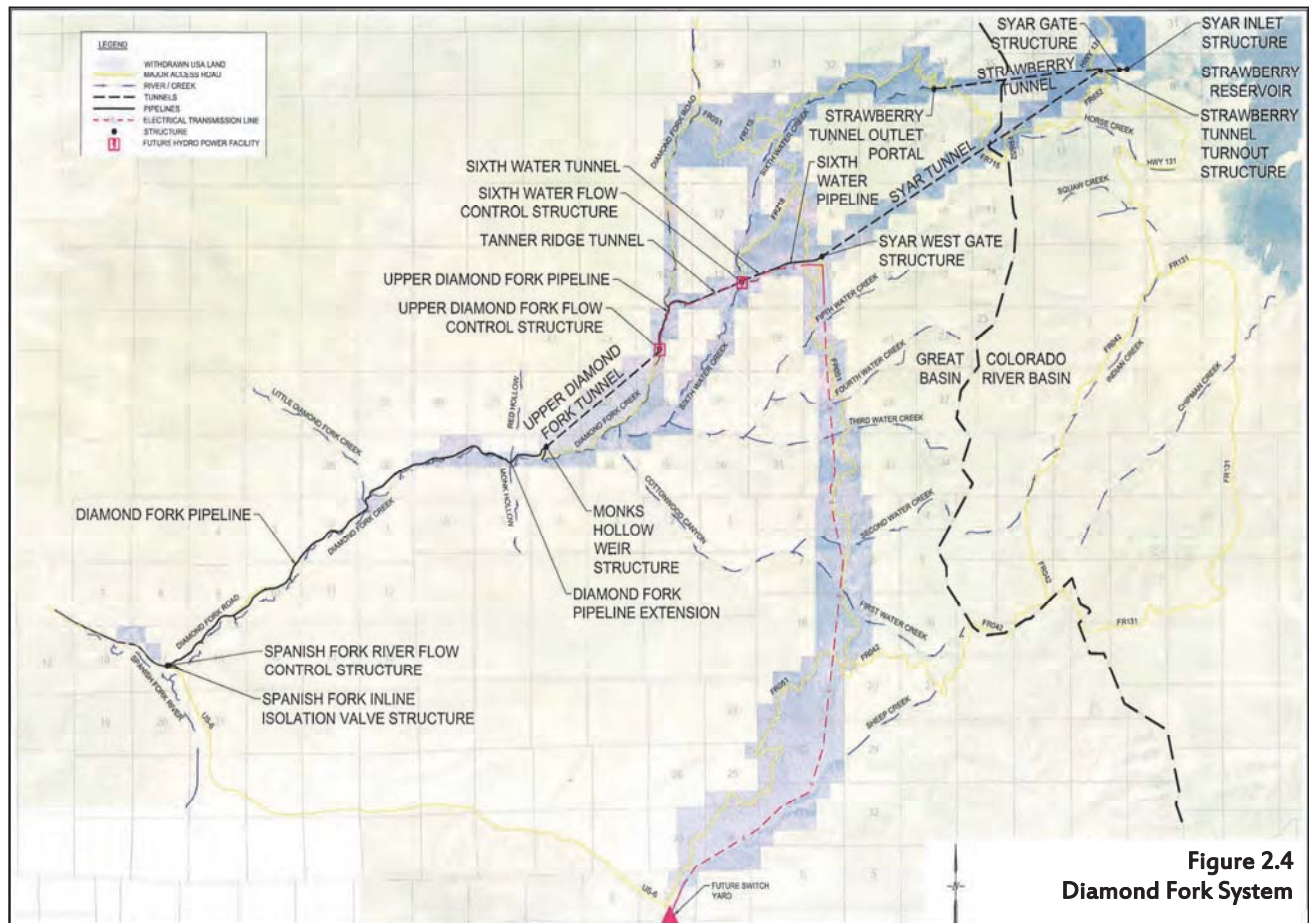


Figure 2.4
Diamond Fork System

Desired Future Condition: Diamond Fork Watershed

“Diamond Fork natural systems are resilient and dynamic. Sixth Water Creek and Diamond Fork River channels and riparian habitats have been restored. Damaging high flows from irrigation releases are contained in the Diamond Fork Pipeline. Year-round stream flows are provided in Sixth Water and Diamond Fork creeks adequate to maintain a healthy aquatic system, productive fishery and riparian area. Project facilities are operated to optimize conditions for riparian habitat and fish and wildlife to the extent possible.”

Monitoring of Sixth Water and Diamond Fork began in 2005, following completion of the Diamond Fork System in 2004. Data show improving trend of riparian habitat, fluctuating populations of macroinvertebrates, and narrowing and “simplifying” of formerly braided river channels.



The confluence of Fifth Water and Sixth Water Creeks in Diamond Fork Canyon



Sixth Water Flow Control Structure



Sixth Water Flow Control Structure Damaged Sleeve Valve

Water management has focused on removing damaging high flows and maintaining minimum flow targets established by CUPCA. Monitoring data suggest that late summer and winter flow rates contribute to perpetual bedload transport in Sixth Water and Diamond Fork. This condition is not “natural”, and may be damaging to macroinvertebrate productivity and diversity, and fishery recruitment.

The Central Utah Water Conservancy District, Department of the Interior and Mitigation Commission determined that winter instream flows for Diamond Fork can no longer be safely and efficiently delivered from the Sixth Water Flow Control Structure due to damages the deliveries caused to its sleeve valves. Winter instream flows for

Sixth Water and Diamond Fork Creeks therefore must be made through the Strawberry Tunnel; however, the resulting higher flow rates in Sixth Water may cause adverse impacts to the ecological condition of the Creek. In addition, prior monitoring data suggests that established minimum flow rates may be too high

especially during certain times of the year, causing adverse impacts to ecological conditions on both streams. The Commission and partners initiated a study in 2016 to examine instream flow rates. The proposed study affords the opportunity to operate the water delivery systems to provide various flow rates, according to approved study parameters. Study results will inform future decisions regarding target flow rates and potential infrastructure changes.



Diamond Fork restoration project areas (top half of photo)

The Commission and Utah Division of Wildlife Resources have cooperated on projects to help restore Diamond Fork's aquatic system and riparian area. A small project to reduce erosion of a steep cut-bank was conducted in 2008, which consisted of installing several log and rock barbs. Between 2009 and 2010, another small project was completed to reclaim a portion of the old Diamond Fork floodplain that had been cleared and leveled for agricultural use. An old diversion and canal was rebuilt and used to deliver irrigation water from Diamond Fork to a series of shallow excavated wetland depressions and channels.

The area was re-seeded and re-planted with native trees and shrubs with great success. Flow through the canal system is not continuous and has to be managed according to water rights.



Installation of log and rock barb in main Diamond Fork channel



Preparing the floodplain wetland restoration area for reseeding



Restoration area, first spring after project completion



Spotted frog in restored project area

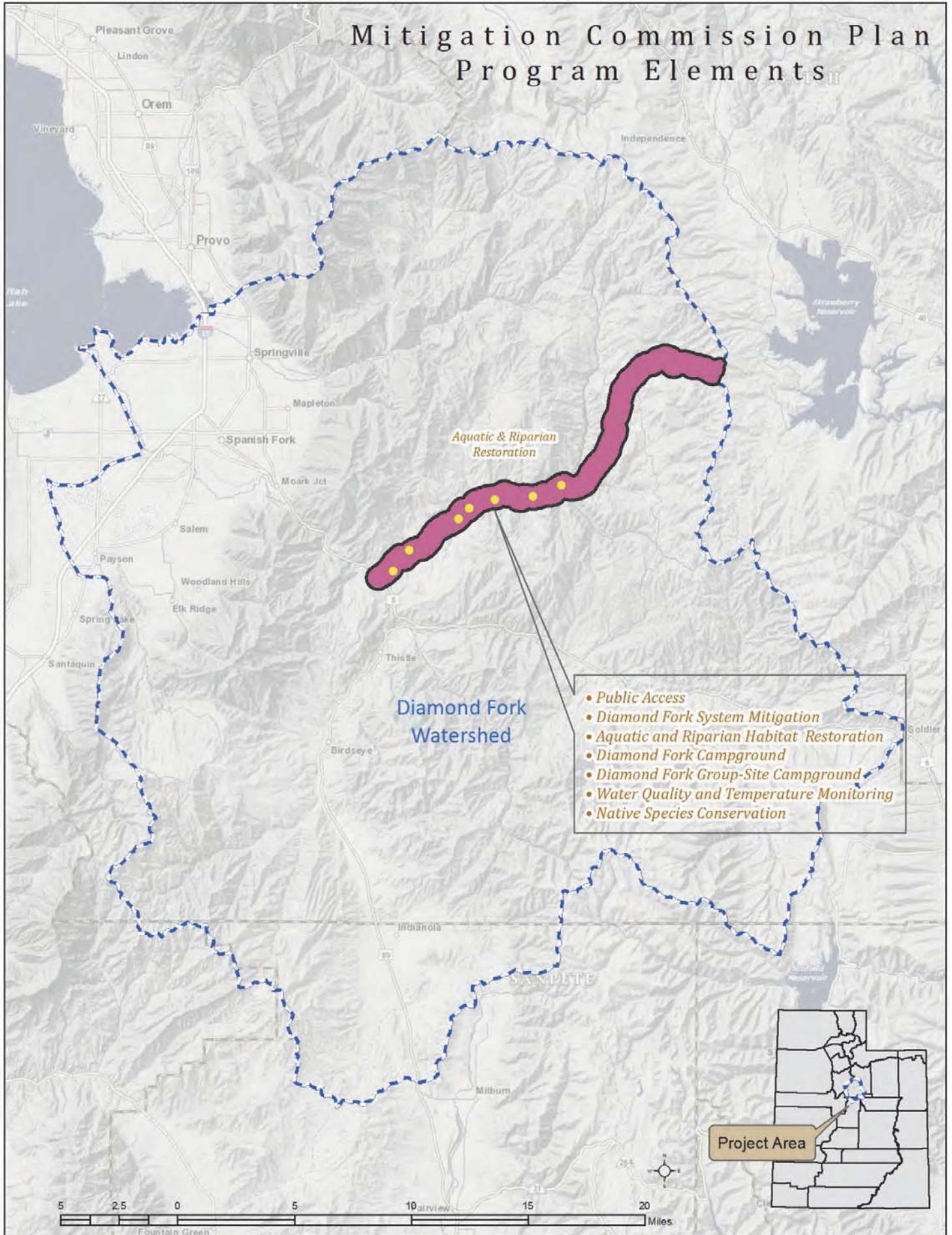
“Recreation facilities are constructed to provide outdoor recreation opportunities that are compatible with the conservation of biological resources and natural systems. Public access to restored habitats for compatible recreational uses is provided.”

The Commission funded the Forest Service to plan and construct recreation facilities to help meet anticipated recreation demand associated with project construction and growing populations along the Wasatch Front. Recreation facilities included two campgrounds, day use areas, trails and angler access facilities to assure public access.



The Diamond Fork Outlet (circled in the photos above), near Monks Hollow up Diamond Fork Canyon, is used to make summertime supplemental instream flow releases into Diamond Fork Creek. Construction of the Diamond Fork Group Campground began on this site in 2006 and was completed in 2007, shown right.

Map 5. Diamond Fork Watershed Program Elements



PROGRAM DESCRIPTION FOR DIAMOND FORK

The Commission's program for Diamond Fork places priority on completing unfulfilled mitigation responsibilities identified in the 1988 Definite Plan Report, and environmental commitments made under CUPCA through the Records of Decision for the Diamond Fork System in 1999 and 2000, and the ULS System in 2004. In order to better understand the dynamics of the Diamond Fork watershed, the Commission and U.S. Forest Service entered into an interagency agreement in 1996 to complete an Area Assessment of the Diamond Fork Watershed. The Area Assessment is an evaluation of the streams, vegetation and wildlife before European settlement, the impacts of human use on these resources, and their current status. The assessment identified where resources were currently operating outside of a properly functioning condition and why. The Assessment serves as a foundation for activities planned for the Diamond Fork watershed.

Since completion of the Diamond Fork System in 2004, high flows have generally been delivered through a tunnel and pipeline system, providing the opportunity to restore a more naturally functioning riverine system in Sixth Water and Diamond Fork from Three Forks to the mouth at Spanish Fork River. The Commission, together with the Forest Service, Utah Division of Wildlife Resources and other partners, will implement an aquatic and riparian assessment, monitoring and restoration plans for Sixth Water and Diamond Fork. In 2005, the Commission began assessing stream channels, riparian vegetation and biotic communities as part of its planning to restore Sixth Water and Diamond Fork.

Water quality monitoring was identified as an environmental commitment in the 1988 Definite Plan Report (DPR) and also in the 2004 Final Supplement to the DPR. The Commission and Central Utah Water Conservancy District have conducted water quality and some water temperature monitoring in Sixth Water and Diamond Fork since 1996. A monitoring program will be maintained for the future, subject to revision based on results. If monitoring indicates potential problems on downstream resources, the Commission will work with the District and others to try to resolve the problem.

The Commission has funded the Forest Service to plan and construct recreation facilities to help meet anticipated recreation demand. Recreation facilities included two campgrounds, day use areas, trails and angler access facilities.

Finally, the Commission's program includes management of acquired mitigation lands on lower Diamond Fork to ensure the benefits of stream and riparian restoration efforts and the Diamond Fork Pipeline are realized and that angler access is provided.

Diamond Fork Watershed Program Elements

Diamond Fork Area Assessment Evaluate the Diamond Fork watershed to identify desired resource conditions and objectives for achievement. *This program element has been completed.*

Aquatic and Riparian Habitat Restoration - Sixth Water and Diamond Fork Develop and implement a monitoring program to measure responses to flow changes from operation of the Diamond Fork System. Develop an aquatic and riparian habitat restoration plan for Sixth Water from West Portal Tunnel outlet to the confluence with Diamond Fork. Develop a conceptual aquatic and riparian habitat restoration plan for Diamond Fork from Three Forks to the Spanish Fork River.

Implementation to Date & Future Actions As part of restoration planning and prior to committing funds to on-the-ground projects, the Commission and its partners developed and implemented an assessment and monitoring program in 2005 to evaluate responses of stream and riparian conditions to new reduced flow regimes produced by completion of the Diamond Fork water

delivery system. The Commission has funded programs to monitor and assess conditions of native fish populations; riparian vegetation; aquatic macroinvertebrates; stream channel morphology and sediment dynamics; water quality, temperature and flow; and Ute ladies'-tresses. These reports support an adaptive approach to monitoring and then implementing stream and riparian restoration measures in the Sixth Water and Diamond Fork corridors.

Seasonal peak irrigation flows released from Strawberry Tunnel into Sixth Water Creek generally exceeded 400 cfs through most of the 20th Century. Section 303(c)(1) of CUPCA established minimum instream flows for Diamond Fork and Sixth Water. The minimum winter and summer instream flows are shown in Table 2.1 below. The magnitude of the release from Strawberry Tunnel was decreased to instream minimum flows of 25 cfs (Nov-April) and 32 cfs (May – Oct) with completion of Sixth Water aqueduct, tunnel and outlet in 1996. Flow magnitude below Sixth Water Outlet was decreased to instream minimum flows of 60 cfs (Nov-April) and 80 cfs (May – Oct) with completion of the balance of the Diamond Fork system in 2004. The upper portion of Sixth Water Creek (above Sixth Water Outlet) has been adjusting to reduced flow for 20 years. The balance of Sixth Water Creek and Diamond Fork River below the Sixth Water confluence has been adjusting to reduced flow for 12 years.

Table 2.1	Winter Flows (cubic feet per second)	Summer Flows (cubic feet per second)
Diamond Fork (near Monk's Hollow)	60 cfs October – April	80 cfs May – September
Sixth Water (at Strawberry Tunnel)	25 cfs November – April	32 cfs May – October

However, the minimum instream flow levels of CUPCA were based on recommendations for earlier proposed versions of the 1984 Diamond Fork Power System Environmental Impact Statement (EIS) and the 1990 Supplement to the EIS. At that time, a very different set of water management features was planned, including Monk's Hollow Dam and Reservoir, and a lower-capacity tunnel system. Neither document addressed minimum stream flows. In 1999, the Central Utah Water Conservancy District, U.S. Department of the Interior, and Mitigation Commission (Joint Leads) issued the Supplement to the Diamond Fork System EIS. This document describes the implementation of the mandated minimum stream flows as "interim operation" until the Utah Lake Drainage Basin Water Delivery System (ULS) EIS would be adopted. The ULS EIS made the "interim operation" of the Diamond Fork System permanent. The Joint Leads have followed the Diamond Fork System operation and CUPCA mandated flows as closely as possible given that a portion of the System was constructed prior to CUPCA's enactment.

The minimum instream flows for Sixth Water Creek are delivered through the Strawberry Tunnel. Since completion of the Sixth Water Flow Control Structure, the Diamond Fork River minimum instream flows have been delivered through the sleeve valves at the Sixth Water Flow Control Structure (Note: minimum flows are achieved through a combination of natural and supplemental flows). The sleeve valves within the Sixth Water Flow Control Structure were designed for high water pressure releases at high volumes. The release of low flow volumes to meet the required Diamond Fork River minimum flow during the winter months through the Sixth Water sleeve valves has resulted in damage to the sleeve valves. In fall of 2012, the District and the Interior repaired and re-tooled the sleeve valves in hopes that they would better handle the extreme range (especially the low flow volume) of instream flow deliveries, but the new sleeve valves have experienced similar damage.

Therefore, the District, Interior and Commission determined that winter instream flows for Diamond Fork River can no longer be safely and efficiently delivered from the Sixth Water Flow Control Structure; winter instream flows for Diamond Fork River and Sixth Water Creek will need to be made through the Strawberry Tunnel.

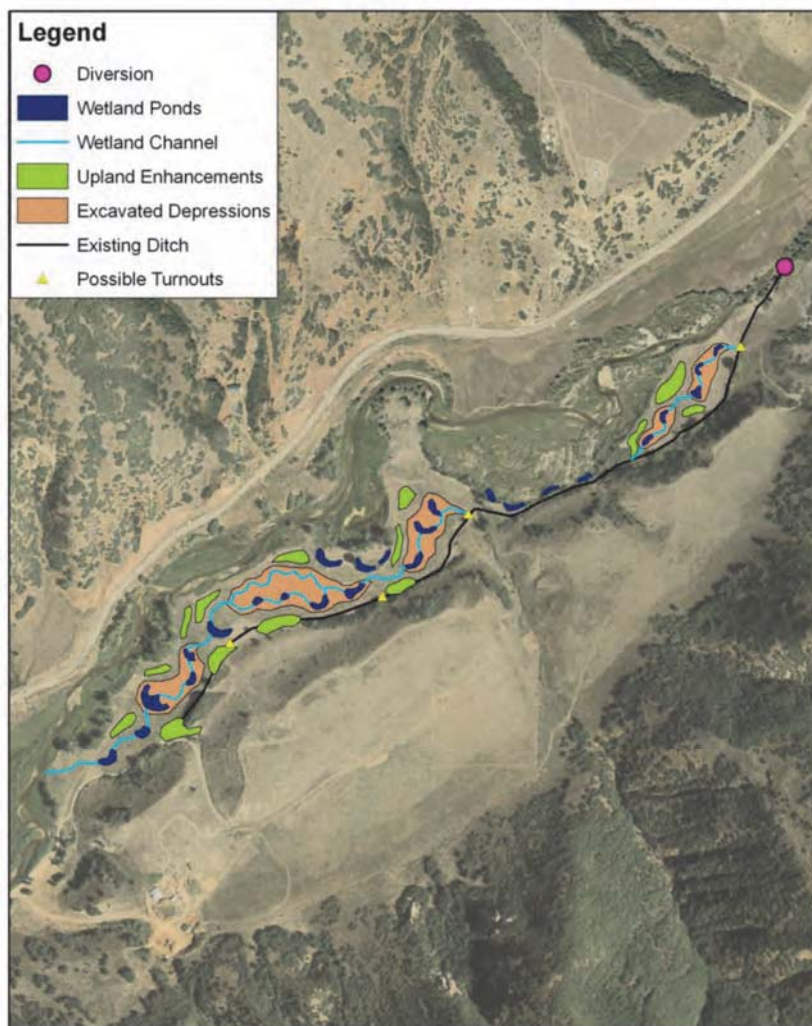
The Commission is concerned that releasing higher flows from Strawberry Tunnel may cause adverse impacts to the ecological condition of Sixth Water Creek. In addition, the Commission is concerned that minimum flow requirements established by CUPCA may also be too high especially during certain times of year, causing adverse impacts to ecological conditions on both streams.

Monitoring data collected to date suggests there is an imbalance between water flows and sediment transport in the Sixth Water and Lower Diamond Fork Creeks. Sediment transport of fine-grained material seems to be occurring year-round. Under natural conditions, this is an unusual occurrence, as typically sediment transported as bedload will drop to zero, or nearly so, following the peak of runoff in spring. This doesn't occur in Sixth Water and Lower Diamond Fork currently. This condition leads to "fining", which is an unnatural buildup of fine-grained sediment on the streambed, throughout summer, fall and winter. This condition can adversely affect macroinvertebrate production and spawning and hatching success of fishes.

Given these concerns, beginning in 2016, the Commission will partner with Utah State University to initiate studies on Diamond Fork River and Sixth Water Creek to determine desired flow regimes over the course of several years. The studies will also identify opportunities where direct physical habitat restoration interventions may be effective in promoting faster and more self-sustaining ecosystem recovery than change to flow alone.

Because the studies may require variance from the instream flow amounts identified in CUPCA Section 303, discussions have been held with the Utah Congressional Delegation, which concurred with the decision to conduct the studies. Informational meetings have also been held with the public and natural resource agencies. The studies may lead to further actions, including NEPA compliance.

Some on-the-ground projects were carried out during the first few years of Diamond Fork System operations, when and where exceptional conditions required immediate intervention. (See Map 6).



Map 6. Diamond Fork restoration projects

A small project to reduce erosion of a steep cut-bank was instituted in concert with Utah Division of Wildlife Resources in 2008. This project consisted of installing several log and rock barbs.

Another small project to reclaim a portion of the old Diamond Fork floodplain (now a terrace) that had been cleared and leveled for agricultural use many years ago was taken place during 2009 and 2010. An old diversion and canal was rebuilt and used to deliver irrigation water from Diamond Fork to a series of shallow excavated wetland depressions and channels. The area was re-seeded and re-planted with native trees and shrubs with great success. Flow through the canal system is not continuous and has to be managed according to water rights.

Water Temperature Study Develop and implement a water quality and water temperature monitoring program in Diamond Fork as identified in the 1984, 1990, 1999 and 2000 NEPA documents for the Diamond Fork System.

Implementation to Date & Future Actions The Commission, U.S. Department of the Interior, U.S. Fish and Wildlife Service, Utah Division of Wildlife Resources, and Central Utah Water Conservancy District agreed in 2005 that water quality monitoring was still a valid environmental commitment. Monitoring needs were reviewed and adjusted in light of construction of the Upper Diamond Fork Tunnel, and the Diamond Fork System operation and maintenance schedule. Monitoring of several parameters (e.g. temperature, dissolved oxygen, pH etc.) occurs regularly and continues through the present.

Recreation Facilities in Diamond Fork Construct recreation facilities compatible with the conservation of natural resources, including construction of a group campground.

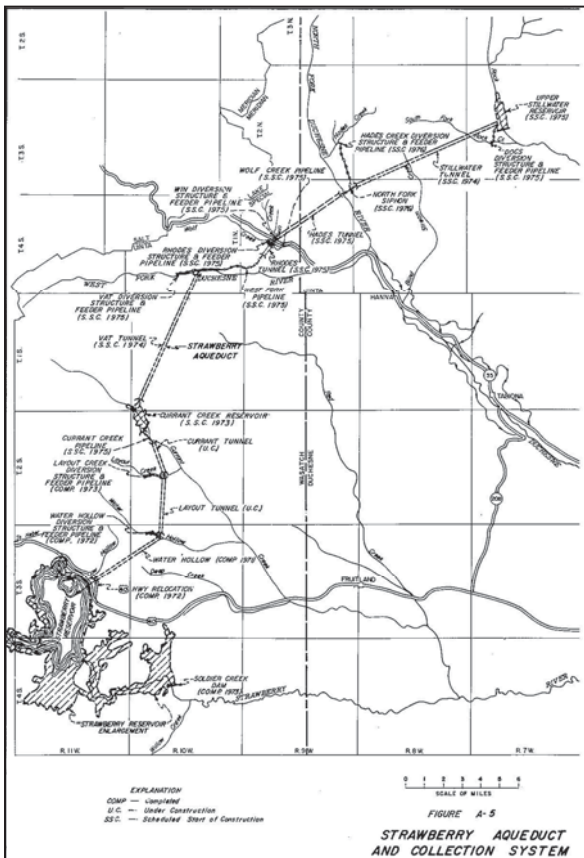
Implementation to Date *Funding for this program element has been fully appropriated and this Program Element is now complete.*

Strawberry/Duchesne Watershed

OVERVIEW AND PROBLEM STATEMENT

Water development projects in Strawberry Valley were constructed in the early 1900s. Strawberry Reservoir was constructed as the major feature of the Strawberry Valley Reclamation Project, Utah's first Federal reclamation project. Water was delivered from Strawberry Reservoir via a tunnel, through the Wasatch Mountains into Sixth Water Creek, a tributary of Diamond Fork River. This water supply was and still is used today primarily for irrigation in Utah County. Other water development activities impacted the valley by substantially reducing Strawberry River flows. Alternatively, man-made canals used to transport water would often “dump” unnaturally high flows into small natural channels, causing erosion. Abandoned canals also were a source of erosion and headcuts.

Strawberry Valley has since become the hub of the Central Utah Project’s Bonneville Unit. The Duchesne River and its tributaries, including Strawberry River, provide the water supply for the Bonneville Unit. Three of its six systems are located within this watershed: the Starvation Collection System, Ute Indian Tribal Development Activities, and the Strawberry Aqueduct and Collection System. The Uinta Basin Replacement Project, authorized under CUPCA, also is located in this watershed.



The Starvation Collection System includes as its major features, Starvation Reservoir, located on the Strawberry River about 6 miles upstream of the town of Duchesne, and the Knight Diversion Dam, located on the Duchesne River. Most of the water supply for Starvation Reservoir is collected from the Duchesne River and transported to Starvation Reservoir for storage. Water is used locally in the Uinta Basin, primarily for agriculture. Other features include the Duchesne River Area Canal Rehabilitation program (DRACR), which improved 41 miles of canals in the project area, but adversely affected wetlands. Mitigation efforts in the 1980s resulted in the acquisition of 1,090 acres of property along the lower Duchesne River intended to be used for wetland mitigation by restoration and enhancement.

The Ute Indian Tribal Development Activities included construction of Bottle Hollow Reservoir. Bottle Hollow Reservoir was constructed as a small portion of the mitigation required for the Ute Indian Tribe because of the diversion of water, through the Bonneville Unit, from the Duchesne River and some of its tributaries. A substantial portion of that water was made available by the Tribe’s agreement to defer agricultural development of over 15,000 acres of tribal trust land. Several planned water development

features benefiting the Tribe, such as the Leland Bench Irrigation Project and the Ute Indian Unit of the Central Utah Project, will not be implemented in accordance with language of Title II of CUPCA. Title V of CUPCA does provide a variety of measures for resolving certain Tribal claims and concerns. The Ute Indian Tribe, Department of the Interior and others continue to work towards resolution of these issues.

The Strawberry Aqueduct and Collection System (SACS) is a key component of the Bonneville Unit. It develops water supply out of the Duchesne River system in the Colorado River Basin for delivery to the Bonneville Basin. Under full operation, the Bonneville Unit is expected to deliver about 102,000 acre-feet of water to the Wasatch Front in an average year.

In the early 1970s, Soldier Creek Dam was constructed a few miles downstream of the original Strawberry Dam. In the mid-1980s, Soldier Creek Dam filled to the level of the old Strawberry Reservoir and the reservoirs were equilibrated. Water supply for Soldier Creek Reservoir (commonly referred to as “enlarged Strawberry Reservoir” or “Strawberry Reservoir”) is developed by a series of reservoirs, on-stream diversions, and a 37-mile long aqueduct connecting Upper Stillwater Reservoir, located on Rock Creek, to Strawberry Reservoir. Along its course, SACS intercepts water from a total of ten streams (Rock Creek, South Fork Rock Creek, Hades Creek, Twin Creek, Wolf Creek, West Fork Duchesne River, Currant Creek, Layout Creek, Water Hollow Creek, and Strawberry River).

Creation and subsequent enlargement of Strawberry Reservoir profoundly impacted the valley by replacing a naturally flowing river system with a permanent reservoir, and by inundating a large segment of the Strawberry River and portions of several of its tributaries. Stream fisheries were replaced by a reservoir fishery managed by the Utah Division of Wildlife Resources. Inundation of thousands of acres of land resulted in habitat loss for numerous wildlife species. All but one sage grouse strutting ground known at that time and numerous brood-rearing areas in the valley were lost when the reservoir was enlarged.

Since development of the Strawberry Valley Reclamation Project in the early 1900s, Strawberry Valley lands surrounding the reservoir were managed intensively for livestock production and other purposes. Water tables were lowered, stream banks became increasingly unstable and beaver populations declined. The result was erosion and subsequent destruction of crucial spawning habitat for trout. Tributary degradation also caused detrimental sedimentation and eutrophication of reservoir waters. In addition, overall range degradation resulted in severe noxious weed infestations.

In 1988, Congress transferred administration of the 56,775-acre Strawberry Valley Management Area from the U.S. Bureau of Reclamation to the U.S. Forest Service (P.L. 100-563). Since then, the U.S. Forest Service has worked cooperatively with the U.S. Bureau of Reclamation and Utah Division of Wildlife Resources to rehabilitate lands surrounding the reservoir, develop the recreation potential of the area, and enhance the fishery.

The Utah Division of Wildlife Resources chemically treated Strawberry Reservoir and tributary streams in 1990. This treatment together with subsequent stocking programs rejuvenated the Strawberry Reservoir fishery. Previous populations were replaced with kokanee salmon, cutthroat trout and sterilized rainbow trout. The program has been an outstanding success; however, challenges remain, including re-emergence of Utah chub, reservoir fluctuations, intense fishing pressure, limitations of the stocking program and angler access. In addition, more visitors are attracted to the facilities and are seeking increasingly diverse recreation experiences such as snowmobiling, mountain biking, dispersed camping and horseback riding.

The Uinta Basin Replacement Project (UBRP) was authorized under Title II, Section 203 of CUPCA. The Final Environmental Assessment was prepared by the Central Utah Water Conservancy District and signed by the Department of the Interior in October 2001. Project construction began in 2003. The Commission issued its Decision Notice in 2004. The project included enlarging the existing Big Sand Wash Reservoir to store another 12,000 acre-feet, new diversion and water distribution facilities, and water conservation.

UBRP’s purpose is to provide additional early and late season irrigation water, provide municipal and industrial water supplies, and to modify and operate water management facilities for environmental purposes. The project involved: stabilizing thirteen high mountain lakes within the High Uintas Wilderness Area that were historically dammed for irrigation water storage, water rights for which were transferred downstream for storage in the enlarged reservoir; constructing the new Big Sand Wash Feeder Diversion Structure and Pipeline; enlarging Big Sand Wash Reservoir; constructing a new Big Sand Wash-to-Roosevelt Pipeline; modifying the Moon Lake Dam outlet works to allow instream flow releases; and, implementing fish and wildlife mitigation and enhancement features.

Desired Future Condition: Strawberry/Duchesne Watershed



“Continuous stream flows are maintained on the Strawberry River, Carrant Creek, West Fork of the Duchesne River and Rock Creek to enhance stream habitat and recreation opportunities.”

The U.S. Fish and Wildlife Service leads an interagency group including Utah Division of Wildlife Resources, Central Utah Water Conservancy District, U.S. Department of the Interior and Mitigation Commission in an annual process of recommending distribution of water supplies allocated by the Stream Flow Agreement, its Amendment in 1990, and CUPCA in the four major streams affected by SACS. The District monitors performance and provides data and reports to the other participating agencies.



“Wetland areas in the lower Duchesne River drainage are managed to protect, develop and enhance wetland values.”

The Lower Duchesne River Wetlands Mitigation Project is half-complete. It targets creation, restoration and enhancement of wetlands and riparian habitats along the Duchesne River floodplain east of Myton, Utah. The project is under direction of the Ute Tribe, with assistance from the Commission and Department of the Interior. Project construction is anticipated to be complete in 2018.



Photos above show wetland pond excavation in the Lower Duchesne Wetlands Project area in 2013, seeding of excavated areas using a large tractor, wetland pond filling, and pond after completion (bottom right photo, taken in 2015)

“The Strawberry Reservoir supports wild fish populations with natural spawning in the tributaries. Strawberry Valley streams support resident populations of fish and other aquatic life. Strawberry Valley’s natural systems are resilient and dynamic.”



Strawberry Reservoir near Soldier Creek Dam

Strawberry Reservoir is considered a Blue-Ribbon Fishery, and has been found to be anglers’ most popular reservoir fishing destination in Utah. It supports a high quality, diverse fishery made up of stocked rainbow trout and naturally reproducing cutthroat trout and Kokanee salmon. The Utah Division of Wildlife Resources estimated 837,663 angler hours at Strawberry Reservoir in 2011.

In 2006, the Utah Division of Wildlife Resources’ Strawberry Project received a distinguished award as the “Outstanding Project of the Year” in North America by the American Fisheries Society, further validating the success of the program at Strawberry Reservoir.

The Commission, Forest Service, Utah Division of Wildlife Resources and others began a cooperative effort in 2005 to look at the upper Strawberry River as a potential restoration area because a reach of the river goes dry during low flow months most years. Stream flow monitoring, tracer-dye studies, and groundwater monitoring through piezometers are underway. The Commission developed a plan for testing the suitability of an alternate channel for conveying streamflow through the losing reach. That test will undergo further analysis under NEPA, if monitoring suggests it may be effective.



Brown trout caught on Strawberry River, downstream of Soldier Creek Dam. Photo courtesy of Eric McBride.

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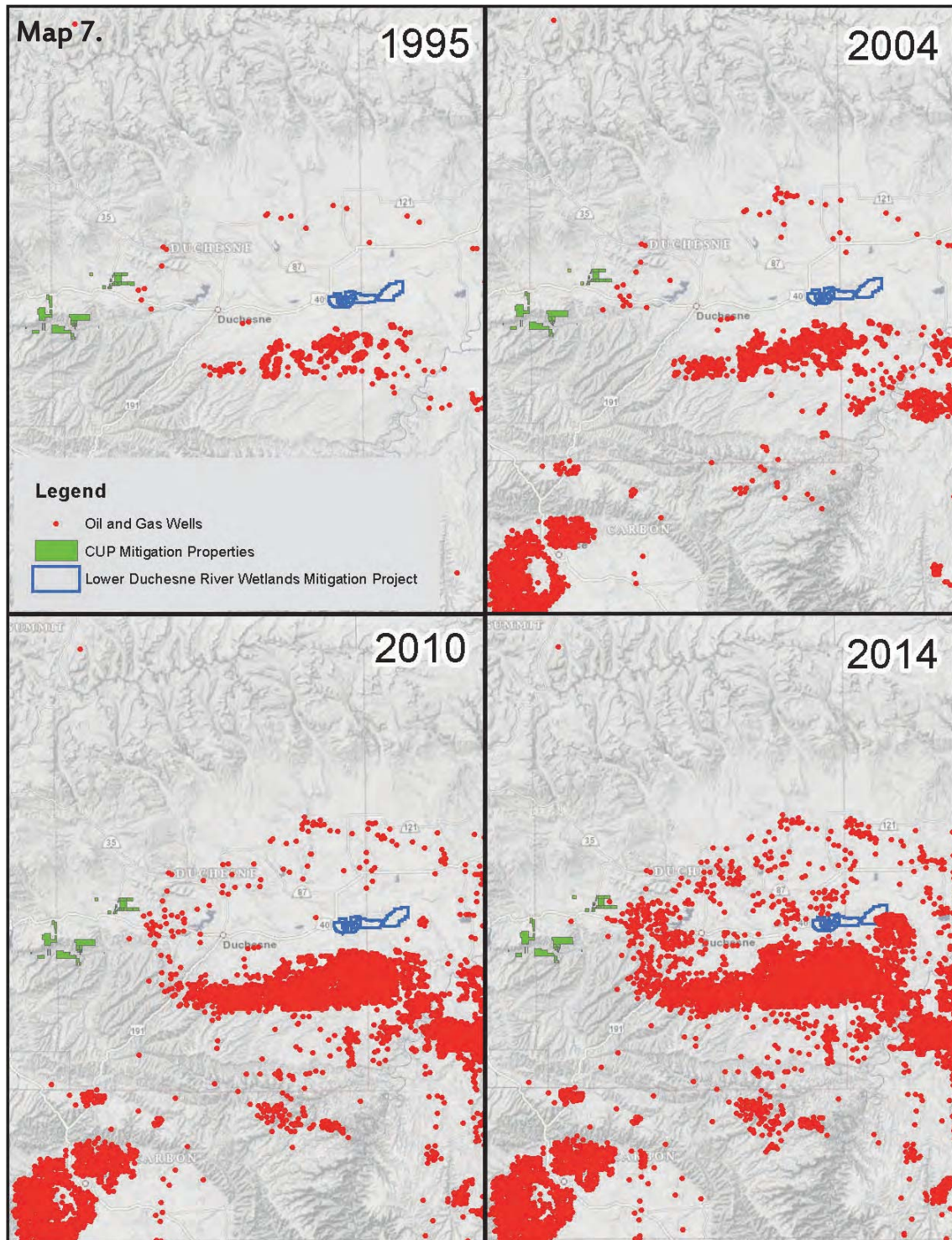
“Big game herd sizes in CUP-affected areas are maintained at desired levels facilitated by acquisition of critical terrestrial habitats and wildlife travel corridors. Mitigation lands are managed together with adjacent private and public lands to protect critical habitats, including migration corridors, riparian areas and wetlands.”

The U.S. Bureau of Reclamation acquired approximately 24,000 acres of big game winter range in the Curreant Creek watershed as mitigation for the Bonneville Unit in the 1980s. The Commission acquired an additional 300 acres in Curreant Creek drainage in 2001. By 2002, approximately 3,800 acres were acquired by the Commission near the middle section of Strawberry River as partial mitigation for CUP-caused angler access losses and wildlife habitat impacts. In 2006, the Commission acquired a large block of high value upland habitats used by sage grouse and other wildlife. The 1,720 acre parcel connects two CUP mitigation areas: the Wildcat Canyon Wildlife Management Area and the Strawberry River Wildlife Management Area. From 2008 to 2013, the Commission acquired from willing sellers another 5,960 acres of critical big game and sage grouse habitat in the Fruitland area. (Refer to Map 9 on page 2-39.)



Greater sage grouse in Strawberry Valley, photos courtesy of Brigham Young University. Male sage grouse gather on traditional "strutting grounds" during March and April and put on a spectacular courtship performance. Females visit the grounds during the first part of April. Nesting begins in April. Nests are shallow depressions lined with grass or twigs and are usually located under sagebrush. The female lays from five to nine eggs, which hatch after 25 days of incubation. Greater sage grouse is a species in decline across its range due to habitat loss and fragmentation, predation, encroachment of invasive species, such as cheatgrass, and other factors. Utah Division of Wildlife Resources lists it as a sensitive species.

Energy development throughout the intermountain west over the past decade has provided challenges to resource managers. Oil and gas development and transmission line construction have the potential to impact wildlife resource values through direct habitat alteration and continue over the life of the project with increased noise and visual disturbance from human activity, vibration and habitat fragmentation resulting from the network of roads and related infrastructure required to support these activities. New resource extraction methods have accelerated the growth of mineral extraction activities within the Strawberry Duchesne watershed. Map 7 below shows oil and gas development over the past 10 years in the vicinity of CUP mitigation efforts in Duchesne and Uintah Counties Utah. Growth in this industry has slowed dramatically since 2014 due to a downturn in the price of oil, but is expected to increase again in the future as oil prices increase.





“Riparian communities on the south slope of the Uintas are sustained with necessary stream flows. Fish habitat and fish movement are not impaired by prior stream habitat improvement measures or diversion structures on SACS-affected streams. Watershed conditions are improved; erosion and stream sedimentation are decreased.”

Through a partnership with Duchesne County Water Conservancy District, the Commission replaced or combined all diversions on the Duchesne River upstream of Knight Diversion. The new diversions have mechanisms to bypass instream flows and allow boards to be placed or pulled to facilitate fish migration.



Reconstructed Tabby Diversion on the Duchesne River

Reconstructed Jasper-Pike Diversion on the Duchesne River



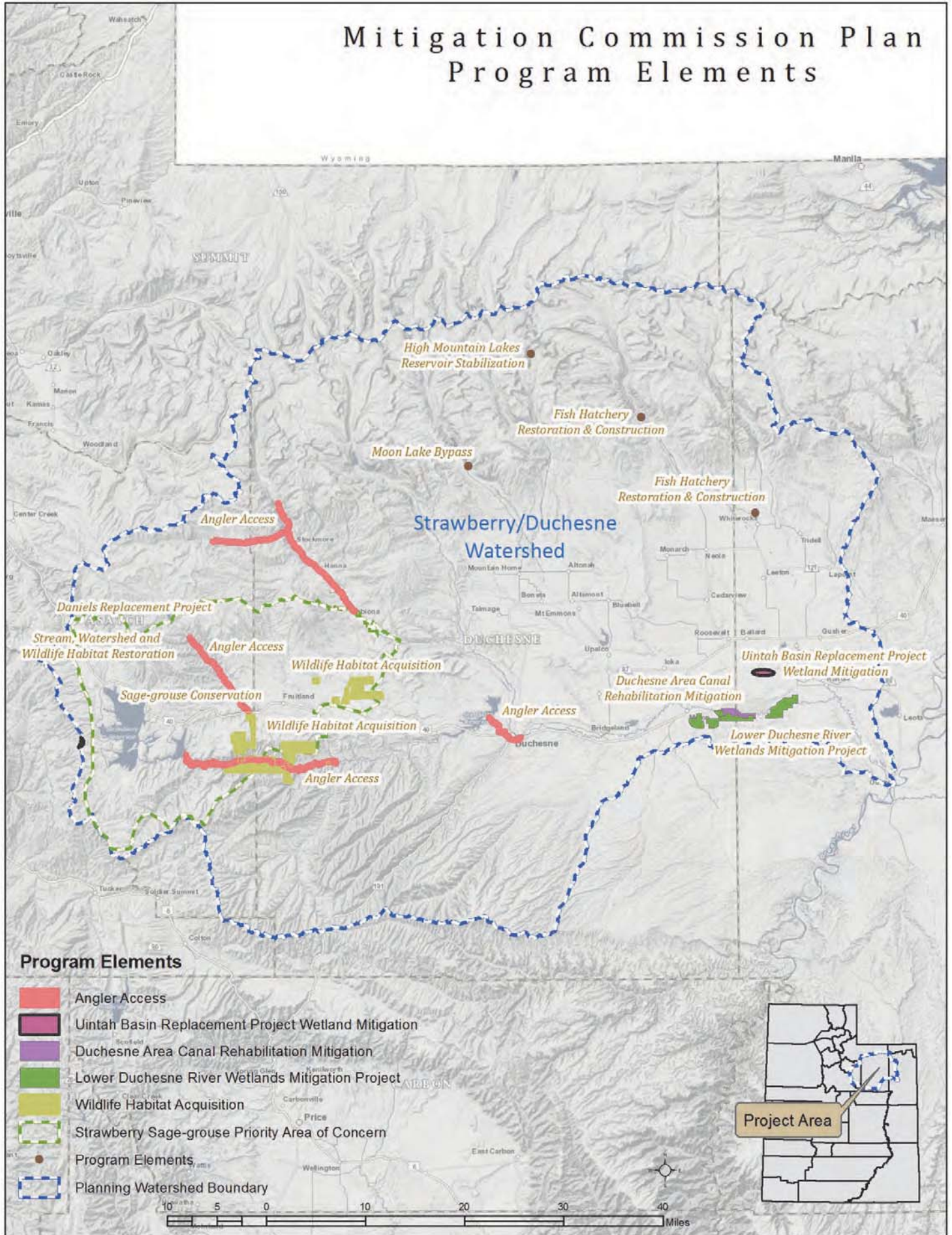
“The public is provided access to contiguous stretches of Currant Creek, the West Fork, North Fork and main stem of the Duchesne River, the middle and lower Strawberry River and Rock Creek. They are aware of and respect adjoining private property and are guided by useful maps and other user information.”

The Commission has completed the SACS angler access mitigation program started by the U.S. Bureau of Reclamation. Over 51 miles of streamside access were obtained either by purchase of an easement or purchase of fee title to provide angler access, as per the 1988 SACS Aquatic Mitigation Plan. (Refer to Maps 8 and 9).



Left Photo: Construction of angler access parking on the Strawberry River, downstream of Starvation Dam. Photos, right: construction of angler site, including paved parking and signage, on the Duchesne River in Hanna, Utah.

Map 8. Strawberry/Duchesne Watershed Program Elements



PROGRAM DESCRIPTION FOR STRAWBERRY/DUCHESNE

Over the past 20+ years of CUP development in the Duchesne and Strawberry rivers drainages, substantial investments in fish, wildlife mitigation and conservation and related recreational facilities have been made, and numerous opportunities to enjoy fish and wildlife populations have been provided. Significant progress has been made toward restoring fish and wildlife habitats. The Commission particularly endorses the combined efforts of State and Federal managers during the past several years to promote the establishment and perpetuation of fishery resources in Strawberry Valley through natural recruitment. In addition, the Uinta National Forest Service spent several years leading a cooperative effort to examine conditions in Strawberry Valley with input from a diverse set of constituents. In 2004, the Forest Service released the “Strawberry Watershed Restoration Report”, which identified specific actions necessary to restore various habitats and ecological functions in the Strawberry Reservoir Watershed.

The Commission’s program will help restore ecosystem functions in the affected watershed, and ensure fish and wildlife populations are maintained and improved and recreational opportunities are maintained and expanded.

Since 2005, mitigation requirements of the SACS Aquatic Mitigation Plan in the Duchesne River watershed⁵ and the Wildlife Mitigation Plan⁶ for the Bonneville Unit have been completed. Details are described below. Only the wetland mitigation programs for SACS and DRACR remain incomplete.

Strawberry/Duchesne Watershed Program Elements

Angler Access and Related Facilities The 1988 Aquatic Mitigation Plan for the Strawberry Aqueduct and Collection System (SACS) of CUP’s Bonneville Unit identified acquisition of approximately 51 miles of stream access on the Duchesne, North Fork Duchesne, West Fork Duchesne, Currant Creek, Strawberry River and Rock Creek to provide partial mitigation for lost angling opportunities resulting from construction and operation of the Strawberry Aqueduct and Collection System. Angler access was to be acquired where instream flows were provided. The Commission and Bureau of Reclamation were to acquire public access and develop operating agreements, small parking areas and other facilities.

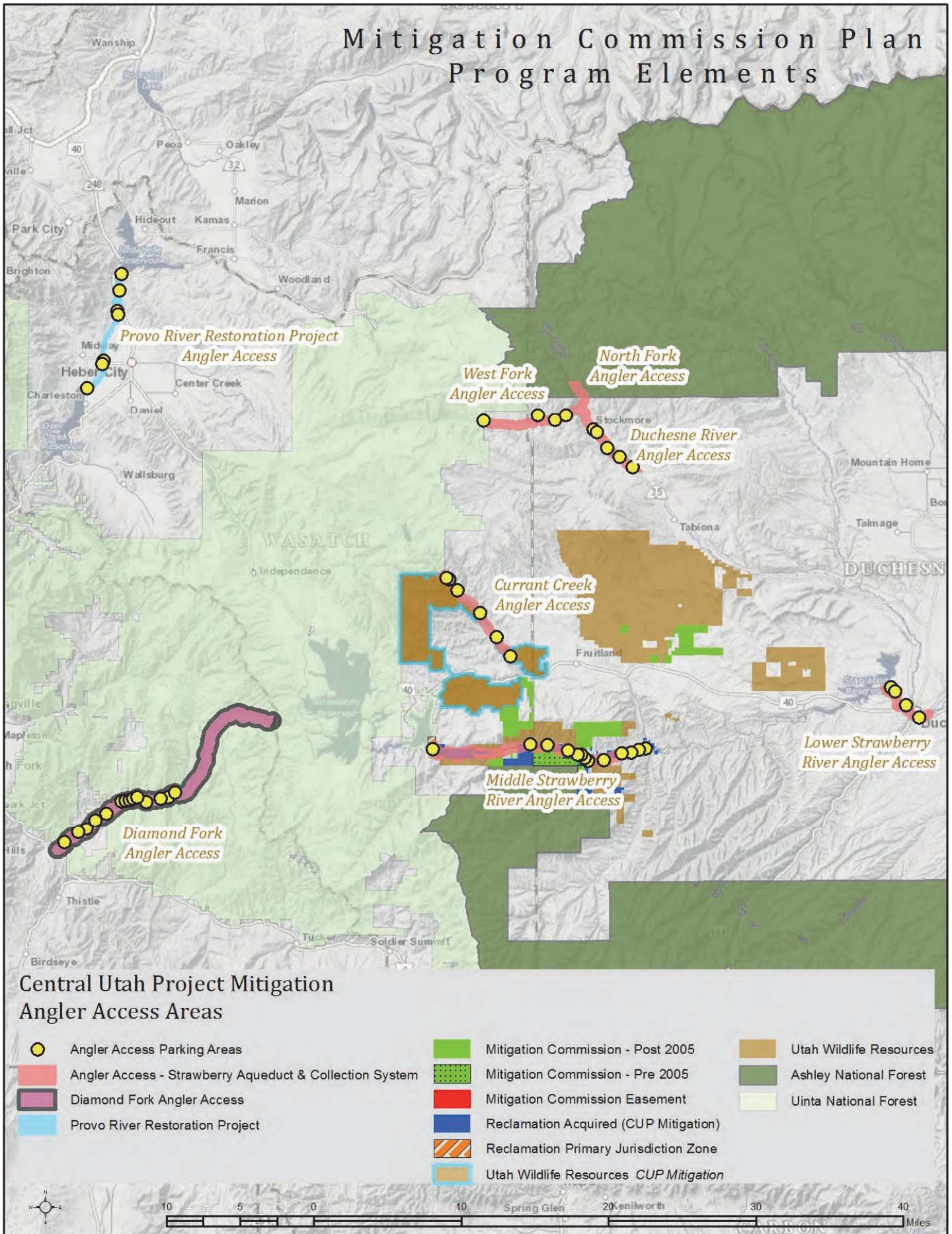
Implementation to Date & Future Actions *The angler access acquisition program element is complete.* (See Map 9 on the following page). The primary focus of the angler-access program will shift from acquisition to management. In cooperation with the Utah Division of Wildlife Resources, efforts will focus on implementing Operating Agreements, including user guides.

⁵The original mitigation plan for SACS provided for only 6,500 acre-feet of instream flows to be maintained in streams affected by SACS diversions. The Streamflow Agreement of 1980, its amendment in 1990, and CUPCA increased the Bonneville Unit commitment for providing water for instream flows to 44,400 acre-feet annually from project water supplies. (Note that the Streamflow Agreement of 1980 and the Amended Streamflow Agreement of 1990 reserve to U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources, in consultation with Utah Division of Water Resources and U.S. Forest Service, ultimate discretion as to where the 44,400 acre-feet reserved for streamflows and fisheries is to be utilized.) This amount of water, together with approximately 10,500 acre-feet of spills and bypasses in an average year, retains 50 percent of the historic (pre-CUP) trout habitat in the four largest streams (Rock Creek, West Fork of the Duchesne River, Currant Creek and Strawberry River) affected by SACS.

Remaining aquatic habitat losses were to be mitigated through implementation of the Aquatic Mitigation Plan for the SACS (finalized in 1988). Measures identified in the Mitigation Plan were of four general types: acquisition of additional water for instream-flow supplementation in area streams; acquisition of 51 miles of specified angler access; stream habitat improvement measures; and, replacement of egg-taking facilities at Strawberry Reservoir. The mitigation plan included both on-site and off-site measures.

⁶In 1987, a Wildlife Mitigation Plan to address impacts from SACS, the Municipal and Industrial System and the Diamond Fork [Power] System of the Bonneville Unit was developed. This plan provided for the acquisition, improvement, and management of lands in the Uinta Basin and Bonneville Basin for wildlife mitigation objectives. Properties identified for acquisition included several parcels in the Currant Creek drainage and along the middle Strawberry River and in Diamond Fork.

Map 9. Angler Access and Wildlife Mitigation Lands



Mitigation for Duchesne River Area Canal Rehabilitation (DRACR) Program During the next five years, the Commission will initiate required wetland mitigation for the DRACR program, a component of the Starvation Collection System of CUP's Bonneville Unit. This is a Priority 1 program element.

Implementation to Date & Future Actions A 1,090-acre parcel of land on the lower Duchesne River, now referred to as the "North Riverdell property," was acquired by the Bureau of Reclamation in the late 1980s for use as a wetland mitigation site for DRACR. The North Riverdell properties were to be managed by the U.S. Fish and Wildlife Service as part of the Ouray Wildlife Refuge; however, the U.S. Fish and Wildlife Service was unable to provide management of these lands as originally planned. In 1996, the Department of the Interior and Bureau of Reclamation provided funding to the Bureau of Indian Affairs to repair water conveyance facilities, and water deliveries were then made to the North Riverdell wetland areas. Long-term management of the parcel will be determined in the next five year period. The Commission will continue to explore feasible alternatives for achieving the required DRACR wetland mitigation. The Commission may also evaluate other locations for potential fulfillment of the required DRACR wetland mitigation.

SACS Wetland Mitigation Construction and operation of SACS had impacts downstream of the Strawberry and Duchesne River confluence, particularly affecting wetlands and other resources of the Ute Indian Tribe. In addition, there were commitments made to the Ute Indian Tribe in the 1960s that promised development of six waterfowl management areas. SACS wetlands impacts will be mitigated in accordance with a Plan developed by the Commission cooperatively with the Ute Tribe and Department of the Interior for the lower Duchesne River corridor.

Implementation to Date & Future Actions This is a Priority 1 program element. A Final EIS and Record of Decision were completed for the Lower Duchesne River Wetlands Mitigation Project (LDWP) in 2008. The Commission, with assistance from Bureau of Reclamation acquired over 1,500 acres of lands for the project between 2010 and 2012. On-the-ground construction of wetlands features began in 2013 in the east half of the Riverdell Unit. The west half was completed in 2014, and the north half of the Ted's Flat Unit was completed in 2015. The remainder of the Ted's Flat Unit and the Uresk Unit are scheduled for completion by the end of 2018. (Refer to Map 8 on page 2-37.) The Commission has, since 2009, and continues to provide funding annually to the Ute Indian Tribe for management and maintenance of the LDWP, including mosquito control and weed control. The Ute Tribe LDWP manager has coordinated these activities with Duchesne and Uintah Counties.

Uinta Basin Replacement Project Mitigation The Uinta Basin Replacement Project (UBRP) is located within Duchesne County near the towns of Altamont, Upalco, and Roosevelt, within the Uinta Basin of northeastern Utah. The Central Utah Water Conservancy District implemented the water development features of the Project. The Commission is responsible for the environmental mitigation. This involves stabilizing thirteen high mountain lakes within the High Uintas Wilderness Area, modifying the Moon Lake Dam outlet works, so that instream flow releases can be made during the winter and throughout the year, and mitigation for wetland impacts from enlarging Big Sand Wash Dam and Reservoir. Funding for the mitigation measures was provided under Title II of CUPCA through the U.S. Department of the Interior. *This program element is complete.*

Implementation to Date The Commission issued a Decision Notice and Finding of No Significant Impact in February 2004 for implementing fish and wildlife mitigation features of the Uinta Basin Replacement Project. These mitigation features, described below, are all completed:

High Mountain Lakes Stabilization. Construction work and stabilization of thirteen high mountain lakes began in 2006, and was completed in 2010. Stabilization of the dams provides constant lake water levels year-round. Nine of these lakes (Bluebell, Drift, Five Point, Superior, Milk, Farmers, East Timothy, White Miller, and Deer) are located in the Upper Yellowstone River watershed and four

(Brown Duck, Island, Kidney and Clements) are in the upper Lake Fork watershed. Streamflows originating in these upper watersheds have been returned to natural hydrologic runoff patterns, wilderness fishery and recreational values are restored, and operation and maintenance impacts associated with the former dams have been eliminated in the wilderness area. Our website contains extensive information on the history and details of this project at: www.mitigationcommission.gov/hmls/hmls_home.

Moon Lake Outlet Works Modifications. The Bureau of Reclamation made modifications to the Moon Lake Dam outlet works to facilitate release of instream flows. Under prior operation, no water was typically released from Moon Lake Dam from October to April. Gaging instruments were installed on the outlet works and in the reservoir, and on the Yellowstone Feeder Diversion and Canal Diversion.

Wetland Habitat Mitigation and Monitoring. The Commission is responsible for wetlands mitigation for impacts caused by enlargement of Big Sand Wash Dam and Reservoir and long-term maintenance and monitoring of the mitigation site. The Commission identified an alternate site for the wetland mitigation and initiated planning for the project in 2005. The Montes Creek Wildlife Management Area administered by the Utah Division of Wildlife Resources was selected as the site for additional wetland creation and enhancement. The mitigation plan was implemented and the 5th and final year of monitoring has been completed. A final report was prepared and submitted to the Corps of Engineers for approval in 2015. Acceptance of the mitigation was confirmed by the U.S. Army Corps of Engineers on May 13, 2016.

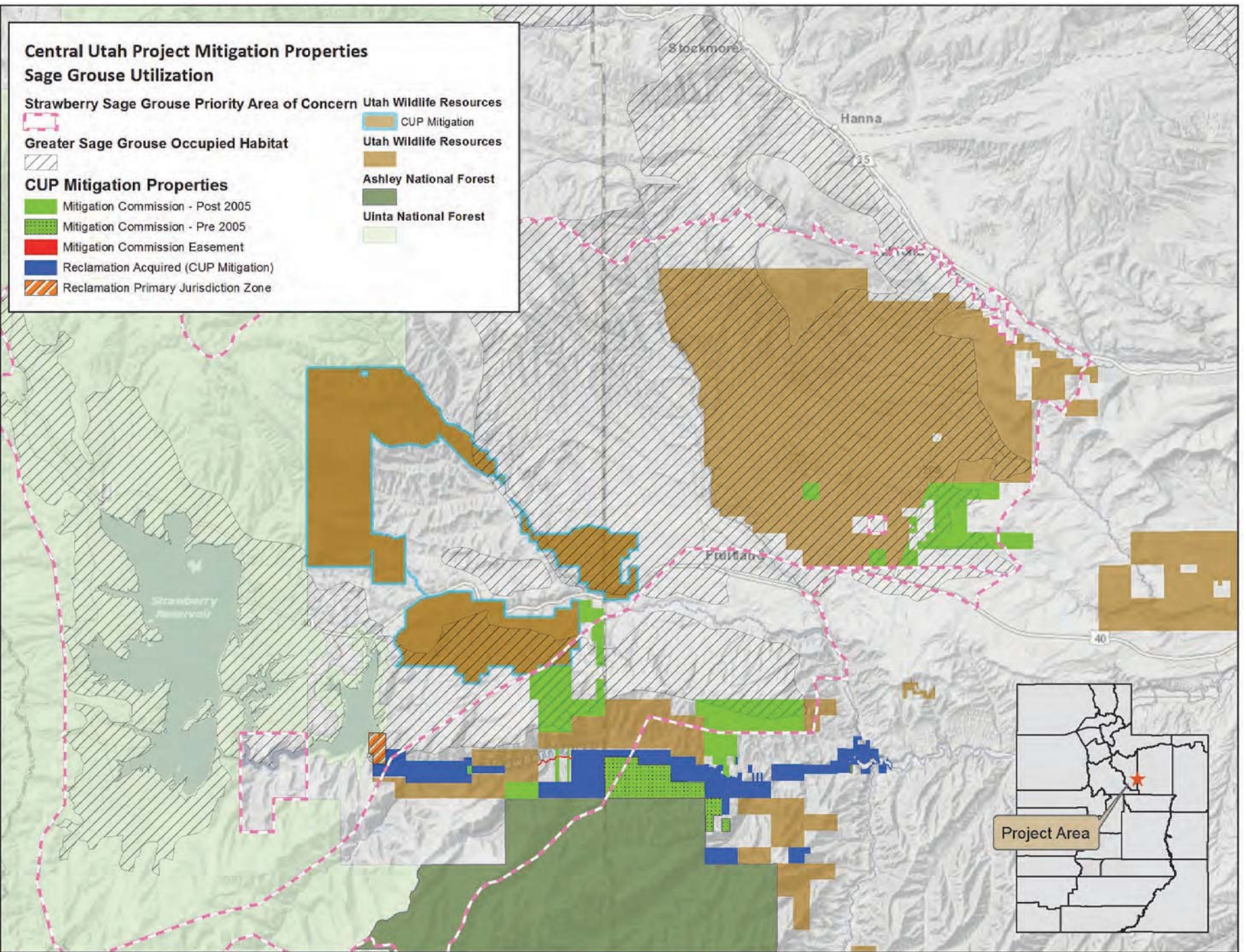
The entire mitigation program for UBRP is complete. Due to efficiencies implementing the program, the Commission anticipates approximately \$400,000 of funds provided for UBRP mitigation, authorized under Section 202(c) of CUPCA, may be available for reallocation to other high priority programs. Therefore, the Commission intends to reallocate these remaining funds to June sucker recovery program initiatives, such as the Provo River Delta Restoration Project.

Strawberry Valley Program Elements

Strawberry Valley Stream, Watershed, and Wildlife Habitat Restoration Two prior Program Elements *Fishery and Aquatic Resources Management* and *Strawberry Area Assessment, Watershed and Wildlife Habitat Restoration* were integrated into this Program Element in 2005.

Implementation to Date & Future Actions Over the next planning period, the Commission proposes to work cooperatively with the U.S. Forest Service and its many other partners to identify actions that help achieve or complement existing mitigation, or conservation projects for which the Commission has authorization. The Commission, Forest Service, Utah Division of Wildlife Resources and others began a cooperative effort in 2005 to look at the upper Strawberry River as a potential restoration area because a reach of the river goes dry during summer flow months in most years. Stream flow monitoring, tracer-dye studies, and groundwater monitoring through piezometers are underway, or have been completed. The Commission developed a plan for testing the suitability of an alternate channel for conveying streamflow thorough the losing reach. That plan will undergo further analysis under NEPA, if groundwater monitoring results support doing so.

Sage Grouse Conservation and Recovery The Commission supports efforts to aid conservation and recovery of sage grouse in the Strawberry Valley. Federal reclamation projects in Strawberry Valley, together with past management practices on Project lands prior to the transfer of those lands to the Forest Service in 1988, contributed to the decline of sage grouse populations in Strawberry Valley. The Commission helps fund studies and other actions to help their recovery. The U. S. Forest Service, Utah Division of Wildlife Resources, Brigham Young University and the U.S. Fish and Wildlife Service are key partners in the effort.



Implementation to Date & Future Actions From 1998 to 2002 a better understanding was gained of the basic ecology and limiting factors leading to population decline of sage grouse in Strawberry Valley. From 2003 through 2008, about 395 birds were translocated from other parts of Utah to the valley to augment the struggling population. Each bird was fitted with a radio-transmitter and monitored year-round. Survival of translocated hens was slightly above average across the species range and the fact that 100% of surviving birds were found flocked with resident sage grouse prior to breeding season indicated the translocations had been successful. Subsequent counts of males on the lek supported the notion that recovery was occurring. In 2006, a 200% increase over 2005 was observed in lek attendance (2 active leks). This was the third highest lek count ever recorded on the lek. Population numbers dipped from 2006 to 2011; however, this was likely due to what many sage grouse biologists believe is regional population cycling. In 2014, 169 males on 6 different leks were observed, compared to the lowest point of the study where there were only 24 males on one lek.

The Strawberry Valley population was estimated at 100 to 150 birds in 1998 and approximately 500 birds in 2014, representing significant progress and potentially even a growing population instead of one in decline.

Habitat improvement projects in 2005, 2007, 2009, and 2011 appeared to have positive results, with increased visitation of sage grouse to newly treated areas. The Commission, now going on 18 years, continues to fund research and monitoring of the sage grouse population (refer to Map 10).

The Commission acquired a large block of high value upland habitats used by sage grouse and other wildlife in 2006. The 1,720-acre parcel connects two CUP mitigation areas: the Wildcat Canyon Wildlife Management Area and the Strawberry River Wildlife Management Area (see Map 9. on pg. 2-39 and Map 10 on opposite page). The Commission acquired another 5,030 acres of critical big game and sage grouse habitat in the Fruitland area between 2008 and 2013. Each of these acquisitions and any further actions taken to protect and manage sage grouse and other wildlife habitat in and around Strawberry Valley will have beneficial impacts.

Watershed-Wide Program Elements

Wildlife Habitat Acquisition The Commission also seeks to acquire high-priority terrestrial habitat which consolidates management capability for wildlife objectives. The Commission seeks partners to accomplish these measures within the Strawberry-Duchesne drainage. Although the focus is on ecosystem function, some target species such as mule deer and sage grouse are of particular interest and importance. Preservation and restoration of sagebrush communities is particularly sought.

Although not only a Strawberry/Duchesne Watershed program element, we mention it here because a substantial portion of the prior terrestrial habitat mitigation for Bonneville Unit has occurred in this watershed. Several of those mitigation measures implemented in accordance with prior Bonneville Unit Definite Plan Reports are approaching 30 or more years of age. The landscape within which some of these land units existed 25 to 30 years ago may be substantially different today due to changes in surrounding land ownerships and land uses. With the assistance of the U.S. Fish and Wildlife Service, Utah Division of Wildlife Resources, U.S. Bureau of Reclamation and others as appropriate, the Commission will assess the contribution of these areas or projects to fulfilling mitigation requirements intended to function “for the life of the (water development) project”; identify issues that may be inhibiting a mitigation measure from reaching its full intended potential; and, propose remedies for any problems that are encountered.

An example that has emerged in the past decade is the westward expansion of energy development in the Uintah Basin. There have been numerous proposals in the past few years to develop oil and gas wells, to locate electrical transmission lines, and to similarly affect CUP mitigation lands. In most cases when Reclamation and/or the Commission acquired lands for CUP mitigation, the

mineral estate (including oil and gas rights) was not acquired. For the most part, those rights had already been severed from the surface estate, or withheld initially by the Federal government, as in the case of former Uintah and Ouray Indian Reservation lands sold into private ownership under the 1905 Homestead Act. So, while the Commission as surface owner can request reasonable restrictions on oil and gas development, we are unable to stop it in most instances. This type of threat was not contemplated when most of the mitigation lands were acquired, and it is vital to engage in the planning efforts for these activities in order to protect the mitigation values to the extent possible. Although not adding to the Commission's program, it is nonetheless an important part of the future work we anticipate in the Strawberry/Duchesne Watershed for the foreseeable future. (Refer to Map 7 on page 2-35).

Another example is the 743-acre West Hills Wildlife Mitigation Area in Wasatch County that was acquired under the wildlife mitigation plan adopted in the 1987 Final Supplement to the Municipal & Industrial System Final EIS. Prior to developing Jordanelle Dam and Reservoir, the project area was regionally important to deer, elk and moose as a migration route and winter use area. The area was also important breeding, brood rearing, and wintering habitat for sage grouse.

Initial wildlife habitat development and management goals for the West Hills WMA included vegetation management for mule deer, elk and sage grouse; protection for golden eagle breeding and nesting habitat; installation of a boundary fence and other fencing needed for vegetation management; development of public access to include parking areas and fence crossing stiles; information signage; and, various terrestrial habitat improvements including control of noxious weeds. However, since the early 1990s, the region surrounding the WMA has experienced rapid residential and resort development and three major roadways now encircle the Area. This has resulted in the loss and fragmentation of large tracts of habitat and created barriers for big game migratory routes once contiguous with the project area. The concurrent increase of vehicular traffic on the roadways has also created barriers and obstructed big game migratory routes to and from the WMA. The cumulative result is that the West Hills WMA has become an isolated block of undeveloped habitat that may be too small and too separated from neighboring habitats to sustain its original wildlife management goals for mule deer, elk, and sage grouse.

The Commission will examine these issues with its partners to determine if future actions might be taken to bolster the wildlife and ecosystem value of existing mitigation areas, or if other opportunities might be pursued to accomplish longer-lasting mitigation and conservation objectives.

Implementation to Date & Future Actions Approximately 24,000 acres of big game winter range were acquired by the Bureau of Reclamation in the Currant Creek watershed as mitigation for the Bonneville Unit. The Commission acquired an additional 300 acres in Currant Creek drainage in 2001. By 2002, approximately 3,800 acres were acquired by the Commission near the middle section of Strawberry River as partial mitigation for CUP-caused angler access losses and wildlife habitat impacts. In 2006, the Commission acquired a large block of high value upland habitats used by sage grouse and other wildlife. As mentioned under *Sage Grouse Conservation and Recovery*, the 1,720-acre parcel connects two CUP mitigation areas: the Wildcat Canyon Wildlife Management Area and the Strawberry River Wildlife Management Area. From 2008 to 2013, the Commission acquired from willing sellers another 5,960 acres of critical big game and sage grouse habitat in the Fruitland area. The Commission will continue to consider willing-seller acquisition opportunities that complement existing CUP mitigation lands and objectives. (Refer again to Maps 9 on pg. 2-39 and 10 on pg. 2-42).

Instream Flow Management The Commission will continue to participate in monitoring the flow regime necessary to sustain riparian communities and fisheries on streams affected by SACS.

Implementation to Date & Future Actions The Commission and Central Utah Water Conservancy District cooperated to reinstall stream flow gages on Currant Creek and middle Strawberry River in 2005 to help manage instream flows to achieve ecological objectives. Coordination with the Interagency Aquatic Biological Assessment Team occurs several times per year. Under the direction of the U.S. Fish and Wildlife Service, the Commission and other partners participate in the development of instream flow recommendations for the streams affected by the Streamflow Agreement of 1980 and its 1990 Amendment.

Modify Diversion Structures The Commission cooperated with the Duchesne County Water Conservancy District and local water users to modify or replace selected diversion structures in the Duchesne and Strawberry River drainages. The structures of concern were those that may be impacting fish habitat or inhibiting fish passage and delivery of instream flows provided under the Stream Flow Agreement. *This program element is now complete; all authorized funding has been expended.*

Implementation to Date The Commission and Duchesne County Water Conservancy District entered into an agreement to begin rebuilding diversions in 1999. Four projects were selected on a pilot project basis. Construction was completed on two structures located on the Duchesne River in 2001. A third, the Pioneer Diversion, was finished in 2002. A programmatic environmental assessment was completed in 2003 to address the remainder of the program. Planning for four additional projects (two on the Duchesne River and two on the Strawberry River) was initiated in 2004. Construction of the two Duchesne River projects was completed in 2004 and 2005. The Farm Creek Diversion was rebuilt in 2004.

In 2005, the WPPB Diversion was reconstructed on the Duchesne River, and it now combines water diversions from five previously-used diversions. Irrigation water diverted at WPPB is delivered to each of the participating canal systems through pipelines constructed as part of the project. Four diversions no longer used were removed in 2006.

All identified diversion structures on the Duchesne River were rebuilt, including several that were combined, with funds authorized by Section 203(a)(5) and Section 307(a)(8) of CUPCA. Jasper-Pike and New Tabby Diversions were both rebuilt in 2009-2010 using American Recovery and Reinvestment Act funds appropriated through CUPCA. The Turnbow diversion was rebuilt in 2009. The Rhodes Diversion on North Fork Duchesne River was completed in 2011-12. Improvements were made to the Defa Diversion head gate and canal in 2011. Funding for the program is expended and no funds remain. The Commission, working with its partners, rehabilitated all 13 major diversions on the Duchesne River upstream of its confluence with Strawberry River excluding Knight Diversion Dam. No projects were completed on Strawberry River.

Recreation Improvements Promote public awareness of the Commission's fish and wildlife mitigation programs and opportunities for public access to streams for angling opportunities. Improve public recreation access, information and facilities with priority on SACS mitigation requirements. *This program is complete and is in maintenance mode.*

Implementation to Date Preliminary draft operating agreements for the West Fork of the Duchesne River and Currant Creek have been prepared. Parking pullouts have been constructed along the middle Strawberry River and along Currant Creek. A parking easement was purchased in 2006 along the Duchesne River near Hanna, and a small parking lot, fence and gates were installed in 2007. Another access site was developed and its entrance, off Highway 35, was paved in 2009-10.

Watershed Stabilization, Wildlife Enhancement, and Access Management Watershed stabilization, wildlife enhancements, and access management are secondary actions that will be considered after acquisition efforts are completed. Private landowners and cooperators will be consulted. Although priority

may be given to mitigation properties, sound resource management objectives will be developed which address resource needs, regardless of land ownership status.

Implementation to Date & Future Actions Through an interagency agreement, the Commission funded the U.S. Forest Service to mitigate impacts to soil, fish habitat and water quality caused by abandonment of the Currant Creek Feeder Canal from tributaries above Currant Creek Reservoir to Cop Creek in Strawberry Valley. Between 1997 and 2002, a major headcut was remediated on Pass Creek, five drainages were put back into their natural channels (South Fork Currant Creek, Left Fork Currant Creek, Tut Creek, Pass Creek, Smith Basin), and several wetlands were stabilized in Smith Basin.

Several unauthorized two-track roads on the Currant Creek WMA were closed and rehabilitated in 2005 and 2006. Additional unauthorized two-tracks were closed on the 1,720-acre parcel in 2011, and the Currant Creek Mountain parcel in 2013. No County Roads were affected by these closures.

Great Salt Lake Watershed

OVERVIEW AND PROBLEM STATEMENT

The Great Salt Lake (GSL) is a saline water body in the Bonneville Basin in the heavily populated area of the Wasatch Front, which includes Salt Lake City, Ogden, Provo and other major urban areas in Utah. For this Mitigation Plan, the Commission has limited the definition of the Great Salt Lake watershed to the area immediately adjacent to the lake. This in no way diminishes the importance or value of its tributaries. The tributaries are critical to bringing fresh water and hydrologic function to the wetlands of the Great Salt Lake. Consideration from local governments, industry and landowners to protect water delivery and water quality is critical to the function and value of the wetlands and the lake ecosystem. The Jordan River, being a 45 mile waterway in a very urban area, offers opportunities that are worthy of separate planning consideration.

The Great Salt Lake wetland ecosystem is recognized internationally for its importance as a vital link in the migration corridor for water birds. The GSL was designated as one of only 17 Hemispheric Reserves that make up the Western Hemisphere Shorebird Reserve Network. In all, more than 1,500 square miles of water environments are available to the millions of migratory birds that use the GSL in their annual migration.

The GSL wetlands ecosystem represents the largest wetland area in the State of Utah. About 400,000 acres of wetlands exist along the shore of the lake, which represents almost 75 percent of all the wetlands in the State. Wildlife associated with the GSL and its periphery is abundant and diverse, including migratory waterfowl, shore and wading birds, and marsh-oriented songbirds. Over 250 different species have been identified using the area. Several million individual birds use these wetlands during spring and fall migrations.

In addition to birds, the GSL ecosystem also hosts 23 species or subspecies of fish, eight species of amphibians and 64 species or subspecies of mammals. The variety of plants and invertebrates, especially brine flies and brine shrimp, occurring in and around the lake provide an invaluable food source for these other species.

This critical ecosystem has been impacted over the years by acts of nature and development. In addition to isolated acts of nature, the GSL is adversely affected by human activities. Over 60 percent of Utah's 3.0 million people live within 20 miles of the GSL's wetlands. This results in direct and indirect impacts on the resource. Habitat encroachment by human development is obvious. Less obvious are impacts such as altered or contaminated aquifers, solid waste, invasive exotic species and effects of air pollution

A common vision for the future of Great Salt Lake wetlands is emerging. Ownership and administration at the GSL is complex, involving the Commission, Utah Division of Wildlife Resources, Utah Division of Forestry, Fire and State Lands, U.S. Fish and Wildlife Service, U.S. Bureau of Land Management, The Nature Conservancy, counties, municipalities and private interests. The State of Utah has completed a plan for the Great Salt Lake; however, it did not include a detailed plan for coordinated management that extended beyond State jurisdiction. To date, no mechanism exists to coordinate private wetlands management with public wetlands.

Desired Future Condition: Great Salt Lake/Jordan River Watersheds

“A wetland and upland corridor owned by State, Federal or local governments, private landowners or private organizations, along the shoreline of the Great Salt Lake has been preserved that allows dynamic fluctuations of lake level. Resident wildlife and migratory shorebirds in the Western Hemisphere and waterfowl in the Pacific Flyway are assured resting, feeding and nesting habitat during the normal lake fluctuations, as well as a buffer when the lake level fluctuates more extremely.”

Wetland hydrology is maintained in perpetuity and access for compatible recreation is available. A commitment to preserve the ecological function and values of the GSL and associated wetlands exists among State and local governments, private landowners and private industry.”



Overlooking the most recent acquisition for the GSL South Shore Reserve, created in partnership with the National Audubon Society

The Commission together with its partners The Nature Conservancy, National Audubon Society, and Utah Division of Wildlife Resources have collectively conserved more than 2,620 acres through acquisition of land and water rights and easements. Several other ventures have been accomplished (Inland Sea, Legacy mitigation area, etc.) helping to fulfill the vision of a connected habitat in Salt Lake and Davis counties.

Bay Waterfowl Management Area to the Utah Division of Wildlife Resources. This property includes the site of the Robert N. Hasenyager Great Salt Lake Nature Center, which is a joint venture project among Federal, State, and local governments and non-profit organizations.

In addition, the Commission has transferred title of 260 acres adjacent to the Farmington

“Diverse educational opportunities are available that promote general understanding of the complexity and value of the Greater Salt Lake wetland ecosystem as well as public and political support for the ecosystem’s wetland, wildlife and intrinsic values.”

The Commission funded construction of portions of Utah State University’s Utah Botanical Center wetlands education facilities in 2005, 2006, and 2007. The Commission provided additional funding to the Utah Botanical Center in 2009 and 2012 to complete its Wetland Discovery Point facilities and riparian areas.





Utah Botanical Center’s Wetland Discovery Point, solar panels and wetlands boardwalks, which the Commission provided funding to help construct.

The Utah Botanical Center has assumed responsibility for managing a wetlands education program started by the Commission, now called the Utah Wetlands Interpretive Network. The geographic scope of the program comprises the wetland ecosystem associated with the area from Cache Valley, down the Bear River, along the shore of the Great Salt Lake, up the Jordan River, through Utah Lake and up the Provo River to Jordanelle Reservoir. The program identified diverse audiences, important messages, and message delivery ideas appropriate for each audience, which has been used as intended by various agencies and organizations as the basis for developing their own wetland education programs.



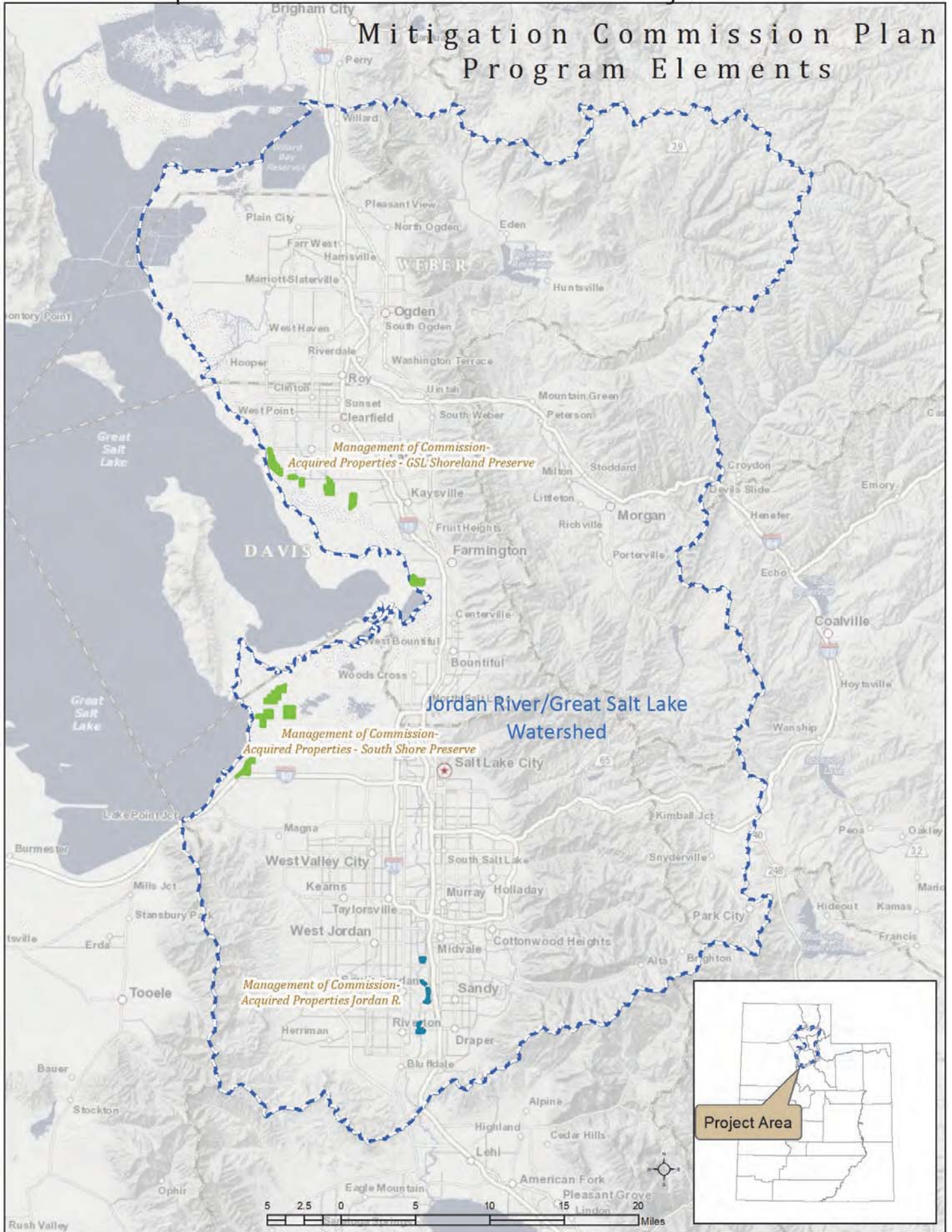
“Approximately 1,500 acres of Jordan River wetland, native vegetation and wildlife habitat are professionally managed for perpetuity in an integrated manner. Areas that are primarily for human use such as trails, golf courses and parks are managed, to the extent possible, to complement the wetlands, native vegetation and wildlife habitat of the natural conservation corridor. A minimum stream flow is maintained for the benefit of fisheries, wildlife and people.”

Considering all areas reserved for wildlife, including Commission properties, over 25 percent of the 1,500-acre goal has been achieved. Through the Jordan River Natural Areas Forum on-going efforts, awareness of opportunities to provide linking wildlife habitat on trails, golf courses and parks is increasing.



A new diversion structure (shown left) installed in 2015 by the Mitigation Commission and Bureau of Reclamation, provides adequate flows to support the restored Willow Creek wetland complex (shown right), while ensuring high flows are delivered to the Jordan River, and water rights are met.

Map 11. Jordan River/Great Salt Lake Watersheds Program Elements



Program Description for Great Salt Lake

The Commission envisions a wetland and upland corridor along the shoreline of the Great Salt Lake that will provide hundreds of avian species with resting, feeding and nesting habitat during normal lake fluctuations, as well as a buffer when the lake level fluctuates more extremely.

Section 306(a) of CUPCA authorized funds for planning and implementing projects to preserve, rehabilitate and enhance wetland areas around the Great Salt Lake. The Commission expended approximately 30 percent of the funding to restore State and Federal-managed wetland areas along the shore of the Great Salt Lake; to enhance existing wetlands to increase or improve the quality of wildlife habitat; and, to assist public understanding of the Great Salt Lake and its ecosystem. The remaining 70 percent of the funding was used to provide perpetual wetland area conservation through acquisition of land and water rights. The Commission uses Title IV funds for protection and management of Commission-acquired properties.

Great Salt Lake Watershed Program Elements

Great Salt Lake Wetlands Acquisition *The funding authorization for this program element has been fully appropriated and expended.*

Implementation to Date Since 1994, 2,714 acres of vital wetland and upland habitats primarily around the eastern and southern shores of the Great Salt Lake have been acquired by the Commission. The purchases were made possible through a tremendously successful partnership with The Nature Conservancy, National Audubon Society, the U.S. Bureau of Reclamation, and others. The Commission's acquisitions complement other area acquisitions, some made by The Nature Conservancy (TNC) and National Audubon Society, and some by private entities, for wetland mitigation banking.

The Commission acquired an additional 363 acres in 2006 within TNC's Great Salt Lake Shorelands Preserve, which is a joint Federal/non-profit partnership ecosystem conservation venture.

The National Audubon Society, TNC, the Commission, and a private landowner completed negotiations for a flooding easement on more than 500 acres within the Great Salt Lake South Shore Reserve in 2005, after many years of effort. The purchase was completed in 2006. Plans to deliver water to and through the easement were developed in 2006, and project partners completed the infrastructure needed to deliver the water to the flood easement area in 2008. The Commission has continued to fund stewardship activities on the Reserve. Although the Commission's involvement in new acquisitions is likely limited due to funding constraints, a 40-acre inholding within the Great Salt Lake South Shore Reserve was purchased in 2015 with Title IV funds.

The Commission encourages public agencies and political bodies to continue efforts in preserving the ecological functions and values of the wetland systems critical to the Great Salt Lake through the tools available to them, including zoning, planning and management. The Commission has remained extensively involved with planning efforts for transportation projects in northern Utah that could potentially affect the Great Salt Lake Shorelands Preserve.

Restoration of Agency Management Areas Support restoration, enhancement and rehabilitation of State and Federal-managed wetlands adjacent to the Great Salt Lake. *The funding component for this program element has been fully appropriated and expended.*

Implementation to Date Activities at State and Federally managed areas have provided restored habitat for migratory birds, increased water control to enhance water delivery to the units managed for migratory birds, and improved recreation access. In 1998, State and Federal cooperators completed restoration measures underway since 1994 with Commission funds.

Among the accomplishments are: an access road and parking lot providing access to Bear River Bay on the north end of the Great Salt Lake; 26 foot bridges, over 11 miles of dikes, 18 miles of boundary fence and more than 6 miles of gravel placed on area roads at four waterfowl management areas (Timpie Springs, Farmington Bay, Ogden Bay and Howard Slough); low dikes and ditches at Locomotive Springs Wildlife Management Area; construction of dikes and canals at Bear River Migratory Bird Refuge; and restoration and enhancement of wetland and wildlife values at Salt Wells and Blue Springs Habitat management areas on the north end of the Great Salt Lake.

Many improvements also provide access to managed wildlife areas for hunting and viewing during appropriate times of the year. Some areas have interpretive or other informational provisions to promote general understanding of the Great Salt Lake ecosystem.

Restoration and Management of Commission-Acquired Properties Initiate agreements with appropriate entities to address immediate and long-term management needs of Commission properties to protect and enhance values.

Implementation to Date & Future Actions The Commission has interim management agreements with National Audubon Society and The Nature Conservancy to provide initial stewardship activities on Commission-owned properties contiguous with the Great Salt Lake South Shore Reserve and Great Salt Lake Shorelands Preserve. The Commission will continue to fund activities to address immediate needs including fencing, fence repair, area clean-up and weed control, as well as longer term baseline surveys to help determine existing resource values and identify opportunities for future management.

The Commission has transferred title of 260 acres adjacent to Farmington Bay Waterfowl Management Area to the Utah Division of Wildlife Resources. This property is now the site of the Robert N. Hasenyager Great Salt Lake Nature Center, which is a joint venture project among Federal, State, and local governments and non-profit organizations.

Wetland Preservation Strategies Develop and implement strategies that will contribute to the perpetual conservation of wetland functions and values through planning, management agreements and strategic partnerships. *The funding component for this program element has been fully appropriated.*

Implementation to Date The vision of a wetland and upland corridor along the Great Salt Lake shoreline, preserved for resident wildlife and migratory shorebirds, is the desired future condition the Commission set in its first Plan. The Commission is partnering with many government organizations, landowners, conservation groups, agencies and others to help make it a reality.

The Commission helped accomplish a major local planning effort in Davis County with The Wetlands Conservation Plan: A Plan for Protection of the Great Salt Lake Wetlands Ecosystem in Davis County. The Plan was accepted by the Commission in January 1997 and by the Davis County Commission in November 1997. The Plan helped identify acquisition priorities and provided important background for the subsequent Davis County Shorelands Plan. The plan is being implemented by each city in Davis County using innovative concepts such as transfer of development rights to protect important wetlands.

The Commission funded a similar planning effort in Box Elder County. The Box Elder County Comprehensive Wetlands Management Plan was completed in August 1999. The Plan was adopted by the Box Elder County Commission in August 1999 and accepted by the Commission in November of 1999. The key Wetlands Plan recommendation - to develop a Special Area Management Plan (SAMP) for the Brigham City and Perry City area – is to be developed by Box Elder County and the cities through a grant from the U.S. Environmental Protection Agency.

Through the SAMP process, there is the opportunity to look at a contiguous area and collectively (with the public and landowners) determine those areas most important for wetlands protection and those more suitable for development. The SAMP will include strategies to mitigate financial impacts to wetland owners where the desired outcome is wetlands protection.

Drawing from the experiences in Davis and Box Elder counties, the planning process has been refined to also map wetlands and develop SAMPs for Tooele County and Salt Lake County wetlands at risk for development. In Tooele County, mapping and a Functional Assessment have been completed, and a draft SAMP was prepared in 2006.

In Salt Lake County, the Commission partnered with Envision Utah to develop a Salt Lake Shorelands Plan. It is the link between management plans created by Tooele County, Davis County, and Box Elder County to protect the wetlands and hydrology of the region, while allowing development where appropriate and needed. Including a large portion of western Salt Lake City, the project area extends from Davis County south to Interstate 80 and from Tooele County east to the Jordan River and I-215. Work on detailed mapping and a Functional Assessment was completed in 2006. Information from the Functional Assessment is being used in Salt Lake City's planning efforts for the Northwest Quadrant (a subset of the wetlands covered in the Functional Assessment).

Wetlands Ecosystem Education Plan (WEEP) Support development of a message and implementation plan that meets Commission goals and objectives in educating people about the Greater Great Salt Lake Wetland Ecosystem, and cooperate with Utah State University in the establishment of a wetlands education and interpretive facility at the Utah Botanical Center in Kaysville, Utah. *The funding component for this program element has been fully appropriated.*

Implementation to Date In 1995, to help identify direction and need, the Commission funded a Needs Assessment and Conceptual Plan for Interpretive Recreation and Education for the Greater Great Salt Lake Wetlands Ecosystem. This report identified a gap between the level of importance placed on wetlands and wetlands awareness and opportunities available to satisfy those needs. To help address this, the Commission helped fund and participated in developing a wetlands education plan.

The geographic scope of the planning project comprised the wetland ecosystem associated with the area from Cache Valley, down the Bear River, along the shore of the Great Salt Lake, up the Jordan River, through Utah Lake and up the Provo River to Jordanelle Reservoir. The final plan, completed in January 2001, identified diverse audiences, important messages, and message delivery ideas appropriate for each audience, and has been used as intended by various agencies and organizations as the basis for developing wetland education programs.

The Commission funded construction of portions of Utah Botanical Center's wetlands education facilities in 2005, 2006, and 2007. The Utah Botanical Center (UBC) has also assumed responsibility for managing WEEP, now known as the Utah Wetlands Interpretive Network. The Commission provided additional funding to the Utah Botanical Center in 2009 and 2012 to complete UBC's Wetland Discovery Point facilities and riparian areas. For more information about this unique facility and Utah's Wetland Interpretive Network, visit: <http://usubotanicalcenter.org/htm/education/adult/uwin/>.

Jordan River Watershed

OVERVIEW AND PROBLEM STATEMENT

The Jordan River lies in the heart of Utah's urbanized center. It extends 45 miles from Utah Lake in the south, to the Great Salt Lake in the north. Land uses near the river vary from farms and scattered homes to urban, industrial and residential uses. What was once a natural, meandering river corridor providing abundant fish and wildlife habitat has been compromised by human development. These developments are largely a consequence of population growth, which in part has been due to Federal Reclamation projects in Utah.

The river has suffered from industrial and municipal waste discharges; encroachment of industrial, commercial and residential activities on its flood plain; dredging and channelization; extensive water diversions and manipulations; and polluted runoff from streets and fields.

Society's ideas of acceptable uses of this river corridor and its condition are changing. What were once considered prudent uses along the Jordan River are now recognized as abuses. Many characteristics of the Jordan River and adjacent lands are now recognized for their own worth as integral components of a valuable ecosystem, which includes Jordan River tributaries. While this plan focuses on the Jordan River, a complete vision must include its tributaries. Again, partners are key in accomplishing a Jordan River watershed vision.

Program Description for the Jordan River

The Commission's program for the Jordan River focuses on restoration and management of the Natural Areas it had acquired in the 1990s. The Commission will be transitioning from interim management agreements to permanent transfer of property to suitable entities, in order to address immediate and long-term management needs of those properties.

Jordan River Watershed Program Elements

Restoration and Management of Jordan River Natural Areas The Commission has been involved since 1994 in planning and implementing habitat restoration and Jordan River corridor management with various partners. The Commission will remain committed to restoration efforts on those Natural Areas it has already acquired, and to working with local communities and organizations to find long-term management solutions for the Jordan River Natural Areas the Commission has already helped establish.

Implementation to Date & Future Actions

Properties near 12300 South Street

A 70.8 acre acquisition was completed along the Jordan River in 1996 near 12300 South. This parcel is adjacent to wetland mitigation property owned by Salt Lake County and is anticipated to eventually tie to property owned by the State of Utah. With these three parcels, a corridor on the east side of the river from about 12300 South to 14600 South would be protected for wetland and wildlife habitat values. A Tri City (Draper, Bluffdale and Riverton) planning group identified this open space area for wetland and wildlife values.

Properties near 10600 South Street

A 44-acre parcel on the north side of 10600 South in South Jordan was acquired by the Commission in 1997. In 1999, a second parcel (about 17 acres) was acquired by the Commission on the south side of 10600 South in South Jordan. In 2000, a conservation easement was donated to the Commission on about 35 acres along the Jordan River and adjacent to the second parcel. In 2001, about 17 acres were purchased along the Jordan River between 9800 South and 10000 South. These parcels link with other undeveloped parcels. In 2008, the Commission issued a license agreement to Sandy City to construct an access road to the city's park and fishing pond, components of the Jordan River Parkway in Sandy City. The Commission is pursuing an opportunity to transfer the underlying fee plus adjacent acreage of approximately 3.8 acres to Sandy City for their use and maintenance as open space.

At the end of 2015, after a successful, productive partnership for almost 20 years, the Great Salt Lake Audubon Chapter completed its management agreement for properties on either side of 10600 South. The Chapter accomplished many great things during its period of stewardship, and the Commission recognizes their contributions. The Chapter will also transfer ownership of about 15 acres within the project area to the Commission. The Commission will resume stewardship activities on all the properties in the South Jordan area until a long-term management arrangement is made.

Properties near 9000 South Street

In 1998, a 22-acre parcel was acquired by the Commission in the West Jordan Project area. In 2000, an additional 31 acres were acquired by the Commission. West Jordan has purchased additional properties that will tie into their plan for open space, trails, wetlands protection and wildlife habitat from about 6500 South to 9000 South. Collectively these properties are known as the "Big Bend" area. West Jordan City entered into an agreement with the U.S. Army Corps of Engineers (Section 206 Environmental Restoration program) in 2005 to develop a plan to restore the project area. Studies were conducted to determine the cost and feasibility of various restoration alternatives and a draft Environmental Assessment was issued. However funding for completing the EA, and for design and construction was withdrawn before the plan and EA were completed.

West Jordan City, with assistance from the Commission, U.S. Fish and Wildlife Service, National Park Service and others are leading a renewed planning effort to develop and implement a comprehensive habitat restoration and recreation development plan for the combined properties. The plan will be analyzed in an Environmental Assessment currently underway with the Mitigation Commission in a lead role. One aspect of the proposed project analyzed in the EA will be the proposed disposition of the Commission's property to West Jordan City.

The Commission also completed an EA earlier in 2013 and issued a FONSI to allow West Jordan City to construct a 0.25 mile long trail along the west boundary of the Commission's property. This 0.25 mile portion was one of the last few remaining gaps of Jordan River Trail to be completed, and was an "America's Great Outdoors" priority project.

Statewide Program

OVERVIEW AND PROBLEM STATEMENT

The majority of program elements in the ‘Statewide Program’ are Priority 3 or Priority 4 items. Several authorizations under CUPCA, which the Commission has placed in its *Statewide* program area, are intended to satisfy mitigation and conservation needs that are in addition to those identified in prior Definite Plan Reports and Fish and Wildlife Coordination Act reports for the Central Utah Project or the Colorado River Storage Project (CRSP). The Central Utah Project was authorized almost 60 years ago, and has been under construction for more than 50 years. Several of these ‘Statewide’ authorizations from Congress provide some limited funding authority to address needs of maintaining mitigation values from prior activities. In planning the use of these ‘Statewide’ funds, emphasis will be placed on projects that add to or preserve prior mitigation efforts under the Bonneville Unit, under the Central Utah Project, or under the Colorado River Storage Project, in that order. The Commission will keep several Statewide program elements as part of its next five-year plan, although opportunities to proceed with most of these program elements will likely be minimal due to funding limitations.

Statewide Program Description

The Central Utah Project and other reclamation projects created many reservoirs in Utah. These flatwater areas provide a variety of water-related recreation opportunities, including fishing. Most reservoir fisheries are heavily used and are not able to sustain themselves through natural recruitment, requiring management programs dependent on stocking hatchery-reared fish. Fish stocking demands in Utah for reclamation projects have not always been met in the past, despite combined efforts of both State and Federal hatcheries. CUPCA identifies funding for planning and implementing improvements to existing hatcheries and/or the development of new fish hatcheries to increase production of warm-water and cold-water fish for areas affected by the Colorado River Storage Project in Utah.

Planning for the fish hatchery program considered the need for hatchery improvements, types of fish to be raised, effects on native species from stocking fish, and budget and scheduling of implementation. Through the planning process, the need to develop facilities for producing sensitive species, such as native cutthroat trout, and threatened or endangered species, has also been addressed. The Commission’s Statewide program contains an element for funding hatchery improvements and construction to help meet these demands.

The funding authorization in CUPCA for fish hatchery improvements and development is not intended to replace natural production, nor should it be viewed as an alternative to the Commission’s other programs that emphasize habitat restoration objectives. Support for this program does not diminish the Commission’s commitment to implement measures that achieve ecosystem restoration and biological diversity through its other programs.

Desired Future Condition: Statewide Watershed



“Warm water and cold water fish production needs for CRSP affected area waters in the State are met, providing a variety of sport fish opportunities to the public. Through the hatchery program, native fish populations are augmented to meet conservation and recovery needs.”

The Commission and Utah Division of Wildlife Resources entered into cooperative agreements to reconstruct the Kamas, Fountain Green and Whiterocks State Fish Hatcheries to meet increasing cold-water fish needs in CRSP-impacted waters. Construction on the Kamas Hatchery was completed in 2001; Fountain Green was completed in 2002, with raceway covers added in 2006; and, Whiterocks was completed in 2007, with raceway covers constructed in 2009. The Commission entered into an agreement with the Ute Indian Tribe to construct a Tribal Fish Hatchery at Big Springs on the Ute Indian Reservation. The hatchery construction was completed in 2010.



Construction of covered raceways, Administrative and residential buildings at the Ute Indian Tribe's Big Springs Fish Hatchery

A recirculating facility was added at the Utah Division of Wildlife Resources' Fisheries Experiment Station in Logan, Utah in 2006. The condition and numbers of the hatchery-reared native June sucker have improved since then with improved water temperatures and diet. The Commission provided additional funding to the Division to retrofit older portions of the hatchery complex to incorporate recirculation equipment, which has boosted condition of the native fish, as well as increased production.



New facilities at the Utah Division of Wildlife Resources' Fisheries Experiment Station in Logan, Utah



Covered raceways at the Whiterocks State Fish Hatchery



Screen shot of web interface to the Utah Division of Wildlife Resource’s Utah Conservation Data Center with access to the Sensitive Species Database

“A centralized system to deposit and retrieve data on sensitive species is functional and is being used by state and federal agencies, the general public and development interests to obtain information.”

Commission funds were used to help develop Utah Division of Wildlife Resource’s biodiversity information database. The database contains sensitive vertebrate, invertebrate, and plant species information that is continually updated and available on the internet at: <http://dwrcdc.nr.utah.gov/ucdc/>.

“Stream and riparian restoration and public access projects funded by the Commission provide diverse aquatic and riparian habitats that are perpetuated by natural river processes. These river systems support a rich biological community and appropriate public uses.

“Small impoundments on Forest Service and State of Utah lands are rehabilitated or improved to assist, or at least do no harm to, native species recovery efforts, conserve and perpetuate recreational values and meet dam safety standards with low operation and maintenance requirements.”

“Bonneville and Colorado River cutthroat trout are restored and conserved within their historic ranges in Utah.”

The Commission is a signatory party to Conservation Agreements developed in accordance with the Endangered Species Act for the Colorado River cutthroat trout and Bonneville cutthroat trout, and supports both strategies.

Identification of suspected remnant populations of native cutthroat trout is ongoing, using a combination of geographic, meristic and DNA analyses. Genetic and physical or meristic analysis is continuing on sampled cutthroat populations to determine the amount of introgression with rainbow trout and nonnative Yellowstone cutthroat trout. Conservation strategies and a standardized rangewide database for the two subspecies are continually updated.

The Commission funded two on-the-ground cutthroat trout conservation projects in 2006: non-native trout eradication on the West Willow Creek drainage in northeastern Utah for native Colorado River cutthroat trout; and, habitat improvement for Bonneville cutthroat trout on small streams of the Goshute Indian Reservation in western Utah.

Statewide Program Elements

Fish Hatchery Restoration and Construction Support fish hatchery production to assist meeting warm-water and cold-water fish production and stocking needs for Utah reservoirs in the CRSP-affected areas, and to augment native fish populations as appropriate.

Implementation to Date & Future Actions A Fish Hatchery Production Plan was developed in 1995 and revised in 1998 that describes Commission-funded actions over a ten-year period for hatchery improvements in Utah⁷. The following is the status on those improvements:

Cold-water Hatcheries The Commission and Utah Division of Wildlife Resources entered into cooperative agreements to reconstruct the Kamas, Fountain Green and Whiterocks State Fish Hatcheries to meet increasing cold-water fish needs in CRSP-impacted waters. Construction on the Kamas Hatchery was completed in 2001; Fountain Green was completed in 2002, with raceway covers added in 2006; and, Whiterocks was completed in 2007, and raceways were covered in 2009 with American Recovery and Reinvestment Act funding.

Cold water fish species production from these three state fish hatcheries includes rainbow trout, cutthroat trout, kokanee salmon, and grayling. Pre- and post-construction hatchery production for these three state facilities are given in Table 2.1 below:

Table 2.2 Annual Production of State owned cold water fish hatcheries, in pounds.

Timeframe	Facility		
	Kamas SFH	Fountain Green SFH	Whiterocks SFH
Preconstruction	80,000	59,250	35,000
2002	131,335	"	"
2003	134,733	145,970	"
2004	125,017	147,530	"
2005	144,439	191,154	"
2006	170,901	176,440	"
2007	159,314	221,106	"
2008	141,810	214,355	162,289
2009	159,180	250,219	137,126
2010	188,963	206,453	162,651
2011	0*	266,108	158,371
2012	945*	236,035,	132,123
2013	121,359	241,030	97,886
2014	180,053	196,333	173,506
2015	174,213	198,895	199,062

*The Kamas SFH was taken offline in October 2010 to repair a sinkhole that impacted the water supply.

⁷The Fish Hatchery Production Plan was mandated by CUPCA (Section 313(c)) to identify long-term needs and management objectives for hatchery production. The Plan has been updated by the Hatchery Workgroup, incorporating Mitigation and Conservation Plan priorities, feasibility report information, stocking assessment report results and the UDWR stocking policy. An Environmental Assessment and Finding of No Significant Impact was released in April of 1998.

The Commission entered into an agreement with the Ute Indian Tribe with funding provided through the American Recovery and Reinvestment Act of 2009 to construct a Tribal Fish Hatchery at Big Springs on the Ute Indian Reservation. Construction was completed in 2010 and first stocking was made in May of 2012 to Midview Reservoir. Annual production in pounds were as follows: 2012 - 20,045 lbs; 2013 - 15,789 lbs; 2014 – 15,223 lbs; and, 2015 - 19,237 lbs.

Warm-water Hatcheries A recirculating facility was added to the existing June sucker building at the Utah Division of Wildlife Resources' Fisheries Experiment Station in Logan, Utah in 2006. The condition and numbers of the hatchery-reared June sucker have improved since then with improved water temperatures and diet. Funding provided through the American Recovery and Reinvestment Act of 2009 enabled the Commission to provide funding to the Division to retrofit older portions of the hatchery complex to incorporate recirculation equipment, which has boosted condition of the fish as well as increased production. Post construction average annual stocking (2006-2010) is over 64,000 suckers (with a range from 22,933 to 113,764). Production in 2013 totaled 87,654, and it was 117,872 in 2014.

Based on the success of the recirculation technology and the availability of the Springville State Fish Hatchery facility on the west side of Main Street in Springville, a feasibility study was conducted in 2009. This study indicated that most of the warm-water native aquatic species production needs could be met with a reconstructed facility at this site. The Commission does not anticipate funding being available to participate in Springville Hatchery rebuilding project until 2020. The Commission will consider partnering with Utah Division of Wildlife Resources in this effort prior to 2020, if funding is made available.

Sensitive Species Inventory and Database Support a statewide survey of sensitive fish, wildlife, invertebrate and plant species and develop a centralized, shared database. Develop methods to help users obtain information from the database, as well as provide information to the database. *The funding component for this program element has been fully appropriated and expended.*

Implementation to Date Commission funds were used to help develop Utah Division of Wildlife Resource's biodiversity information database. The database contains sensitive vertebrate, invertebrate, and plant species information that is continually updated and available on the internet at: <http://dwrcdc.nr.utah.gov/ucdc>

Stream and Riparian Restoration/Enhancement and Public Access From 1995 to 2000, the Commission's stream and riparian restoration and public access projects were focused on fulfilling Priority 1 commitments in Strawberry/Duchesne and Provo River/Utah Lake watersheds. Many of the Commission stream and riparian restoration projects are in specific watersheds; however, some will be conducted on a statewide basis because they meet Commission priorities. The Commission supports projects designed to restore ecosystem health and function to aquatic and riparian areas and public access to enjoy recreational opportunities.

Implementation to Date & Future Actions Activities under this program element occurred within the Bonneville Unit area established as a priority by the Commission for the first planning periods. The Commission will continue this priority emphasis on streams in the Bonneville Unit area and on streams already associated with a Commission project, especially the Provo River Restoration Project. The Commission reallocated \$809,000 of funding authority formerly identified for Jordan River fish habitat rehabilitation (CUPCA Section 311(a) - \$204,100) and riparian habitat rehabilitation (CUPCA Section 311(b) - \$605,200) to this program element in 2005.

During the next several years, the Commission's emphasis will be placed on June sucker recovery (including the Provo River Delta Restoration Project and the East Hobbie Creek Habitat Improvement Project).

Small Watershed and Small Dam Improvements Section 313(b) of CUPCA authorizes funds for restoration-and conservation-related improvements to small dams and watersheds on State of Utah and National Forest System lands within the Central Utah Project and Colorado River Storage Project areas in Utah. Numerous opportunities exist to fund repair of small dams and to acquire water rights to establish conservation pools or stabilized lakes.

Implementation to Date & Future Actions This program element will remain a low priority (Priority 4) in the 2016 Plan and is not likely to be funded within the next five years.

Native Cutthroat Trout Natural resource management authorities and interested publics have developed Conservation Agreements, in accordance with the Endangered Species Act, that identify strategies and actions for conserving native cutthroat trout in Utah. The Commission is a signatory party to each agreement for the Colorado River cutthroat trout and Bonneville cutthroat trout and supports both strategies. The Commission will annually review each conservation agreement to identify priority projects compatible with Commission objectives and select projects for implementation. The Commission will also strive to take actions on other projects that support native cutthroat trout conservation goals.

Implementation to Date & Future Actions Both the original Colorado River and Bonneville Cutthroat Trout Conservation Strategies are in place and continue to be implemented. Identification of suspected remnant populations of native cutthroat trout is ongoing, using a combination of geographic, meristic and DNA analyses. Genetic and physical or meristic analysis is continuing on sampled cutthroat populations to determine the amount of introgression with rainbow trout and nonnative Yellowstone cutthroat trout. Conservation strategies and a standardized rangewide database for the two subspecies are continually updated. The Commission funded two on-the-ground cutthroat trout conservation projects in 2006: non-native trout eradication on the West Willow Creek drainage in northeastern Utah for native Colorado River cutthroat trout; and, habitat improvement for Bonneville cutthroat trout on small streams of the Goshute Indian Reservation in western Utah.

Funding for restoration and conservation of native cutthroat trout populations is likely to be limited during the next five years. Individual projects, if any are possible, will be determined in concert with the Conservation Agreements and the appropriate resource agencies. The Commission anticipates continuing to support genetic assessments of populations.

Chapter 3

Proposed Program Elements and Estimated Costs for FY2016 through FY2020

The Commission is responsible for carrying out numerous “environmental commitments” for CUP’s Bonneville Unit. These are commitments the Commission has made, or the U.S. Bureau of Reclamation (Reclamation) made prior to the Commission’s formation. Most, but not all of these, were created in response to consultation with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources, under authority of the Fish and Wildlife Coordination Act of 1958, as amended. Some commitments came about as a result of consultation under the Endangered Species Act of 1973, as amended, or as a result of NEPA documents and Records of Decision.

The list of commitments was last updated by the U.S. Fish and Wildlife Service in 2000. Appendix D contains the up-to-date list and status report of all environmental commitments for which the Commission is responsible. For completeness, the table also includes some environmental commitments for which the Central Utah Water Conservancy District (District) or U.S. Department of the Interior (Interior) are responsible, or have shared responsibilities.

Most of the environmental commitments Reclamation established for the Bonneville Unit, and the Commission, District or Interior made under CUPCA have been completed, or are being met through their integration into the Commission’s Program Elements. The Commission has had tremendous success due to its partnerships with numerous agencies and organizations, so had hoped to begin including in its 2016 Plan remaining projects authorized under CUPCA. However, funding limitations will restrict Commission involvement to primarily the major programs that fulfill required mitigation (the environmental commitments) for Bonneville Unit water development features.

For the next five years, the Commission will continue its focus on Priority 1 and 2 projects in central Utah watersheds to most efficiently use its limited appropriation of funds. Those watersheds are the Provo River/Utah Lake, Strawberry/Duchesne, and Diamond Fork watersheds. The Commission will also continue to implement a few projects throughout the state that address mitigation, conservation or restoration of fish and wildlife resources lost due to CUP.

Program elements of a lower priority (3 or 4) may be implemented during the next five years, while those of a higher priority, may not. This could be due to extraordinary or limited opportunity to accomplish a lower priority element, particularly if substantial partnerships are involved, or it could be because a specific funding source can only be used for certain purposes satisfied by a lower priority project. In general, however, the Commission will emphasize accomplishing program elements in order of priority.

COMMISSION PROGRAM SUMMARY for FY2016 through FY2020:

- The Commission proposes to focus on June sucker recovery efforts, especially restoration of the lower Provo River at its mouth at Utah Lake (the Provo River Delta Restoration Project-PRDRP) to restore habitat needed to support all lifestages of June sucker, young-of-the-year and juvenile lifestages in particular, and other aquatic species. Emphasis will include a program as part of the PRDRP to use authorized Utah Lake recreation facilities funding to replace, modify, expand or construct recreation facilities. Rehabilitation or replacement of diversion dams on the lower Provo River and/or Hobbie Creek will be included as funding allows.

- The Commission proposes to complete restoration of wetlands along the lower Duchesne River corridor (Lower Duchesne River Wetlands Mitigation Project) to satisfy Interior and Commission mitigation obligations for impacts to the Ute Indian Tribe and wetlands-related resources. This is a long-standing commitment for the Strawberry Aqueduct and Collection System of the Bonneville Unit.
- The Commission proposes to initiate a compensatory mitigation project to make up for wetland and riparian and wetland losses that occurred when the Duchesne River Area Canal Rehabilitation Program was implemented along the Duchesne River corridor. This is a long-standing commitment of the Starvation Collection System of the Bonneville Unit.
- The Commission proposes to continue its partnering efforts to study the instream flow regime and riparian communities in Sixth Water and Diamond Fork Creeks, and to develop and implement a program to manage instream flows and sustainably restore stream and riparian habitats, as required mitigation for the completed Diamond Fork System.
- The Commission proposes to continue to support efforts to conserve sage grouse in Strawberry Valley and nearby locations crucial to the population, and to cooperate with Wasatch-Cache-Uinta National Forest and others to restore stream flows on Strawberry River upstream of Strawberry Reservoir.

In this Plan, we have combined several Program Elements from prior planning periods. This is most evident in the Provo River/Utah Lake Watershed, but a few other combinations or clarifications were made as well. We also removed Program Elements that were completed, or for which the funding authorization has been expended. A listing of the 2016-2020 Program Elements and their assigned priority are described in the tables that follow.

PROVO RIVER/UTAH LAKE WATERSHED PROGRAM ELEMENTS

Lower Provo River Program Elements

Program Element	Description	Priority
June Sucker Recovery	Support the June Sucker Recovery Implementation Program and help fund implementation of the June Sucker Recovery Plan.	1
Provo River Delta Restoration Project*	<ul style="list-style-type: none"> • Acquisition of Instream Flows Acquire and provide additional instream flows in the lower Provo River. • Stream Restoration Plan and implement delta restoration on the lower Provo River in concert with the JSRIP. • Public Access and Facilities Development Acquire and/or develop and improve public access and facilities along the lower Provo River. • Provo River Water Quality Improvements Implement aeration of the lower Provo River channel. 	1,2
Diversion Dam Modifications*	With emphasis on June sucker recovery, plan and implement diversion dam modifications along the lower Provo and/or Hobbie Creek to restore river continuity and provide for fish passage, measurement and bypass of instream flows, and improvement of stream and riparian conditions where possible.	1
* Complements June Sucker Recovery.		

Middle and Upper Provo River Program Elements

Program Element	Description	Priority
Provo River Restoration Project	Ongoing management of public access and federal lands surrounding the middle Provo River in concert with the Provo River Restoration Project.	1

Utah Lake Program Elements

Program Element	Description	Priority
June Sucker Recovery	<ul style="list-style-type: none"> Utah Lake Drainage Basin Mitigation Commitments Continue to implement Environmental Commitments of the Utah Lake Drainage Basin System (ULS) associated with June sucker recovery.	1,2
Provo River Delta Restoration Project	<ul style="list-style-type: none"> Utah Lake Fish Management Utah Lake Recreation Facilities Support measures to aid recovery of the Utah Lake ecosystem. Construct recreation facilities directly associated with efforts to restore riverine and floodplain habitats of the lower Provo River at its interface with Utah Lake	1,2
Utah Lake Wetland Preserve	Ongoing management of public access and federal lands in the Goshen Bay and Benjamin Slough areas of the Utah Lake Wetland Preserve. Acquire additional land if funding allows. Implement development plan as funding allows.	3
Terrestrial Habitat Conservation	Measures such as acquisition and/or restoration of sagebrush-steppe vegetative communities along the southern Wasatch Front.	3,4

Diamond Fork Watershed Program Elements

Program Element	Description	Priority
Aquatic and Riparian Habitat Restoration - Sixth Water and Diamond Fork	Continue a monitoring program to measure responses to flow changes created by operation of the Diamond Fork System. Implement selected aquatic and riparian habitat restoration measures on Sixth Water and/or Diamond Fork creeks.	1,2
Water Quality and Temperature Monitoring	Develop and implement a water quality and water temperature monitoring program in Diamond Fork as identified in the 1984, 1990, 1999 and 2000 NEPA documents for the Diamond Fork System.	1
Diamond Fork Mitigation	Continue management of public access on lower Diamond Fork outside the Uinta National Forest boundary. Resolve boundary management issues. Carry out environmental commitments of the ULS System in Diamond Fork.	1
Diamond Fork System Native Species Conservation	Support leatherside chub conservation efforts within its native range. Support efforts to conserve Ute Ladies'-tresses.	1

Strawberry/Duchesne Watershed Program Elements

Program Element	Description	Priority
Angler Access and Related Facilities	Continue management of public access and federal lands associated with public access operating agreements, small parking areas and other facilities on the West Fork, North Fork and main stem of the Duchesne River, the middle and lower Strawberry River, Currant Creek and Rock Creek. Develop maps and other useful guides.	1
Duchesne River Area Canal Rehabilitation (DRACR) Program Wetland Mitigation	Protect, restore or enhance wetlands as mitigation for DRACR wetland impacts.	1
Lower Duchesne River Wetlands Mitigation Project	Protect, restore and enhance wetlands along the lower Duchesne River corridor as mitigation for SACS wetland impacts and commitments to Ute Indian Tribe.	1
Duchesne River Drainage Stream, Watershed, and Wildlife Habitat Restoration <i>Priority on CUP mitigation properties</i>	Cooperate with U.S. Forest Service and other partners to identify future projects for watershed, wildlife habitat and tributary restoration and/or that support conservation of sage grouse in Strawberry Valley and nearby areas used by the population. Manage access area-wide and improve wildlife habitat with priority to CUP mitigation properties. Protect mitigation investments from outside threats and challenges, including energy development.	1,2,3
Wildlife Habitat Acquisition	Acquire high priority terrestrial habitats in Strawberry River, Currant Creek and/or adjacent drainages that are inholdings, or that complement, buffer or protect prior investments in fish and wildlife mitigation lands.	3
Sage Grouse Conservation	Continue support of sage grouse conservation in Strawberry Valley and nearby areas used by the population.	1,3

Great Salt Lake Watershed Program Elements

Program Element	Description	Priority
Management of Commission-Acquired Properties	Transition from interim management agreements to permanent transfer of property to suitable entities to address immediate and long-term management needs of Commission-acquired properties.	3

Jordan River Watershed Program Elements

Program Element	Description	Priority
Management of Commission-Acquired Properties	Transition from interim management agreements to permanent transfer of property to suitable entities to address immediate and long-term management needs of Commission-acquired properties.	3

Statewide Program Elements

Program Element	Description	Priority
Fish Hatchery Restoration and Construction	Support fish hatchery production to assist in meeting warm-water and native fish production and stocking needs for CRSP-affected waters in the State, and to augment native fish populations. Included are measures for culture of amphibious and other aquatic-dependent species.	3,4
Stream and Riparian Restoration and Enhancement	Emphasis will be placed on projects that add to or preserve prior Bonneville Unit, Central Utah Project mitigation efforts (especially June Sucker Recovery and Provo River Delta Restoration Project in Provo River/Utah Lake Watershed).	1,2,3
Native Aquatic Species Conservation	Support native aquatic species conservation and restoration projects (including those in the Diamond Fork Watershed) that are compatible with the Commission's priorities and Conservation Agreements and Strategies. In this Plan, cutthroat trout and leatherside chub are recognized priority species; others, such as spotted frog and least chub, may be addressed in the next five years if synergistic opportunities are presented.	2

ESTIMATED COSTS TO IMPLEMENT THE FIVE-YEAR PLAN

Estimated costs associated with implementing this Plan FY2016 through FY2020 are described in the Tables that follow.

Table 3.1 lists program elements and estimated costs of implementation FY2016 through FY2020.

Table 3.2 summarizes anticipated costs of securing capacity in the Spanish Fork Canyon-Provo Reservoir Canal Pipeline for delivery of instream flow water to Hobble Creek or Provo River. This commitment dates back to 2004 as described in the Commission's 2005 Plan (see Page 2-13 of this Plan).

Table 3.3 shows the anticipated schedule of Title IV Account interest payments from FY2016 through FY2020, and how the Commission proposes to use those interest payments.

In summary, the Commission proposes to manage the Title IV Account to yield interest payments of \$40 to \$45 million over the next five years. To accomplish this, the balance of the principal invested in the Title IV Account is expected to decline from its current value of about \$153 million, to about \$127 million at the end of FY2020. Actual amounts depend on several factors, including annual appropriations under CUPCA Titles II and III for support of Commission programs, actual investment options available and selected for future Title IV Account investments, and actual program element costs as projects proceed.

Appendix C contains historical data on Title IV Account appropriations and investments, as well as potential future Title IV Account projections.

Table 3.1 Estimated costs of implementing Mitigation Plan FY2016-FY2020

PROGRAM/PROGRAM ELEMENT	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	5-Year SUM
Provo River/Utah Lake Watershed						
June Sucker Recovery Program						
Annual Contribution to JSRIP	125,000	125,000	125,000	125,000	50,000	550,000
Hobble Creek Restoration Project	400,000	50,000	5,000	5,000	0	460,000
						1,010,000
Provo River Delta Restoration						
Monitoring & Studies	60,000	65,000	70,000	70,000	75,000	340,000
Land Acquisition	8,000,000	6,000,000	250,000	250,000	125,000	14,625,000
Design & Construction of Delta	1,000,000	1,500,000	3,500,000	4,000,000	2,500,000	12,500,000
Design & Construction of Recreation Facilities	150,000	250,000	600,000	1,000,000	250,000	2,250,000
						29,715,000
Diversion Dam Modifications for JSRIP						
Provo River/Hobble Creek Diversion Dams	25,000	75,000	125,000	300,000	125,000	650,000
						650,000
Utah Lake Wetland Preserve						
Land Acquisition	300,000	400,000	550,000	550,000	1,000,000	2,800,000
Wetland Restoration & Development	100,000	100,000	110,000	110,000	125,000	545,000
Utah Lake Wetland Preserve O&M&R*	285,000	290,000	300,000	300,000	300,000	1,475,000
						4,820,000
Provo River Restoration Project						
PRRP Project O&M&R*	250,000	250,000	275,000	275,000	275,000	1,325,000
						1,325,000
Diamond Fork Watershed						
Aquatic and Riparian Restoration						
Instream Flow, Restoration Planning, NEPA	475,000	75,000	50,000	175,000	125,000	900,000
Water Quality Monitoring	25,000	25,000	25,000	25,000	25,000	125,000
Diamond Fork Mitigation						
O&M&R*	25,000	25,000	25,000	25,000	250,000	350,000
Land Acquisition	2,000,000	1,400,000	0	0	0	3,400,000
Native Species Conservation	50,000	50,000	50,000	50,000	50,000	250,000
						5,025,000
Strawberry /Duchesne Watershed						
SACS Angler Access and Related Facilities						
O&M&R*	80,000	80,000	85,000	85,000	85,000	415,000
						415,000
Duchesne River Area Canal Rehabilitation Mitigation						
DRACR Mitigation Planning and NEPA	15,000	150,000	500,000	1,700,000	1,000,000	3,365,000
						3,365,000
Lower Duchesne Wetland Project						
Design & Implementation	1,900,000	2,000,000	2,000,000	400,000	100,000	6,400,000
Land Acquisition & Leases, Water	100,000	100,000	100,000	100,000	100,000	500,000
Tribal management O&M&R*	350,000	350,000	365,000	365,000	250,000	1,680,000
						8,580,000
Stream, Watershed, and Wildlife Habitat Restoration						
O&M&R*	90,000	85,000	105,000	105,000	105,000	490,000
Protection of Bonneville Unit Mitigation	50,000	50,000	50,000	50,000	50,000	250,000
Strawberry Valley Stream Restoration	10,000	15,000	50,000	50,000	0	125,000
						865,000
Wildlife Habitat Acquisition						
Land Acquisition	450,000	450,000	450,000	450,000	450,000	2,250,000
O&M&R*	100,000	100,000	110,000	110,000	110,000	530,000
						2,780,000
Sage Grouse Conservation						
	55,000	55,000	55,000	60,000	60,000	285,000
						285,000
Great Salt Lake/Jordan River Watersheds						
Project O&M&R*	55,000	55,000	55,000	60,000	60,000	285,000
						285,000
Statewide Program						
Fish Hatchery Restoration & Construction						
	0	0	0	0	400,000	400,000
Native Aquatic Species Conservation						
	25,000	25,000	25,000	25,000	25,000	125,000
						125,000
Contract Costs for project support						
	425,000	420,000	495,000	495,000	495,000	2,330,000
						2,330,000
TOTAL	16,975,000	14,615,000	10,505,000	11,315,000	8,565,000	61,975,000

*O&M&R: Operations, Management & Maintenance, and Repair & Replacement of features or facilities.

Table 3.2 Estimated costs of providing instream flow for Hobble Creek or the Provo River*

ESTIMATED COSTS OF INSTREAM FLOW COMMITMENT	
Utah Lake System: Title III / Section 8 Costs of Pipeline (302(a))	\$ 20,927,831
Utah Lake System: Title III / Section 8 Costs of Pipeline (202(c))	\$ 25,000,000
Total Program Costs	\$ 45,927,831

* In its 2005 Plan, the Commission disclosed its commitment to provide \$15 million of 2005 budget authority under Section 302(a) of CUPCA (indexed) to pay for a portion of the costs of the Spanish Fork Canyon-Provo Reservoir Canal Pipeline to provide capacity in the pipeline to deliver instream flow water, when available, to either Hobble Creek or the Provo River (see Page 2-13 of this Plan). Remaining costs of securing that capacity would be under the authority of CUPCA Section 202(c). Funds have not been appropriated to pay these costs.

Table 3.3 Schedule and Estimates of Title IV Account Interest Payments and their proposed distribution.
(See Appendix C for further information)

	FY 2014 to FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
Interest Earned (Based on Existing Investments) ¹	\$28,858,466	\$6,354,435	\$6,335,180	\$2,219,159	\$0	\$0	\$43,767,240
Interest Earned (Based on Estimated Future Investments) ²	n/a	n/a	\$9,627	\$8,113,442	\$9,380,561	\$9,380,561	\$26,884,191
Interest Retained for Program Expenditure ³	\$20,747,003	\$5,104,435	\$5,085,180	\$9,032,601	\$8,080,561	\$7,980,561	\$56,030,341
Interest Reserved for Agency Administration ⁴	\$2,500,000	\$1,250,000	\$1,250,000	\$1,300,000	\$1,300,000	\$1,400,000	\$9,000,000
Estimated Cumulative Balance of Title IV Investment Account ⁵	\$153,453,610	\$153,453,610	\$129,263,752	\$127,250,441	\$127,250,441	\$127,250,441	

¹ The Title IV Account is currently invested across six separate funds in the U.S. Treasury. Those investments produce known (fixed) semi-annual interest payments. Investments may be made for a period of 6 months to 5 or more years. All six investments are scheduled to mature (allowing re-investment) by or before 5/15/2018.

² We've estimated the amount of interest that may potentially be earned in the future based on current investment options available in FY 2016. Predicted interest rates, premium rate (cost of the investment), and pre-paid interest are factored into these estimates. Past performance or availability of investments yielding similar interest at similar premium rates are not guaranteed for future investments.

³ The Commission is authorized by law (P.L. 108-137, 117 Stat. 1827 Section 214) to expend interest earned from the Title IV Account beginning in FY 2014. The Commission retained \$20,747,003 of interest received in FY2014 and FY2015 for project expenditures. The Commission has identified a program need from the Title IV Account of approximately \$40 million to \$45 million over the next five years (actual amount will depend on annual appropriations received and actual project costs).

⁴ The Commission is authorized to expend up to \$1.5 million annually (indexed) for agency administration. Actual costs have been lower.

⁵ The value of all investments in the Title IV Account as of 10/1/2015 (the end of FY2015) was \$153,453,610. The Commission estimates the balance of the investments in the Title IV Account will be \$127,250,441 by the end of FY2020 (actual amount will vary based on factors discussed in Notes 2, 3 and 4 (above)).

Chapter 4

COMMENTS and RESPONSES

A draft of this combined Plan and Report was released for a 60-day public review on April 15, 2016. Public notice was made on our website and approximately thirty hard copies were mailed out along with approximately thirty letters and 130 emails referring the public to the draft document available for review and download on our website (www.mitigationcommission.gov). Public comments were accepted via written letter, as well as email.

Public comments consisted of three letters received through the mail, one letter received through email, and one email. The commenters were: Duchesne County Commission, Stonefly Society Chapter of Trout Unlimited, U.S. Department of the Interior, Central Utah Project Completion Act Office, U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources.

The letters are displayed on the following pages with individual comments within them assigned a number. Responses that follow each letter are numbered according to the comment to which they respond.

Letter Number	Individual or Organization
1	Duchesne County Commission
2	Stonefly Society Chapter of Trout Unlimited
3	U.S. Department of the Interior, Central Utah Project Completion Act Office
4	U.S. Fish and Wildlife Service
5	Utah Division of Wildlife Resources

LETTER 1. DUCHESNE COUNTY COMMISSION



DUCHESNE COUNTY COMMISSION

Ronald Winterton, Chairman; Ken Burdick, Member; Greg Todd, Member

P.O. Box 270
Duchesne, Utah 84021-0270
Phone (435) 738-1100
Fax (435) 738-5522

May 16, 2016

Mr. Mark Holden, Executive Director
Utah Reclamation, Mitigation & Conservation Commission
230 S 500 East, Suite 230
Salt Lake City, UT 84102-2045

RE: Draft Annual Report and Mitigation Plan

Dear Mr. Holden:

Thank you for giving Duchesne County an opportunity to review and comment on the Utah Reclamation, Mitigation & Conservation Commission's Draft Annual Report and Plan. After review of this report and plan, we offer the following for your consideration:

Strawberry/Duchesne Watershed (Page 2-34): At the bottom of this page, there is a statement that "Greater sage grouse is a species in decline across its range due to habitat loss." This statement should be revised. Recent science shows that Greater sage grouse populations have been increasing in Utah due to more favorable weather conditions and the efforts of private, state and federal land managers. Some of these positive conditions, for the Strawberry Valley grouse population, are mentioned on Page 2-43 of the plan. Duchesne County believes that while some historic decline in Greater sage grouse populations may have been due to habitat loss, a greater contributor to such declines is predation. Greater sage grouse nest on the ground, where their eggs and young are easy prey for coyotes, raptors, badgers, ravens, fox, skunks and raccoons. Please contact the Utah Division of Wildlife Resources for more accurate, up to date, information associated with Greater sage grouse populations in Utah and the effects of climate, wildfire and predation on the species.

1.1

Strawberry/Duchesne Watershed (Page 2-35): This page addresses the increase in energy development in the region surrounding the Lower Duchesne River Wetland Mitigation Project between 1995 and 2014. What this section fails to mention is that the dramatic drop in oil prices has brought energy development to a virtual halt. For example, according to the Utah Division of Oil, Gas and Mining, the number of new wells drilled in Duchesne County dropped from 433 in 2014 to 37 in 2015 to 4 in the first four months of 2016.

1.2

Strawberry/Duchesne Watershed (Page 2-36): The first paragraph on this page should be centered and italicized to match the formatting in the remainder of the document.

1.3

Strawberry/Duchesne Watershed (Page 2-40): In the middle of this page, a new paragraph was inserted to give an update on the Lower Duchesne River Wetlands Mitigation Project. This update fails to address two major issues Duchesne County continues to have with this project:

LETTER 1. DUCHESNE COUNTY COMMISSION

Mr. Mark Holden
Mitigation Plan
May 16, 2016
Page 2 of 2

mosquito control and noxious weed control. Please amend this section of the plan to specify how those two issues are being addressed as the mitigation project moves forward. Also, on Page 2-40, there is a repetition of the words “in the” at a point five lines up from the bottom of the page.

1.4

Strawberry/Duchesne Watershed (Page 2-43 and 2-44): The last paragraph on Page 2-43, which continues on to Page 2-44, addresses the westward expansion of energy development in Duchesne County and how such development may have negative impacts on lands purchased for mitigation. The reader is referred to Map 7 on Page 2-35 to view this westward expansion. However, this Map does not depict energy development west of Antelope Canyon and does not show how oil well development affects Mitigation Commission lands in Township 3 South, Ranges 7 and 8 West or in Township 4 South, Ranges 8 and 9 West. A map of western Duchesne County oil well locations (and proposed locations) may be needed here.

1.5

Strawberry/Duchesne Watershed (Page 2-46): The final paragraph on this page mentions that the Mitigation Commission closed several “unauthorized two-track roads” in Duchesne County in 2005, 2006, 2011 and 2013. These roads may have been classified as Class D public roads and such roads can be closed only after a public hearing and receiving permission from the Duchesne County Commission. Please submit to Duchesne County maps of the roads that were closed so we can determine if such closures occurred according to state law.

1.6

Appendix D, Item #23: This “environmental commitment” involves efforts to reduce deer mortality on highways around Jordanelle Reservoir. The status of this commitment is “completed” due to an agreement by the USFWS, DWR and the Mitigation Commission to “purchase additional terrestrial habitats near Fruitland.” Duchesne County objects to supplying lands for mitigation to address deer mortality on highways near Jordanelle Reservoir. Such mitigation lands should have been acquired closer to Jordanelle; not in the Fruitland area of Duchesne County.

1.7

Again, we thank you for the opportunity to comment. Please send us your response to our comments; including whether the proposed report and plan will or will not be amended as a result. Please coordinate with Duchesne County well in advance of any additional property acquisitions in our county for mitigation purposes. We would appreciate an opportunity to meet with you in person to discuss your agency’s plans and programs in Duchesne County.

1.8

Sincerely,

DUCHESNE COUNTY COMMISSIONERS

Paul Mattson
Gary Todd
Ken W. Brunel

Mike Hyde
Mike Hyde, AICP
Community Development Director

LETTER 1. RESPONSE

- 1.1 Text at the end of page 2-34 has been revised to read: “Greater sage grouse is a species in decline across its range due to habitat loss and fragmentation, predation, encroachment of invasive species such as cheatgrass, predation, and other factors. Utah Division of Wildlife Resources lists it as a sensitive species.”
- 1.2 The last sentence on page 2-35 has been revised to read: “Growth in this industry has slowed dramatically since 2014 due to a downturn in the price of oil, but is expected to increase again in the future as oil prices increase.”
- 1.3 The formatting has been changed as suggested. Thank you.
- 1.4 The following has been added to the end of SACS Wetland Mitigation Implementation paragraph: “The Commission has, since 2009 ,and continues to provide funding annually to the Ute Indian Tribe for management and maintenance of the LDWP, including mosquito control and weed control. The Ute Tribe LDWP manager has coordinated these activities with Duchesne and Uintah Counties”. The repeated “in the” has been deleted. Thank you.
- 1.5 Map 7 on page 2-35 has been updated to show additional expansion of energy developments in the area.
- 1.6 A map showing the location of two-track roads that were closed in Duchesne County was sent to Mike Hyde, Community Development Director for Duchesne County on July 13, 2016, for review. Mike Hyde replied on July 20, 2016 and stated: “Our legal staff has looked at the roads that were closed by the Mitigation Commission and raised no concerns. Please check with the County before closing any other roads in the future.”
We will check with the County in the future, if there is a desire to close additional unauthorized roads.
- 1.7 Thank you for the comment. Acquired lands did include more than 2,600 acres acquired on a willing-seller basis in Wasatch County, as well as some lands purchased in Duchesne County, also on a willing-seller basis, with conservation values for not only mule deer, but also elk, Greater sage grouse, and other species.
- 1.8 Thank you for your comments. We appreciate the time and careful consideration you’ve given the draft document. The Final Mitigation Plan 2016 and Annual Report has been amended as described above and a copy has been sent to you.

Stonefly Society Chapter of



482 12th Avenue
Salt Lake City, Utah 84103
June 22, 2016

Mark Holden Executive Director
Utah Reclamation Mitigation and Conservation Commission
230 South 500 East
Salt Lake City, Utah 84102

Dear Mark,

The Stonefly Society Chapter of Trout Unlimited worked very hard to obtain the passage of the Central Utah Completion Act which included the formation of the Utah Reclamation Mitigation and Conservation Commission. We consider this a remarkably successful effort leading to the re-creation of the Middle Provo River, Diamond Fork & Sixth Water Creeks, the protection of & access to multiple streams in the Uintah Basin, the return of flows to the Upper Strawberry River, protection of lakes in the High Uintah's, enhancement of stream flows in the Uintah Basin, enhancement of Strawberry Valley, efforts to protect Utah Lake ecosystem, and finally the Jordan River Corridor and the Great Salt Lake.

We deeply appreciate that the Commission hopes to continue work on these projects in the Bonneville Unit area of the Central Utah Project. And that many of these areas are in need of continued work by the Commission. We are especially pleased that the Commission might explore additional work on Yellowstone Creek and Lake Fork River. This is an area with great potential.

In the next five years, we consider the planned efforts dealing with stream access on the Strawberry Collection System which includes the Strawberry River, Current Creek, West Fork Duchesne, main stem Duchesne, Rock, and Rock Creek of great importance to Utah fisherman.

We are also concerned that work continues on the Middle Provo River. This is a restoration project of national significance.

We are also pleased that Commission plans include work on the Utah Lake Wetlands Preserve, Lower Provo, enhancement of Utah Lake, restoring the Provo River/Utah Lake delta, and completing the Lower Duchesne Wetlands Project in association with Ute Indian Tribe.

We are particularly concerned that the Commission work to use CUP facilities to enhance stream flows in northern Utah waters connected to the CUP. We consider this an intention of the Central Utah Project Completion Act.

We are also pleased that work continues on the Diamond Fork System facilities, to optimize instream flows in Sixth Water and Diamond Fork and other restoration work in the drainage.

We are especially concerned that the US Congress has failed to continue funding for the Mitigation Commission as planned in the Central Utah Project Completion Act as passed in 1992. Reduced annual appropriations has forced the Commission to use, from 2006 to 2013, most of the funding from the Western Area Power Administration to fund projects rather than investing those funds in a planned conservation endowment fund for the State of Utah. This is a very important point. This money was planned to provide an ongoing fund for conservation work in the state of Utah.

Sincerely

Fred Reimherr, Conservation Chairman
Scott Antonettit, President
Stonefly Society Chapter Trout Unlimited



2.1

2.2

LETTER 2. RESPONSE

- 2.1 The Mitigation Commission is grateful to the Stonefly Society for their initial and continued efforts and support of the Mitigation Commission's programs and projects.
- 2.2 Thank you for your comment. The Mitigation Commission will continue to formulate its annual budget requests with the U.S. Department of the Interior.

LETTER 3. U.S. DEPARTMENT OF THE INTERIOR, CENTRAL UTAH PROJECT COMPLETION ACT

2016 Mitigation and Conservation Plan CUPCA Office Comments

General Comments

Throughout the document shading is used to indicate Implementation and Future actions but it is inconsistent. Sometimes only part of the section is shaded and other times the whole section is shaded. | 3.1

Acronyms need to be checked. For example sometimes the "Department of the Interior" is used, sometimes "Interior", sometimes "DOI". | 3.2

Specific Comments

Page 1-1, third paragraph, last sentence.
When referring generically to water projects reclamation should begin with a lower-case "r". | 3.3

Page 1-5, last paragraph,
The plan will not be printed at all, just on the website? | 3.4

Page 2-3, second to the last paragraph,
Reclamation with a lower-case r? | 3.3

Page 2-7, first paragraph,
The Flow Study Report was finalized in 2008. | 3.5

Page 2-11, first paragraph under Lower Provo River – Deer Creek Dam to Utah Lake heading
The specific date of May 26, 2015, could be used here which was the actual date the RODs were signed. | 3.6

Page 2-12, under Acquisition of Stream Flows, second sentence,
Change "will be" to "are." | 3.7

Page 2-12, footnote 2
Please add Department of the Interior, CUPCA Office as a JSRIP participant | 3.8

Page 2-13, first paragraph
DOI is defined as the acronym for Department of Interior, | 3.2

Page 2-13,
"Constructing and operating the ULS Project ~~Proposed Action~~..." | 3.9

Page 2-13, fourth paragraph
We question the need to include the discussion of the Provo Reservoir Canal project, no other 207 projects are highlighted. It just seems out of place. | 3.10

Page 2-13, bottom heading
"Instream Flow ~~Study~~ Studies" | 3.11

Page 2-14, Stream Restoration paragraph

LETTER 3. U.S. DOI, CENTRAL UTAH PROJECT COMPLETION ACT OFFICE

We are not sure what the statement regarding limited funding authorization means. It may be construed to mean that we are expending funds outside of our authority.	3.12
Page 2-15, fourth paragraph Would the statement, expanding the scope of Section 302(c) imply additional legislation is needed?	3.13
“However, irrigation diversions on lower Hobbie Creek can impede water deliveries , block access by spawners...	3.14
Page 2-16, Should the Paragraph titled “Implementation to Date & Future Actions” be in grey?	3.1
Page 2-17, Should the Paragraph titled “Implementation to Date & Future Actions” be in grey?	3.1
Page 2-18, second paragraph “The Utah Division of Wildlife Resources is pursuing acquisitions in partnership with the Commission and with the Bureau of Reclamation as the Commission’s agent. ”	3.15
Page 2-18, Should the Paragraph titled “Implementation to Date & Future Actions” be in grey?	3.1
Page 2-19, fourth paragraph “...major Bonneville Unit water development features, is in the early implementation phase.”	3.16
Page 2-19, Should the Paragraph titled “Implementation to Date & Future Actions” be in grey?	3.1
Page 2-20, second paragraph “...constructed pursuant to Section 8, but under the authorization of CUPCA...”	3.17
Page 2-20, fourth paragraph Should this paragraph about the “Implementation to Date” include a discussion of what has been done so far? Work with OVS, agreements being negotiated, designs being prepared, etc.	3.18
Page 2-21, first paragraph “...but artificially high flows, up to of over 500 cfs...”	3.19
Page 2-26, last paragraph Someplace in this description we should include a statement like: “Since the studies on Sixth Water and Diamond Fork Creeks will require a variance from the mandated instream flows, discussions have been held with the Utah Congressional Delegation who have concurred with the decision to conduct the studies. Informational meetings have also been held with the public and resource agencies.”	3.20
Page 2-33, second paragraph Is the official title the Strawberry Project? Is that a state title or does it relate to Strawberry Reservoir?	3.21
Page 2-40, Uinta Basin Replacement Project mitigation paragraph Should this paragraph be written in the past tense since the program element is complete?	3.22
Page 2-59, first paragraph	

LETTER 3. U.S. DOI, CENTRAL UTAH PROJECT COMPLETION ACT OFFICE

Should there be a discussion of how under Section 313(c) of CUPCA DOI is responsible for providing funds for O&M of hatcheries improved by the Commission, but that in 2012 due to funding restrictions DOI made the decision to only provide O&M funds for ESA and tribal hatcheries?

3.23

LETTER 3. RESPONSE

- 3.1 Gray shading in the draft Annual Report and 2016 Mitigation Plan was provided with the intent of aiding readers in identifying new Report information and changes in our Plan focus for the next five years. As commenters have had the opportunity to review this key information, the gray shading has been removed in the Final document.
- 3.2 We've attempted to identify all instances where an acronym was used for the U.S. Department of the Interior, and have revised the text in those instances to use only the acronym "Interior", as opposed to "DOI".
- 3.3 We've capitalized the "R" in reclamation when we are using the word in place of, or in reference to, the Federal government agency. So, not in reference to a general water reclamation project, but specifically a U.S. Bureau of Reclamation project. Similarly, when referencing Reclamation law, we are referring to U.S. Bureau of Reclamation law.
- 3.4 As indicated in this paragraph, the Plan will be printed and distributed to the groups identified in the paragraph, as well as to those specially requesting it.
- 3.5 The Provo River Flow Study Report referenced in this paragraph was completed by Bio-West, Inc. in February 2004. It's full title is: "Jordanelle to Deer Creek PROVO RIVER FLOW STUDY Flow-habitat and Flow-ecological Relationships within the Riverine Ecosystem: Aquatic Habitat, Riparian Vegetation, Recreational Uses, Fluvial Processes".
A flow report on the *Lower* Provo River, the "LOWER PROVO RIVER ECOSYSTEM FLOW RECOMMENDATIONS FINAL REPORT", was finalized in 2008.
- 3.6 This date has been added to the text.
- 3.7 The text has been revised as suggested.
- 3.8 We apologize for this omission; the Department of the Interior CUPCA Office is a valued JSRIP team member and has been added to the participants listed in footnote 2.
- 3.9 The text has been revised as suggested.
- 3.10 The Provo Reservoir Canal project was mentioned because it involves such a significant quantity of water. The text has been revised as suggested.
- 3.11 The text has been revised. Thank you for catching this.
- 3.12 The text has been revised to clarify the meaning of limited funding authorization.
- 3.13 Expanding the scope of Section 302(c) does not imply further legislation is needed; Section 301(h) (1) gives the Commission the authority to do so.
- 3.14 The text has been revised as suggested.
- 3.15 The text has been revised as suggested.
- 3.16 The text has been revised as suggested.

LETTER 3. RESPONSE

- 3.17 The text has been revised as suggested.
- 3.18 As this is an Annual Report for the years 2005 through 2015, we've summarized information of activities conducted through 12/31/2015.
- 3.19 The text has been revised as suggested.
- 3.20 The suggested text has been added.
- 3.21 The text has been revised to clarify that the Strawberry Project mentioned is that of the Utah Division of Wildlife Resource's.
- 3.22 The paragraph has been rewritten so as to clarify the program element has been completed.
- 3.23 We did not add this discussion because the Mitigation Commission is not responsible for the O&M funding of the hatcheries.

LETTER 4. U.S. FISH AND WILDLIFE SERVICE



United States Department of the Interior FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119



October 17, 2016

In Reply Refer To:
FWS/R6
ES/UT
06E23000-2017-CPA-0001

Mark Holden, Executive Director
Utah Reclamation Mitigation and Conservation Commission
230 South 500 East, Suite 230
Salt Lake City, UT 84102

Dear Mr. Holden:

We have reviewed Appendix D of the Utah Reclamation Mitigation and Conservation Commission's (Mitigation Commission) Draft 2016 Mitigation & Conservation Plan And 2015 Annual Report dated April 2016. The 2016 plan and annual report were written to inform the public and guide the Mitigation Commission as it carries out its responsibilities through 2020. Appendix D includes a table summarizing the status of over 100 environmental commitments that the Mitigation Commission (and its conservation partners, as appropriate) is responsible for completing for the Bonneville Unit of the Central Utah Project. The environmental commitments originate from the Bureau of Reclamation's 1988 Definite Plan Report (DPR), new environmental commitments after the plan was in place, and modifications made to original DPR commitments. We have done a review of Appendix D and are providing the following comments to assist you in preparing a final report.

In general, we are encouraged by the progress the Mitigation Commission has made in many program areas, including Provo River Delta Restoration Project planning, the Lower Duchesne River Wetlands Mitigation Project, habitat restoration on Hobble Creek, and flow refinement and sediment studies on Diamond Fork River and Sixth Water Creek. We also appreciate the Mitigation Commission's ecosystem approach and collaborative planning process, which are essential to developing, implementing, and sustaining successful mitigation.

Our assessment of Appendix D included review of information on environmental commitments, action comments and information updated since 1999, and the status description of each commitment. The status of many actions is marked as completed, while some are ongoing, some are suspended due to a change in project planning, and some items are in the early stages for actions that are just beginning. In general we are in agreement with the status descriptions that

4.1

LETTER 4. U.S. FISH AND WILDLIFE SERVICE

are listed for each individual environmental commitment. In addition, we make the following comments where we had questions regarding action implementation, action disposition, or where additional information may be valuable.

Item Number 26 states that impacts of the Utah Lake System on Strawberry Reservoir, Utah Lake, Utah Valley streams, and the Jordan River will be presented in the environmental impact statement (EIS) on the Utah Lake System. We are concerned that past CUP related water development and its associated effects on Utah Lake water levels may have contributed to algal blooms and the poor water quality observed this past year in the lake. It is unclear to us whether ULS water operations will ultimately improve the Utah Lake water quality situation or worsen it. Thus, we recommend including an environmental commitment to assess the potential cumulative impacts associated with past and future water development affecting the Utah Lake Basin and Utah Lake water quality. The assessment should include analysis on potential effects to water quality of Utah Lake tributaries as well as to June sucker and its ecological requirements in the lake. If the associated effects of water development are determined to be negatively affecting Utah Lake water quality, then appropriate environmental commitments should be identified.

4.2

Items 37 and 88 state that the joint-lead agencies will plan for a long-term monitoring program in the Diamond Fork System and Spanish Fork River for leatherside chub. Because habitat conditions changed in these systems such that population sustainability of the species was uncertain, the Mitigation Commission began contributing approximately \$20,000 annually to leatherside chub conservation in 2010. We understand that these contributions have been used to support leatherside chub conservation. Therefore, we recommend assessing conservation efforts and species status including doing an assessment of population numbers lost in the Diamond Fork and Spanish Fork systems and comparing that information with habitat improvements and populations that have benefitted from the applied conservation funds. Any assessment should be based on standard ecological metrics (i.e. populations numbers, occupied habitat) to depict habitat and population fluctuations. In addition, environmental commitments should be included to address any additional leatherside chub conservation work that is deemed necessary post-assessment.

4.3

Items 41a through 41m. Significant monitoring of Ute ladies'-tresses including demographic and vegetation studies was completed in Diamond Fork Canyon and Spanish Fork Canyon by the Central Utah Water Conservancy District (District) and the Mitigation Commission. Appendix D states that a comprehensive review of Ute ladies'-tresses monitoring data through 2005 showed no reliable correlations between the habitat parameters being measured and the number of flowering plants observed. Monitoring was discontinued in 2008 after consultation with our office. However, it is our understanding that flow regimes in the system are now likely to change. Therefore, we recommend consideration of additional basic monitoring to track any potential effects of flow changes to this species.

4.4

Item 43 states that the District, in cooperation with the other Provo River water users, our office, and members of the Provo River Flows Workgroup, will agree on operational scenarios that mimic dry, moderate, and wet years and benefit the June sucker. Appendix D indicates this work has generally been accomplished and yearly water management and delivery is ongoing. However, we now have new information on June sucker spawning success as it relates to

LETTER 4. U.S. FISH AND WILDLIFE SERVICE

particular flow regimes. In addition, Provo River Delta restoration work may result in future changes to flow scenarios. For these reasons we recommend adding a commitment to reassess the operation scenarios for dry, moderate, and wet years to accommodate new information and any changed flow regimes.

4.5

Items 54, 58a, and 58d include information on the Provo River Restoration Project. Several of the items in this section have a comment stating that the Mitigation Commission proposes reconsideration of some monitoring requirements. We are aware that extensive monitoring has occurred in the Provo River Restoration Project area and that it may be reasonable to reconsider monitoring efforts that are no longer necessary. As part of any effort to reconsider monitoring requirements, we request that a thorough assessment be made for each resource that includes pre restoration and post restoration status. The assessment should also include a determination regarding project effectiveness for a given resource and indication of the need for any additional monitoring or mitigation. Resources that are of particular interest include Ute ladies'-tresses, leatherside chub, Columbia spotted frog, migratory birds, and any other additional endangered, threatened, or sensitive species that may be affected by project activities.

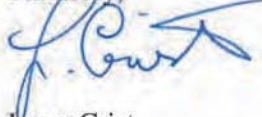
4.6

Items 86 and 87 discuss commitments made to monitor Ute ladies'-tresses populations in Spanish Fork Canyon and enact mitigation actions if effects thresholds are exceeded. However, because monitoring was suspended (with our office's approval) it is unclear how effects will be determined in the future. Please update this environmental commitment to describe the change in monitoring commitments, current species status, and future process for evaluation of mitigation needs. Also, as described above, please evaluate if basic monitoring would be useful to track the Spanish Fork Canyon Ute ladies'-tresses population.

4.7

We appreciate the opportunity to review the draft document and provide comments. We welcome further discussion of our recommendations regarding the environmental commitments of the Mitigation Commission and its partners, and we look forward to working with you to plan and implement fish and wildlife mitigation measures. If we can be of further assistance, please contact us at (801) 975-3330.

Sincerely,



Larry Crist
Utah Field Supervisor

Cc: DOI – CUP Completion Act Office (Attn: Russ Finley)
UDWR – Salt Lake City (Attn: Bill James, CUP Coordinator)
FWMAO – Vernal (Attn: Mark Fuller)

LETTER 4. RESPONSE

- 4.1 Thank you for the comment. Our agency is appreciative of the involvement and support of the U.S. Fish and Wildlife Service over these many years of carrying out mitigation measures for the Bonneville Unit of the Central Utah Project.
- 4.2 Thank you for the comment. We, along with the other Joint Lead Agencies for the Utah Lake System EIS, will coordinate with your office in the months ahead to discuss this recommendation.
- 4.3 Thank you for the comment. We, along with other entities engaged in leatherside chub conservation, will coordinate with your office in the months ahead to discuss this recommendation.
- 4.4 Thank you for the recommendation. We will coordinate with your office in the months ahead to discuss this recommendation and to reach consensus on Ute ladies'-tresses monitoring or other conservation measures.
- 4.5 The Provo River Delta Restoration EIS and ROD, the East Hobble Creek Restoration Environmental Assessment and Decision Notice, and a Resolution of the June Sucker Recovery Implementation Program on May 7, 2015, all recognized the emerging nature of instream flow recommendations, and adopted the approach as described in those other documents. We believe this recommendation has been and will continue to be achieved. We will be glad to discuss this recommendation further in the months ahead.
- 4.6 Thank you for this recommendation. We believe the data is available to address your comment, and we will coordinate with your office in the months ahead to discuss this recommendation.
- 4.7 Thank you for the recommendation. We concur that further consultation regarding Ute-ladies'-tresses is appropriate and we will coordinate with your office in the months ahead to discuss Ute ladies'-tresses monitoring or other conservation measures

LETTER 5. UTAH DIVISION OF WILDLIFE RESOURCES

7/25/2016

DEPARTMENT OF THE INTERIOR Mail - Utah Division of Wildlife Resources feedback on Appendix D to 2016 Mitigation and Conservation Plan



Holden, Mark <mholden@usbr.gov>

Utah Division of Wildlife Resources feedback on Appendix D to 2016 Mitigation and Conservation Plan

1 message

Bill James <billjames@utah.gov>

Fri, Jul 22, 2016 at 11:15 AM

To: Mark Holden <MHOLDEN@usbr.gov>

Cc: "Mingo, Richard" <rmingo@usbr.gov>, Maureen Wilson <mwilson@usbr.gov>, Christopher Keleher <christopherkeleher@utah.gov>, paul_abate@fws.gov

Mark--

We have had a couple of personnel changes which delayed our agency's response on Appendix D to the 2016 *Mitigation and Conservation Plan*. Jason Vernon just became our regional supervisor in Springville, and I just yesterday formally took over coordination of all DWR/CUP-related liaison.

I am personally excited to be working again on CUP Completion Act projects, and happy to be reacquainting myself with Mitigation Commission project activities (and staff) these days. It's a different "season" of CUPCA fulfillment, but nonetheless an interesting and important time for fish and wildlife conservation related to federal water development; I am glad to be back working on it.

A number of us here reviewed the Appendix D material, myself included, and we are happy to be able to report broad agreement with your conclusions and technical findings. We concur with Appendix D to the draft 2016 *Mitigation and Conservation Plan*, and have no further comments.

If this email will suffice to provide you with documentation of our Fish and Wildlife Coordination Act review and concurrence, then please let it serve that purpose. If you require a more formal indication, such as our Director's signature on agency letterhead, we are happy to generate that. Logistically speaking, both Ashley Green and I will be out on annual leave until August 1, so there would be a delay in following up, but we are glad to do so if you'll give us a couple of weeks.

Thank you, and we'll talk in August.

Bill James
Utah Division of Wildlife Resources
(801) 538-4752 office
(801) 230-1778 mobile

5.1

LETTER 5. RESPONSE

- 5.1 Thank you for your comments and concurrence. We appreciate Utah Division of Wildlife Resources' involvement and support over our many years of carrying out mitigation measures for Central Utah Project's Bonneville Unit. We look forward to continued coordination and consultation in the future.

Appendix A

Financial Supplement
Fiscal Years 2005-2015



UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Appendix A

Financial Supplement

The following financial supplement report summarizes Commission expenditures activities for fiscal years 2005 through 2015. More detailed financial information not included in this appendix, including obligation amounts, is available from the Commission upon request.

All funding authorized by CUPCA for use by the Commission is indexed (increased to adjust for inflation). The amount of the annual indexing is determined by published indices for engineering costs. Indexing is applied only to the remaining un-appropriated balance of an authorization. The amounts shown in this budget and schedule reflect indexing; therefore, amounts available under a specific authorization may in some cases appear to exceed the original amount authorized by CUPCA.

Utah Reclamation Mitigation and Conservation Commission
 Financial Supplement: Fiscal Year 2005 - Fiscal Year 2015

PROVO RIVER / UTAH LAKE	Original Authority [1991]	1 Remaining Authorization [2005]	2 Expenditures FY 2005	Expenditures FY 2006	Expenditures FY 2007	Expenditures FY 2008	Expenditures FY 2009	Expenditures FY 2010
LOWER PROVO RIVER								
June Sucker Recovery	1,177,000	4 130,074	(280,041)	(226,717)	(285,003)	(137,364)	(195,284)	(691,520)
Acquisition of Instream Flows	15,000,000	4 17,437,644	(7,018)	(21,752)	(29,769)	(23,826)	(26,928)	(29,110)
Instream Flow Study	500,000	86,205	0	(1,000)	0	(13,483)	(3,045)	0
Stream Restoration	1,264,500	4 1,424,120	(10,000)	(19,992)	(37,257)	(5,159)	(7,412)	(11,898)
Diversion Dam Modifications	4,000,000	4 5,888,054	(23,000)	(20,000)	(99,769)	(54,291)	(108,144)	(191,680)
Public Access and Facilities Development	508,000	508,000	0	0	0	0	0	0
Water Quality Improvements	25,000	25,000	0	0	0	0	0	0
MIDDLE PROVO RIVER								
WCWEP and Daniels Replacement Pipeline	10,500,000	0	0	0	0	0	0	0
Provo River Restoration Project	18,389,819	3 1,749,990	(4,018,223)	(6,823,214)	(1,169,283)	(5,230,328)	(590,802)	(893,532)
UPPER PROVO RIVER								
Highway-Related Deer Mortality Reduction	0	3 953,704	(4,500)	(21,569)	(6,757)	(4,979)	(258,585)	0
Upper Provo River Reservoir Stabilization Project	5,000,000	0	0	0	0	0	0	0
UTAH LAKE								
Utah Lake Fish Management and June Sucker Recov	500,000	4 522,568	0	0	0	0	0	(3,200)
Utah Lake Wetland Preserve	16,670,000	8,486,009	(1,370,079)	(1,847,214)	(1,673,390)	(819,528)	(1,977,317)	(2,001,259)
Utah Lake Drainage Basin Mitigation Commitments	2,767,900	3,711,500	(48,430)	(12,998)	(53,619)	(20,562)	(36,458)	0
Utah Lake Recreation Facilities	1,968,000	1,036,200	0	0	0	0	0	0
Terrestrial Habitat Conservation	750,000	1,139,500	0	0	0	0	0	0
Subtotal Provo River / Utah Lake	79,020,219	43,098,568	(5,761,291)	(8,994,457)	(3,354,846)	(6,309,521)	(3,203,975)	(3,822,199)
DIAMOND FORK								
Diamond Fork Area Assessment	40,000	0	0	0	0	0	0	0
Aquatic & Riparian Habitat Restoration - Sixth Wate	2,730,000	3,484,120	(73,142)	(206,508)	(51,358)	(5,395)	(209,264)	(68,600)
Water Temperature Study	215,000	117,721	0	(20,418)	(10,403)	0	(16,678)	(125)
Recreation Facilities in Diamond Fork	299,000	341,041	(28,339)	(12,000)	(4,041)	0	0	(28,958)
Subtotal Diamond Fork	3,284,000	3,942,882	(101,481)	(238,926)	(65,801)	(5,395)	(225,943)	(97,683)
DUCHESNE / STRAWBERRY								
Angler Access and Related Facilities	6,522,625	415,582	(262,218)	(332,586)	(1,472,681)	(2,037,213)	(150,158)	(27,185)
Mitigation for Duchesne Area Canal Rehabilitation (I	160,000	222,400	0	0	0	(70,000)	(20,000)	0
SACS Wetland Mitigation	7,927,000	10,037,633	(371,050)	(288,359)	(54,500)	(454,914)	(192,616)	(4,874,624)
Uinta Basin Replacement Project Mitigation	0	3 4,605,678	(1,524,509)	(915,331)	(959,219)	(1,488,620)	(1,641,629)	(2,026,059)
Strawberry Valley Stream, Watershed & Wildlife Hal	3,695,000	5,449,621	(21,715)	(24,175)	(28,777)	(9,549)	(1,114)	0
Sage Grouse Conservation and Recovery	700,000	193,233	(93,886)	(99,056)	(117,690)	(39,652)	(49,497)	(96,975)
Wildlife Habitat Acquisition	1,700,000	845,900	0	(900,000)	0	0	(367,447)	(241,324)
Instream Flow Management	400,000	207,966	(8,000)	0	(34,200)	0	(34,320)	(20,182)
Modify Diversion Structures	0	3 50,099	(742,604)	(367,006)	(9,707)	(7,655)	(19,918)	(2,018,397)
Recreation Improvements	40,000	40,000	0	0	0	0	0	0
Watershed Stabilization, Wildlife Enhancement & Ac	2,350,000	3,392,675	(3,000)	(140,000)	(57,597)	(52,780)	(13,949)	(2,288)
Subtotal Duchesne / Strawberry	23,494,625	25,460,786	(3,026,982)	(3,066,514)	(2,734,371)	(4,160,383)	(2,490,648)	(9,307,034)
GREAT SALT LAKE								
Great Salt Lake Wetlands Acquisition	11,150,780	1,187,739	(635,405)	(4,603,256)	(3,443,026)	(49,416)	(23,028)	(19,959)
Restoration of Agency Management Areas	1,300,000	0	0	0	0	0	0	0
Restoration and Management of Commission-Acquir	240,000	40,000	(25,523)	(20,592)	(16,346)	(19,026)	(15,916)	(13,620)
Wetland Preservation Strategies	939,220	15,000	(66,965)	(51,250)	(4,392)	(1,989)	(243)	0
Wetlands Ecosystem Education Plan (WEEP)	558,655	0	0	(7,601)	(188,269)	(59,673)	(28,327)	0
Subtotal Great Salt Lake	14,188,655	1,242,739	(727,893)	(4,682,699)	(3,652,033)	(130,104)	(67,513)	(33,579)

Utah Reclamation Mitigation and Conservation Commission
 Financial Supplement: Fiscal Year 2005 - Fiscal Year 2015

JORDAN RIVER	Original Authority [1991]	Remaining Authorization [2005]	Expenditures FY 2005	Expenditures FY 2006	Expenditures FY 2007	Expenditures FY 2008	Expenditures FY 2009	Expenditures FY 2010
Restoration & Management of Jordan River Natural	9,390,000	407,815	(18,825)	(27,318)	(63,128)	(191,382)	(61,111)	(10,500)
Subtotal Jordan River	9,390,000	407,815	(18,825)	(27,318)	(63,128)	(191,382)	(61,111)	(10,500)
CRSP / STATEWIDE	Original Authority [1991]	Remaining Authorization [2005]	Expenditures FY 2005	Expenditures FY 2006	Expenditures FY 2007	Expenditures FY 2008	Expenditures FY 2009	Expenditures FY 2010
Fish Hatchery Restoration and Construction	22,800,000	12,777,299	(551,510)	(4,000,772)	(2,277,998)	(74,068)	(368,481)	(2,834,581)
Sensitive Species Inventory and Database	1,500,000	149,913	(161,285)	(192,288)	(63,506)	(31,394)	(52,554)	(10,561)
Stream and Riparian Restoration/Enhancement and P	5,343,720	8,274,422	0	0	(800,000)	0	0	0
Small Watershed and Small Dam Improvements	3,774,404	3,974,200	0	0	0	0	0	0
Native Cutthroat Trout Restoration	475,000	213,680	(48,502)	(63,577)	(81,427)	(22,231)	(42,365)	(8,355)
Subtotal Statewide	33,893,124	25,389,515	(761,296)	(4,256,638)	(3,222,932)	(127,693)	(463,400)	(2,853,497)
OTHER PROGRAM ELEMENT	Original Authority [1991]	Remaining Authorization [2005]	Expenditures FY 2005	Expenditures FY 2006	Expenditures FY 2007	Expenditures FY 2008	Expenditures FY 2009	Expenditures FY 2010
General Projects	0	0	0	0	(142,057)	(174,240)	(167,910)	(209,124)
Program Elements Inactive / Complete	6,459,596	20,000	(78,723)	(980,966)	(1,574,152)	(256,237)	(67,495)	(23,038)
Subtotal Other Program Element	6,459,596	20,000	(78,723)	(980,966)	(1,716,209)	(430,477)	(235,404)	(232,162)
FINANCIAL SUMMARY	Original Authority [1991]	Remaining Authorization [2005]	Expenditures FY 2005	Expenditures FY 2006	Expenditures FY 2007	Expenditures FY 2008	Expenditures FY 2009	Expenditures FY 2010
Provo River / Utah Lake	79,020,219	43,098,568	(5,761,291)	(8,994,457)	(3,354,846)	(6,309,521)	(3,203,975)	(3,822,199)
Diamond Fork	3,284,000	3,942,882	(101,481)	(238,926)	(65,801)	(5,395)	(225,943)	(97,683)
Duchesne / Strawberry	23,494,625	25,460,786	(3,026,982)	(3,066,514)	(2,734,371)	(4,160,383)	(2,490,648)	(9,307,034)
Great Salt Lake	14,188,655	1,242,739	(727,893)	(4,682,699)	(3,652,033)	(130,104)	(67,513)	(33,579)
Jordan River	9,390,000	407,815	(18,825)	(27,318)	(63,128)	(191,382)	(61,111)	(10,500)
Statewide	33,893,124	25,389,515	(761,296)	(4,256,638)	(3,222,932)	(127,693)	(463,400)	(2,853,497)
Other Program Elements	6,459,596	20,000	(78,723)	(980,966)	(1,716,209)	(430,477)	(235,404)	(232,162)
Total	169,730,219	99,562,304	(10,476,492)	(22,247,518)	(14,809,320)	(11,354,954)	(6,747,993)	(16,356,654)

Notes:

1 Original Authority is found in the Central Utah Completion Act of 1992 [P.L. 102 575, as amended]. In many instances, two or more authorizations are combined in a Program Element.

2 Remaining Authority includes (a) the Original Authority [1991], (b) + or - Reallocations, (c) Less Appropriations, (d) Less Section 314(c) transfers, (e) Plus indexing increases and (f) plus funds that have been appropriated but not yet obligated.

3 Programs established pursuant to CUPCA through reallocation or transfer of funds.
 \$1,227,600 established for Middle Provo River Diversion Dams and combined in PRRP Fish and Riparian Habitat Restoration
 \$1,151,000 established for Highway-Related Deer Mortality Reduction
 \$7,235,248 established from CUWCD under Section 202(c) for the Uinta Basin Replacement Project Mitigation
 \$2,619,665 established from CUWCD under Section 203(a)(5) to Modify Diversion Structures
 \$1,800,000 established for construction of the Washington Lake Campground

4 Additional June Sucker Recovery Programs include: Acquisition of Instream Flows, Stream Restoration, Diversion Dam Modifications, Utah Lake Fish Management, Fish Hatchery Restoration & Construction.

Utah Reclamation Mitigation and Conservation Commission
 Financial Supplement: Fiscal Year 2005 - Fiscal Year 2015

PROVO RIVER / UTAH LAKE	Original Authority [1991]	1	Expenditures FY 2011	Expenditures FY 2012	Expenditures FY 2013	Expenditures FY 2014	Expenditures FY 2015	Remaining Authorization [2015]	2
LOWER PROVO RIVER									
June Sucker Recovery	1,177,000	4	(345,418)	0	(336,755)	(278,320)	(340,707)	598,767	
Acquisition of Instream Flows	15,000,000	4	(19,168)	(10,832)	0	0	0	23,725,500	
Instream Flow Study	500,000		0	0	0	0	0	98,200	
Stream Restoration	1,264,500	4	(27,105)	0	0	0	0	2,422,500	
Diversion Dam Modifications	4,000,000	4	0	0	(1,750)	0	(35,000)	7,374,000	
Public Access and Facilities Development	508,000		0	0	0	0	0	755,100	
Water Quality Improvements	25,000		0	0	0	0	0	25,000	
MIDDLE PROVO RIVER									
WCWEP and Daniels Replacement Pipeline	10,500,000		0	0	0	0	0	0	
Provo River Restoration Project	18,389,819	3	(392,608)	(286,286)	(248,560)	(135,066)	(115,204)	0	
UPPER PROVO RIVER									
Highway-Related Deer Mortality Reduction	0	3	0	0	0	0	0	1,654,730	5
Upper Provo River Reservoir Stabilization Project	5,000,000		0	0	0	0	0	0	
UTAH LAKE									
Utah Lake Fish Management and June Sucker Recovery	500,000	4	0	0	0	0	0	519,368	
Utah Lake Wetland Preserve	16,670,000		(2,575,642)	(480,789)	(266,864)	(1,230,536)	(268,362)	6,681,200	
Utah Lake Drainage Basin Mitigation Commitments	2,767,900		(273,310)	0	0	(0)	0	2,788,742	
Utah Lake Recreation Facilities	1,968,000		0	0	0	0	0	1,456,200	
Terrestrial Habitat Conservation	750,000		0	0	0	0	0	1,553,600	
Subtotal Provo River / Utah Lake	79,020,219		(3,633,251)	(777,907)	(853,929)	(1,643,921)	(759,273)	49,652,906	
DIAMOND FORK									
Diamond Fork Area Assessment	40,000		0	0	0	0	0	0	
Aquatic & Riparian Habitat Restoration - Sixth Water & Diamond Fork	2,730,000		(30,261)	(72,523)	(122,971)	(10,703)	(5,315)	4,054,200	
Water Temperature Study	215,000		0	(51,556)	(25,166)	(0)	(18,762)	0	
Recreation Facilities in Diamond Fork	299,000		0	0	0	0	0	0	
Subtotal Diamond Fork	3,284,000		(30,261)	(124,079)	(148,137)	(10,703)	(24,076)	4,054,200	
DUCHESNE / STRAWBERRY									
Angler Access and Related Facilities	6,522,625		(1,035)	0	0	0	0	(0)	
Mitigation for Duchesne Area Canal Rehabilitation (DRACR)Program	160,000		0	0	0	0	0	181,800	
SACS Wetland Mitigation	7,927,000		(2,239,245)	(1,561,981)	(1,180,905)	(1,194,110)	(2,008,167)	6,870,000	
Uinta Basin Replacement Project Mitigation	0	3	(490,285)	(41,529)	(11,176)	(38,822)	(40,062)	0	
Strawberry Valley Stream, Watershed & Wildlife Habitat Restoration	3,695,000		0	0	0	0	0	6,239,759	
Sage Grouse Conservation and Recovery	700,000		(67,059)	(53,215)	(57,178)	(64,855)	(70,342)	785,740	
Wildlife Habitat Acquisition	1,700,000		(4,368,077)	(75,236)	(171,497)	(14,112)	(57,744)	859,100	
Instream Flow Management	400,000		(17,880)	(38,830)	(37,733)	(39,993)	(82,688)	171,100	
Modify Diversion Structures	0	3	(2,839)	(326,470)	0	0	0	0	
Recreation Improvements	40,000		0	0	0	0	0	116,700	
Watershed Stabilization, Wildlife Enhancement & Access Mangement	2,350,000		0	0	0	0	0	3,899,600	
Subtotal Duchesne / Strawberry	23,494,625		(7,186,419)	(2,097,261)	(1,458,489)	(1,351,893)	(2,259,003)	19,123,800	
GREAT SALT LAKE									
Great Salt Lake Wetlands Acquisition	11,150,780		(5,000)	0	0	0	0	0	
Restoration of Agency Management Areas	1,300,000		0	0	0	0	0	0	
Restoration and Management of Commission-Acquired Properties	240,000		(18,030)	(52,967)	(46,644)	(33,141)	(58,543)	0	
Wetland Preservation Strategies	939,220		0	0	0	0	0	0	
Wetlands Ecosystem Education Plan (WEEP)	558,655		0	(5,000)	0	0	0	0	
Subtotal Great Salt Lake	14,188,655		(23,030)	(57,967)	(46,644)	(33,141)	(58,543)	0	

Utah Reclamation Mitigation and Conservation Commission
 Financial Supplement: Fiscal Year 2005 - Fiscal Year 2015

JORDAN RIVER	Original Authority [1991]	Expenditures FY 2011	Expenditures FY 2012	Expenditures FY 2013	Expenditures FY 2014	Expenditures FY 2015	Remaining Authorization [2015]
Restoration & Management of Jordan River Natural Areas	9,390,000	0	(5,300)	(24,536)	(17,884)	(2,488)	212,200
Subtotal Jordan River	9,390,000	0	(5,300)	(24,536)	(17,884)	(2,488)	212,200
CRSP / STATEWIDE	Original Authority [1991]	Expenditures FY 2011	Expenditures FY 2012	Expenditures FY 2013	Expenditures FY 2014	Expenditures FY 2015	Remaining Authorization [2015]
Fish Hatchery Restoration and Construction	22,800,000	(2,180,829)	0	0	0	0	5,003,500
Sensitive Species Inventory and Database	1,500,000	0	0	0	0	0	0
Stream and Riparian Restoration/Enhancement and Public Access	5,343,720	(77,821)	0	0	0	0	12,590,823
Small Watershed and Small Dam Improvements	3,774,404	0	0	0	0	0	5,418,000
Native Cutthroat Trout Restoration	475,000	(17,321)	(19,494)	(697)	(27,488)	(13,552)	44,901
Subtotal Statewide	33,893,124	(2,275,971)	(19,494)	(697)	(27,488)	(13,552)	23,057,223
OTHER PROGRAM ELEMENT	Original Authority [1991]	Expenditures FY 2011	Expenditures FY 2012	Expenditures FY 2013	Expenditures FY 2014	Expenditures FY 2015	Remaining Authorization [2015]
General Projects	0	(241,936)	(554,361)	(132,050)	(378,562)	(397,547)	0
Program Elements Inactive / Complete	6,459,596	(7,221)	(6,157)	(3,384)	(3,628)	(3,930)	0
Subtotal Other Program Element	6,459,596	(249,156)	(560,518)	(135,434)	(382,190)	(401,477)	0
FINANCIAL SUMMARY	Original Authority [1991]	Expenditures FY 2011	Expenditures FY 2012	Expenditures FY 2013	Expenditures FY 2014	Expenditures FY 2015	Remaining Authorization [2015]
Provo River / Utah Lake	79,020,219	(3,633,251)	(777,907)	(853,929)	(1,643,921)	(759,273)	49,652,906
Diamond Fork	3,284,000	(30,261)	(124,079)	(148,137)	(10,703)	(24,076)	4,054,200
Duchesne / Strawberry	23,494,625	(7,186,419)	(2,097,261)	(1,458,489)	(1,351,893)	(2,259,003)	19,123,800
Great Salt Lake	14,188,655	(23,030)	(57,967)	(46,644)	(33,141)	(58,543)	0
Jordan River	9,390,000	0	(5,300)	(24,536)	(17,884)	(2,488)	212,200
Statewide	33,893,124	(2,275,971)	(19,494)	(697)	(27,488)	(13,552)	23,057,223
Other Program Elements	6,459,596	(249,156)	(560,518)	(135,434)	(382,190)	(401,477)	0
Total	169,730,219	(13,398,089)	(3,642,525)	(2,667,864)	(3,467,220)	(3,518,412)	96,100,330

Notes:

- Original Authority is found in the Central Utah Completion Act of 1992 [P.L 102 575, as amended]. In many instances, two or more authorizations are combined in a Program Element.
- Remaining Authority includes (a) the Original Authority [1991], (b) + or - Reallocations, (c) Less Appropriations, (d) Less Section 314(c) transfers, (e) Plus indexing increases and (f) plus funds that have been appropriated but not yet obligated.
- Programs established pursuant to CUPCA through reallocation or transfer of funds.
 - \$1,227,600 established for Middle Provo River Diversion Dams and combined in PRRP Fish and Riparian Habitat Restoration
 - \$1,151,000 established for Highway-Related Deer Mortality Reduction
 - \$7,235,248 established from CUWCD under Section 202(c) for the Uinta Basin Replacement Project Mitigation
 - \$2,619,665 established from CUWCD under Section 203(a)(5) to Modify Diversion Structures
 - \$1,800,000 established for construction of the Washington Lake Campground
- Additional June Sucker Recovery Programs include: Acquisition of Instream Flows, Stream Restoration, Diversion Dam Modifications, Utah Lake Fish Management, Fish Hatchery Restoration & Construction.
- The Highway-Related Deer Mortality Reduction mitigation commitment has been completed, using Title IV funds. Appropriations were not adequate to support this program's completion.

Appendix B

CUPCA Program &
Commission Funding
Fiscal Years 1994-2015



UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION

Appendix B

CUPCA Program and Commission Funding FY1994-FY2015

The Central Utah Project (CUP) was originally authorized in 1956 as a participating project of the Colorado River Storage Project. The CUP was planned by the Bureau of Reclamation (Reclamation), and construction began on the project in 1966. For convenience, the CUP was originally divided into six units. The Bonneville Unit was the largest and last of the CUP units established. Reclamation continued planning and construction of the CUP until October 30, 1992, when the Central Utah Project Completion Act (CUPCA), Public Law 102-575, was enacted.

CUPCA provides for the orderly completion of the CUP by increasing the appropriations ceiling and authorizing features and measures for delivering water for municipal, industrial, and irrigation purposes; water conservation; wildlife mitigation; and in-stream flows. CUPCA also provides for cost-sharing of project costs, establishes a water conservation program, allows local entities to construct project features, and requires compliance with environmental laws.

CUPCA established a partnership arrangement among the Department of the Interior (Interior), the Central Utah Water Conservancy District (the District), the Utah Reclamation Mitigation and Conservation Commission (Commission), and the Ute Indian Tribe. The District was given the responsibility for completing the water conveyance facilities, and the Commission was tasked with completing the environmental mitigation. To implement CUPCA, Interior established a small office in Provo, Utah, (CUPCA Office) under the direction of the Assistant Secretary-Water and Science, to oversee project completion and the activities of the District, the Commission, and the Ute Indian Tribe.

The CUP annually provides 62,000 acre feet of water for irrigation of over 30,000 acres and 94,750 acre feet for municipal and industrial purposes, meeting the needs of approximately 400,000 people. This water is necessary to provide for the needs of the growing population in the Wasatch Front, one of the fastest growing areas in the Nation. The program is also a key component of meeting water challenges in Utah and the Colorado River Basin, and supports water conservation, development of the new energy frontier through renewable hydropower, and the river restoration component of the America's Great Outdoors initiative.

Federal funding for implementing CUPCA is subject to annual appropriations (budgetary) processes. The process starts when the President submits a detailed budget request for the coming fiscal year, which begins on October 1. This budget request is developed through an interactive process between federal agencies and the President's Office of Management and Budget (OMB) that begins the previous spring (or earlier).

Among other things, the President's budget lays out relative priorities for federal programs: how much the President believes should be spent on defense, agriculture, education, health, and so on. The President's budget is very specific, and recommends funding levels for individual federal programs or small groups of programs. As discussed below, the budget comprises different types of programs: some that require new funding each year to continue (such as CUPCA) and others that are ongoing and therefore do not require annual action by Congress. The President recommends funding levels for annually appropriated programs.

Annually appropriated programs, such as CUPCA, fall under the jurisdiction of the House and Senate Appropriations Committees. Funding for these programs must be renewed each year to keep government agencies open and programs operating. These programs are considered “discretionary” because the laws that establish them leave Congress with the discretion to set the funding levels each year. Altogether, discretionary programs make up about one-third of all federal spending. The President’s budget spells out how much funding he recommends for each discretionary program.¹

In the pages that follow, Figure B-1 shows the Federal funding history of CUPCA from FY 1993 through FY 2015. The funds received by Interior in a given year were distributed among the CUPCA Office, the District, and the Commission. In FY 1994 through FY 2004, additional funds were appropriated under Title V of CUPCA, known as the “Ute Indian Rights Settlement”. Figure B-2 shows the President’s budget request, the Congressionally-approved (or “enacted”) amount, and the estimated funding capacity of the District, Interior, and Commission to implement CUPCA for fiscal years 2005 to 2015.

Titles II and III of CUPCA authorized the Commission to expend appropriated funds for various mitigation and conservation projects. Title IV of CUPCA authorized the creation of a trust account in the U. S. Treasury, the purpose of which is to provide an ongoing source of funds for the Commission for:

- (1) mitigation and conservation projects authorized in CUPCA Titles II and III , and
- (2) mitigation and conservation projects unknown at the date of enactment, but that became necessary as CUP water development features authorized in CUPCA Title II were designed and/or constructed over time.

Pursuant to CUPCA, the Title IV Account is comprised of (A) contributions to build up an initial principal within the Account, plus (B) interest earned on the principal during an initial period of years. Annual contributions from Interior, the District, and the State of Utah were specified over an initial eight year period; an annual contribution from the Western Area Power Administration of the Department of Energy (Western) continued through FY2013.² The amount of contributions from the District and from Western was indexed annually (increased by a percentage determined in accordance with inflation measures).

Title IV granted the Commission discretion to either invest or expend the annual Western contribution, as well as contributions from the District in fiscal years 1994 through 2001.

As required by CUPCA, all interest earned through FY 2013 was re-invested in the Account. Beginning in FY 2014, the earned interest is no longer required to be re-invested, and is instead directly available either for Commission expenditure or, upon the Commission’s discretion, for re-investment into the Account. The Commission directs the investment of matured investments, and earned interest to be re-invested, through written instructions to the CUPCA Office.

Investments in notes and/or bonds have an established maturity date and interest is earned semi-annually. When an investment instrument (bond or note) is chosen for investment of Title IV Account funds, there is typically an up-front cost. The “premium” paid to enter into an investment instrument varies, depending on the desired length of the investment period before maturity, and the desired interest rate. Generally, obtaining an investment with a higher interest rate will cost a higher initial premium. The Commission selects investment instruments that will yield the desired amount of interest over a time period that is needed to fund its programs.

¹Information excerpted from <http://www.cbpp.org/research/policy-basics-introduction-to-the-federal-budget-process>

²Section 214 of P.L. 108-137 amended CUPCA to terminate the Western contribution after FY 2013, and also authorized the Commission to expend interest from the Title IV Account beginning in FY 2014.

On the following pages, Figure B-3 illustrates the breakdown of Commission program funds from annual appropriations, Western contributions, and Title IV Account interest, FY 1997 to FY 2015. Table B-1 summarizes the Title IV contributions and the net annual investments into the Title IV Account from FY 1994 through FY 2015. Table B-2 shows a detailed breakdown of the Title IV Account investments, interest earned, premiums paid, accrued interest paid, and net interest earnings for FY 1994 to FY 2015. The balance of the Title IV Account at the end of FY 2015 is 153,453,610.

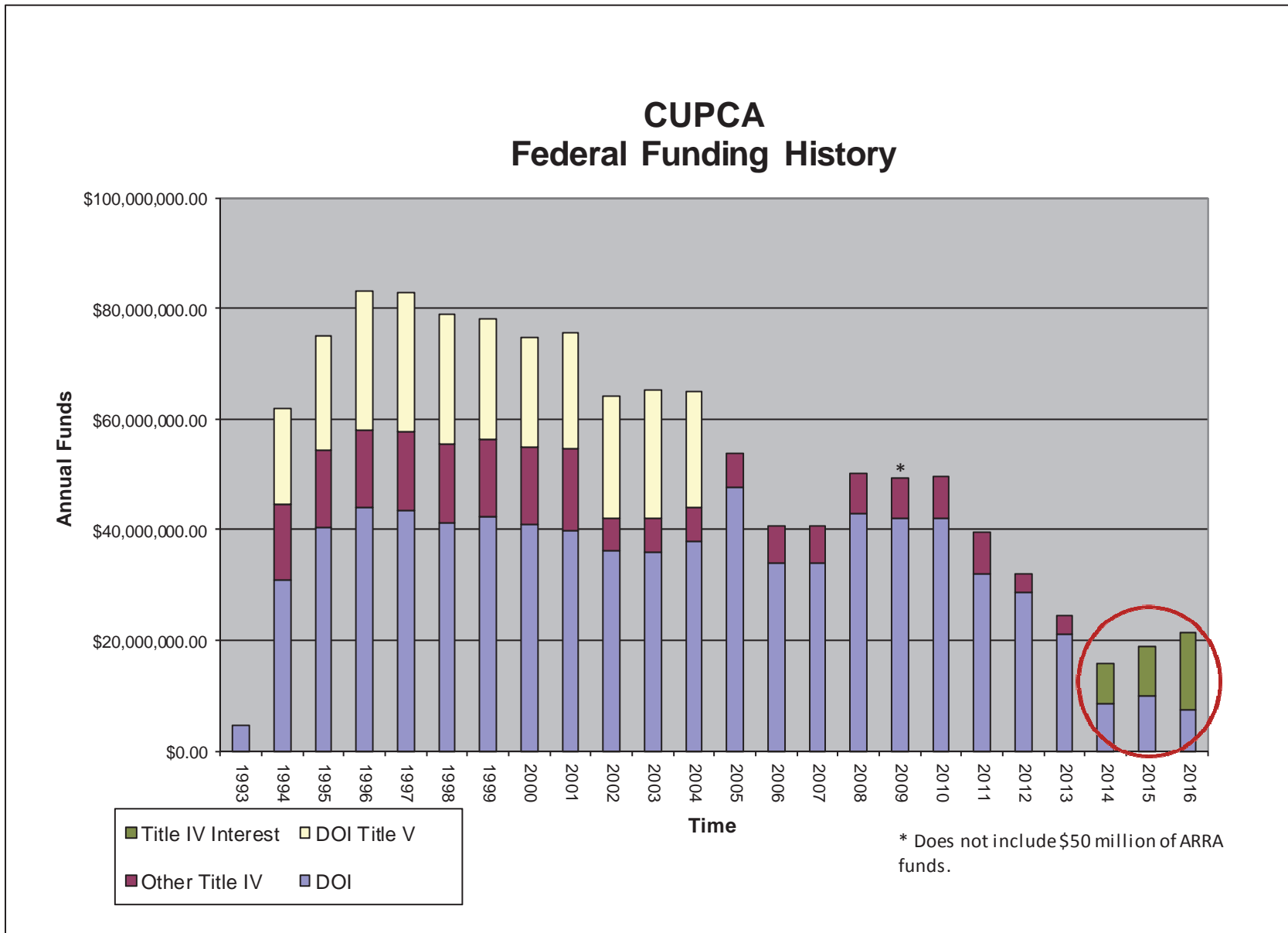


Figure B-1. CUPCA Program appropriations 1993 to 2016; appropriations plus Title IV Account interest committed to Commission program, 2014 to 2016. Title V funds for Ute Indian Tribe settlement (not a Commission program).

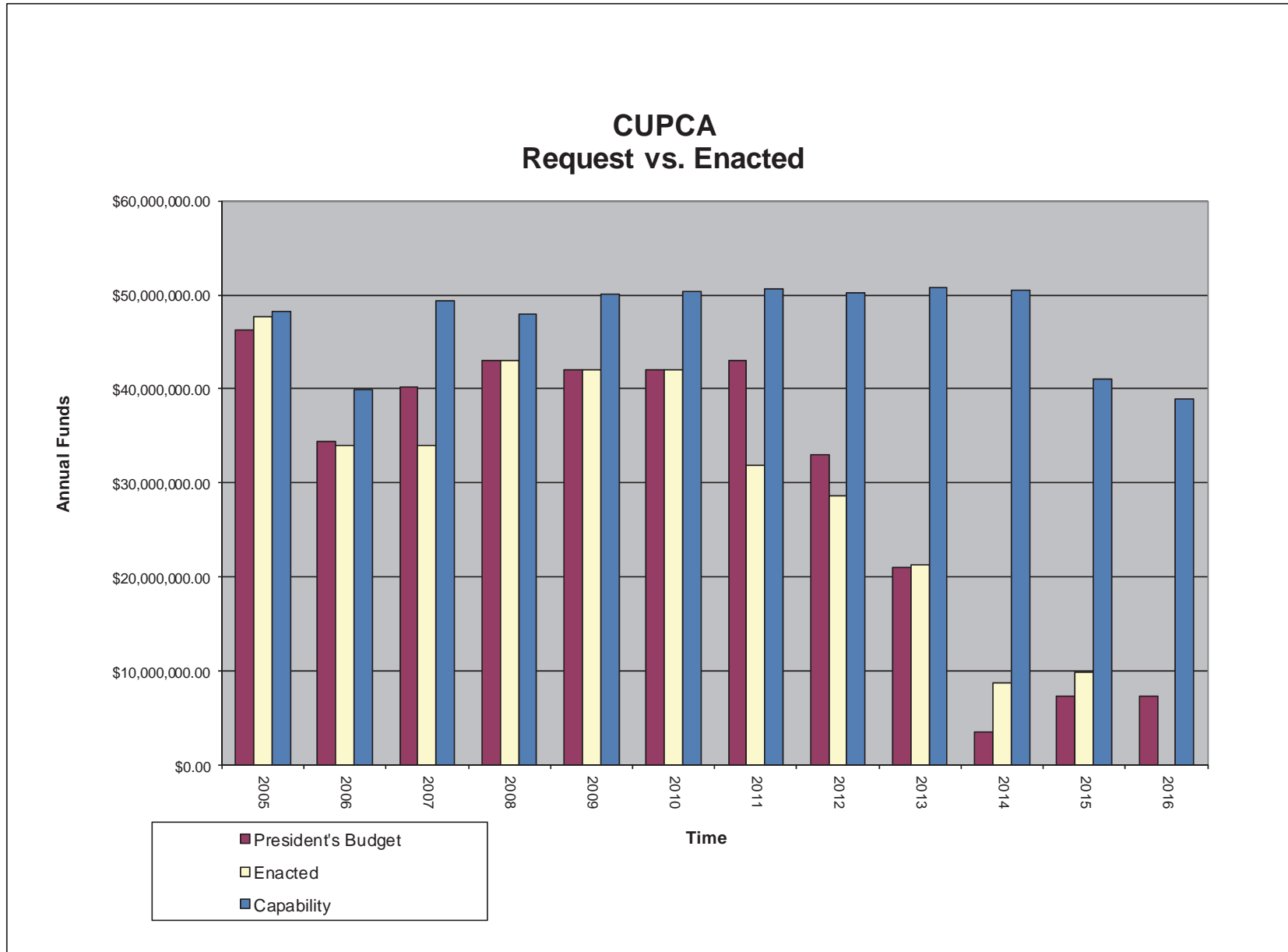


Figure B-2. CUPCA Program (Interior, District and Commission) enacted appropriations, President's budget, and program capability, 2005 to 2016

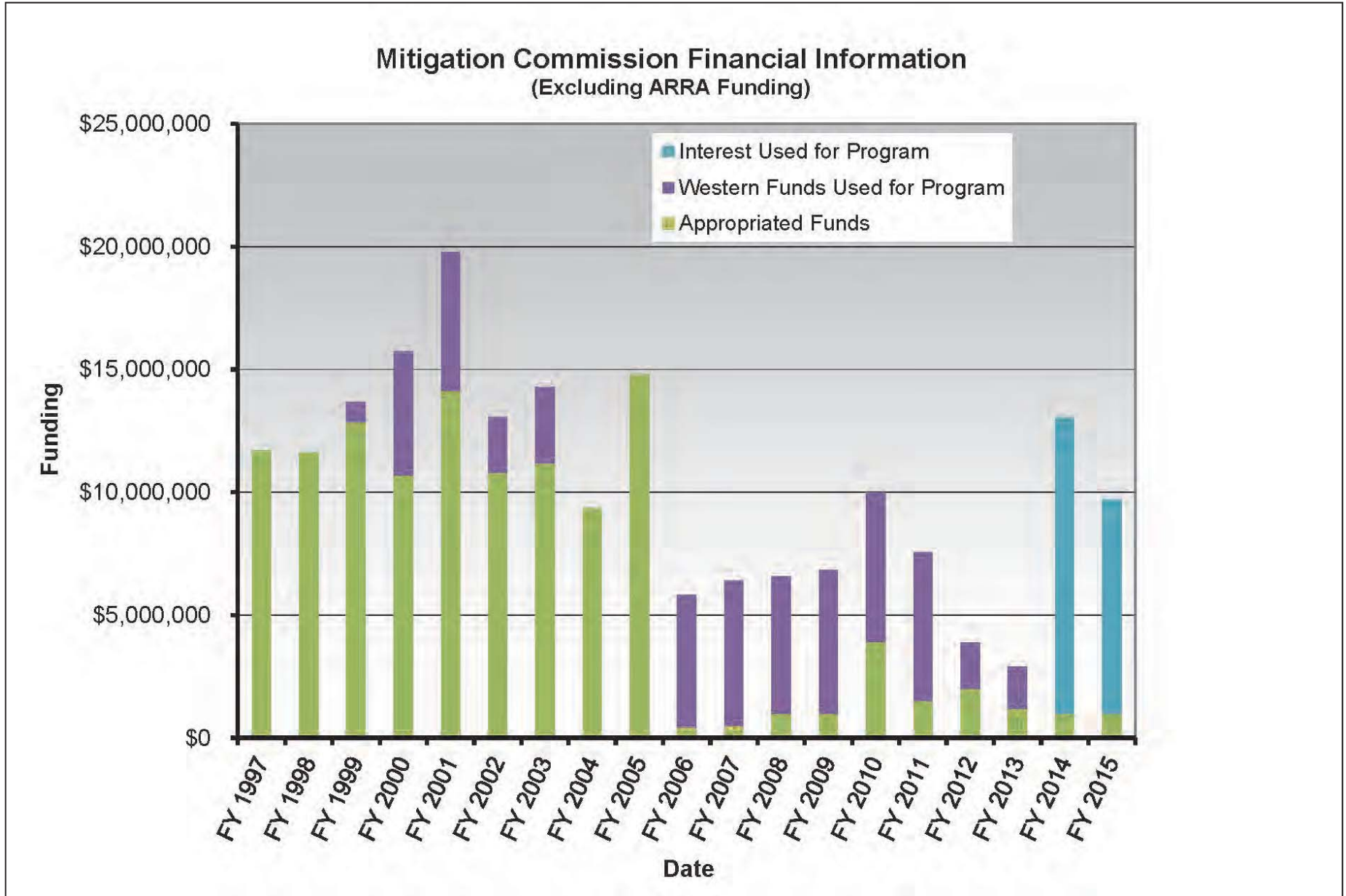


Figure B-3. Annual federal funding for Commission, 1997 to 2015. "Appropriated Funds"= appropriations received through Interior for Commission projects; "Western Funds Used for Program"= amount of Western Area Power Administration contribution used for Commission projects and not invested in Title IV Account; "Interest Used for Program" = amount of Title IV Account interest retained for Commission projects and not re-invested in Title IV Account.

Table B-1. Contributions to Title IV Account by source, 1994 to 2015. ^a

Fiscal Year	Federal Contribution	State Contribution	CUWCD Contribution	Western's Contribution	Interest Available from Account ^b	Investments from Other Sources ^c	Retained for Agency Administration ^d	Retained for Projects ^d	Annual Net Investment
1994	5,000,000	3,000,000	750,000	5,000,000	0		(250,000)	0	13,500,000
1995	5,000,000	3,000,000	772,500	5,135,000	0		(1,029,000)	0	12,878,500
1996	5,000,000	3,000,000	792,200	5,283,000	0		0	0	14,075,200
1997	5,000,000	3,000,000	814,500	5,432,000	0		0	0	14,246,500
1998	5,000,000	3,000,000	838,800	5,592,000	0		0	0	14,430,800
1999	5,000,000	3,000,000	858,000	5,036,000	0		(1,144,000)	(800,000)	11,950,000
2000	5,000,000	3,000,000	871,400	5,036,000	0		(871,400)	(5,036,000)	8,000,000
2001	5,000,000	3,000,000	890,600	5,950,000	0		(1,187,500)	(5,653,100)	8,000,000
2002	0	0	0	6,000,000	0		(1,227,400)	(2,272,600)	2,500,000
2003	0	0	0	6,060,630	0		(1,262,300)	(3,598,330)	1,200,000
2004	0	0	0	6,163,420	0		(1,282,300)	(2,200,000)	2,681,120
2005	0	0	0	6,150,400	0	2,700,000	(754,500)	0	8,095,900
2006	0	0	0	6,633,000	0		(1,257,000)	(5,376,000)	0
2007	0	0	0	6,633,000	0		(707,800)	(5,925,200)	0
2008	0	0	0	7,113,437	0		(1,500,000)	(5,613,437)	0
2009	0	0	0	7,342,000	0		(1,500,000)	(5,842,000)	0
2010	0	0	0	7,584,000	0		(1,500,000)	(6,084,000)	0
2011	0	0	0	7,568,832	0		(1,500,000)	(6,068,832)	0
2012	0	0	0	3,375,000	0		(1,500,000)	(1,875,000)	0
2013	0	0	0	3,198,467	0		(1,500,000)	(1,698,467)	0
2014	0	0	0	0	16,117,288		(2,500,000)	(12,112,310)	1,504,978
2015	0	0	0	0	11,165,972		0	(9,314,665)	1,851,307
	40,000,000	24,000,000	6,588,000	116,286,186	27,283,260	2,700,000	(22,473,200)	(79,469,941)	114,914,306

Total Contributions through 2013 ^d \$186,874,186

Less: Total Contributions Invested through 2013 ^d \$111,558,020

Less: Contributions Retained for Program through 2013 ^d \$75,316,166

^a "CUWCD" = Central Utah Water Conservancy District; "Western" = Western Area Power Administration. Contributions from CUWCD and Western were indexed annually.

^b Beginning with FY 2014, the Commission is authorized to retain (or to re-invest) interest earned from the Title IV Account for program expenditures.

^c In FY 2005, \$2,700,000 from a Western contribution from a prior year were invested in the Title IV Account.

^d P.L. 108-137 authorized retention of earned interest beginning in FY 2014

**Table B-2. Summary of Title IV Account investments, interest earned, premiums paid, accrued interest paid, and net interest earnings
FY 1994 to FY 2015**

Fiscal Year	Title IV Funds ALL Sources	Amount Invested	Interest Earned	Prem/Disc Paid	Accrued Interest Pd.	NET Investment Interest Earned
FY 1994	13,750,000	13,500,000	184,191	(107,339)	105,290	186,240
FY 1995	13,907,500	12,878,500	2,002,979	(1,529,200)	648,549	2,883,630
FY 1996	14,075,200	14,075,200	2,085,678	(125,893)	275,913	1,935,657
FY 1997	14,246,500	14,246,500	3,443,804	1,062,114	337,438	2,044,252
FY 1998	14,430,800	14,430,800	4,763,308	2,207,745	366,435	2,189,128
FY 1999	13,894,000	11,950,000	7,031,643	2,092,025	289,001	4,650,617
FY 2000	13,907,400	8,000,000	9,121,230	600,428	1,151,871	7,368,931
FY 2001	14,840,600	8,000,000	8,705,640	2,749,390	189,862	5,766,389
FY 2002	6,000,000	2,500,000	7,377,244	2,746,609	125,887	4,504,747
FY 2003	6,060,630	1,200,000	7,644,969	11,313,484	2,928	(3,671,443)
FY 2004	6,163,420	2,681,120	9,953,588	765,729	81,908	9,105,950
FY 2005	6,150,400	8,095,900	9,220,102	3,611,927	51,638	5,556,537
FY 2006	6,633,000	0	9,123,613	3,020,612	0	6,103,001
FY 2007	6,633,000	0	9,924,944	(390,622)	(3,577)	10,319,143
FY 2008	7,113,437	0	7,319,505	10,952,967	15,174	(3,648,637)
FY 2009	7,342,000	0	9,760,955	1,824,959	9,083	7,926,914
FY 2010	7,584,000	0	10,024,903	12,000,636	19,038	(1,994,771)
FY 2011	7,568,832	0	7,775,906	1,620,916	246,680	5,908,309
FY 2012	3,375,000	0	7,439,154	32,641,795	28,745	(25,231,385)
FY 2013	3,198,467	0	14,547,867	337,929	48,904	14,161,034
FY 2014		1,504,978	16,117,288	7,798,076	921,207	7,398,005
FY 2015		1,851,307	11,165,972	7,475,005	1,330,651	2,360,316
FY94-FY15	186,874,186	114,914,306	174,734,481	102,669,294	6,242,622	65,822,564

Net Principal (Invested + Interest Earned - Premiums - Accrued Interest)	\$180,736,870
Less: 2014 and 2015 Interest Not Reinvested ¹	\$27,283,260
Principal Balance as of FY 2015	\$153,453,610

Total Contributions Invested ^{1,2}	\$114,914,306
Interest Earned ²	\$174,734,481
Less: Available Interest Retained ¹	-\$27,283,260
Less: Premium And Accrued Interest Paid ²	-\$108,911,916
Principal Balance	\$153,453,610

¹ From Table B-1
² From Table B-2

Annual Title IV Distributions and DOI Appropriations

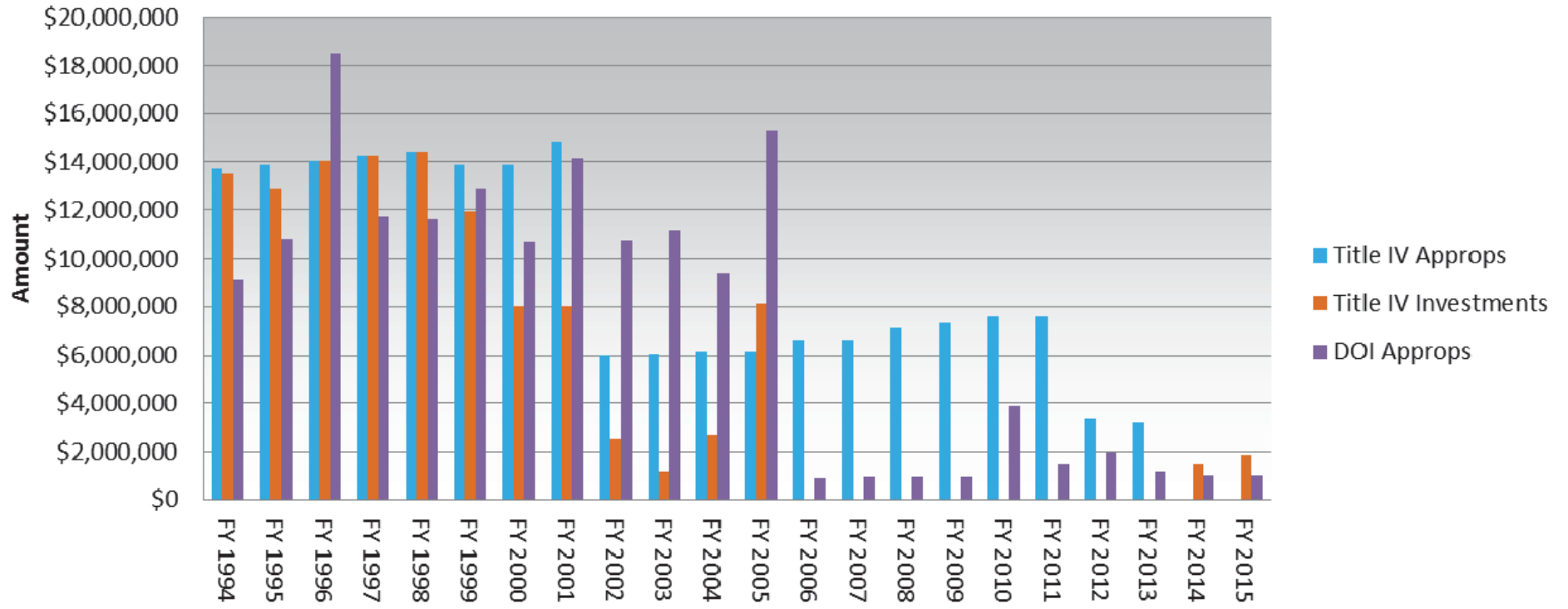


Figure B-4. Annual funding 1994 to 2015 from DOI appropriations, Title IV appropriations, and Title IV Account investments.

Appendix C

Estimated Costs of Plan Implementation
and
Management of Title IV Account
FY2016-FY2020



UTAH RECLAMATION
MITIGATION
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Appendix C

Estimated Costs of Implementing the Five Year Plan & Anticipated Management of Title IV Account FY2016-FY2020

The Commission is authorized to expend federal funds to carry out its mandate. Actual funding has depended on the amount Congress appropriates on an annual basis. In Appendix B, the federal appropriations history for the Commission's programs was presented. It is evident that appropriations for the Commission (and all of CUPCA) have declined over the past decade to the point where supplemental funding from the Utah Reclamation Mitigation and Conservation Commission Account established under Title IV of CUPCA (the Title IV Account) will be essential to carry out the Commission's mission in future years.

The Title IV Account is intended, among other things, to provide an ongoing source of funds for operation, management and maintenance, and repair and replacement (O&M&R) of fish and wildlife and environmental features constructed under CUPCA, in perpetuity.

Title IV Account investment strategies are determined by the Commission and enacted by its Executive Director. Management goals initially focused only on maximizing net return over a long period of time, as all interest earned was required to be re-invested into the account. Since 2014, the Commission has been authorized to expend the interest earned. Therefore, investment strategies are expected to change in the future and the focus shift from maximizing net return on investment over a long period of time, to one which generates annual (semi-annual) interest payments sufficient to support adequate and effective Commission programs.

Estimated costs to implement each Program Element of our Plan for FY2016 through FY2020 are presented in this Appendix in Table C-1. The anticipated schedule of Title IV Account interest received from FY2016 through FY2020, and how the Commission proposes to use the interest, is shown in Table C-2. In summary, the Commission proposes to manage the Title IV Account to yield interest payments of 40 to 45 million over the next five years. The exact amount of interest needed to be retained for agency administration and program expenditure will depend on several factors, including: annual appropriations under CUPCA Titles II and III for support of Commission programs; actual investment options available and selected for future Title IV Account investments; and, actual program element costs as projects proceed.

By managing investments to yield an estimated 42 million of earned interest over the next five years, the balance of the principal in the Title IV Account is expected to decline from its current value of about 153 million, to about 127 million at the end of FY2020.

Figure C-1 depicts hypothetical Title IV Account scenarios for generating and retaining interest earned to support Commission programs. The three scenarios are:

- Managing the Title IV Account to yield 42 million in interest for implementing the Mitigation Plan
- Managing the Title IV Account to re-invest all interest earned from FY2016 to FY2020
- Managing the Title IV Account to retain only 1.5 million of interest earned from FY2016 to FY2020 (for agency administration) and re-investing all other earned interest (i.e. rely strictly on annual appropriations to support Commission programs).

Obviously, neither of the last two scenarios will enable the Commission to have a functional program if future annual appropriations are similar to the past decade.

Figure C-2 depicts three other scenarios, based on a FY2021 Title IV Account starting balance of 127 million, attempting to identify a sustainable rate of interest expenditure over the next fifty years. Assuming a 3% annual interest rate of return on investments, the Title IV Account could sustain expenditures of approximately 2.7 to 3 million annually.¹ This amount is approximately equal to current O&M&R annual costs.

¹The initial amounts (e.g. 2.7, 3, or 3.5 million) were indexed by 2% annually to account for inflation.

Table C-1. Estimated costs of implementing 2016 to 2020 Mitigation Plan

PROGRAM/PROGRAM ELEMENT	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	5-Year SUM
Provo River/Utah Lake Watershed						
June Sucker Recovery Program	525,000	175,000	130,000	130,000	50,000	1,010,000
Provo River Delta Restoration	9,210,000	7,815,000	4,420,000	5,320,000	2,950,000	29,715,000
Diversion Dam Modifications for JSRIP	25,000	75,000	125,000	300,000	125,000	650,000
Utah Lake Wetland Preserve	685,000	790,000	960,000	960,000	1,425,000	4,820,000
Provo River Restoration Project	250,000	250,000	275,000	275,000	275,000	1,325,000
Diamond Fork Watershed						
Aquatic and Riparian Restoration	475,000	75,000	50,000	175,000	125,000	900,000
Water Quality Monitoring	25,000	25,000	25,000	25,000	25,000	125,000
Diamond Fork Mitigation	2,025,000	1,425,000	25,000	25,000	250,000	3,750,000
Native Species Conservation	50,000	50,000	50,000	50,000	50,000	250,000
Strawberry /Duchesne Watershed						
SACS Angler Access and Related Facilities	80,000	80,000	85,000	85,000	85,000	415,000
Duchesne River Area Canal Rehabilitation Mitigation	15,000	150,000	500,000	1,700,000	1,000,000	3,365,000
Lower Duchesne Wetland Project	2,350,000	2,450,000	2,465,000	865,000	450,000	8,580,000
Stream, Watershed, and Wildlife Habitat Restoration	150,000	150,000	205,000	205,000	155,000	865,000
Wildlife Habitat Acquisition	550,000	550,000	560,000	560,000	560,000	2,780,000
Sage Grouse Conservation	55,000	55,000	55,000	60,000	60,000	285,000
Great Salt Lake/Jordan River Watersheds	55,000	55,000	55,000	60,000	60,000	285,000
Statewide Program						
Native Aquatic Species Conservation	25,000	25,000	25,000	25,000	25,000	125,000
Contract Costs for project support	425,000	420,000	495,000	495,000	495,000	2,330,000
TOTAL	16,975,000	14,615,000	10,505,000	11,315,000	8,565,000	61,975,000

Table C-2. Predicted interest payments and Title IV Account balance FY 2016 – FY 2020 based on 5-Year Mitigation Plan*

SCHEDULE OF TITLE IV ACCOUNT INTEREST PAYMENTS	FY 2005 to FY 2015 (Actual)	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Interest Earned (Based on Existing Investments) ¹	\$28,858,466	\$6,354,435	\$6,335,180	\$2,219,159	\$0	\$0
Interest Earned (Based on Estimated Future Investments) ²	n/a	\$0	\$9,627 ^a	\$8,113,442 ^{a,c,e}	\$9,380,561 ^{a,c,e}	\$9,380,561 ^{a,c,e}
Interest Retained for Program Expenditure ³	\$20,747,003	\$5,104,435	\$5,085,180	\$9,032,601	\$8,080,561	\$7,980,561
Interest Reserved for Agency Administration ⁴	\$2,500,000	\$1,250,000	\$1,250,000	\$1,300,000	\$1,300,000	\$1,400,000
Estimated Cumulative Balance of Title IV Investment Account ⁵	\$153,453,610	\$153,453,610	\$129,263,752 ^b	\$127,250,441 ^{b,d}	\$127,250,441 ^{b,d}	\$127,250,441 ^{b,d}

*The Commission's goal for the Title IV Account for the 5-year period FY2016 to FY2020 is to manage investments to yield interest payments of \$40 million to \$45 million to support Agency mission and administration.

1 The Title IV Account is presently invested across six separate accounts. Those investments produce known (fixed) semi-annual interest payments. Investments may be made for a period of 6 months to 5 or more years. All six investments are scheduled to mature (allowing re-investment) by or before 5/15/2018.

2 We've estimated the amount of interest that may potentially be earned in the future based on current investments available in FY 2016. The predicted interest rates, premium rate (cost of the investment), and pre-paid interest are factored in to these estimates. Past performance or availability of investments yielding similar interest at similar premium rates are not guaranteed.

3 The Commission is authorized by law (P.L. 108-137, 117 Stat. 1827 Section 214) to expend interest earned from the Title IV Account beginning in FY 2014. The Commission retained \$20,747,003 of interest received in FY2014 and FY2015 for project expenditures. The Commission has identified a program need from the Title IV Account of approximately \$40 million to \$45 million over the next five years (actual amount will depend on annual appropriations received and actual project costs).

4 The Commission is authorized to expend up to \$1.5 million annually (indexed) for agency administration. Actual costs have been lower.

5 The value of all investments in the Title IV Account as of 10/1/2015 (the end of FY2015) was \$153,453,610. We estimate that by managing the Title IV Account to provide \$40 to \$45 million in expendable interest payments over the next 5 years, the balance of the investments in the Title IV Account will be \$127,250,441 by the end of FY2020 (actual amount will vary based on factors discussed in Note 2 (above)).

a Assumes: Re-investment of \$962,730 on 5/1/16 at 1.0% and 1.00 Premium Rate (Par) for 60 months; yielding two semi-annual interest payments totaling \$9,672 annually.

b Assumes: Purchase of 9% investment at 1.2717 Premium Rate costs \$24,189,858 and reduces corpus of this re-investment to \$89,031,497 (or \$113,221,354 - \$24,189,858), bringing total value of the Title IV Account to \$129,263,752 (estimated).

c Assumes: Investment of \$89,031,497 on 5/1/17 at 9.0% and 1.2717 Premium Rate for 42 months; investment of \$3,879,533 @ 1% at Par on 5/1/17 ; investment of \$5,218,491 @ 1% at Par on 5/16/17 cumulatively yield semi-annual payments totaling \$8,113,442 (including interest as per Note ^a above).

d Assumes: Purchase of these two investments at 4.50% interest and 1.0715 Premium Rate costs \$2,013,311 and reduces corpus of the two re-investments to \$28,158,189 (or \$30,171,500 - \$2,013,311), bringing total value of the Title IV Account to \$127,250,441 (estimated).

e Assumes: Investment of \$7,667,037 on 5/1/18 at 4.50% at 1.0715 Premium for 24 months; investment of \$20,491,152 @ 4.5% at 1.0715 Premium for 24 months cumulatively yield semi-annual interest payments totaling \$1,267,110, bringing total interest earned of all investments to \$9,380,561 (estimated) in FY 2019 and FY 2020.

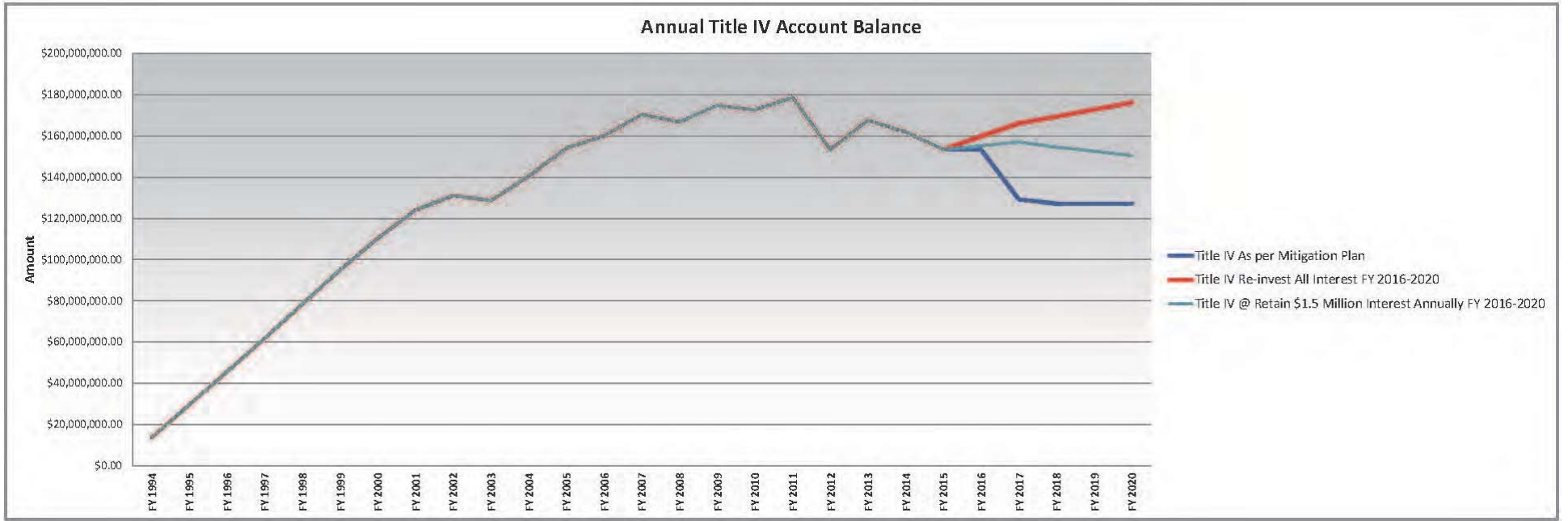


Figure C-1. Actual (1994 to 2015) and predicted (2016 to 2020) Title IV Account balance for three different interest distribution scenarios.

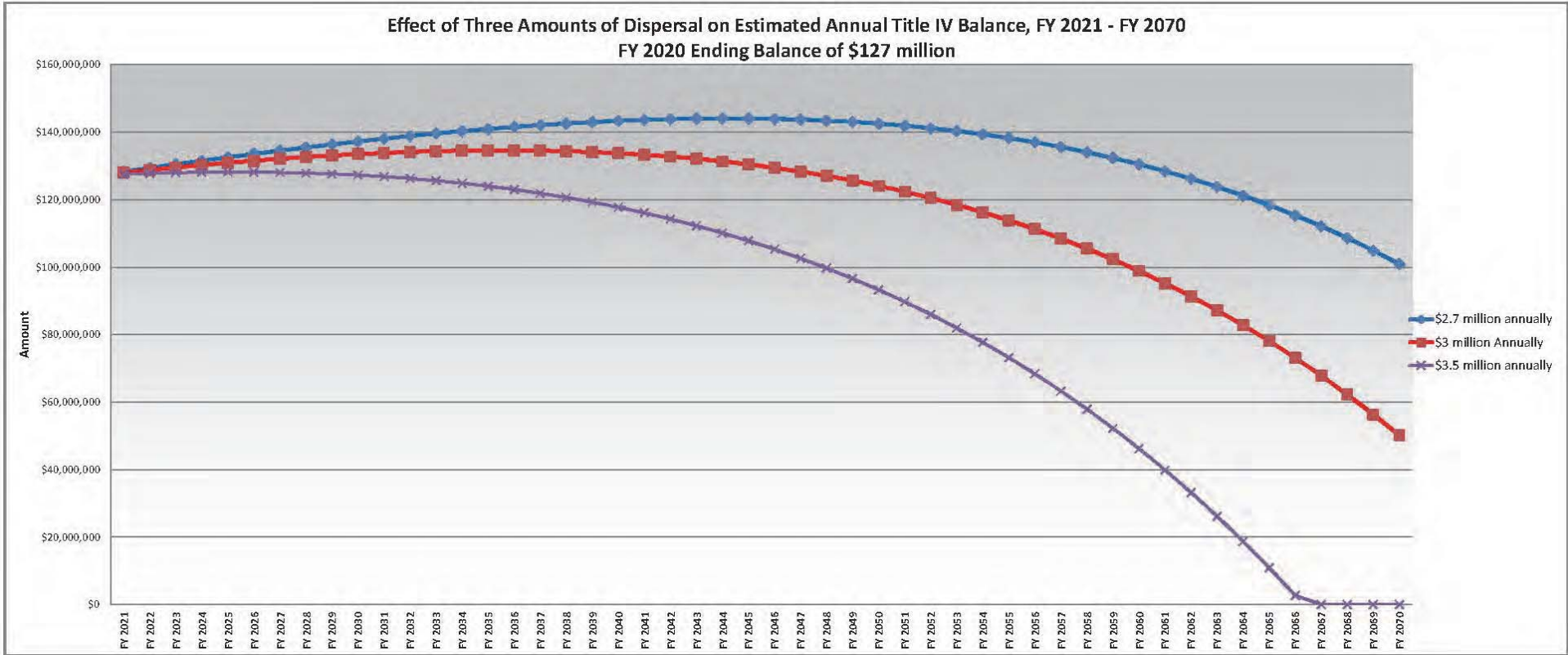


Figure C-2. Effects of distributing \$2.7 million, \$3.0 million, or \$3.5 million annually (each inflated at 2% annually) from Title IV Account, FY 2021 to FY 2070, assuming a starting balance in 2020 of \$127 million, and 3% rate of interest earned. At some point the Title IV Account balance would be insufficient to generate \$2.7 to \$3.5 million (inflated at 2% annually) in interest annually (approximately at a balance of \$100 million).

Appendix D

Status of Environmental Commitments
of the Central Utah Project
Bonneville Unit



UTAH RECLAMATION
MITIGATION
AND CONSERVATION
COMMISSION



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APPENDIX D: ENVIRONMENTAL COMMITMENTS

1	Mitigate wildlife losses in accordance with the January 1987 “Wildlife Mitigation Plan for Strawberry Aqueduct and Collection System, Municipal and Industrial System, and Diamond Fork System, Bonneville Unit, Central Utah Project.”	<p>This comprehensive mitigation plan was developed to address impacts of three major systems of the Bonneville Unit. The plan focused on acquisition of private lands with subsequent management by public agencies for wildlife habitat values.</p> <p>Reformulation of the Diamond Fork System (DFS) as described in the 1990 and 1999 Final Supplements to the 1984 FEIS and 2000 Final EA for Proposed Action Modifications to the DFS resulted in a reduced mitigation need. Mitigation was met by adjusting mitigation acreage of other Bonneville Unit systems and by acquiring 161 additional equivalent acres of wildlife habitat. Wildlife habitats acquired adjacent to the Strawberry River angler access corridor as described in the 1999 Angler Access EA achieved this commitment.</p> <p>The 1987 Wildlife Mitigation Plan required mitigation for 630 acres of wooded riparian vegetation impacted by the M&I System. 165 acres have been mitigated through acquisition and habitat improvements on part of the Moon properties on Carrant Creek, and 237 acres have been mitigated as part of the Camelot properties on the Strawberry River. The remaining 228 acres have been achieved by the Provo River Restoration Project (PRRP) and by acquisition of 64 acres of riparian habitat on West Fork Duchesne River.</p> <p>In 2000, 1,760 acres were acquired along the Strawberry River for angler access, SACS aquatic mitigation and the final increment needed to complete the 1987 Wildlife Mitigation Plan terrestrial mitigation. All required lands have been acquired. Appropriate management plans (operating agreements) have been or will be implemented with Utah Division of Wildlife Resources.</p>	Mitigation Commission	Completed.	Pending	2004 DPR
2	Provisions for bypasses of sufficient water to protect 50 percent of historic trout habitat in Strawberry River, Carrant Creek, Rock Creek, and West Fork Duchesne River.	The 1986 Working Agreement guaranteed 44,400 acre-feet, in addition to spills and bypasses, until 2000. The 1990 Final Supplement to the 1984 Diamond Fork FEIS also guaranteed the flow. Provisions for up to 54,900 acre-feet of water, including 10,500 acre-feet non-lapsing carry-over storage in Strawberry Reservoir, are provided by the 1990 amendment to the 1980 Streamflow Agreement. Sec. 303(a) of CUPCA commits sufficient water to maintain the minimum streamflows established pursuant to the Streamflow Agreement.	Central Utah Water Conservancy District (District) and U.S. Bureau of Reclamation (Reclamation)	Completed; ongoing	Complete.	2004 DPR
3	Strawberry Exchange restore natural streamflows in 16.3 miles of upper Strawberry River and 9.8 miles of Bjorkman Hollow, Hobble Creek and Willow Creek (9,225 angler days).	<p>The Wasatch County Water Efficiency Project (WCWEP) and Daniel Replacement Project (DRP) have been constructed and start-up during June 2001 has resulted in restoring the natural streamflows in 16.3 miles of Strawberry River and 9.8 miles of Bjorkman Hollow, Hobble Creek and Willow Creek. The SACS Aquatic Mitigation Plan assigned a range between 9,225 and 10,225 angler-days credit for this measure. The Mitigation Commission and Fish and Wildlife Service (FWS) determined that 9,225 credits are applied based on Table 1 in Appendix A of the SACS Aquatic Mitigation Plan.</p> <p>Section 303(b)(1)(C) states that the Mitigation Commission, Utah Division of Wildlife Resources and U.S. Fish and Wildlife Service will determine where this water will go, what its use(s) will be and how it will be released or operated. Currently natural flows are restored to the upper Strawberry River drainage, and 2,900 acre-feet is released to the middle Strawberry River from Soldier Creek Dam, where it flows at least to Starvation Reservoir in accordance with Section 303(b)(1)(A) and 303(b)(1)(B).</p> <p>District completed removal and remediation of Daniel Irrigation Co. reservoirs, canals and diversion in 2002. Completed remediation of McGuire Draw and Bjorkman headcuts in 2003.</p> <p>Mitigation Commission removed Strawberry Diversion Dam and realigned stream in 2002. Currently, 2,900 acre-feet remains in Uintah Basin as base streamflow and contributes to water supply for Endangered Species flows in lower Duchesne River “critical habitat” reach. See also EC 9.</p>	Mitigation Commission Mitigation Commission, UDWR and U.S. Fish and Wildlife Service (FWS)	Completed.	Pending	CUPCA

APPENDIX D: ENVIRONMENTAL COMMITMENTS

4	<p>Acquisition of Angler Access</p> <p>Currant Creek upstream from U.S. Highway 40 9.4 miles (2,350 AD)</p> <p>Strawberry River (Camelot Resort) - 8.0 miles (2,400 AD)</p> <p>Strawberry River (Soldier Creek Dam to Camelot) - 11.2 miles (3,360 AD)</p> <p>Strawberry River (downstream from Starvation Dam) - 2.0 miles (600 AD)</p> <p>West Fork Duchesne River - 9.3 miles (2,325 AD)</p> <p>Duchesne River - 7.0 miles (1,750 AD)</p> <p>Rock Creek - 2.2 miles (550 AD)</p> <p>North Fork Duchesne River 1.85 miles (463 AD)</p>	<p>The 1988 Aquatic Mitigation Plan for the Strawberry Aqueduct and Collection System of the Bonneville Unit of CUP identified the acquisition of approximately 51 miles of stream access on the West Fork Duchesne, Duchesne, Currant Creek and Strawberry Rivers to provide partial mitigation for lost angling opportunities. Angler access would be acquired where instream flows were being provided, and in some instances, where stream habitat improvements were made. An Environmental Assessment addressing the impacts of acquiring the remaining lands or easements and management of the angler-access corridors was released November 13, 1999. The EA revised stream segments and lengths slightly. The length of access on Currant Creek was reduced and length was added on North Fork of the Duchesne River. The Commission entered into an agreement with the Utah Division of Wildlife Resources and the Bureau of Reclamation in 1996 to coordinate acquisition priorities and develop operating agreements for the acquired properties and easements.</p> <p>The required 51 miles of angler access has been acquired.</p>	Mitigation Commission; Reclamation	Completed.	Pending	1988 DPR; 1999 Final EA on the Angler Access Mitigation Program, SACS; book of deeds
5	<p>Fish habitat improvement measures</p> <p>Strawberry River downstream from Starvation Dam 6.2 miles (3,124 AD)</p> <p>Currant Creek 16.2 miles (1,368 AD)</p> <p>Rock Creek 10 miles (914 AD)</p> <p>W. Fork Duchesne River (downstream from Vat Diversion Dam 11.3 miles (partially completed; 75 AD)</p> <p>Strawberry River (upstream from Strawberry Reservoir) 18.1 miles (304 AD for reach upstream of Daniels diversion only)</p> <p>Strawberry River (downstream from Soldier Creek Dam) 6.0 miles (507 AD)</p> <p>Provo River (from Jordanelle Dam to Deer Creek Reservoir) 9.3 miles (balance to be achieved by PRRP)</p> <p>Diamond Fork (Three Forks to Springville Crossing) 6.6 miles (265 AD)</p> <p>North Fork Duchesne River 10.0 miles (664 AD)</p> <p>West Fork Duchesne River (upstream from Vat Diversion Dam) 10.0 miles (748 AD)</p> <p>South Fork Rock Creek 3.0 miles (224 AD)</p> <p>Diamond Fork (upstream from Springville Crossing) 4.0 miles (160 AD)</p>	<p>The 1988 Aquatic Mitigation Plan for the Strawberry Aqueduct and Collection System identified 14 stream segments totaling over 119 miles as potential sites for stream habitat improvement work.</p> <p>A limit of 9,790 angler days mitigation credit was imposed by the FWS for fish habitat improvements as a component of the Strawberry Aqueduct and Collection System Aquatic Mitigation Plan. 90 miles of stream habitat improvements have been installed. A review was conducted by the Mitigation Commission in 1995, which found that most of the fish habitat structures were functioning as planned. The FWS estimated in its January 30, 1998 FWCA report on the PRRP that about 75 percent of the installed structures were performing as intended, which provided mitigation for 6,115 AD of the needed 9,790 AD. The PRRP provided the remaining 3,675 angler days of mitigation for fish habitat improvements</p> <p>Strawberry Reservoir filled for the first time in 1998, fulfilling Reclamation's first-fill requirements on Soldier Creek Dam. Reservoir releases during summer, fall and winter 1998-99 resulted in unseasonably high flows in the Strawberry River below Soldier Creek Dam. An assessment of potential adverse impacts to the stream habitat improvement structures was conducted. Final report on Middle Strawberry River (2001) has been completed. IBAT has reviewed the impact of interim operational flows with the SACS streams and determined that no compensatory mitigation is required.</p>	Mitigation Commission	Completed.	Pending	1988 DPR; 1988 Aquatic Mitigation Plan; PRRP Final EIS 1997
6	<p>Strawberry egg taking station (1,800 angler days)</p>	<p>Construction was completed in 1987. Electric weir was installed in 1995.</p>	Reclamation and Mitigation Commission	Completed.	Completed.	1988 DPR; 1988 Aquatic Mitigation Plan

APPENDIX D: ENVIRONMENTAL COMMITMENTS

7	Duchesne River Area Canal Rehabilitation (DRACR) Program (a SACS feature): Develop 140 acres of riparian and marsh vegetation adjacent to Starvation Reservoir to replace habitat losses for the DRACR Program, a part of the Starvation Collection System.	The project plan to develop wetland mitigation areas around the shoreline of Starvation Reservoir was determined to be infeasible in 1987. Reclamation and FWS revised plans for the required mitigation. Reclamation acquired 1,087 acres of land with water rights (known as the Riverdell property) for this mitigation. Initial plans for development and management of the property by the FWS have been withdrawn. The Mitigation Commission proposes re-initiation of planning to accomplish this requirement.	Mitigation Commission	This commitment remains to be implemented.	Not started Pending	
8	Six waterfowl management areas will be established along the Duchesne River to mitigate for waterfowl losses resulting from operation of the Strawberry Aqueduct and Collection System.	A 1965 FWCA report recommended the development of 6 wetland management areas containing 6,640 acres to mitigate for impacts of the Bonneville Unit SACS, and to provide additional wetland/wildlife-related benefits to the Ute Tribe. Plans developed by Reclamation in the 1970s were never implemented. The Mitigation Commission, Department of the Interior and Ute Tribe entered into agreements beginning in 1995 for development of a conceptual plan for the protection, enhancement and restoration of wetland areas along the Duchesne River corridor. Under the agreements, the Tribe developed a feasibility study for a 45-mile corridor of the lower Duchesne River, from Bridgeland to Ouray, Utah. A Final EIS was completed in 2007. Project implementation began in 2008. All required private lands for the project have been acquired. Construction of restoration features began in 2013. All private fee lands have been acquired (1,642 acres). Ute Tribe performs mosquito control and weed control on the project lands. Restoration began in 2013; half completed as of 2015. Expect to complete in 2018.	Mitigation Commission	Ongoing.	Not started Pending	2007 FEIS and 2008 RODs
9	Until it is resolved whether existing law will require that said entire 44,400 acre-feet of water remain in the Duchesne River until its confluence with the Green River, the District will not divert above said confluence.	The FWS issued its Biological Opinion for the Duchesne River in 1998, and based on more recent flow recommendations developed by the RIP and finalized in 2003 (Modde and eleher 2003), the FWS issued an Updated "Reasonable and Prudent Alternative" to the Biological Opinion in 2005. Implementation of flow recommendations are being coordinated through the Duchesne River Working Group (DRWG) that includes representatives from the FWS, State of Utah, Department of Natural Resources (Divisions of Water Rights, Water Resources and Wildlife Resources), the District, the DOI, and the Mitigation Commission. The DRWG was informally formed in 2003 to address issues involved with implementing the flow recommendations. The DRWG is addressing many issues, including water availability, water management, and protection of in-stream flows provided for endangered fishes. The role of this working group was formalized in the 2005 Reasonable and Prudent Alternative for the Duchesne River. The DRWG issued a report in 2013 summarizing water management for the years 2004 to 2011.	District	Ongoing.	Not started Pending	1990 Streamflow Amendment and Biological Opinion; 1998 Duchesne River Biological Opinion; 2005 Update to 1998 Reasonable and Prudent Alternative
10	A minimum of 25 cfs will be maintained in Rock Creek at the FS/Indian reservation boundary.	The 1980 Streamflow Agreement and 1990 amendment recognized the 25 cfs commitment from the September 20, 1965 Agreement. The CUP Completion Act (Section 505(d) states the Secretary shall endeavor to maintain continuous flows of 29 cfs during May-October and 23 cfs during November-April at the reservation boundary. These minimum flows are met through combined releases out of Upper Stillwater Dam on Rock Creek and Docs Diversion on South Fork of Rock Creek. South Fork of Rock Creek joins the main channel of Rock Creek about 0.9 miles downstream from Upper Stillwater Dam. The two streams merge approximately 7 miles upstream of the reservation boundary. With accretion flows, the 25 cfs requirement is being achieved and usually exceeded. A U.S. Geological Survey gage at the Reservation boundary is used to confirm the minimum flows are met. Monitoring of the 1980 Streamflow Agreement and 1990 Amendment is conducted by IBAT, District, the Tribe and the Service.	District	Ongoing.	Ongoing Complete	1965 Deferral Agreement; CUPCA

APPENDIX D: ENVIRONMENTAL COMMITMENTS

11	The operation and maintenance of the recreation, fishery and wildlife features of Midview Reservoir will be transferred to the Tribe, and a minimum fishery pool will be maintained in the reservoir.	This recommendation has been accomplished.	District, Reclamation, Ute Indian Tribe and U.S. Bureau of Indian Affairs	Completed.	Pending	1988 DPR
12	Fishing lakes aggregating approximately 800 surface acres will be constructed on Indian lands, site locations and cost estimates to be provided on the basis of further studies by the Service, said cost not to exceed 2 million to be funded under the provisions of Section 8 of the Act of April 11, 1956.	Bottle Hollow Reservoir (see Figure 6), with a surface area of approximately 420 acres was completed in 1970, and fulfilled part of this recommendation. The proposed Lower Stillwater reservoir would have provided the remaining 380 acres of surface water fishing opportunity committed to the Tribe. However, the proposed Lower Stillwater was deauthorized by Section 201 of CUPCA. Replacement features and further recreation enhancements for the Ute Tribe are authorized by Section 505 of CUPCA. e of construction of Lower Stillwater Reservoir. The Title V program is administered by the CUPCA Office of the Department of the Interior.	U.S. Department of the Interior (DOI)	Ongoing.	Pending.	CUPCA
13	The acquisition and development of 1,280 acres of big game winter range.	A total of 1,661 acres of big game winter range were acquired and deeded to Utah Division of Wildlife Resources. Additional lands were acquired in lieu of development. The lands are situated within the Utah Division of Wildlife Resources Red Creek Wildlife Management Area.	Reclamation	Completed.	Completed.	1988 DPR
14	Transfer to Utah Division of Wildlife Resources 970 acres of Deer Creek lands. Provide funds to improve lands.	This mitigation commitment has been dropped, as a result of the 1990 reformulation of the Diamond Fork System (DFS) and the resulting reduced need for mitigation. The additional 161 acres of equivalent wildlife habitat has been fulfilled by land acquired on the Middle Strawberry River. (See Environmental Commitment No. 1).	Mitigation Commission	Completed.	Pending	2004 DPR
15	Acquire 720 acres of West Hills area.	Lands have been acquired by Reclamation. Reclamation transferred the land to Utah Division of Wildlife Resources in July 2001 (see Environmental Commitment No. 1). The Mitigation Commission proposes to evaluate the degree to which this property is meeting mitigation goals.	Mitigation Commission, Reclamation	Completed.	Completed.	2004 DPR
16	Manage Jordanelle Reservoir lands for wildlife within management boundary area.	Reclamation and Utah Division of Parks and Recreation developed a cooperative agreement on 12/19/90 to manage lands within the management boundary. The agreement states that Utah Division of Parks and Recreation will implement a resource management plan developed by Reclamation. Reclamation prepared a revision to the Jordanelle Reservoir Resource Management Plan. Some considered actions might affect lands within the reservoir management boundary and could require mitigation.	Mitigation Commission, Reclamation, Utah Division Wildlife Resources, Utah Division of Parks and Recreation	Ongoing, but subject to revision.	Pending	2004 DPR; 2012 Jordanelle Reservoir Resource Management Plan (RMP)

APPENDIX D: ENVIRONMENTAL COMMITMENTS

17	Stabilization of twelve upstream reservoirs on Provo River.	The Mitigation Commission entered into Interagency Agreements with the Forest Service and Reclamation to complete this project. All twelve lakes in the upper Provo River drainage were stabilized during the 1994-1999 period.	Mitigation Commission	Completed.	Completed.	2004 DPR
18	Construct a campground at Washington Lake and construct the Crystal Lake Trailhead.	The 1987 Final Supplement to the Final Environmental Impact Statement for the Municipal and Industrial System required the construction of Washington Lake Campground and the Crystal Lake Trailhead. Construction began in July of 1997 and was completed in 1999.	Mitigation Commission	Completed.	Completed.	2004 DPR
19	Fishery mitigation will consist of maintenance of minimum flows of 125 cfs between Jordanelle Dam and Deer Creek Reservoir, 100 cfs between Deer Creek Dam and Olmsted Diversion, and 25 cfs during the winter from Olmsted Diversion to Utah Lake.	This commitment originated from the 1987 Final Supplement to the Final Environmental Impact Statement on the M&I System (Reclamation 1987) and compliance is also required by Sec. 303(c) of CUPCA: "The yield and operating plans for the Bonneville Unit of the Central Utah Project shall be established or adjusted to provide for the following minimum stream flows, which flows shall be provided continuously and in perpetuity from the date first feasible, as determined by the Commission in consultation with the FWS and the Utah State Division of Wildlife Resources: In the Provo River from the base of Jordanelle Dam to Deer Creek Reservoir a minimum of one hundred and twenty-five cubic feet per second; In the Provo River from the confluence of Deer Creek and the Provo River to the Olmsted Diversion a minimum of one hundred cubic feet per second." Jordanelle Reservoir filled and was declared operation in July 1996. Minimum stream flows have been met since that date. Flows are coordinated annually through the Deer Creek -Jordanelle Operating Agreement for which Reclamation holds meetings at least annually.	District	Ongoing.	Ongoing	1987 FS/FEIS; 1988 DPR; CUPCA; 2004 DPR
20	Post-project fishery studies will be conducted below Deer Creek Dam to more precisely examine the impacts of summer habitat loss and winter habitat gain on the overall Brown trout population and assess the feasibility of improving habitat through modification of streamflow regimens.	This commitment originated from the 1987 Final Supplement to the Final Environmental Impact Statement on the M&I System (Reclamation 1987). The study is intended to address the impacts on Brown trout habitat in the Provo River downstream from Deer Creek Dam resulting from implementation and operation of the M&I System. Section 303(d) of CUPCA indicates that "The District shall, with public involvement, prepare and conduct a study and develop a plan to mitigate the effects of peak season flows in the Provo River. Such study and plan will be developed in consultation with the FWS, the Utah Division of Water Rights, the Utah Division of Wildlife Resources, affected water right holders and users, the Mitigation Commission, and the Bureau." Section 303(e) authorized the appropriation of 500,000 to conduct this study and prepare the plan. In early 2002, the Mitigation Commission, in cooperation with the District and DOI, initiated the study. The Provo River System Stream Flow Study developed the database and ability to address a broad scope of operational scenarios. Therefore, in accordance with section 303(d) of CUPCA and this previous environmental commitment, the Joint Lead Agencies completed the Provo River System Stream Flow Study.	Mitigation Commission and District	Completed.	Pending	1987 FS/FEIS; 1988 DPR
21	Angler access to 10 miles of Provo River downstream of Jordanelle Dam to Deer Creek Reservoir.	The PRRP ROD was signed by the Mitigation Commission on February 23, 1998 and by the DOI on March 20, 1998. Angler access acquisition along the middle Provo River is integrated with the PRRP.	Mitigation Commission	Completed.	Pending	1988 DPR
22	Replacement of Middle Provo River Diversion Dams.	The 1987 Final Supplement to the M&I System Final EIS committed to assure that instream flows released from Jordanelle Dam could be bypassed all the way to Deer Creek Reservoir. Diversion dams in this reach were incapable of accurately measuring or delivering bypasses for instream flows. All diversion structures on the middle Provo River were removed or modified by the PRRP, which is complete.	Mitigation Commission	Completed.	Pending	1988 DPR
23	Deer Mortality reduction on highways around Jordanelle Reservoir.	The Mitigation Commission continues to coordinate with Utah Division of Wildlife and FWS to determine the need and best methods for reducing deer mortality. The Mitigation Commission is no longer funding studies to evaluate the at-grade deer crossing areas as a viable mitigation measure. Utah Department of Transportation funded a study to evaluate deer exit ramps. As per recommendation by USFWS and concurrence by UDWR, the Mitigation Commission purchased additional terrestrial habitats near Fruitland as off-site compensatory mitigation.	Mitigation Commission	Completed.	Pending	1988 DPR; 1989 FWCA Report on M&I System; 1997 USFWS Memorandum

APPENDIX D: ENVIRONMENTAL COMMITMENTS

24	A total capacity of 510 cfs will be included in the Diamond Fork Pipeline for the purpose of removing project water, as well as existing high irrigation flows, from the lower Diamond Fork to mitigate potential project impacts and provide fishery enhancement.	The 510 cfs capacity pipeline has been constructed and the Diamond Fork Tunnel and pipeline has been constructed. The DFS is completed and in operation.	CWCD and DOI	Completed.	Pending	Diamond Fork System ROD 1990, 1995
25	A monitoring program will be established to ensure satisfactory water quality and water temperature in Diamond Fork below Monks Hollow Reservoir. If problems occur with low dissolved oxygen during project operation, corrective measures such as multi-level outlet on Monks Hollow Dam, aerators or destratifiers on Strawberry or Monks Hollow reservoirs, or warming ponds and aerators on Diamond Fork below Monks Hollow Reservoir will be constructed, as required, to guarantee a minimum dissolved oxygen content of 5 mg/L.	The DFS was reconfigured and Monks Hollow Reservoir is no longer part of any project plan. District has been collecting water quality and temperature data since July 1996. A cooperative agreement between the Mitigation Commission and District was signed in 1997 for collecting water quality and temperature data. The Mitigation Commission funded installation of two real-time stream gauging stations complete with Hydrolab water quality sampling units. The Mitigation Commission will work with District and the FWS to recommend incorporating water temperature and water quality modeling into the Utah Lake Drainage Basin Water Delivery Project planning process. Post project water temperature monitoring also would continue. The water quality monitoring program committed to in the 1990 final supplement (Reclamation 1990) and the DOI 1995 Diamond Fork Pipeline ROD will be continued. District and Mitigation Commission jointly have monitored water quality, temperature and stream flows. Corrective measures have not been found to be necessary.	District and Mitigation Commission	Ongoing. Revisit to determine necessity of continuing the monitoring.	Pending	Diamond Fork System ROD 1990, 1995
26	Impacts of the ULS on Strawberry Reservoir, Utah Lake, Utah Valley streams, and the Jordan River will be presented in the environmental statement on the ULS.	Original EC from the 1990 FS-FEIS stated: "Features required exclusively for the Recommended Plan and Alternative A should not be constructed until there has been a disclosure of the total impacts they would have on fish and wildlife resources of Strawberry Reservoir, Utah Lake, and streams in Utah and Sevier valleys, and plans for mitigating losses have been agreed upon." Cumulative impacts of Bonneville Unit on Strawberry Reservoir, Utah Lake, Utah Valley streams, and the Jordan River are addressed in the ULS. Sevier Valley area, Millard and Sevier counties are no longer in the District.	District	See EC No. 25.	Pending	Diamond Fork System ROD 1999
27	The feasibility of incorporating plans for delivering up to 49 cfs during summer and 32 cfs during winter to Sixth Water Creek should be thoroughly explored. A similar recommendation was included as an option in the 1988 Aquatic Mitigation Plan for the SACS .	Sec. 303(c)(1)(A) of CUPCA specifies that minimum stream flows in Sixth Water Creek downstream of Strawberry Tunnel shall be not less than thirty-two cfs during May through October and not less than twenty-five cfs during November through April. A stream gage was constructed in October 1998 on Sixth Water Creek immediately upstream of the Sixth Water Aqueduct Outlet to monitor minimum stream flows. Modifications to Strawberry Tunnel and installation of the Syar Tunnel Guard Gate help achieve this objective. Studies were initiated in 2015 to examine optimum instream flow target levels.	District operates per CUPCA Sec. 303(c)(1)(A)	Completed.	Pending	Diamond Fork System ROD 1999
28	If not required by law, the feasibility of maintaining a minimum streamflow of 80 cfs in Diamond Fork for the protection of the stream fishery should be thoroughly explored.	The minimum streamflows specified in CUPCA Section 303(c) (1) (B) state that subsequent to completion of Monks Hollow Dam or other structure that re-diverts water from the Diamond Fork drainage into the DFS of the Bonneville Unit, flows from the bottom of Monks Hollow Dam to the Spanish Fork River shall be not less than 80 cfs from May through September and not less than 60 cfs from October through April. Studies were initiated in 2015 to examine optimum instream flow target levels.		Completed	Pending	Diamond Fork System ROD 1999

APPENDIX D: ENVIRONMENTAL COMMITMENTS

29	Significant impacts on aquatic resources from modifications made at the Spanish Fork River diversions will be mitigated. If the diversion structures are modified, fish passage will be built into each structure.	District commenced studies on modifications at the Spanish Fork River diversions in 2001, but the design studies were terminated when ULS action alternative was selected and is being implemented. The June Sucker Recovery Implementation Program recommended flows be provided to lower Hobble Creek, rather than Spanish Fork River, to establish a second June sucker spawning run. Flows have been provided to Hobble Creek beginning in 2013. The Spanish Fork River Diversion Structures project has been suspended.	District	This is not a valid Bonneville Unit EC anymore.	Pending	Diamond Fork System ROD 1999
30	The Diamond Fork System should be operated so that all sections of the Spanish Fork River receive the flows that are documented in the 1999 FS-FEIS that will benefit aquatic and terrestrial resources.	Through planning for ULS, the USFWS and June Sucker Recovery Implementation Program recommended the joint-lead agencies provide flows to lower Hobble Creek, rather than lower Spanish Fork River, as number one priority for establishing a second spawning run of June sucker. This was included in the ULS EIS. The ULS project delivered water to Hobble Creek beginning in 2013, and not to lower Spanish Fork River	District	This is not a valid Bonneville Unit EC anymore.	Pending	Diamond Fork System ROD 1999
31	An interagency team consisting of representatives from the joint-lead agencies (District, DOI, and Mitigation Commission), FS, FWS, and Utah Division of Wildlife Resources should be organized to determine flow needs within Sixth Water and Diamond Fork creeks and the Spanish Fork River to benefit aquatic, terrestrial, and riparian resources.	See the comments in Environmental Commitment No. 25. The Mitigation Commission organized and convened an interagency team in 2005 after the DFS began to operate and high irrigation-influenced streamflows were removed from Diamond Fork Creek. Three years of monitoring to establish baseline conditions for riparian vegetation, geomorphology, and substrate was conducted. Monitoring included assessment of spawning gravel conditions, and leatherside populations and habitat. Additional sediment transport data collected in 2011 and 2012 was analyzed to develop rating curve for flows 60 cfs at "Monks Hollow". Studies were initiated in 2015 to examine optimum instream flow target levels. Subsequent to the Diamond Fork RODs, planning for the Utah Lake System has been completed. The Spanish Fork River was not selected to receive a commitment of minimum instream flows. Hobble Creek was instead selected, primarily for its use and benefits to June sucker spawning.	Mitigation Commission	Ongoing.	Pending	Diamond Fork System ROD 1999
32	Water quality monitoring will continue downstream of Strawberry Tunnel, Sixth Water Aqueduct, and the Diamond Fork Tunnel Outlet to determine potential DO concentration impacts and how far downstream low DO levels are found.	This Environmental Commitment supersedes the dissolved oxygen portion of Environmental Commitment No. 25. District and Mitigation Commission are monitoring water quality. The ULS addressed this issue and came to a conclusion that corrective measures were not necessary.	Mitigation Commission and District	Ongoing. Revisit. See the comment in Environmental Commitment No. 25	Pending	Diamond Fork System ROD 1999
33	If low DO levels are found downstream from tunnel outlets, baffles or oxygen aerators should be installed to bring DO concentrations up to levels that are not detrimental to fish and other aquatic resources.	See the comment in Environmental Commitment No. 25.	District	Revisit. See Environmental Commitment No. 25.	Pending	Diamond Fork System ROD 1999
34	Conduct a water quality and temperature-monitoring program throughout the Diamond Fork System.	The Mitigation Commission entered into a cooperative agreement with District to implement the program in 1997 and at that time added additional water quality parameters to be monitored. This Environmental Commitment supersedes the temperature portion of Environmental Commitment No. 25. Monitoring continues through present. In 2001, the Mitigation Commission determined through consultation with District, FWS, DOI and Utah Division of Wildlife Resources that most metals and other parameters could be removed from the monitoring program.	Mitigation Commission and District	Ongoing. Revisit. See Environmental Commitment No. 25.	Pending.	Diamond Fork System ROD 1999
35	Acquire public access to the lower five miles of Diamond Fork Creek.	This requirement consisted of acquiring private lands. Partial accomplishment by USFS through land exchange; remaining lands acquired by Reclamation. The public access provides angler access on lower Diamond Fork Creek.	Mitigation Commission	Completed.	Pending.	1988 DPR

APPENDIX D: ENVIRONMENTAL COMMITMENTS

36	Provide Diamond Fork recreation facilities compatible with the conservation of natural resources.	<p>The 1988 Definite Plan Report and 1990 Final Supplement to the Final Environmental Impact Statement for the DFS identified construction of recreation facilities to help meet the anticipated recreation demand associated with construction of the DFS and to help meet the needs of a growing population along the Wasatch Front. The recreation facilities identified in the documents included a campground, day-use areas, trails and angler access. The 1999 Final Supplement to the 1984 FEIS did not further revise the recreation commitments.</p> <p>Based on a 1998 Final Environmental Assessment (EA) and Decision Notice, the Diamond and Palmyra campgrounds were rebuilt in 2000. The rehabilitated campgrounds provide two-thirds the capacity of the original campgrounds in order to protect riparian vegetation from visitor use and to allow for stream restoration of Diamond Fork Creek. A Final EA for the group campground facility was released in 2004 and construction was completed in 2006. Other CUP recreation facilities including day-use areas, trailheads and angler access points are complete.</p>	Mitigation Commission	Completed.	Pending.	Diamond Fork System ROD 1999
37	The joint-lead agencies will plan for a long-term monitoring program to determine the effects on riparian vegetation including species composition, riparian corridor width, and vegetation density; spawning gravels; and leatherside chub habitat and populations from flow modifications within the impact area of influence.	<p>The Mitigation Commission completed a three-year baseline study in 2007 including long-term riparian vegetation monitoring along Diamond Fork Creek.(See also Environmental Commitment No. 30). Riparian monitoring was conducted again in 2010. UDWR conducted 2-year study of leatherside. None were collected in Diamond Fork or Sixth Water. Mitigation Commission began contributing 20,000 annually to Leatherside conservation in 2010.</p> <p>Studies were initiated in 2015 to examine optimum instream flow target levels.</p>	Mitigation Commission	Ongoing.	Pending.	Diamond Fork System ROD 1999
38	The joint-lead agencies will continue to coordinate with the FWS regarding results of the monitoring program and recommendations to mitigate any documented impacts.	The Mitigation Commission coordinates with the FWS, USFS, DOI and UDWR.	Mitigation Commission	Ongoing.	Pending.	Diamond Fork System ROD 1999
39	The joint-lead agencies will mitigate any losses or detrimental impacts on wetland and riparian habitats that cannot be restored.	The Mitigation Commission will determine the need for mitigation of losses or detrimental impacts on wetland and riparian habitats that cannot be restored, after the DFS begins operating (See also Environmental Commitment No. 30).	Mitigation Commission	Ongoing. (Not required as of 2015).	Pending.	Diamond Fork System ROD 1999
40	The Mitigation Commission will continue to consult with the DOI, District, FWS, FS, Utah Division of Wildlife Resources, and others to plan and implement restoration of Sixth Water and Diamond Fork creeks.	<p>The Mitigation Commission will continue to consult with the agencies to plan and implement restoration actions as appropriate. Studies are initiated in 2015 to examine optimum instream flow target levels, and to identify opportunities for active restoration.</p> <p>See also Environmental Commitment No. 31, 37 and 38.</p>	Mitigation Commission	Ongoing.	Pending.	Diamond Fork System ROD 1999
41a	Monitoring during the construction period prior to project operation will continue to establish a credible baseline for Ute ladies'-tresses.	<p>District conducted ULT studies in Diamond Fork Canyon and Spanish Fork Canyon during construction of the Diamond Fork Project. The Mitigation Commission continued ULT monitoring for some period during operation of the DFS. The Spanish Fork Canyon colonies will be potentially affected by the ULS project; therefore, the commitments listed must be met under the ULS.</p> <p>District monitored ULT through 2004. The Mitigation Commission became responsible for data collection after the DFS began operation as noted in Environmental Commitment 40b. The Mitigation Commission monitored ULT through 2008, at which time the Mitigation Commission requested re-consultation with FWS regarding this change.</p>	District	Completed.	Pending.	Diamond Fork System ROD 1999

APPENDIX D: ENVIRONMENTAL COMMITMENTS

41b	Data collection following project implementation will include measurements of actual stream elevations relative to Ute ladies'-tresses orchid colony locations. If there are significant discrepancies, the model should be modified and a new impact assessment completed. Additionally, the joint-lead agencies should perform aerial mapping at a resolution sufficient to record stream channel geomorphology, vegetation community, and orchid colony locations in several-year intervals to help better understand changes and evaluate their significance in relation to restoration and conservation goals.	A comprehensive review of ULT monitoring data through 2005 showed no reliable correlations between the habitat parameters being measured and the results (of flowering plants observed) of the monitoring effort.	Mitigation Commission	Pending. Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41c	Changes in vegetative communities in occupied or potentially suitable orchid habitat will be measured along Diamond Fork Creek and Spanish Fork Canyon.	The changes in vegetative communities may be measured using habitat associations, based on recent consultation between the Mitigation Commission and FWS.	Mitigation Commission	Pending. Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41d	The natural variation in Ute ladies'-tresses orchid demography, population vigor and habitat will be characterized under baseline conditions and under actual operations.	After the DFS begins operation, the Mitigation Commission will be responsible for monitoring Ute ladies'-tresses orchid populations under action operations.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41e	The Three Forks colony will be monitored to better understand the process of loss of viability and eventual extirpation of colonies.	The Three Forks colony of Ute ladies'-tresses orchid is the most upstream colony documented in the Diamond Fork Creek drainage. Baseline data on this colony have been collected since the SFN EIS was started and continued through completion of the 1999 Diamond Fork System FS-FEIS.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41f	Monitoring should focus on the rate of loss, identifying which parameters are best to measure to determine if loss is occurring.		Mitigation Commission	Suspended since 2009.	Pending.	
41g	Conservation measures in addition to altering flows and rescue/transplant should be considered, such as vegetation manipulation, providing supplemental water to colonies, and mechanical reconfiguration of portions of the stream channel or floodplain surfaces, if monitoring data show streamflow hydrology is adversely affecting the Ute ladies'-tresses orchid population.		Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41h	If pollination is determined to be a limiting factor to long-term orchid viability and successful colonization of new habitats, then the joint-lead agencies will consider actions to enhance pollinator habitat or numbers as appropriate.		Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999

APPENDIX D: ENVIRONMENTAL COMMITMENTS

41i	A methodology should be developed that will monitor changes in Ute ladies'-tresses orchid habitat quality, and the methodology should be used to establish habitat quality parameters of the population.	The District has been collecting data on Ute ladies'-tresses orchid that will support the development of the methodology.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41j	Population viability parameters and "red-flag" conditions should be established for the habitat quality parameters.	The District has been collecting data on Ute ladies'-tresses orchid that will support establishing population viability parameters and "red-flag" conditions for the habitat quality parameters.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41k	The accuracy of the predicted effects analysis should be measured.	This was not listed as a commitment in the DOI ROD. The District has been collecting data that will support measurement of the accuracy of the predicted effects analysis.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41l	Timing for performing the most accurate canyon-wide Ute ladies'-tresses orchid counts should be evaluated.	The District has been collecting data that will support evaluation of timing for performing the most accurate canyon-wide counts of Ute ladies'-tresses orchid.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
41m	The relationship between river hydrology, depth to soil water, soil moisture, soil characteristics and Ute ladies'-tresses orchid colonies should be correlated.	The District has been collecting data that will support the correlation of these relationships.	Mitigation Commission	Suspended since 2009.	Pending.	Diamond Fork System ROD 1999
42	The joint-lead agencies will identify, acquire, and permanently provide a block of water for flows in the lower Provo River through critical habitat, in perpetuity, for June sucker.	<p>The District, DOI and Mitigation Commission have actively worked to acquire water for the June sucker and continue to pursue more water through Sections 207, 303, and other existing authorities involving water conservation conveyance efficiency, and outright purchase of water. Water saved or acquired may become project water and may be applied to meet this and other environmental commitments.</p> <p>The District, DOI, and Mitigation Commission have been actively acquiring water through the Sections 207, 303, and other existing authorities, now in the amount of 3,300 ac-ft permanent water rights, with additional temporary water in the amount of 10,000 ac-ft available in 5-year increments. Under the Section 207 program, 13,000 acre-feet are available annually.</p>	District and DOI	Ongoing.	Pending.	Diamond Fork System ROD 1999
43	District, in cooperation with the other Provo River water users, the FWS, and other members of the Provo River Flows Workgroup, will agree on operational scenarios that mimic dry, moderate and wet years. The District, with the support of the joint-lead agencies and Provo River water users, will apply operational scenarios to the annual Provo River operation to benefit June sucker.	<p>District has developed operational scenarios that mimic dry, moderate and wet year hydrology and has applied them annually since 1999 to release of water in the Provo River to benefit June sucker. These operational scenarios are working well and the District has accomplished its goal of providing operations in the Provo River to benefit June sucker.</p> <p>In 2008 the Mitigation Commission and partners completed a comprehensive study of instream flows for the lower Provo River ecosystem. The report has been adopted by the JSRIP and by the Mitigation Commission and Interior via their respective RODs on the Provo River Delta Restoration Project in 2015. This commitment has been met, and the District will continue to manage and operate flows in accordance with the June sucker Flow Workgroup recommended scenarios.</p>	District	Ongoing.	Pending.	Diamond Fork System ROD 1999
44	The joint-lead agencies, in cooperation with the State of Utah and the FWS, will work toward establishment of a refugium in Red Butte Reservoir for June sucker.	District established a refugium for June sucker in Red Butte Reservoir. The dam was rebuilt in and the reservoir re-filled. June sucker were stocked in 2005. Via letter dated August 5, 2015, FWS determined that Red Butte Reservoir is no longer needed as a refuge for the JSRIP.	District	Completed.	Pending.	Diamond Fork System ROD 1999
45	Any future development of the Bonneville Unit of CUP will be contingent on the Recovery Implementation Program making "sufficient progress" towards recovery of June sucker.	<p>District, DOI and the Mitigation Commission have been active participants in the June Sucker Recovery Implementation Program (JSRIP).</p> <p>The RIP has been formed and "Sufficient Progress" was determined in writing by FWS on May 6, 2015 for the 2009-2013 period.</p>	District, DOI, and Mitigation Commission	Ongoing.	Pending.	Diamond Fork System ROD 1999

APPENDIX D: ENVIRONMENTAL COMMITMENTS

46	The ROD commits and obligates the Joint-Lead Agencies to prepare another EIS on the Bonneville Unit, Central Utah Project, associated with the Utah Lake System in compliance with Interior's FRN (FR Doc. 98-27484) dated October 14, 1998. That will not only address the impacts associated with any additional Utah Lake System facilities, but will also incorporate and address all remaining and incomplete commitments contained in the various CUP NEPA compliance documents and previous RODs.	The District, DOI and the Mitigation Commission completed NEPA compliance activities on the Utah Lake System project in 2004. See section on Utah Lake Drainage Basin Water Delivery System.	District, DOI, and Mitigation Commission	Completed.	Pending.	Diamond Fork System ROD 1999
47	While continuation of pre-project land use will not increase impacts on water quality, where it is necessary to purchase easements, and when practicable and feasible, land uses will be restricted to those which will not impair water quality.	All easements have been acquired for the WCWEP project, and all uses of water are protected from livestock and any other uses that could impact water quality.	District	Completed.	Pending	CUPCA; 1997 WCWEP/DRP Final EIS and ROD
48	The District will support studies to determine if there significant losses of fish into any canal associated with the WCWEP & DRP and develop measures to prevent such losses as may warrant alleviation	The District consulted with the U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources during design of the WCWEP& DRP and those agencies determined that no significant losses were occurring and that no measures to alleviate losses were warranted.	District	Completed.	N/A	1997 WCWEP/DRP Final EIS and ROD
49	The Mitigation Commission will be signatory to the Conservation Agreements for Colorado River and Bonneville Cutthroat trout and as such will work to implement suitable mitigation for the impact on naturally reproducing cutthroat trout in upper Daniels Creek, within the Provo River drainage if possible	The Mitigation Commission is signatory to the conservation agreements, and has participated in their activities. The Mitigation Commission has provided more than 583,000 to date for native cutthroat trout conservation efforts as part of its contribution to the conservation teams.	Mitigation Commission	Ongoing.	N/A	1997 WCWEP/DRP Final EIS and ROD; CUPCA
50	A survey will be conducted prior to construction activities to identify leatherside chub population centers and learn more about the status of the species.	The Mitigation Commission funded a survey by Utah Division of Wildlife Resources of potential leatherside chub habitats to determine the status and distribution of leatherside chub in the Heber Valley drainage area. See Utah Division of Wildlife Resources Publication Number 98-13: <i>Leatherside Chub</i>	Mitigation Commission	Completed.	N/A	1997 WCWEP/DRP Final EIS and ROD
51	Areas outside the impact area but within Heber Valley that contain populations of leatherside chub that would benefit from habitat enhancement would be enhanced and protected in accordance with an agreement to be finalized with the U.S. Fish and Wildlife Service and Utah Division of Wildlife Resources.	The Mitigation Commission has created, restored and enhanced many miles of potentially suitable leatherside chub habitat in Heber Valley in association with the Provo River Restoration Project (PRRP). The Utah Division of Wildlife Resources formalized a Conservation Agreement for leatherside chub in 2010. The Mitigation Commission has contributed 60,000 to leatherside conservation since 2010. Also acquired 100 acres of Mona Springs property in Juab County for native species conservation, including leatherside.	Mitigation Commission	Ongoing.	N/A	1997 WCWEP/DRP Final EIS and ROD

APPENDIX D: ENVIRONMENTAL COMMITMENTS

52	A wetlands monitoring plan will be established to evaluate the success of mitigation measures. Such mitigation measures will be modified as needed to ensure successful mitigation.	The District's wetlands mitigation for this project is to restore or enhance wetlands in the Strawberry River drainage following removal of the Daniel Irrigation Company facilities including two dams in the headwaters of a Strawberry River tributary. Removal of the dams and restoration of the wetlands and stream corridors has been completed.	District	Completed.	N/A	1997 WCWEP/DRP Final EIS and ROD
53	Roads in the upper Strawberry River basin associated with the DIC diversion facilities would be closed. The roads leading to the dams and the two-wheel track roads used for canal maintenance will be ripped and revegetated. Signs reading "Closed to Motor Vehicles" will be posted in appropriate locations. The roads to the dams would be reshaped to natural slopes in certain areas to provide drainage and to discourage use by unauthorized vehicles.	The Uinta National Forest revised parts of this plan in 2000 with its Environmental Assessment on closing roads in the upper Strawberry River watershed. The road to the DIC dams was subsequently not closed; however Forest Road up the main Strawberry River drainage was closed and rehabilitated from about mile upstream of the former DIC diversion. The road to the diversion has been closed. The canals and dams have been removed or recontoured, and large headcuts caused by years of channel erosion have been rehabilitated. The District and Forest Service completed this work in 2003.	District and U.S. Forest Service	Completed.	N/A	1997 WCWEP/DRP Final EIS and ROD
54	Develop a comprehensive monitoring and reporting program in cooperation with the U.S. Army Corps of Engineers, Utah Division of Wildlife Resources, FWS, recreation groups, and county officials to evaluate and provide information and management guidance on the following: A. Success of revegetation and erosion control measures. B. Control of noxious weeds and undesirable plants. C. Aquatic and terrestrial habitat mitigation. D. Aquatic and terrestrial species responses to the project. E. Threatened, endangered, and candidate species status and trends.	The Mitigation Commission has been monitoring and reporting on each item in cooperation with the agencies and entities listed at left. The project is meeting or exceeding its goals for revegetation, erosion control, control of noxious weeds and undesirable plants, aquatic and terrestrial habitat mitigation, T&E species habitat. The aquatic and terrestrial species responses to the project are being monitored. Monitoring reports. COE Wetlands monitoring is complete; annual bird and spotted frog surveys; annual eagle counts; annual ULT surveys; UDWR does fish population sampling; weed control and monitoring annually; mosquito control annually; habitat mapping 5 years; aerial photographs; USU studies. Baseline data and post-project data have been collected since 1997. Annual progress meetings were held for 5 years post-construction. The Mitigation Commission proposes re-consideration of some monitoring requirements.	Mitigation Commission	Ongoing. The Mitigation Commission proposes re-consideration of some monitoring requirements.	Pending	CUPCA
55	The restoration project will be carried out in adherence to the numerous Standard Operating Procedures (SOPs) described in the FEIS and RODs.	The Mitigation Commission has adhered to all SOPs, or consulted with Utah Division of Wildlife Resources, U.S. Fish and Wildlife Service and other affected agencies and publics if any SOPs were revised.	Mitigation Commission	Completed.		1998 ROD for PRRP
56	A survey will be conducted prior to construction activities to identify leatherside chub population centers and learn more about the status of the species.	See E.C. No. 50. See Utah Division of Wildlife Resources Publication Number 98-13: <i>Leatherside Chub</i>	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP
57	Designs for fish passage facilities will be incorporated into plans for all diversion structures that are modified by the Project.	This commitment was incorporated as a standard part of the PRRP objectives. The first choice under the restoration effort was to eliminate diversions entirely, but where diversions are still needed, they were rebuilt along with the restoration project to provide fish passage in both directions.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP

APPENDIX D: ENVIRONMENTAL COMMITMENTS

58	In order to avoid the likelihood of adverse impacts on Ute ladies'-tresses orchid, the following actions will be followed.		Mitigation Commission	Completed.	N/A	1998 ROD for PRRP
58a	A monitoring plan will be implemented for Ute ladies -tresses orchid approved by the FWS and developed in consultation with the FWS, Mitigation Commission, and Utah Natural Heritage Program (UNHP) staff biologists. The monitoring plan will be part of an overall monitoring plan that will track the success of the project in meeting environmental goals.	<p>The Mitigation Commission has developed and implemented monitoring plans in concert with the U.S. Fish and Wildlife Service and UNHP. Modifications to the monitoring program were recommended by the Mitigation Commission following several years of survey work, and the changes were approved.</p> <p>The Commission continues to monitor for ULT plants at known colonies.</p> <p>The Mitigation Commission proposes re-consideration of monitoring requirements.</p>	Mitigation Commission	Ongoing.	N/A	1998 ROD for PRRP
58b	Prior to construction, the genetics of the Provo River watershed population will be characterized, particularly in relation to other Wasatch Front populations, to help determine the uniqueness of the Provo River population and to determine the biological appropriateness of using seeds or transplanted individuals from other populations to augment colonies or replace lost individuals following construction and implementation of PRRP.	<p>The Mitigation Commission contributed funding for a study of genetics of the Provo River population. This study was under agreement with the U.S. Fish and Wildlife Service. The study concluded that based on the genetic markers evaluated there is more genetic variation within populations than among populations, and the Provo River population was not genetically distinct from others, e.g. Diamond Fork, in the area (for further information contact U.S. Fish and Wildlife Service).</p> <p>See <i>r e e e o r o e r o e e o e r r e o r r e</i></p>	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP
58c	Direct construction impacts will be avoided. The FWS and the Mitigation Commission will determine an appropriate buffer zone based upon final design and what is encountered during construction. This buffer zone will be surrounded with orange fencing and posted with signs stating "conservation area - do not disturb". The existence of the threatened Ute ladies -tresses orchid will not be stated on the signs to avoid unwanted attention to the area. The FWS will be notified when fencing has been installed prior to construction and given the option of inspecting the location and adequacy. Additionally, the FWS will be notified when construction will be taking place near orchid colonies. A representative of the Mitigation Commission or the FWS will be present when construction is occurring near orchid colonies in order to ensure that unexpected impacts do not occur and to be available for consultation should changes in construction methods or location appear necessary.	The Mitigation Commission has complied with this environmental commitment. The U.S. Fish and Wildlife Service was involved in reviewing and revising draft and final designs for the restoration work for every segment of the river, including those that contained historic colonies of ULT. Construction has occurred with consultation before, during and after the project to ensure U.S. Fish and Wildlife Service involvement and approval of the work. The Mitigation Commission has completed restoration work in the two river segments known to contain ULT.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP

APPENDIX D: ENVIRONMENTAL COMMITMENTS

58d	<p>Conditions necessary for continued viability of the Provo River population will be maintained, including artificial maintenance of habitat conditions, until the FWS determines such activities are no longer necessary or warranted. Circumstances that permit termination of artificial habitat maintenance include documentation of successful establishment of viable colonies and expiration of existing colonies due to circumstances not related to this project. Artificial maintenance may include such actions as augmenting or modifying hydrologic conditions and vegetation management. The Proposed Action has been redesigned to maintain, to the extent possible, existing channel features and hydrology within the occupied habitat. This will help minimize the likelihood that artificial habitat maintenance will be required.</p>	<p>The Mitigation Commission has continued to consult with U.S. Fish and Wildlife Service throughout this project. To date, no artificial means of maintaining populations has been recommended by the U.S. Fish and Wildlife Service. The Mitigation Commission continued to consult with U.S. Fish and Wildlife Service throughout the completion of the restoration work in 2007. ULT are monitored annually.</p> <p>The Mitigation Commission proposes re-consideration of monitoring and maintenance requirements.</p>	Mitigation Commission	Ongoing.	N/A	1998 ROD for PRRP
58e	<p>Additionally, restoration of the river floodplain corridor and, to the degree possible, river dynamics will help create and maintain suitable habitat. The Mitigation Commission will work with the FWS to design and manage these areas and recreation access points and trails in a manner that will allow establishment and viability of Ute ladies-tresses orchid colonies.</p>	<p>The Mitigation Commission has complied with this environmental commitment. The U.S. Fish and Wildlife Service was involved in reviewing and revising draft and final designs for restoration work for every river segment, including those that contained historic colonies of ULT. Construction occurred with consultation before, during and after the project to ensure U.S. Fish and Wildlife Service involvement and approval of the work. The Mitigation Commission has continued to consult with U.S. Fish and Wildlife Service throughout this project. The Mitigation Commission has developed and implemented monitoring plans in concert with the U.S. Fish and Wildlife Service and UNHP. Modifications to the monitoring program were recommended by the Mitigation Commission following several years of survey work, and the changes were approved.</p>	Mitigation Commission	Completed	N/A	1998 ROD for PRRP
59	<p>In order to avoid, reduce and mitigate potential impacts of the PRRP on spotted frog, the following actions would be incorporated (the implementation of measures marked with an asterisk (*) will be contingent upon receiving the necessary permits from the UDWR):</p>		Mitigation Commission	Completed	N/A	1998 ROD for PRRP
60	<p>During construction in Reach 9, spotted frogs will be precluded from moving into the “wire ponds” before construction impacts the ponds. In Reach 9, spotted frogs will be prevented from moving back into the “wire ponds” or entering the construction area. Exclusion will be accomplished by placing drift fences around ponds, and between the construction area and the USBR Jordanelle wetlands areas. Pit-fall traps would be placed along the drift fence prior to fall season and before construction begins. Trapping would be continued in the spring. Traps would be checked at regular, frequent intervals so that captured frogs could be moved to a suitable area. Trapping and relocation will be in accordance with the protocols described above.</p>	<p>The Mitigation Commission has coordinated extensively with Utah Division of Wildlife Resources and other agencies throughout the PRRP re: spotted frog mitigation and conservation measures. Protocols developed for Reach 9 have also been applied in other reaches of the project that contain spotted frog. The Mitigation Commission has trained spotted frog technicians on staff and has also funded Utah Division of Wildlife Resources to coordinate and participate in all spotted frog-related activities of the PRRP.</p>	Mitigation Commission; Utah Division of Wildlife Resources	Completed.	N/A	1998 ROD for PRRP

APPENDIX D: ENVIRONMENTAL COMMITMENTS

61	During construction, a trained person shall be on-site to coordinate implementation of the Environmental Commitments, identify and resolve problems involving spotted frogs. This action will be performed by personnel trained by qualified professional herpetologists. An accurate record of all activities involving spotted frogs will be maintained in accordance with the approved protocols. As part of this protocol, the Mitigation Commission proposes to mark spotted frogs 40 mm SVL that are moved due to construction disturbance with P.I.T. tags to evaluate their movement patterns and survival rates.	The Mitigation Commission has trained spotted frog technicians on staff and has also funded private/academia experts and Utah Division of Wildlife Resources to coordinate and participate in all spotted frog-related activities of the PRRP. PIT-tagging and other studies have been carried out.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP
62	Collection and translocation of spotted frogs will be in accordance with protocols to be developed by the Mitigation Commission and other members of the Bonneville Basin Conservation and Recovery Team and its technical advisors. The protocols will also be reviewed for approval by the UDWR in conformance with the policies, procedures and regulations governing the "Collection, Importation, Transportation or Possession of Zoological Animals."	The Mitigation Commission carries out all spotted frog activities either through direction of Utah Division of Wildlife Resources experts on the project and/or in compliance with the Certificate of Registration (COR) issued to the Mitigation Commission by the Utah Division of Wildlife Resources.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP
63	The Mitigation Commission would document frog use of the existing ponds within the proposed construction corridor in Reach 9 during spring breeding season, summer, and during the periods of retreat into and emergence from hibernation.	Monitoring of the PRRP project area has been expanded greatly beyond the requirement of this environmental commitment, to include the entire 10-mile corridor of the PRRP. Monitoring has shown successful occupation of newly-created wetland by the spotted frog, and based on egg mass counts, since the PRRP has been implemented the Conservation Agreement goal of having at least 500 egg masses each spring in the population has now been exceeded for the past 14 years. The Mitigation Commission proposes release from monitoring requirements.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP
64	Mitigation for the potential removal of two to four "ox bow" type ponds (created by river channelization) along the east side of Reach 9 will be completed. This mitigation is recommended because spotted frog monitoring indicates that these ponds are used by frogs for breeding, summer activity, and herpetologists speculate that these ponds may be hibernation sites. The Mitigation Commission will create four or more new ponds to address known habitat requirements for all spotted frog life stages. At least two of these ponds will be designed and constructed to mimic the two 'ox bow' ponds previously identified as suitable for frogs in Reach 9, and at least two additional ponds will be designed and constructed to provide potential hibernation sites.	The Mitigation Commission created many more acres of wetlands, including wetlands designed specifically to provide suitable breeding and hibernating habitats, for the PRRP prior to removing any occupied habitats. In addition, final designs and construction avoided the oxbow ponds and they were not removed.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP

APPENDIX D: ENVIRONMENTAL COMMITMENTS

65	The Mitigation Commission will monitor the newly constructed and modified ponds for use by spotted frogs for 5 years after construction of each site. It is also recommended that wildlife agencies continue to monitor the sites after this period.	The Mitigation Commission and Utah Division of Wildlife Resources are monitoring annually through PRRP completion. Monitoring after that date as per the Spotted Frog Conservation Team and State funding allows. The Mitigation Commission requests release from this monitoring requirement.	Mitigation Commission	Completed.	N/A	1998 ROD for PRRP																											
66	The Mitigation Commission will work cooperatively with USBR and other involved entities to modify water management of several existing mitigation ponds to hold water permanently and improve suitability as hibernation sites.	The Mitigation Commission has provided increased flows to several of the wetlands cells and modified others to maintain a more constant elevation during breeding season for spotted frog to reduce water level fluctuations that previously cause desiccation of egg masses. The Mitigation Commission and USBR are examining potential measures to increase and improve water supplies to the wetlands cells constructed by USBR for wetlands mitigation. Pipeline and valves were replaced so they can operate during cold weather, allowing water to be added to the Jordanelle Wetlands year-round. Change application on PRRP water rights was approved in 2011 allowing unused irrigation water to be stored in Jordanelle Reservoir (on a space-available basis), for use in wetlands. Proof materials were being prepared in April, 2016.	Mitigation Commission	Completed.	N/A	2001 UBRP Final EA and FONSI																											
67	<p>Instream flow commitments by MLWUA, Central Utah Water Conservancy District, and Department of the Interior in the Lake Fork River between Moon Lake Reservoir and the Big Sand Wash Feeder Diversion Structure will be maintained.</p> <p>Providing these instream flows is considered project mitigation for the impacts created by the Moon Lake Project.</p>	<table border="1" data-bbox="935 989 1920 1487"> <tr> <td data-bbox="935 989 1308 1090"></td> <td data-bbox="1308 989 1672 1090"></td> <td data-bbox="1672 989 1920 1090"></td> </tr> <tr> <td data-bbox="935 1090 1308 1151"></td> <td data-bbox="1308 1090 1672 1151"></td> <td data-bbox="1672 1090 1920 1151"></td> </tr> <tr> <td data-bbox="935 1151 1308 1286">October 1 through April 30</td> <td data-bbox="1308 1151 1672 1191">Wet (36 out of 100 years)</td> <td data-bbox="1672 1151 1920 1191">10.5</td> </tr> <tr> <td data-bbox="935 1191 1308 1231"></td> <td data-bbox="1308 1191 1672 1231">Average (42 out of 100 years)</td> <td data-bbox="1672 1191 1920 1231">7.0</td> </tr> <tr> <td data-bbox="935 1231 1308 1286"></td> <td data-bbox="1308 1231 1672 1286">Dry (22 out of 100 years)</td> <td data-bbox="1672 1231 1920 1286">3.5</td> </tr> <tr> <td data-bbox="935 1286 1308 1352">May 1 through July 31</td> <td data-bbox="1308 1286 1672 1352">All years</td> <td data-bbox="1672 1286 1920 1352">Normal Irrigation Releases</td> </tr> <tr> <td data-bbox="935 1352 1308 1393"></td> <td data-bbox="1308 1352 1672 1393">Wet (36 out of 100 years)</td> <td data-bbox="1672 1352 1920 1393">11</td> </tr> <tr> <td data-bbox="935 1393 1308 1433"></td> <td data-bbox="1308 1393 1672 1433">Average (42 out of 100 years)</td> <td data-bbox="1672 1393 1920 1433">11</td> </tr> <tr> <td data-bbox="935 1433 1308 1487">August 1 through September 30</td> <td data-bbox="1308 1433 1672 1487">Dry (22 out of 100 years)</td> <td data-bbox="1672 1433 1920 1487">6</td> </tr> </table> <p>The following water year definition is based on anticipated active storage in Moon Lake Reservoir on October 1:</p> <ul style="list-style-type: none"> • Wet year - more than 15,000 ac-ft • Average year - between 4,500 and 15,000 ac-ft <p>There are four criteria for bypassing this additional water at the "C" Canal diversion:</p> <ol style="list-style-type: none"> 1. MLWUA's diversion of water must be in priority 2. The Secretary of the Interior determines that the bypassed flows will be advantageous for fishery benefits 3. Capacity is available to move the bypassed water through the Big Sand Wash Feeder Pipeline 4. Changing the point of diversion from the "C" Canal to the Big Sand Wash Feeder Diversion will not reduce the amount of water available to MLWUA, except to the extent of any conveyance losses between the "C" Canal and the Big Sand Wash Feeder Diversion 							October 1 through April 30	Wet (36 out of 100 years)	10.5		Average (42 out of 100 years)	7.0		Dry (22 out of 100 years)	3.5	May 1 through July 31	All years	Normal Irrigation Releases		Wet (36 out of 100 years)	11		Average (42 out of 100 years)	11	August 1 through September 30	Dry (22 out of 100 years)	6	District	Completed. Ongoing.	N/A	2001 UBRP Final EA and FONSI
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APPENDIX D: ENVIRONMENTAL COMMITMENTS

68	Instream flow commitments by MLWUA, Central Utah Water Conservancy District, and Department of the Interior in the Yellowstone River between Yellowstone Feeder Canal Diversion and the Big Sand Wash Feeder Diversion Structure will be maintained. Providing these instream flows is considered project mitigation for the impacts created by the Moon Lake Project.	The MLWUA agrees to reduce its diversions into the Yellowstone Feeder Canal in order to bypass 1,945 acre-feet of water annually past the Yellowstone Feeder Canal Diversion for the downstream diversion at the Big Sand Wash Feeder Diversion and storage in the enlarged Big Sand Wash Reservoir. The volume of water to be bypassed is equal to the average annual yield of the nine high mountain lakes in the Yellowstone River drainage basin that are being stabilized as part of this project. The following schedule will be followed for the bypass of water each year. <ul style="list-style-type: none"> • October 1 through June 30 3 cfs • July 1 through July 31 2.5 cfs • August 1 through September 30 2 cfs 	District	Completed and Ongoing.	N/A	2001 UBRP Final EA and FONSI
69	Juvenile and adult fish passage facilities will be incorporated into the design of the Big Sand Wash Feeder Diversion Structure on the Lake Fork River.		District	Completed.	N/A	2001 UBRP Final EA and FONSI
70	Department of the Interior and District will consult with the Utah Division of Wildlife Resources during final design to determine whether screening the inlet to Big Sand Wash Feeder Pipeline is justified.		District	Completed.	N/A	2001 UBRP Final EA and FONSI
71	The District and Department of the Interior will work with MLWUA to ensure that proper measures are taken to avoid release of contaminants into the environment when the power plant at Big Sand Wash Reservoir is dismantled. The site should be sampled for residual contaminants after power plant removal and after all contaminants are removed.		District, DOI	Completed.	N/A	2001 UBRP Final EA and FONSI
72	Four existing high mountain lakes in the upper Lake Fork River watershed and nine existing high mountain lakes in the upper Yellowstone River watershed that are located in the High Uintas Wilderness will be stabilized as a fish and wildlife/wilderness enhancement measure.	Lake Fork River drainage: Brown Duck Lake, Island Lake, Sidney Lake, Clements Lake Yellowstone River drainage: Bluebell Lake, Drift Lake, Five Point Lake, Superior Lake, Water Lily Lake, Deer Lake, Farmers Lake, White Miller Lake, East Timothy Lake. Stabilization of all 13 lakes is complete.	Mitigation Commission	Completed.	N/A	2001 UBRP Final EA and FONSI
73	Mitigate for impacts to wetlands associated with the UBRP Project.	Permanent wetland impacts would occur around the enlarged Big Sand Wash Reservoir. Most temporary impacts would occur along the Big Sand Wash Feeder Pipeline and the Big Sand Wash-Roosevelt Pipeline. Temporary impacts have been mitigated through compensation to the National Fish and Wildlife Foundation for a wetland mitigation bank. The mitigation site approved by the U.S. Army Corps of Engineers (Corps) is located on Montes Creek Wildlife Management Area administered by Utah Division of Wildlife Resources. Wetland creation and restoration has been completed. Annual monitoring was completed in 2015 and maintenance (weed control) is ongoing. Completed year 5 of wetlands mitigation monitoring and were released from further monitoring by COE in Spring 2016.	Mitigation Commission	Completed.	N/A	2001 UBRP Final EA and FONSI
74	The proposed diversion structure location and final pipeline alignments will be intensively surveyed for Ute ladies'-tresses orchids in August prior to final design, and all populations will be mapped or marked. Department of the Interior in cooperation with U.S. Fish and Wildlife Service will develop appropriate conservation measures for unavoidable adverse impacts.		Department of the Interior; District	Completed.	N/A	2001 UBRP Final EA and FONSI

APPENDIX D: ENVIRONMENTAL COMMITMENTS

75	District commits to survey habitat for Uinta Basin hookless cactus. If the cactus is found, U.S. Fish and Wildlife Service will be consulted to avoid impacts.		District	Completed.	N/A	2001 UBRP Final EA and FONSI
76	Department of the Interior and District will participate in carrying out the reasonable and prudent alternative identified by the U.S. Fish and Wildlife Service in their 1998 Duchesne River Basin Final Biological Opinion as amended for the four listed Colorado River fish species.	The FWS issued its Biological Opinion for the Duchesne River in 1998, and based on more recent flow recommendations developed by the RIP and finalized in 2003 (Modde and eleher 2003), the FWS issued an Updated “Reasonable and Prudent Alternative” to the Biological Opinion in 2005. Implementation of flow recommendations are being coordinated through the Duchesne River Working Group (DRWG) that includes representatives from the FWS, State of Utah, Department of Natural Resources (Divisions of Water Rights, Water Resources and Wildlife Resources), the District, the DOI, and the Mitigation Commission. The DRWG was informally formed in 2003 to address issues involved with implementing the flow recommendations. The DRWG is addressing many issues, including water availability, water management, and protection of in-stream flows provided for endangered fishes. The role of this working group was formalized in the 2005 Reasonable and Prudent Alternative for the Duchesne River. The DRWG issued a report in 2013 summarizing water management for the years 2004 to 2011.	Department of the Interior; District	Ongoing.	N/A	2001 UBRP Final EA and FONSI
77	Roosting surveys for spotted and Big Townsend’s big-eared bats will be conducted in suitable habitat along pipeline corridors during the first year following project authorization. Occupied roost sites at non-reservoir features will be marked to avoid impacts on the bats.		District	Completed.	N/A	2001 UBRP Final EA and FONSI
78	Utah Lake System: Complete all mitigation commitments for fish, wildlife and related recreation associated with the ULS project or other CUP facilities.	The Utah Lake Drainage Basin Water Delivery System (Utah Lake System or ULS) Final EIS has been completed. Environmental commitments are identified in the Final EIS and the Record of Decision documents. The Mitigation Commission will use some of the funds available for this program to implement June sucker recovery actions in accordance with the June sucker Recovery Implementation Program. Also, see Environmental Commitments 76 through 91.	Mitigation Commission	Ongoing.	N/A	1999 Diamond Fork System ROD
79	Utah Lake System: Provide 12,165 acre-feet of water to be regulated annually from Deer Creek Reservoir to the lower Provo River for June sucker spawning and rearing flows.	The DOI and District have formulated the ULS project to provide 12,165 acre-feet of conserved water annually in the lower Provo River for June sucker spawning and rearing. This includes 2,875 acre-feet of existing contracted Bonneville Unit M&I water conserved from Section 207 projects in northern Utah County, 1,000 acre-feet of water conserved from Section 207 piping of the Upper East Union and East River Bottom canals, 290 acre-feet of water conserved from Section 207 piping of the Timpanogos Canal, and 8,000 acre-feet from enclosing the Provo Reservoir Canal or other Section 207 projects. The Provo River Flow Control Structure is complete and successfully tested in May, 2015. Release of most water to Provo River is dependent on issuance of Block Notice (anticipated 2018). Up to 4,500 additional AF of conserved water may be delivered to either Hobble Creek or Provo River for use. In 2008 the Mitigation Commission and partners completed a comprehensive study of instream flows for the lower Provo River ecosystem.	District and DOI	Ongoing.	N/A	2004 ULS Final EIS 2015 PRDRP Final EIS

APPENDIX D: ENVIRONMENTAL COMMITMENTS

80	Utah Lake System: The Mitigation Commission and the District will continue to acquire water shares from irrigation companies to provide flows in the lower Provo River to meet the 75 cfs target flow.	CUPCA Section 302(a) provides for the District, using funds provided by the Mitigation Commission, to acquire by purchase from willing sellers or exchange, 25,000 acre-feet of water rights in the Utah Lake drainage basin. CUPCA Section 303(c)(4) states “Upon the acquisition of the water rights in the Provo Drainage identified in section 302, in the Provo River from the Olmsted Diversion to Utah Lake, a minimum of seventy-five cubic feet per second” shall be provided continuously and in perpetuity from the date first feasible. Most of the Section 302 (a) funding authorization is committed to pay for a portion of the cost of 35 cfs capacity in the ULS system to deliver water to Provo River. This effort will continue, subject to availability of authorized funds. See Environmental Commitment No. 79.	Mitigation Commission and District	Ongoing.	N/A	2004 ULS Final EIS
81	Utah Lake System: Provide 3,300 acre-feet of irrigation company shares of water to flow unregulated toward the 75 cfs target flow in the lower Provo River.	The District has acquired irrigation company water shares representing 3,300 acre-feet of water for the Mitigation Commission towards the amount necessary to meet the 75-cfs target flow in the lower Provo River. The acquired water shares are in the form of water rights and water stock, and this water is only available during the irrigation season. None of this water is storage water and it cannot be regulated by reservoir operations. Instead, the water will be allowed to flow past the diversion location associated with the original water right or share, and the water will continue to flow down to Utah Lake. A change application will be filed with the Utah State Engineer to implement this action.	Mitigation Commission, District, and DOI	Ongoing.	N/A	2004 ULS Final EIS
82	Utah Lake System: An annual average of 16,000 acre-feet of Bonneville Unit water would be delivered to the lower Provo River through the Spanish Fork-Provo Reservoir Canal Pipeline, when water is needed in Utah Lake for exchange to Jordanelle Reservoir, and when the lower Provo River is below the 75 cfs target flow.	The District has planned the Utah Lake System project to include delivering an annual average of 16,000 acre-feet of Bonneville Unit water to the lower Provo River to assist in meeting in-stream flow objectives and would be subsequently exchanged from Utah Lake to Jordanelle Reservoir. This water would be conveyed through the Spanish Fork-Provo Reservoir Canal Pipeline and discharged to the Provo River at the pipeline crossing when needed to make the Utah Lake-Jordanelle Reservoir exchange and when flows in the Provo River are less than 75 cfs. A minimum 75 cfs flow normally occurs in the river between the Olmsted and Murdock diversions during the summer months when releases are made from Deer Creek Reservoir for conveyance through the Provo Reservoir Canal.	District	Ongoing.	N/A	2004 ULS Final EIS
83	Utah Lake System: An annual average of 12,037 acre-feet of water, of which 4,000 acre-feet will be available annually, would be regulated out of Strawberry Reservoir through the Mapleton-Springville Lateral Pipeline to Hobbie Creek to Utah Lake for June sucker spawning and rearing in Hobbie Creek.	The District and DOI have planned the Utah Lake System project to include delivering an annual average of 12,037 acre-feet of project water through the Mapleton-Springville Lateral Pipeline to Hobbie Creek for June sucker spawning and rearing flows (April through July) and to provide other fish and wildlife benefits throughout the year. This water would be part of 40,310 acre-feet of Utah Lake inflow from Strawberry Reservoir and would be subsequently exchanged from Utah Lake to Jordanelle Reservoir. Of the 12,037 acre-feet, 4,000 acre-feet would be provided in every year because this is the amount of water saved each year through Section 207 projects with Spanish Fork City, Mapleton City, and Springville City. An average of 8,037 acre-feet would be provided when water is being delivered from Strawberry Reservoir to Utah Lake for exchange up to Jordanelle Reservoir. Hobbie Creek supplemental water would not be delivered during high runoff years when Utah Lake is above compromise level. The high runoff years correspond with years when natural runoff would be sufficient to attract June sucker spawning in lower Hobbie Creek. In 2009 the Mitigation Commission and partners completed a comprehensive study of instream flows for the lower Hobbie Creek ecosystem. Up to 4,500 additional AF of conserved water may be delivered to either Hobbie Creek or Provo River for use. See <i>o e ree e or o ro e</i> EA and FONSI, 2013; <i>ro o er e e or o ro e</i> EIS and ROD, 2015.	DOI and District	Ongoing.	N/A	2004 ULS Final EIS 2015 PRDRP Final EIS

APPENDIX D: ENVIRONMENTAL COMMITMENTS

84	Utah Lake System: The Mitigation Commission will provide 10 acres of the 85 acre Mona Springs Wetland Unit which was acquired for protection of the wetlands complex for mitigation of 1.03 acres of non-jurisdictional permanent wetland loss and 0.27 acres of temporary wetland impacts.	The Mitigation Commission acquired 85.5 acres of a natural spring-fed wetland complex in Juab County south of Mona Reservoir in 1998 as mitigation for anticipated wetland and riparian impacts of the then-planned SFN System. Subsequently, planning for the SFN System was abandoned. The wetland is known as the Mona Springs Wetland Unit of the Burraston Ponds Wildlife Management Area. A portion of the Mona Springs Wetland Unit is available to mitigate for ULS impacts on riparian wetlands. The mitigation for ULS project permanent impacts on 1.03 acres of non-jurisdictional wetlands and 0.27 acre of temporary riparian wetland impacts would include 10 acres of the Mona Springs Wetland Unit, resulting in a mitigation ratio of 9.7 to 1.	Mitigation Commission	Completed.	N/A	2004 ULS Final EIS
85	Utah Lake System: The Joint-Lead Agencies, in cooperation with the June Sucker Recovery Implementation Program (JSRIP) and FWS, have initiated a study to determine the feasibility of providing fish passage or removing the Fort Field Diversion Dam on the lower Provo River for June sucker spawning and rearing.	The Fort Field Diversion Dam is a low irrigation diversion structure that historically prevented June sucker from migrating upstream of the dam during normal and low water years. During some high runoff years, the Provo River stage at the dam would inundate the structure and is thought to have allowed upstream passage to adult June suckers seeking suitable spawning habitat. The Fort Field Diversion Dam was rebuilt in 2009 by CUWCD, Mitigation Commission and Reclamation.	Mitigation Commission	Completed.	N/A	2004 ULS Final EIS
86	Utah Lake System: A Ute ladies'-tresses orchid monitoring program should be carried forward for a number of years (to be determined jointly by the District, Mitigation Commission and FWS) similar to the pre-operation study in Diamond Fork. If the changes to the Ute ladies'-tresses orchid population in Spanish Fork Canyon exceed the variation expected from pre-operation analysis and the critical values established, management guidelines presented in the 1999 Diamond Fork Biological Opinion may be implemented to compensate for impacts.	There are seven known occurrences of the Ute ladies'-tresses orchid in Spanish Fork Canyon along the Spanish Fork River from Diamond Fork Creek to the Spanish Fork Diversion Dam. The Ute ladies'-tresses orchid is presently listed as a threatened species protected under the Endangered Species Act and its amendments. The ULS Proposed Action may result in decreased river stages, ranging from 0.1 to 0.7 feet lower than baseline conditions, because of lower stream flows from conveying the Bonneville Unit water through a new pipeline down Spanish Fork Canyon. The lower stream flows, simulated through hydraulic models of the Spanish Fork River channel, are not expected to change the hydrology around the Spanish Fork River Ute ladies'-tresses colonies because they typically grow outside the direct influence of the river flows and are supported by secondary hydrology (i.e., subsurface water, springs, seeps, or flows from off-channel ponds). The orchid monitoring program for the Spanish Fork Canyon colonies is based on the program referenced in Environmental Commitment No. 41a. The District will be responsible for orchid monitoring until the Spanish Fork Canyon Pipeline becomes operational; the Mitigation Commission will be responsible for orchid monitoring during ULS operation. The Mitigation Commission monitored ULT through 2008, at which time the Mitigation Commission requested re-consultation with FWS regarding this change.	District, Mitigation Commission	Suspended since 2009. Revisit.	N/A	2004 ULS Final EIS
87	Utah Lake System: If post-operation monitoring results in measured parameters exceeding pre-set critical values for Ute ladies'-tresses orchid populations in Spanish Fork Canyon, the Diamond Fork System operation has the flexibility to supplement flows in Spanish Fork River. Other measures, such as a rescue/transplant program, could be initiated.	See the comments under Environmental Commitment No. 88 and Nos. 41f. If decreased flows in the Spanish Fork River are found to cause conditions exceeding the pre-set critical values for Ute ladies'-tresses orchid colonies and individuals in Spanish Fork Canyon, then the Joint-Lead Agencies will consult with the FWS. The Mitigation Commission monitored ULT through 2008, at which time the Mitigation Commission requested re-consultation with FWS regarding this change.	Mitigation Commission, District, and DOI	Suspended since 2009.	N/A	2004 ULS Final EIS
88	Utah Lake System: To offset potential impacts on leatherside chub, the Joint-Lead Agencies will support the Utah Division of Wildlife Resources in evaluating population and habitat status, or determining threats and/or identifying conservation actions that could protect and where appropriate enhance leatherside chub habitat.	The Joint-Lead Agencies' support of the Utah Division of Wildlife Resources to evaluate population and habitat status, determine threats to the species, and identify conservation actions that could protect and enhance leatherside chub habitat would be focused first on the Spanish Fork River, but if necessary, on other streams of the Utah Lake drainage basin. Mitigation Commission participates in the Conservation Agreement and has provided 60,000 since 2010 to projects.	Mitigation Commission	Ongoing.	N/A	2004 ULS Final EIS

APPENDIX D: ENVIRONMENTAL COMMITMENTS

89	Maintain access to water rights for properties not acquired		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
90	Conduct baseline vegetation mapping, develop revegetation plan and refine weed control plan		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
91	Enter into agreement with Utah County for Pest Management (mosquito, weed)		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
92	Design diversion structure from restored Provo River to old river channel to minimize June sucker entrainment		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
93	Post-Construction: Monitor diversion structure entrainment effectiveness (June sucker larvae no more than 2.5 larval drift)		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
94	Conduct at least one additional year of Ute Ladies -tresses (ULT) survey prior to final design/construction		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
95	Fence ULT locations, establish ingress, egress, and staging areas to avoid known occurrences.		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
96	Wildlife biologists that may be conducting bird-aircraft hazard mitigation actions in the project area prior to construction will be provided with a map of Ute ladies'-tresses occurrence areas to avoid trampling.		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
97	The JLAs will coordinate with FAA and Provo Municipal Airport prior to and during final design and project construction to develop and implement a wildlife hazard monitoring plan and mitigation program.		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
98	The JLAs will coordinate with FAA and Provo Municipal Airport prior to and during and after project construction activities to alert them of pending land use changes that may require recalibration of radar systems.		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015

APPENDIX D: ENVIRONMENTAL COMMITMENTS

99	Implement URMCC preconstruction bird monitoring and movement study		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
100	Identify and include appropriate wildlife hazard reduction measures throughout construction and operations phases of the PRDRP		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
101	Complete Cultural resources class III inventory; have on-site monitor during all construction activities		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
102	Develop Agreement w SHPO for a cultural resources treatment plan for any residual impacts		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015
103	Determine means of raising water levels in existing channel for testing south levee operation and maintenance needs.		Mitigation Commission	Project is just beginning.	N/A	PRDRP ROD, 2015

Appendix E

REFERENCES



UTAH RECLAMATION
MITIGATION
AND CONSERVATION
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Appendix E

REFERENCES

The following is a list of documents referenced in and/or supporting the information in this Report and Plan. This list does not represent all the documents produced since our inception, which would be exhaustive, but rather those specifically relating to projects discussed herein. The documents are organized according to the Commission's planning watersheds and are available either on our website, or by request from the Commission.

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