

**CENTRAL UTAH  
WATER CONSERVANCY DISTRICT**



**WATER MANAGEMENT  
IMPROVEMENT STUDIES**

**2004 SUPPLEMENT TO  
WATER MANAGEMENT  
IMPROVEMENT PLAN**

**APPENDIX A  
WATER CONSERVATION CREDIT PROGRAM  
FIFTH EDITION**

TO THE U.S. SECRETARY OF THE INTERIOR  
AS REQUIRED UNDER PL 102-575 SECTION 207 (b)

**JANUARY 2004**

**WATER CONSERVATION CREDIT PROGRAM  
APPENDIX A  
FIFTH EDITION**

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## LIST OF TERMS AND ABBREVIATIONS

### For purposes of this document:

Act	Central Utah Project Completion Act; quotations from the Act are shown in italics
applicant	any person or entity applying for water conservation credit through the Water Conservation Credit Program
Board	the Central Utah Water Conservancy District Board of Trustees
conservation credit	the amount of "water savings" credited to CUWCD through the Credit Program
conservation measure(s)	<i>actions taken to improve the efficiency of the storage, conveyance, distribution, or use of water exclusive of dams, reservoirs, or wells.</i>
Coordination Committee	the Water Management Improvement Studies Coordination Committee
CRSP	Colorado River Storage Project
CUP	Central Utah Project
CUWCD	Central Utah Water Conservancy District
CX	categorical exclusion
DNR	Utah State Department of Natural Resources
EA	environmental assessment
EIS	environmental impact statement
the goal	CUWCD's water conservation goal as mandated in Section 207 of the Act
M&I	Municipal and Industrial
NEPA	National Environmental Policy Act of 1969

**LIST OF TERMS AND ABBREVIATIONS  
(CONTINUED)**

petitioner(s)	<i>any person or entity that petitions CUWCD for an allotment of water pursuant to the Utah Water Conservancy Act, Utah Code Ann. Sec. 17A-2-1401 et. seq</i>
Plan	the Water Management Improvement Plan as outlined in Section 207 of the Act
project(s)	any water conservation project, measure, or program applying for water conservation credit
the Secretary	Secretary of the United States Department of the Interior
SFN	Spanish Fork Canyon - Nephi Irrigation System - formerly called the Irrigation and Drainage System (I&D)
UBRP	Uinta Basin Replacement Project
USBR	United States Bureau of Reclamation of the Department of the Interior
WMIS	Water Management Improvement Studies as outlined in Section 207 of the Act

# CHAPTER 1

## INTRODUCTION

### CUP COMPLETION ACT SECTION 207

The Central Utah Project Completion Act, section 207, Water Management Improvement, mandates the establishment of a water conservation goal by the Central Utah Water Conservancy District (CUWCD) and a *continuous process for the identification, evaluation, and implementation of water conservation measures*.

As documented in the Water Management Improvement Plan (Plan), submitted to the Secretary of the United States Department of the Interior (Secretary) in December 1994, a water conservation goal for CUWCD was established at **39,294 acre-feet per year**. This goal was calculated according to the water use characteristics of petitioners of CUP water and was based on the best information available at the time. In the 1998 Supplement to the Water Management Improvement Plan (Supplement), the goal was revised to reflect more current data. The revised goal was established at **49,622 acre-feet per year**. This goal amount remained unchanged in the 2001 Supplement. The 2004 Supplement increased the goal to **62,100 acre-feet per year**.

The Act specifies that CUWCD must achieve its entire goal fifteen years after the submission of the Plan. This equates to completion by January 1, 2010. With the submittal of the 1998 Supplement and the revised goal, additional deadlines included achieving 50 percent of the revised goal by January 1, 2005 and 100 percent by January 1, 2013. These deadlines remain unchanged in the 2001 Supplement, however, the 2004 supplement add 2008 and 2011 as the deadline for 50% and 2016 and 2019 as the deadline for 100% of the goal to be achieved. Table 1-1 illustrates the progress made toward the achievement of the goal based on those projects selected for implementation.

In order to identify, evaluate and implement water conservation activities within CUWCD boundaries and to monitor progress toward meeting the water conservation goal, CUWCD has established **The Water Conservation Credit Program** (Credit Program). As conservation measures are implemented, the amount of water conserved will be tracked and recorded, or credited, toward meeting the water conservation goal. CUWCD, through the Credit Program, will also administer the \$195 million (\$50 million original authorization and \$145 additional as per PL107-366) in federal monies (maximum 65% federal cost share / minimum 35% local cost share) to fund the implementation of conservation measures and projects.

The stated purposes of section 207 are:

- C* encourage the conservation and wise use of water;

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- C reduce the probability and duration of periods necessitating extraordinary curtailment of water use;*
- C achieve beneficial reductions in water use and system costs;*
- C prevent or eliminate unnecessary depletion of waters in order to assist in the improvement and maintenance of water quantity, quality, and streamflow conditions necessary to augment water supplies and support fish, wildlife, recreation, and other public benefits;*
- C make prudent and efficient use of currently available water prior to any importation of Bear River water into Salt Lake County, Utah; and*
- C provide a systematic approach to the accomplishment of these purposes and an objective basis for measuring their achievement.*

### **WATER CONSERVATION CREDIT PROGRAM**

The Credit Program has been developed with the assistance of representatives from state, local and federal agencies, water users, environmental groups, sportsmen's organizations, and public interest groups. With input from these organizations, CUWCD will evaluate the effectiveness of the Credit Program on an annual basis, and may adjust sections as necessary.

Federal funding for the Credit Program is expected to be received annually. Each year applications will be accepted by CUWCD and projects will be evaluated and prioritized for funding. Water savings resulting from public education programs are extremely difficult to quantify. For this reason CUWCD will evaluate education program proposals separately from other conservation projects (see Public Education section). Public

Any person, group, or organization with an idea for a project that conserves water is eligible to participate in the Credit Program. In addition, any project implemented after January 1, 1992, is eligible for participation in the Credit Program. However, not all projects submitted will be selected for funding. All projects must first successfully complete all elements of the Credit Program. The elements include:

- C Application
- C CUWCD/Applicant consultation
- C Feasibility Study
- C NEPA compliance

- C Active Inventory
- C Prioritization
- C Selection for funding
- C Implementation and assessment

A detailed description of these elements is included in this document. A flow chart and schedule of the process are presented in Figures 1 and Table 1 respectively.

Those projects that have NEPA compliance and have been judged by CUWCD to meet the criteria outlined by this document and the 2004 Supplement to the Water Management Improvement Plan will be listed on the Active Inventory.

Once a project is listed on the active inventory, the applicant will be required to submit to CUWCD a demonstration of financial commitment to the implementation and maintenance of the proposed conservation project. This will generally include verification of the source(s) and amount(s) of local funding to be obtained.

The Act requires any conservation measure proposed by the Utah Department of Natural Resources (DNR) and up to five conservation measures within any three-year period submitted by nonprofit sportsmen or environmental organizations to be evaluated by CUWCD. The DNR will be responsible for preparing the Feasibility Studies for all conservation measures it proposes. CUWCD will be responsible for preparing the NEPA compliance documents for DNR proposals. CUWCD will be responsible for preparing both the Feasibility Study and the NEPA compliance documents for conservation measures submitted by nonprofit sportsmen or environmental organizations. CUWCD may also act as the applicant for water conservation projects in some instances.

Conservation credit will be applied towards CUWCD's goal as a result of water conserved by projects that have completed the elements of the Credit Program. However, there may be some projects that do not request federal funding. In this case, CUWCD may prepare the Feasibility Study as well as the NEPA documents in order to be credited for the water savings.

Additionally, CUWCD recognizes that some prospective program participants may not have the financial or technical resources to prepare the required Credit Program documents yet the completion of whose proposal may be in the best interest of CUWCD. Consequently, CUWCD may be willing to play a more substantial role in the preparation of these documents for participants who can demonstrate a genuine need. CUWCD staff will evaluate these requests for assistance and make recommendations to CUWCD's Board of Trustees which will make the final decision on a case-by-case basis.

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Figure 1-1 - Credit Program Process

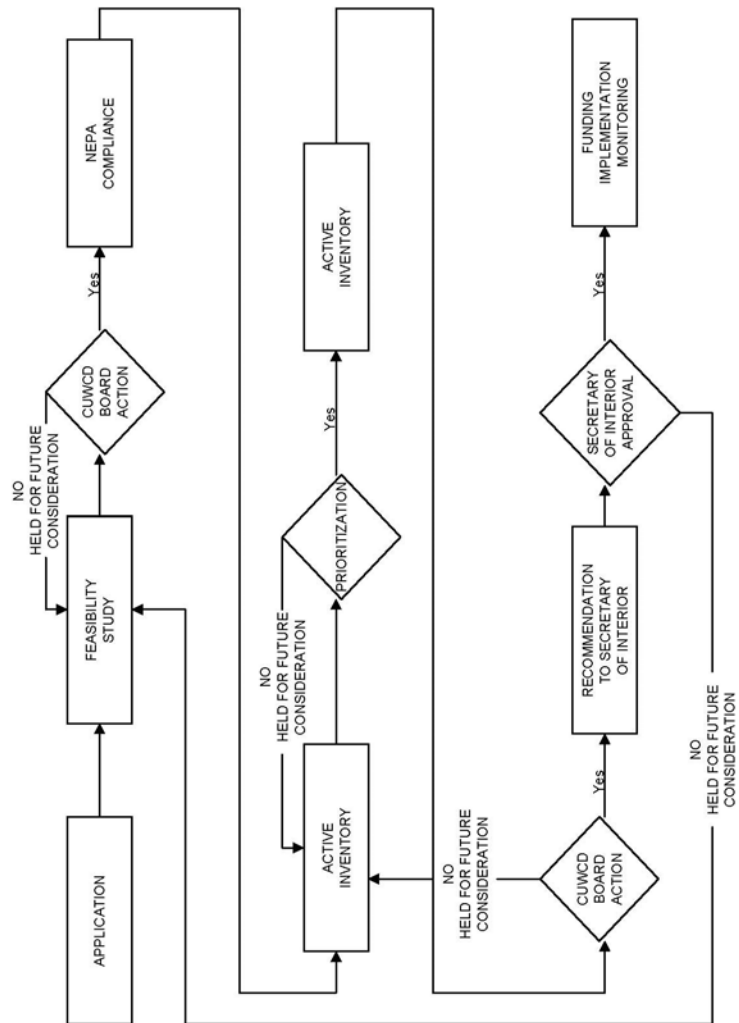


Table 1-1 - General Credit Program Schedule

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Accept Applications & Feasibility Studies												
90% Draft Feasibility Study Deadline												
Final Feasibility Study Deadline												
NEPA Compliance Deadline for Listing on Active Inventory												
Establish / Update "Active Inventory"												
Active Inventory Project Evaluation/Prioritization												
Public Meeting and Comment Period												
Projects Selected for Funding by Board												

Table 1-2

Water Conservation Credit Program - Anticipated Progress to the Year 2016 Conservation Goal

Project #	Project Name	Annual Acre-Feet of Water Conserved								
		1995	1996	1997	1998	1999	2000	2001	2002	2003
712	West Ridge Golf Course Irrigation Project	527	527	527	527	527	527	527	527	527
		415	290	316	576	576	931	623	405	377
724	Terra Diamond Water Cooling Tower	2	2	4	4	5	5	7	7	7
		0	1	2	4	4	8	8	6	6
734	Strawberry West Mountain Sprinkler Irrigation Project	626	626	626	626	626	626	626	626	626
		565	618	621	626	624	639	640	612	588
713	Draper Pressure Irrigation		5,159	5,161	5,164	5,164	5,164	5,167	5,167	5,171
			5,018	5,056	5,198	5,115	6,362	5,000	4,718	5,399
717	Sunshine Pipeline Project		1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
			960	984	847	935	1,111	1,111	1,313	1,260
721	Alpine Dry Creek/Fort Canyon Pipeline Project		3,600	3,600	3,600	3,600	3,600	3,600	3,600	3,600
			1,837	330	3,686	3,798	2,111	1,826	2,340	1,886
733	Kay Family Farm Sprinkler Irrigation Project		63	63	63	63	63	63	63	63
			63	63	63	63	76	58	58	76
745	Provo Lion's and South Fork Parks Secondary Systems		45	45	45	45	45	45	45	45
			13	17	22	19	21	19	32	34
746	Provo Kwanis Park Secondary System		55	55	55	55	55	55	55	55
			0	3	0	31	52	67	44	51
764	Wiser Water Use in Salt Lake City		18	18	18	18	18	18	18	18
			18	18	18	18	18	18	18	18
765	Development of Landscape Education Package		26	26	26	26	26	26	26	26
			0	0	26	26	26	26	26	26
732	Salt Lake County Runoff Groundwater Recharge						5,800	5,800	5,800	5,800
							1,328	5,282	5,800	5,800
735	Wasatch County Water Efficiency Project								5,000	8,000
							1,220	13,560	24,492	25,376
768	Island Ditch Pipeline Project						1,748	1,748	1,748	1,748
							1,747	1,779	1,891	1,198
782	Manti Pressurized Irrigation System Improvements						1,720	3,790	4,820	4,820
							2,065	4,500	4,820	4,900
739	Riverton City Secondary Water System Improvements						782	2,095	3,628	4,003
							432	3,287	4,102	4,604
770	East Juab Water Efficiency Project						3,393	5,105	5,105	5,105
							1,500	2,000	3,000	4,000
798	Thanksgiving Point Water Conservation Project				668	876	538	538	538	538
					647	647	723	606	606	606
738	Econs/PacifiCorp Multi-Family Retrofit Project					277	277	277	277	277
						277	268	268	268	268
802	Alpine City Secondary Irrigation Project							2,741	2,741	2,741
								2,379	2,790	2,790
806	Pleasant Grove Pressure Irrigation & Telemetry System						735	747	758	770
							157	425	526	649
716	Lindon Pressurized Secondary Irrigation System						3,073	3,290	3,436	3,667
							3,179	2,847	3,521	3,834
794	Highland City Pressurized Irrigation System						3,163	3,339	3,524	3,719
							3,160	3,477	3,615	3,824
812	Jordan Valley Water Conservation Project						157	157	157	157
							157	157	157	157
758	Mona Pressurized Secondary Irrigation Project							774	812	852
								843	1,364	1,364
812	Jordan Valley Water Conservation Project							314	314	314
								314	314	314
813	Orchard Mesa Canal Piping Project							975	975	975
								1,292	2,785	2,400
814	Timpanogos Canal Piping Project							1,004	1,004	1,004
								1,771	2,211	2,271
812	Jordan Valley Water Conservation Project								236	236
									236	236
809	Magna Water Company Secondary Water System									
812	Jordan Valley Water Conservation Project									157
										157
822	Salt Lake City Water Conservation and Education									157
										157
825	Spanish Fork City Secondary Water System									3,885
										2,240
<b>PROJECTED TOTALS</b>		<b>1,155</b>	<b>11,221</b>	<b>11,225</b>	<b>11,896</b>	<b>14,130</b>	<b>30,722</b>	<b>40,823</b>	<b>50,002</b>	<b>59,058</b>
<b>ACTUAL TOTALS</b>		<b>980</b>	<b>8,818</b>	<b>7,410</b>	<b>11,713</b>	<b>18,601</b>	<b>34,882</b>	<b>55,980</b>	<b>73,131</b>	<b>78,143</b>

\* No Annual Report

LIGHT SHADED AREAS REPRESENT ACTUAL CONSERVATION

DARK SHADED AREAS REPRESENT CONSTRUCTION PERIOD

## CHAPTER 2

### APPLICATION

#### PURPOSE

The application is the first step in the Water Conservation Credit Program; it begins the process of identifying water conservation measures. By completing and submitting an application, the applicant notifies CUWCD of a potential water conservation project that may help CUWCD meet its water conservation goal. The completed application is the basis for evaluating the initial merits of the project.

#### PROCEDURE

The steps in the application process are as follows:

- C Complete the application form (Appendix A-1) and submit it to CUWCD. Applications are accepted at anytime during the year, however, to be listed on the Active Inventory and considered during a specific year the application **must be received on or before March 1**. Questions that arise while completing the form should be directed to CUWCD staff. The application can be completed within a day or two.
  
- C CUWCD will evaluate the application for the proposed project. This review is a method of identifying projects that **may be** appropriate water conservation measures; it is not meant to determine if the project will be approved or receive federal funding.
  
- C CUWCD will provide comments from its review to the applicant within a month.

#### EVALUATION

Applications will be reviewed and evaluated to determine the initial merits of the proposed conservation measure. The evaluation will focus on the following criteria:

**1) Does the proposed project appear to qualify as a water conservation measure?** Water conservation measures can be defined as *actions taken to improve the efficiency of the storage, conveyance, distribution, or use of water, exclusive of dams, reservoirs, or wells*. Public Law

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107-366 states that the *use of reverse osmosis membrane technologies, water recycling, and conjunctive use* projects are now eligible for funding under Section 207. To determine if a proposed project qualifies as a water conservation measure, CUWCD will ask the following questions:

- C Does this measure reduce the demand for water?
- C Does this measure reduce waste or losses of water?
- C Does this measure reduce consumptive use of water?
- C Does this measure extend existing water supplies?
- C Does this measure improve instream flows or augment water supplies to support fish, wildlife, riparian habitat, recreation, or other environmental purposes?
- C Does this measure reduce the probability or duration of periods of extraordinary curtailment of water use?

If the answer is yes to any of these questions, then the project may be considered a water conservation measure under this program.

The Act specifically excludes some water measures from being used to gain conservation credit by CUWCD. Those measures disallowed from credit include:

- C Dams, reservoirs, and wells
- C Metering
- C Elimination of declining block rate schedules
- C Leak detection and repair programs
- C Low consumption plumbing fixtures in **new** construction
- C Requirements for soil preparation prior to installation or seeding of turf grass in new residential and commercial construction

In addition, funding is not available for operation, maintenance, capital improvements, repairs to existing systems and projects classified as water development. The portions of capital improvement projects implemented for purposes of water conservation may be eligible for funding; however, these portions of the project must go beyond what would normally be required

for the capital improvement.

Proposed measures that either do not meet the criteria for water conservation or are specifically excluded from the Credit Program by the Act will not receive further consideration by CUWCD.

To assist potential applicants in deciding whether to propose specific measures, the following list of measures that **may** be considered valid conservation projects in the context of the Credit Program is provided. It is important to note that ideas for water conservation measures are not limited to the following list:

#### General

- Rate schedules
- Ordinances and regulations
- Distribution system pressure reduction
- Water audits
- Reverse Osmosis and Membrane Technologies

#### Supply Management

- Reservoir or canal lining/piping
- Evaporation suppression
- Treatment and distribution system loss reduction
- Change in timing of releases/uses
- Year to year storage management
- Watershed management
- Conjunctive Use

#### Commercial/Industrial

- Recirculation of cooling water
- In-system treatment of water
- Reuse of treated wastewater
- Reuse of cooling or process water
- Process modification
- Low volume plumbing fixtures

#### Landscape

- Efficient landscape design
- Low-water-use plants
- Scheduled irrigation
- Efficient irrigation systems
- "Gray water" use
- Reuse of treated wastewater

#### Interior residential

- Retrofit with low-flush and ultra-low-flush toilets
- Retrofit with low-flow shower heads
- Pipe insulation
- Retrofit with toilet-tank displacement devices
- Faucet aerators
- Water-efficient appliances

#### Agricultural

- Canal lining, canal consolidation, and realignment
- Automatic and semi-automatic surface irrigation systems, e.g. cablegation and surge Irrigation
- Land leveling or contouring
- Sprinkler irrigation
- Drip irrigation
- Subsurface irrigation
- Improved tillage practices

**2) Is the applicant in control of the water right(s), or applying on behalf of, or in conjunction with, the holder of the water right(s) affected by the proposed measure?**

Each proposed measure must be consistent with Utah State law. Any ownership/water rights questions should be directed to the Utah State Division of Water Rights.

**3) Is the funding request within the federal participation limit?**

**Total federal funds** for the project cannot be more than 65% of the total project implementation cost.

## **COST**

The cost of preparing and submitting the application shall be borne by the applicant. The cost of reviewing the application shall be borne by CUWCD.

CUWCD staff is available to answer questions about the application, and to provide assistance in preparing the application.

## **CHAPTER 3**

### **FEASIBILITY STUDY**

#### **PURPOSE**

The purpose of the Feasibility Study (Study) is to assist CUWCD in determining the viability of a proposed water conservation project. The Study is to be prepared by the applicant or agent of the applicant; it must be detailed and thorough. The amount of water conservation that could be applied toward CUWCD's water conservation goal must be identified, and information about the possible environmental effects resulting from the implementation of the project presented. CUWCD will use this information to make a determination of the type and extent of NEPA compliance that will be required to evaluate the proposed project.

#### **PROCEDURE**

After receiving notification from CUWCD that the application meets initial requirements of the Credit Program, and prior to preparing the Feasibility Study, the applicant must schedule a Feasibility Study consultation with the Credit Program Coordinator. The purposes of the consultation are to:

- C Familiarize CUWCD with the proposed water conservation measure and individuals associated with the Feasibility Study preparation. The applicant should be prepared to describe the proposed conservation measure in detail, including any maps and plans for the project. The applicant should be prepared to answer specific questions raised during review of the application as noted in the response letter.
- C Discuss further requirements of the Credit Program, with particular emphasis on the requirements of the Feasibility Study and the prioritization criteria.
- C Encourage the applicant to investigate environmental enhancement options for their project.
- C Determine schedule of submittal deadlines for the proposed project.

After the consultation, the applicant may choose to continue the Credit Program process by preparing the Feasibility Study. Guidelines for its preparation are included in Appendix A-2.

## CHAPTER 4

### NEPA COMPLIANCE

#### WHAT IS NEPA?

NEPA's objective is to disclose to the public and to federal agency decision makers the potential environmental impact of federal agency actions. In assessing environmental impacts, an agency must determine the scope of its review (scoping), describe and evaluate reasonable alternatives to the proposed action, and consider the consequences, the mitigation, the direct, indirect, short-term and long-term effects of implementation of the range of reasonable alternatives.

#### PROCEDURE

The process for NEPA compliance depends on the significance of the impacts. The three categories of NEPA compliance, as shown in Figures 3, 4, and 5, are **Categorical Exclusion (CX)**, **Environmental Assessment (EA)**, and **Environmental Impact Statement (EIS)**. According to NEPA section 102(C) (Public Law 91-190), only "...major federal actions significantly affecting the quality of the human environment..." require a detailed EIS.

For actions whose anticipated environmental impacts are minor or are not clear, an EA will be prepared. The EA process employs a simpler procedure for public involvement and review than the EIS. If there are no significant impacts, a Finding Of No Significant Impact (FONSI) can be reached, and implementation of the proposal can proceed.

If significant impact on the environment is anticipated, both a more complex review and analysis and a public involvement procedure are required in the form of an EIS. For EISs the public must be involved from the beginning. The scope of the analysis must be determined, alternatives (equal to the proposal) must be developed and evaluated, and the impacts must be evaluated in a draft EIS. A final EIS must include responses to public comments on the draft document. Draft and final EISs are subjected to public review and comment.

Three important points should be noted about NEPA: 1) it is procedural; i.e., a specific decision to proceed, based only on the NEPA document, is not mandated; 2) it is a process to provide decision makers with information to consider but is not the "action" or "decision" document itself; and 3) all known environmental impacts, including socio-economic impacts, for the proposal and alternatives must be evaluated and presented to the public for comment.

For purposes of Credit Program NEPA compliance, the level of NEPA has not been pre-determined. It is expected that there will be the need for CXs and EAs and possibly EISs as water conservation projects are identified, and their potential environmental impacts become known.

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All projects proposed for consideration through the Credit Program will be subject to an environmental review. This review will consist of an evaluation of any impacts resulting from construction, operation, and maintenance of the project.

The steps in the NEPA compliance process for water conservation projects evaluated for the Credit Program are as follows:

- C As part of its review of the Draft Feasibility Study, CUWCD will examine the information submitted on the estimated impacts that the implementation of the proposed water conservation project would have on the environment. Based on that review and other information that CUWCD may gather, CUWCD will select the level of NEPA compliance that seems most appropriate (CX, EA or EIS). As part of that review, CUWCD will estimate the cost of performing the appropriate level of NEPA compliance.
- C CUWCD will evaluate all Feasibility Studies on a case by case basis to determine the proposed projects that will be further evaluated by conducting NEPA compliance. The criteria for identifying the projects that should move on to the NEPA process will be the same criteria used in the prioritization process.
- C CUWCD will manage the NEPA compliance process and will perform the necessary studies and prepare documents using a combination of its staff, consultants, and the resources of the applicant as appropriate. The Act empowers CUWCD to act as a federal agency for the purposes of complying with all federal fish, wildlife, recreation, and environmental laws with respect to the use of federal funds. CUWCD will consult with federal, state and local entities as appropriate and will coordinate one or more field visits to evaluate the requirements of the Fish and Wildlife Coordination Act for the project.

Compliance with the NEPA process often, if not always, includes consideration and compliance with the Endangered Species Act, Clean Water Act, section 106 of the National Historic Preservation Act, and other federal acts. In addition, certain state and even county regulations may need to be addressed in a NEPA document. The NEPA process is most often a dual process because NEPA compliance is usually coupled with permitting, not just disclosure.

## EVALUATION OF PROJECTS WITH NEPA COMPLIANCE

The Act, section 207(b)(2)(B) states that:

*Each conservation measure that is found to be cost-effective, without significant adverse impact to the financial integrity of the District or a petitioner of project [CUP] water, environmentally acceptable and for which the requirements of the National Environmental Policy Act of 1969 have been satisfied, and in the public interest shall be deemed to constitute the 'active inventory'.*

Water conservation projects that have satisfactorily met the requirements of NEPA compliance must be evaluated to determine if they qualify to be placed on the active inventory. The items to be included in the evaluation are:

- C Cost-effectiveness
- C Significant adverse impact to the financial integrity of CUWCD or petitioners
- C Environmental acceptability
- C In the public interest

Cost effectiveness and financial impacts are evaluated during the Feasibility Study review, prior to NEPA compliance. These items will be evaluated again to assure that the previous assessments have not changed as a result of the NEPA compliance process.

During the preparation of the Feasibility Study the applicant will be encouraged to investigate environmental enhancement options, and contact one of the following: 1) someone from the Utah Outdoor Interest Coordinating Council (UOICC) as designated by their Executive Director, 2) someone from the Department of Natural Resources, Division of Wildlife Resources, 3) someone from United States Fish and Wildlife Service, 4) someone from the Utah Reclamation Mitigation and Conservation Commission, or 5) someone knowledgeable about environmental considerations, such as a consultant.

Inclusion of an environmental enhancement to a proposed project is a desired component and will benefit the project in the ranking process (see Prioritization section).

The Senate Committee on Energy and Natural Resources Report provides some guidance relating to the public interest criterion. It states:

*A broad public interest criterion is included as well, not as a 'fudge factor' to eliminate*

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*measures that some might perceive as unpopular, but rather to assure that an appropriate balance is struck between economic, environmental, and financial considerations in the interest of all Utahns served by the project.*

A proposed measure will be judged to be “in the public interest” if it has met each of the requirements of the Credit Program.

### **COST**

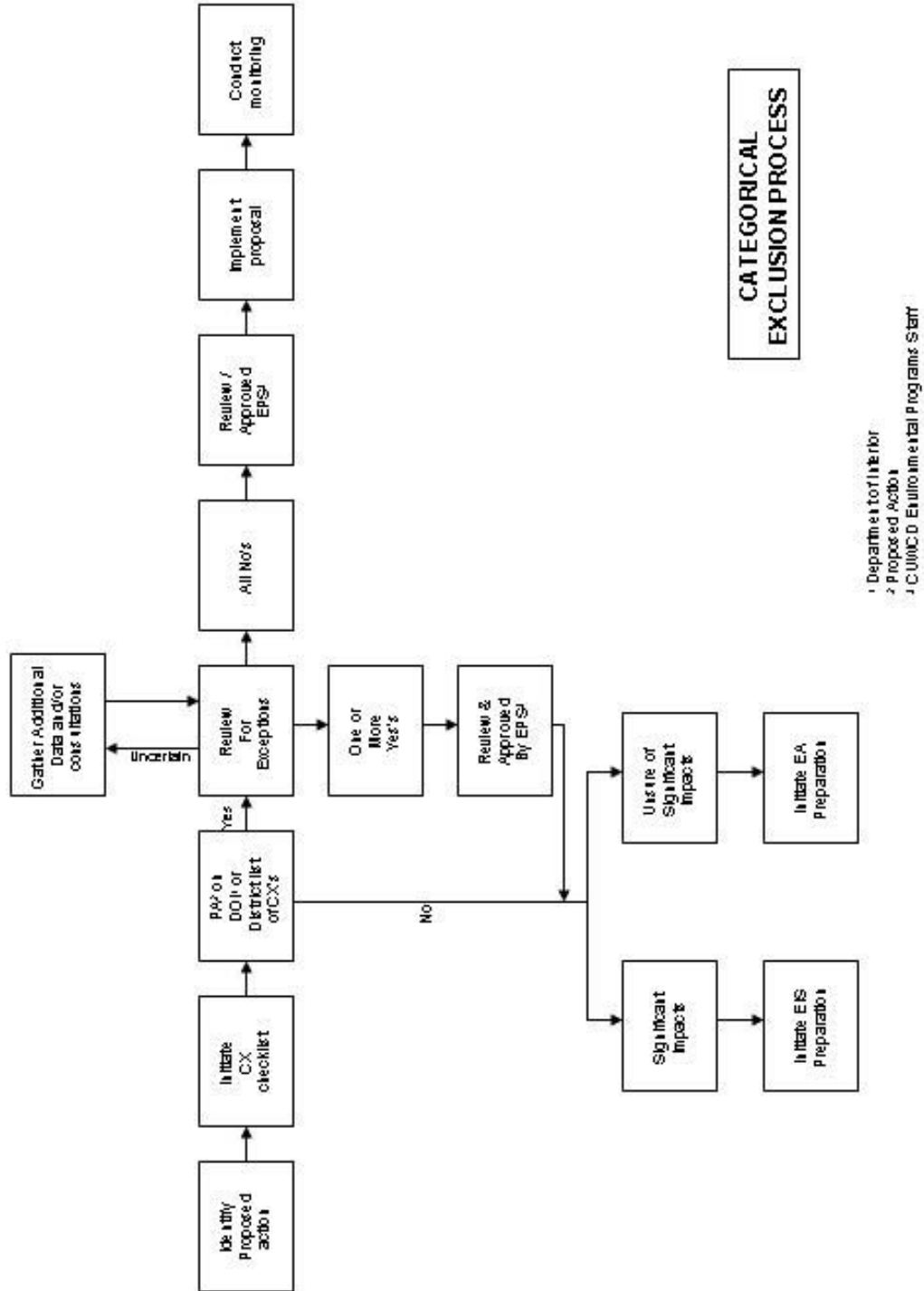
For any proposed project selected by CUWCD for NEPA, the applicant will be responsible for 50% of the cost and CUWCD will be responsible for 50% of the cost to complete NEPA requirements. This CUWCD cost share is subject to the availability of CUWCD funds. Since CUWCD must sign the NEPA documents, it will manage the NEPA process.

If the proposed water conservation project receives funding for implementation through the Credit Program, the costs incurred in preparing the NEPA compliance documents will be considered project implementation costs and may count toward the local cost share.

The applicant and CUWCD will execute a written agreement that will define the cost-sharing arrangements. The specific terms of the agreement will be negotiated by the applicant and CUWCD.

It should be noted that CUWCD has a limited budget for the NEPA compliance process. The amount available will be determined annually. Projects meeting the requirements of the Feasibility Study and evaluation criteria may be held indefinitely awaiting selection for or availability of funding for the NEPA process. However, the applicant may choose to pay for all of CUWCD's cost of preparing the NEPA compliance documents. In this case, either a third party or CUWCD would prepare the NEPA documents. In the case of third party preparation of the NEPA documents (to be approved by CUWCD), the applicant will be required to pay all of CUWCD's costs to manage the process.

Figure 4-1  
Categorical Exclusion Process



WATER CONSERVATION CREDIT PROGRAM

Figure 4-2  
Environmental Assessment Process

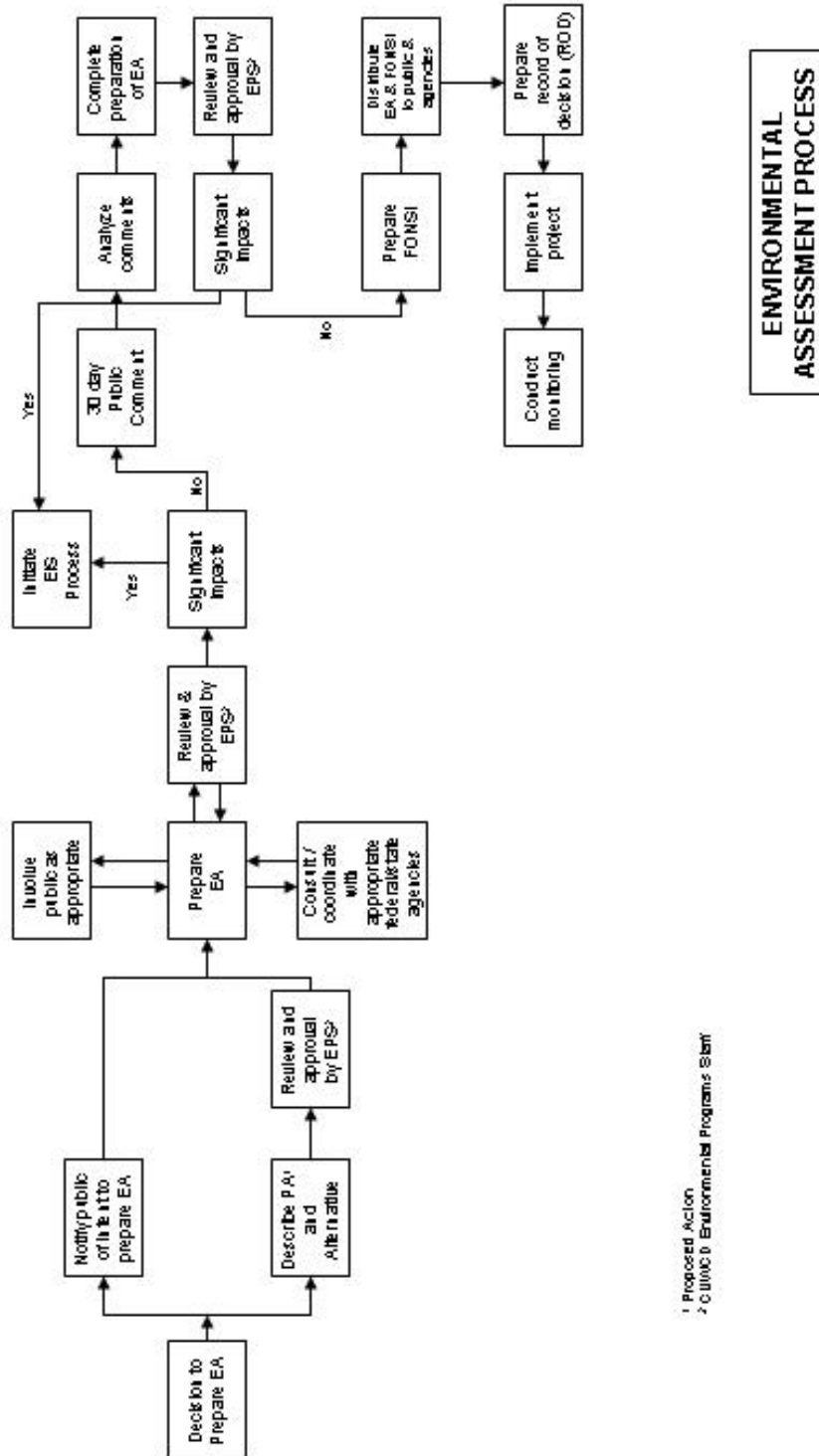
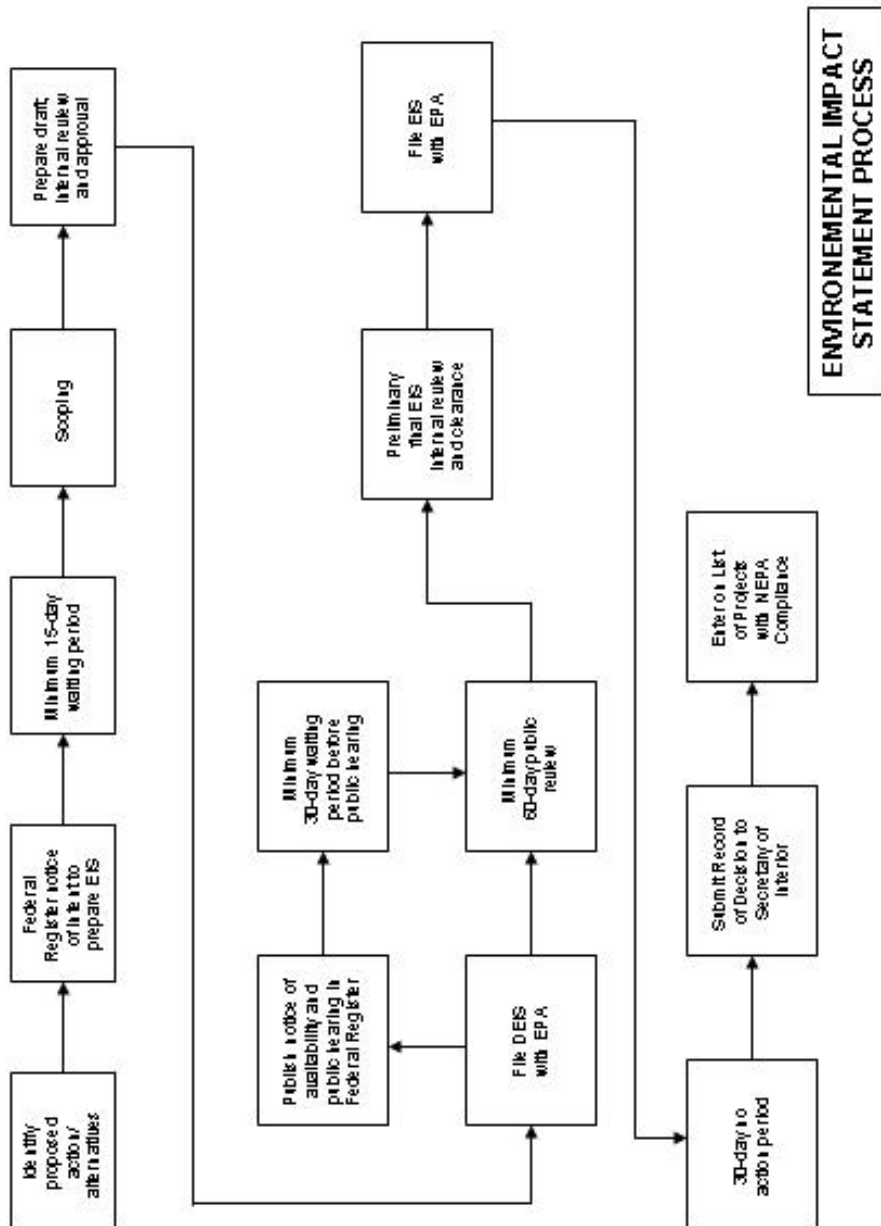


Figure 4-3  
Environmental Impact Statement Process



## **CHAPTER 5**

### **PRIORITIZATION**

#### **PURPOSE**

Section 207(b)(1)(c) requires a comparative analysis of all projects on the active inventory; this is called the prioritization process. The purpose of the prioritization process is to rank the water conservation projects on the active inventory. While all the measures on the active inventory may be worthy of implementation, timing and budget constraints of this program necessitate that projects be prioritized.

Projects not requesting funding that have been placed on the active inventory may be ranked ahead of projects that request funding. This procedure can aid CUWCD in meeting its water conservation goal. The prioritization process, which is described herein, is structured primarily for the purpose of ranking projects that are requesting federal funding through the Credit Program.

#### **PROCEDURE**

Once a year, CUWCD will prioritize and rank the projects on the active inventory. The procedure will be used to determine the projects that CUWCD will propose for implementation and funding the following year.

By September of each year CUWCD anticipates having an indication of the amount of federal appropriation that will be received for the next federal fiscal year (October 1 to September 30). Before June 1 of each year, CUWCD will form a prioritization committee. The purpose of this committee is to review, evaluate and rank the water conservation projects on the active inventory. CUWCD will provide staff to the prioritization committee. The prioritization committee will consist of:

- C Four members of the CUWCD Board of Trustees, representing diverse interests, to be appointed by the Chairman of the Board, who will also designate the Chairman of the prioritization committee.
- C One member designated by the Executive Director of the Utah DNR.
- C One member designated collectively by the Utah State Soil Conservation Commission, the Utah Farm Bureau, and the Utah Farmers Union to represent irrigation interests from within

## WATER CONSERVATION CREDIT PROGRAM

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CUWCD boundaries.

- C One member designated by the Utah Waters / Sierra Club.
- C One member designated collectively by the Municipal and Industrial (M&I) petitioners from within CUWCD boundaries.

The members of the committee will be designated each year by their respective agencies and may serve for more than one year. The prioritization process will consist of the following steps:

- C All projects which have successfully met the requirements of the Water Conservation Credit Program by August 1 will be placed on the active inventory.
- C Information on all projects on the active inventory will be distributed to the prioritization committee members for their review and familiarization with the projects.
- C By August 31 of each year, the prioritization committee will prioritize and rank the projects on the active inventory according to the criteria listed below.
- C CUWCD will hold a public meeting to present the project ranking recommendations of the prioritization committee.
- C The prioritization committee will review public comments and make a final recommendation to the CUWCD Board for ranking of the active inventory projects and funding eligibility.
- C The CUWCD Board will finalize the ranking of the active inventory and the funding of projects.
- C Based on CUWCD Board action regarding the final ranking of the active inventory, contracts and agreements among DOI, CUWCD and the applicant(s) will be prepared.

## **PRIORITIZATION CRITERIA**

The following is a brief description of the criteria used in prioritizing the proposed conservation projects on the active inventory.

1. Water Conserved - the amount of water conserved through the project.
2. Conserved Water Provided for Instream Flows - the quantity and timing of conserved water provided to CUWCD for the purpose of instream flows.
3. Environmental Enhancement - environmental enhancement, separate from the provision of conserved water to CUWCD for instream flows. The significance of the environmental enhancement is determined by the quantification of impacts included in the Environmental Assessment or Environmental Impact Statement, including public comments received.
4. Reduction in Consumptive Use - the reduction in the amount of M&I or irrigation water demand resulting from the particular conservation project.
5. Critical Relationship to Projects of CUWCD and/or CUPCA - project is critical to the implementation of a CUPCA authorized feature or CUWCD sponsored project
6. Total Cost per Quantity of Water Conserved - the ratio of the implementation cost of the project divided by the annual amount of water conserved.
7. Public Interest - projects that balance the public's economic, financial, and environmental interests.
8. Educational Value - projects that contain a public education component or directly educate the public about effective water use, conservation methods and water saving techniques.

## **PRIORITIZATION CRITERIA VALUATION**

The range of scoring for each criteria is from 0 to 10 points, with 10 being the highest or best score possible. In all cases, the individual Committee members will assign the points they feel each project warrants.

The points received from the criteria will form the basis for the evaluation of all projects on the Active Inventory. The point results from the criteria are not meant to be the sole basis for ranking, but are to provide information on each project relative to the purposes of the Water Conservation Credit Program. The Prioritization Committee will consider both the numerical results of the criteria and the degree to which each project fits into the Five-Year Plan developed by CUWCD to achieve its water conservation goal. In addition, any input received (favorable and unfavorable) during the public meeting and comment period will be taken into consideration. The Prioritization Committee's recommendations will be submitted to the CUWCD Board of Trustees who will make the final decision for implementation and funding for the upcoming year.

## **EDUCATION PROJECTS**

While many conservation projects will contain some level of public education, projects which focus primarily on education will be ranked separately under an Educational Project grouping. The core principal behind an educational project should that it educates the public about effective water use, conservation methods and water saving techniques. The list below offers a sampling of several key factors that will be considered in evaluating this new criterion:

- Contribution to increasing public awareness concerning the need for effective water use and conservation
- Ratio of the number of persons reached, participating in, or educated, to total program dollars spent
- Extent to which the submitting entity has consulted or coordinated with affected water supply agencies, companies, or organizations
- Provisions for a comprehensive and credible evaluation and assessment procedure for determining the effectiveness of the program
- Extent to which the program has previously been proven feasible and effective
- Life of the program beyond this request for funding

## CHAPTER 6

### IMPLEMENTATION AND ASSESSMENT

#### PROCEDURE

Following the prioritization process, the CUWCD Board and the United States Department of Interior will approve projects for funding and implementation. Funding for implementation include the following steps:

- C CUWCD will enter into an agreement with DOI for each project.
- C Contracts between CUWCD and the applicant will be negotiated and signed by both parties. Project sponsors will be required to enter into contracts with CUWCD within 60 days of notification of funding availability. Those projects which require water right change applications must receive the necessary approvals before contracts will be signed.
- C Funding appropriations by CUWCD will be made for the approved conservation projects.
- C CUWCD reserves the right to review project plans, specifications, materials, products, etc., as detailed in the Final Feasibility Study, to ensure that the intent of the Credit Program is being met. During construction a quarterly construction report is to be prepared and submitted to CUWCD.
- C After a project is constructed, an Annual Report will be prepared by the applicant which verifies that the water conservation project is achieving the intended water savings.

The water conservation measure cannot be changed or altered without the written consent of CUWCD. This includes change of ownership or any aspect of the water conservation project.

## WATER CONSERVATION CREDIT PROGRAM

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### CONTRACTS

Upon approval of the Final Feasibility Study, a contract between CUWCD and the applicant will be negotiated and signed by both parties. It will address the following provisions:

- C Statement of water savings - The applicant shall attain 95 percent of the amount of water conservation specified in the contract, for a period of three consecutive calendar years. If it is determined that the project consistently conserves less water than documented in the associated Feasibility Study, the applicant will be required to pay back to CUWCD a proportionate share of the Credit Program funds.
- C Contract life - The applicant is required to maintain contract compliance through the life of the project, or a minimum of 20 years. If the applicant discontinues the project prior to the end of the estimated life or the 20 year minimum period, Credit Program funds must be repaid to CUWCD.
- C Scope of Work - The applicant is required to implement the project as specifically detailed in the Final Feasibility Study.
- C Operation and Maintenance - The applicant will operate and maintain the conservation project, including any equipment replacement costs and environmental enhancements, for the life of the project. Federal funding is not available for operation and maintenance. All costs associated with discontinuing and/or altering the conservation project will be paid by the applicant.
- C Ownership - CUWCD will hold no titles, easements, liens, etc. associated with the conservation project, unless CUWCD is the applicant or owner. Any change of ownership shall be approved by CUWCD, and the new owner will be bound by the conditions of the contract.
- C Water Rights - The conservation project will not interfere with any existing water rights.
- C Project Annual Report - The applicant is required to prepare and submit by November 30 of each year a Project Annual Report verifying that the water conservation measure is achieving the intended water savings. The applicant is responsible for all costs associated with its preparation.

- C Terms of Payment - Local funds are required to be appropriated proportionately and concurrently with federal funds. Federal fund disbursements are subject to congressional appropriations to CUWCD, and to the terms of the appropriations (i.e., monthly, quarterly, annually).

## **PROJECT ANNUAL REPORT**

The Act requires that CUWCD conduct an assessment of all Credit Program projects to monitor progress toward achieving the goal. Each water conservation measure that is placed in the active inventory must include a means of monitoring and assessing the implementation.

A Project Annual Report will be required of the applicant for the life of the project and is to be submitted to CUWCD on or before November 30<sup>th</sup>. It will include an assessment of the conservation measure addressing results to date, any changes in the project affecting amount of water conservation, problems since last update and solutions, outlook for the next year (i.e.any planned alterations to the project), and any other pertinent information. Guidelines for the Project Annual Report will be provided to applicants receiving funding for project implementation.



# APPLICATION GENERAL INSTRUCTIONS

## PROCEDURE

Credit Program applicants shall submit a completed application form (pages A1-4 through A1-5) directly to CUWCD, 355 West University Parkway Orem, Utah 84058-7303. Copies of the application form are acceptable. Applications will be accepted at any time, however, any project application received after **March 1 will delay the credit program process until the following calendar year**. Questions and completed applications should be directed to the Conservation Credit Program Coordinator (801) 226-7144.

Water Conservation Credit Program staff will review applications. The CUWCD review serves to identify qualifying water conservation measures and is not meant to be a determination of whether a project will be approved or funded. The review will evaluate if: 1) the proposed measure appears to qualify as a water conservation measure, 2) the applicant controls the water right(s), or applies on behalf of, or in conjunction with, the holder of the water right(s) affected by the proposed measure, and 3) the request for federal funding is within the federal participation limit. CUWCD will provide review comments to the applicant within one month of receipt of the application. Based on the review, the applicant may continue the Credit Program process by preparing a Feasibility Study. Appendix B of this document contains the guidelines for the Feasibility Study.

## APPLICATION

The application is relatively brief, but it must be typed and all items completed thoroughly and accurately. Any items deemed not applicable should be noted "N/A". The following instructions are meant as a guide and to provide an orderly and effective procedure for submitting projects to the Credit Program. CUWCD reserves the right to consider each project on its own merits. A copy of the application follows.

- Item 1 Record the project contact person information. The contact person will be the person submitting the application or the person chosen to lead the effort to participate in the Credit Program. The organization must be a legally existing entity that will be responsible for the project. The address and phone numbers should be those of the contact person.
- Item 2 Give the project a name.
- Item 3 State where the project is located.

## APPLICATION GENERAL INSTRUCTIONS

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- Item 4 Provide a general overview of what the project consists of, its purpose and location. Identify specifically where the water for the project is obtained and in what amounts. Include a statement of whether the project is in place, partially implemented, or not implemented. Describe project facilities; for example: 15 miles of 18-inch pipeline with a capacity of 25 cfs; 1 reservoir of 18 surface acres and 45 acre-foot capacity.
- Item 5 Estimate the total project implementation cost. This cost represents the total implementation costs including planning, design, construction, and administration costs. If the project has been constructed, attach a project cost breakdown.
- Item 6 Estimate the annual volume (in acre-feet) and type of water conserved by the proposed water conservation project. Projects which save less than 250 acre-feet per year can only be submitted by the Executive Director of the Utah Department of Natural Resources, nonprofit sportsmen or environmental organizations.
- Item 7 State the amount of federal funding desired from the Credit Program. To be eligible for program participation, the total amount of federal funding from all sources cannot exceed 65% of the total project implementation cost.
- Item 8 Calculate the federal funding requested per acre-foot water conserved. Divide the amount of federal funding requested (Item #7) by the estimated annual volume of water conserved (Item #6).
- Item 9 List funding sources for the project. Include amounts and percentages of funding from each source.
- Item 10 List water rights information for all water associated with, or immediately affected by, the proposed project. Use of conserved water must be consistent with Utah State Law.
- Item 11 Attach additional technical information or reports pertaining to the project, including preliminary engineering reports/studies, Farm Irrigation Rating Index (FIRI), Natural Resources Conservation Service (NRCS) project reviews, or analyses.
- Item 12 Sign and date the application.



*For CUWCD use only*

Application No. \_\_\_\_\_  
Date Received \_\_\_\_\_

**APPLICATION  
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Fourth Edition**

The applicant is referred to the Application General Instructions for information concerning the completion of this form and the application process.

1. Applicant:

Contact person name and title \_\_\_\_\_  
Organization name \_\_\_\_\_  
Address \_\_\_\_\_  
City/State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

2. Project name: \_\_\_\_\_

3. Project location:

City \_\_\_\_\_ County \_\_\_\_\_

4. Attach a one-half to full page overview of what the project consists of, its purpose and location. Identify specifically where the water for the project is obtained and in what amounts. Include a statement of whether the project is in place, partially implemented/constructed, or not implemented/constructed. Identify and describe project facilities; for example: 15 miles of 18-inch pipeline with a 25 cfs capacity; 45 acre-foot reservoir of 18 surface acres.

5. Estimated total project implementation cost \_\_\_\_\_  
[If previously constructed, attach project cost breakdown.]

6. Estimated annual water conservation in acre-feet (AF) \_\_\_\_\_ AF Total  
\_\_\_\_\_ AF Irrigation Water \_\_\_\_\_ AF Municipal and Industrial Water  
[Minimum savings is 250 acre-feet per year - See General Instructions.]



<i>For CUWCD use only</i> Application No. _____ Date Received _____
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7. Amount of funding requested from the Credit Program \_\_\_\_\_  
[The total amount of funding from all federal sources cannot exceed 65% of Item #5.]

8. Credit Program funding requested per annual acre-foot of water conserved  
(Item #7 ÷ Item #6) \_\_\_\_\_

9. Funding sources for project (include amounts) \_\_\_\_\_  
\_\_\_\_\_

10. Water rights. Identify by court decree, application number or other appropriate explanation -  
attach additional information as necessary.  
\_\_\_\_\_  
\_\_\_\_\_

11. Attach any available technical information pertaining to the project (detailed project  
description, technical reports, etc.)

12. \_\_\_\_\_  
\_\_\_\_\_

Signature(s) of applicant(s)                      Title                      Date

Central Utah Water Conservancy District  
355 West University Parkway  
Orem, Utah 84058



# FEASIBILITY STUDY GUIDELINES

## INTRODUCTION

A Feasibility Study (Study) is a required part of the Credit Program. It is to be a detailed description of many elements of the proposed water conservation measure. The Study will be used to determine the viability of the proposed conservation measure, to identify the water conservation credit that will be realized as a result of the implementation of the proposed measure, and to determine the level of NEPA compliance that will be required for the project. It must contain enough information, in sufficient detail, that the aforementioned items can be clearly evaluated. A Draft form of the Study which is at least 90% complete must be submitted to CUWCD for determination of the required NEPA compliance level and evaluation of its cost effectiveness. Changes may be recommended based upon CUWCD's review of the Draft and a field trip may be required at this time. The U.S. Department of Interior will review and approve all Feasibility Studies prior to project implementation. Supplemental information may be required as a result of the Department of Interior's review. See the Feasibility Study section of the Credit Program for more information on the review and evaluation criteria.

## CONTENTS

The Feasibility Study must be typed and a minimum of three bound copies submitted to the Credit Program Coordinator for review. The Study, including all section and subsection headings, must be formatted the same as shown in these guidelines, using NA (not applicable) where the requested information is not applicable. Studies will be evaluated by CUWCD on a case by case basis, to determine which proposed projects will proceed to the NEPA process. Studies will be reviewed for completeness and accuracy of information, as well as to determine the initial level of NEPA compliance required. Conservation measures classified as NEPA Categorical Exclusions may be processed by CUWCD staff as received.

The Study is divided into eight sections: administrative information, project description, water conservation, cost effectiveness, financial analysis, water rights/ownership, project effects, and public or community involvement. Each section has instructions which detail the specific requirements of that section. Studies not addressing each item in each section and subsection specifically will be returned to the applicant for revision and re-submittal, and will be evaluated with the first group following a complete Study submittal.

A **Cover Page** is required for all Studies and shall include, at a minimum, the following items: project name, application number, date, and indication of Draft or Final.

**I. Administrative Information**

Administrative information should be as concise as possible and presented in the first few pages of the Study.

A. Project Name

List the project name or title.

B. Application Number

This is the number which was given to the application upon receipt by CUWCD. CUWCD will provide this information.

C. Administrative Contact Name

Name of the person to whom all correspondence concerning this project should be sent, as well as address, telephone and fax number.

D. Technical Contact Name

Name of the person to whom all technical correspondence concerning this project should be sent (typically the individual who has prepared Feasibility Study), as well as address, telephone and fax number.

E. Signature and Date

The Study must be signed and dated by the Director, Chairman or other responsible persons authorized by the applicant.

## II. Project Description

The project description must clearly address each element of the project and contain sufficient detail to thoroughly describe, at a minimum, the following:

### A. General Description

1. Overview: Provide a general overview of the project, its purpose, location and method by which water will be conserved. Identify specifically where the water for the project is currently and/or historically used and in what amounts.

Education Proposals should describe the goal of the proposed program, the audience (users, persons, organizations, school districts, conference attendees, etc.) targeted by the program and the total number of persons to be reached, participating in, or educated by, the program.

2. Laws & Regulations: Identify and describe the laws and regulations that presently affect the project (e.g. State law on use of treated effluent water, State water rights laws governing the amount of water that may be applied, and zoning regulations).
3. Permits, Licenses, Approvals: Identify and describe any permits, licenses, or approvals which were or must be obtained in order to construct the project (e.g. State Engineer approval, Corps Of Engineers Section 404 permit, easements, right-of-ways). Identify what stage you are at in obtaining each required permit, license, and approval.

### B. Detailed Description

1. Project Facilities: Identify and describe each element of the project. Include the number of each facility, its length, size, and/or capacity. This information may be easily presented in a table. For example:

Description	Size	Quantity	Surface Disturbance (II. B. 3.)	Comments
Pipeline	18-inch	15 miles	all within existing paved Right-of-Way	25 cfs
Reservoir	18 surface acres	45 acre foot capacity	18 acres of grass and scattered shrubs	Open, plastic lined

2. Land Ownership: Identify the land ownership by project facility. For example; 2 miles of pipeline Forest Service, 5 miles private; 50 acre reservoir - 25 acres private, 25 acres Division of Wildlife Resources.
3. Surface Disturbance: For each facility included in the project, identify the acres that were or will be disturbed during construction, the acres covered by the facility (include any acres that may be contained within a fence which encloses the facility), and the number of acres associated with each facility that will be revegetated upon completion of construction. Identify the acres by vegetation or crop type as appropriate.

C. Location

1. Provide a description of the location of the project (township, range, section). Identify the city, town, or nearest community, and county.
2. Provide a written description or map of how to reach the project.
3. Provide maps of an appropriate scale (minimum scale of a USGS 15 minute quad map) to show:
  - a. Location and/or placement of each facility of the project.
  - b. Relationship of the various project facilities to each other.
  - c. Relationship of proposed project facilities to major geographical points.
  - d. Areas disturbed during construction by vegetation type or crop type.

D. Construction (Not Applicable to Constructed Projects)

1. Time Frame: Describe the time frame in which the construction would occur. Provide a schedule showing when each permit, license and approval will be obtained, when the facilities will be constructed, and the expected time period required for construction for each part of the proposed project.

E. Operation and Maintenance

Describe how the project will be operated and maintained. Include a description of how the operation of the project differs from previous procedures (e.g. stream flows before and after project construction). Identify and describe the time period over which the project will be operated, how pipelines will operate (including monitoring and operation of safety measures), how reservoirs will be operated, etc. If the project involves an increase or change in the number of acres used or crops raised, provide information on what the area was used for before the project and what crops will be raised after the project. Identify the number of acres and show locations on a map.

## WATER CONSERVATION CREDIT PROGRAM

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### F. Useful Life

Estimate the useful life of the project; this must be a minimum of 20 years for Credit Program participation. Applicants will be responsible for reporting on, operating and maintaining the project for this stated life. See Credit Program Implementation and Assessment Section for more information.

Education proposals shall provide an implementation schedule and plan. In addition, the duration of the proposed program shall be identified.

### G. Alternatives

Identify and describe any alternatives to the proposed project that you considered in deciding on what the proposed project would be.

### H. Environmental Enhancement

Identify and describe any environmental enhancement features or actions that could be or were achieved through implementation of the project. Applicants are encouraged to investigate environmental enhancement options, and contact one of the following: 1.) a representative of the Utah Outdoor Interest Coordinating Council (UOICC) as designated by its Executive Director, 2.) a representative of the Department of Natural Resources, Division of Wildlife Resources, 3.) a representative of the U.S. Fish and Wildlife Service, 4.) someone from the Utah Reclamation Mitigation and Conservation Commission, or 5.) someone knowledgeable about environmental considerations, such as a consultant. Summarize the results of the related input. Provide copies of any related letters or documentation in an appendix to this Study.

### I. Similar Local Projects

Determine and list similar local projects and past studies relating to the proposed conservation measure. Include a brief assessment of each similar project.

### III. Water Conservation

#### A. Projected Water Conservation

Using a technically sound method, provide an estimate of the water conservation projected to occur as a result of implementation of the measure. Include the complete calculations as well as a description of the methodology used to determine the projected water conservation.

Applicants of on-farm irrigation projects may estimate projected water conservation according to the following irrigation efficiencies provided by the Natural Resources Conservation Service (NRCS). If more accurate information for a project area is available, that data should be documented and used.

<u>System Type</u>	<u>Efficiency</u>
Flood	30-40% (use 35%), laser leveled 50-55%
Gated Pipe	40-50% (use 45%)
Gated Pipe with surge valves	about 70% with land leveled & proper length runs
Wheel Lines, Hand Lines	65%
Pivots - Low Pressure (40 psi)	70% on level ground
Pivots - High Pressure (120 psi)	65%, 60% in windy areas

#### B. Method of Water Conservation Assessment

Describe the method that will be used to assess or measure actual water conservation. If the project is funded, the applicant will be required to submit a Project Annual Report to CUWCD documenting the water savings. The report must use this method of assessment to support the amount of annual water conserved. See Credit Program Implementation and Assessment Section for more information. Meters will be required at all points of delivery for projects funded through the Credit Program.

Sponsors of education proposals shall describe the method that will be used to assess the effectiveness or quality of the proposed program.

#### C. Schedule of Water Conservation Realization

Provide a schedule showing quantity of water conservation realized through the life of the project; include provisions for phased implementation of the measure and/or loss of efficiency where appropriate. This information may be easily presented in a table or a graph, for example:

## WATER CONSERVATION CREDIT PROGRAM

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Year(s)	Conservation (AF/year)
2004 to 2006	250
2007 to 2010	350
2010 to 2024	450

### D. Proposed Use of Conserved Water

Describe the proposed use(s) of the water conserved as a result of the implementation of this project. Uses of conserved water must be consistent with state law. Describe issues which must be resolved to receive approval of the Utah Division of Water Rights for the proposed use of the conserved water.

## IV. Cost Effectiveness

To determine cost effectiveness, it is necessary to identify and analyze the benefits and costs of each proposed project in a consistent manner. The Act requires that the benefits and costs to CUWCD, the applicant, other directly impacted water users, and society be considered. The benefits and costs required in this analysis are those for which a dollar value can be estimated. Education proposals need only identify the total estimated program cost and nothing more.

In this section provide estimates of benefits and costs of the proposed conservation measure. Provide all benefits and costs on an annual basis, using current dollar estimates (do not adjust dollar amounts for inflation). Provide annual costs and benefits for the expected useful life of the project.

### A. Data Requirements

1. Provide estimates of the following benefits and costs of the project in current dollar terms for each year of the life of the project. If a benefit or cost appears to be applicable under more than one category, only estimate that benefit or cost once. Do not duplicate benefits and costs.
  - a. Planning costs - Include the cost of preliminary studies, the Feasibility Study, layouts, and cost estimates.
  - b. Design costs - Include the cost to prepare design drawings.
  - c. Construction engineering and management costs - Include the cost of preparing specifications and contract documents, soils investigations, land surveys, and

- construction inspection.
- d. Construction costs - Include the cost of materials, equipment, labor, and land, right-of-way, or easement acquisition.
  - e. Environmental Costs - Include the cost of environmental enhancement features and mitigation.
  - f. Legal costs - Include the cost of legal services, water rights investigations, legal fees, and settlements.
  - g. Financing costs - Include the cost of interest and services on bonds issued or loans taken to implement the project. These costs are not eligible for funding through the Credit Program, but will be used to determine the cost effectiveness of the project.
  - h. Public education costs - Include the cost of additional labor, services, equipment, and materials required for public education and marketing of the project.
  - i. NEPA costs - This cost will be provided by CUWCD after review of the 90% submittal. The cost will include all costs associated with NEPA compliance.
  - j. Net change in on-farm costs or operation, maintenance, and replacement costs - Include the cost and cost savings as a result of increased or decreased labor, equipment, power, drainage and material requirements for the implementation and maintenance of the project. Also include any rebate costs, if applicable.
  - k. Net change in wastewater treatment costs - Include the cost and cost savings as a result of increased or decreased labor, equipment, power, and material requirements for any affected wastewater treatment facilities. If affected facilities are not owned by the applicant, the owner must concur with estimates provided.
  - l. Net hydroelectric power generation - Include the net benefit or cost of a change in power generation, valued at avoided cost, of any affected hydroelectric facilities. If affected facilities are not owned by the applicant, the owner must concur with estimates provided.
2. Per section 207(b)(2)(B)(i) of the Act, calculate the value of water conserved. The per acre-foot value is to be determined, *in the case of municipal water, on the basis of the project municipal and industrial repayment obligation of CUWCD, but in no case less than \$200 per acre-foot, and, in the case of irrigation water, on the basis of operation, maintenance, and replacement costs plus the "full cost" rate for irrigation computed in accordance with section 302(3) of the Reclamation Reform Act of 1982 (96 Stat. 1263; 43 U.S.C. 390bb), but in no case less than \$50 per acre-foot.* Provide documentation for values used that are different from those described above.
  3. Estimate the expected annual volume of water conservation that will be made available to CUWCD for instream flows as specified in section 207(b)(4) of the Act

## WATER CONSERVATION CREDIT PROGRAM

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- B. Method of Analysis (This section is provided for the applicant's information only; no data is required of the applicant for this section.)

The economic analysis performed by CUWCD is intended to provide CUWCD with an objective evaluation of the cost effectiveness of each proposed project.

The following assumptions will be used in the economic analysis :

1. Only benefits and costs that can be expressed in terms of dollars (or, in some instances, volume of water conserved) are relevant in analysis calculations.
2. Benefits and costs that are included in the analysis will be net of the expected future condition without development of the proposed project.
3. The prices used to estimate project costs and benefits are market prices, except where explicitly noted (e.g., the determination of the value of saved water).
4. The period over which project benefits and costs are evaluated is the expected useful life of the principal project feature. CUWCD will make the final determination of project life if any discrepancy arises.
5. The discount rate used to adjust future benefits and costs to a present value will be determined by CUWCD and will be an approximation of the real rate of return (adjusted for inflation and risk). The discount rate to be used is 3.0% unless otherwise noted.
6. CUWCD will evaluate the effectiveness of this analysis on an annual basis and may adjust any section as necessary. Requirements and analysis will not differ between proposed projects in any prioritization process.

CUWCD will use the following method to review the cost effectiveness of proposed projects.

1. Benefit/Cost Ratio  
C Threshold of  $\Rightarrow 1.0$ .

## V. Financial Analysis

### A. Federal Participation Limit and Funding Eligibility

With the cost effectiveness information supplied, CUWCD will determine the federal participation limit. Federal funds cannot be: 1) more than 65% of the total project implementation cost, or 2) greater than the federal participation limit.

Federal funds are limited, and total funding may not be available. The prioritization committee has the authority to vary (increase or decrease) the amount of funding recommended. Respond to the question: Will the project proceed without Credit Program funding?

### B. Sources of Funding

Provide a listing of all sources of funding including in-kind contributions used or to be used in implementing the conservation measure. Show the percent of the total costs to be received from each funding source, as well as a statement describing the status of the funds from each source. Provide documentation relating to the ability to finance or fund the local cost share portion of the project. If a portion of the funding will be supplied by your agency, proof of your ability to pay must also be included.

Provide a schedule of when funding from each source identified above, including Credit Program funds, will be obtained. Local funding must be proportionate and concurrent with Credit Program funding.

### C. Other Resources

Provide proof of ability to operate and maintain the conservation measure for the projected life of the measure.

### D. Financial Impacts

Provide an estimate of the financial impacts (both positive and negative) that would occur as a result of the implementation of the project. Include impacts on your agency as well as any other organization that may be financially impacted. Do not include estimate of financial impacts upon CUWCD. Applicants must work directly with any affected petitioners to determine financial impacts on those petitioners. At the applicant's request, CUWCD will identify the potentially affected petitioners.

## **VI. Water Rights/Ownership**

### **A. Water Ownership Information**

Provide a complete and clear listing of all water rights associated with the water to be used or conserved by the proposed water conservation measure. Provide a copy of the water right filing showing the present owner of record as filed with the Utah Division of Water Rights. An analysis of the water rights may be requested by CUWCD in some cases.

## **VII. Project Effects**

### **A. Affected Agencies**

List the local agencies, including municipalities, water agencies, and wastewater agencies, that will be affected by implementation of the measure. Include the effects (excluding financial impacts) that will be felt by each agency, and the extent or degree of the effect. Include both positive and negative effects. Financial impacts are detailed in Section V.

Identify the level and feasibility of interagency coordination that will be required for implementation of the measure.

### **B. Number of Affected Customers**

List the approximate number of customers that will be affected as a result of the implementation of the project. Include what effects and the extent or degree of the effects that will be felt.

### **C. Environmental Effects**

This information is requested to anticipate the level of NEPA compliance which may be required. For the proposed conservation measure, identify any possible environmental or social problems/issues that implementing the measure may cause. Respond to each item in the list provided below with Yes, No or Don't Know. For each "Yes", provide a brief description of what the change or effect would be. Provide an estimate of the amount of change; e.g. 1,000 acres would be changed from flood irrigation to sprinkler irrigation or 5 historic sites would be disturbed. If unable to provide a specific amount of change, provide a range of possible change. If unsure that a change will occur, indicate with "Don't Know". If other resources will be impacted that are not listed, identify them. Use the best information readily available. A detailed research effort is

not required at this point.

Resources Impacted and/or Issues Expected to Develop

1. Socio-economic effects

Will implementation of the proposed measure result in a change in:

- a. The number of people in the area;
- b. The type of individuals, for example:
  - (1) low-income persons,
  - (2) handicapped persons,
  - (3) elderly persons, or
  - (4) minorities including American Indians;
- c. Number and kinds of jobs;
- d. Income of individuals;
- e. Types and numbers of businesses;
- f. Type of community; or
- g. Change in the culture or custom in a community?

2. Agriculture

Will implementation of the proposed measure result in a change in:

- a. What the land is presently being used for;
- b. Productivity;
- c. Drainage patterns;
- d. Ability to travel the land; or
- e. Accessibility of the land (do parcels become landlocked)?

3. Cultural Resources

Will implementation of the proposed measure affect:

- a. Archaeological or historical sites; or
- b. Landmarks and places listed or eligible for listing on the National Register of Historic Places

4. Air Quality

Will implementation of the proposed conservation measure result in a change in the air quality?

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5. Noise

Will implementation of the proposed conservation measure result in a change in the noise level?

6. Energy Consumption

Will the proposed conservation measure result in less or more energy being used (gas or electricity)?

7. Water Quality and Quantity

Will implementation of the proposed measure result in a change in:

- a. Water discharges;
- b. Water use (culinary, agricultural, or industrial);
- c. Groundwater recharge;
- d. Stream and lake water quality;
- e. Ground water quality?

8. Threatened or Endangered Species

Will implementation of the proposed measure affect:

- a. Listed threatened or endangered plant or animal species; or
- b. Species proposed for listing; or
- c. Habitat of any listed or proposed for listing species

9. Wildlife and Wildlife Habitat

Will implementation of the proposed measure affect any wildlife and their habitats, including game and non-game, resident and migratory species?

10. Fisheries and Aquatic Habitat

Will implementation of the proposed measure affect fisheries or aquatic habitat?

11. Public Health or Safety

Will implementation of the proposed measure affect public health or safety?

12. Vegetation

Will implementation of the proposed measure remove any or change the type of vegetation present in the area?

13. Hazardous Waste

- a. Will implementation of the proposed measure generate any hazardous waste?
- b. Will implementation of the proposed measure disturb any known or possibly contaminated:
  - (1) Soils;
  - (2) Groundwater; or
  - (3) Surface water?

14. Riparian and Wetland Ecosystems

Will implementation of the proposed measure affect any:

- a. Riparian zones;
- b. Wetlands; or
- c. Floodplains?

15. Special Use Lands

Will implementation of the proposed measure affect any:

- a. Park lands;
- b. Recreation lands; or
- c. Refuge lands?

D. Determination of Public Interest

Describe how the proposed water conservation measure is in the public interest. The public is defined as "*all Utahns served by the project (CUP)*." The following issues should be addressed:

- 1) How does the proposed water conservation measure serve the public's economic and financial interests?
- 2) How does the proposed water conservation measure serve the public's environmental interests?
- 3) How does the proposed water conservation measure balance the preceding considerations?

## **VIII. Public or Community Involvement**

### A. Activities to Enlist Public Involvement or Public Approval

Include a schedule of all planned public involvement activities associated with the proposed project.

### B. Initial Public Reaction

List public reaction to the proposed conservation measure. This includes positive and negative newspaper editorials, letters or calls to the applicant, opposition or support expressed at public meetings.