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Water Conservation Plan, Rocky Boy / North Central Montana Regional Water System (2004)

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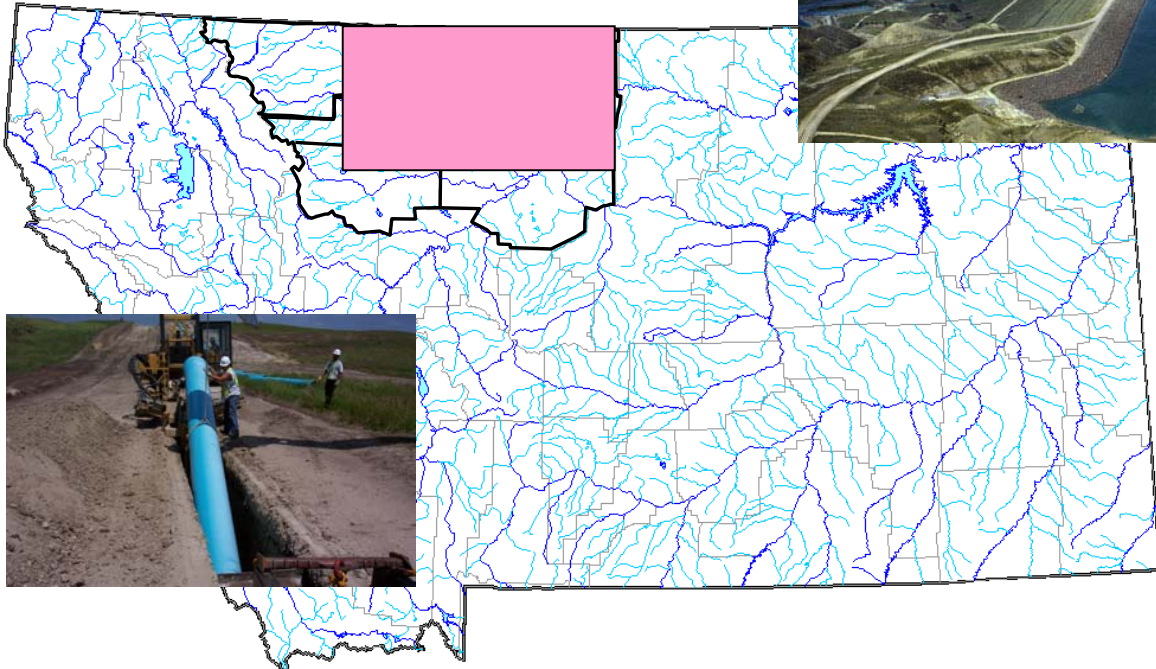
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Water Conservation Plan



Rocky Boy's / North Central Montana Regional Water System

Prepared for

North Central Montana Regional Water Authority
And
Chippewa-Cree Tribe

Prepared by



P.O. Box 31318

Billings, MT 59107-1318

September 2004

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1.0 SUMMARY

The Rocky Boy's/North Central Montana Regional Water System was authorized by Congress by Public Law 107-331. The purpose of this water conservation plan is to ensure that users of water from the core system, non-core system and the on-reservation water distribution systems use the best practicable technology and management techniques to conserve water, P.L. 107-331, Sec. 911. The plan was developed following Bureau of Reclamation (Reclamation) Directives and Standard WTR 01-01.

The project is located in north central Montana in Choteau, Glacier, Hill, Liberty, Pondera, Teton and Toole Counties. The system consists of a core system, non-core system, and on-reservation water distribution system. The core system provides water to the Rocky Boy's Reservation and is held in trust by the United States for the Tribe. The non-core system provides wholesale water to approximately twenty existing off-reservation systems and is owned by the North Central Montana Regional Water Authority. Existing distribution systems deliver water to off-reservation users that will receive wholesale water from this project. These systems are not part of this project and are not under the control of the Authority or Tribe. Therefore, these systems will not be discussed in this document. The Tribe/Authority will encourage these systems to develop their own water conservation plans. The Authority and Reclamation will assist these systems in developing water conservation plans.

Existing water supplies within the project area including groundwater, surface water, and storage. This project will supply water from Tiber Reservoir (Lake Elwell). The Tiber Reservoir water will replace, not supplement existing water sources.

The Rocky Boy on-reservation water distribution system is part of this project. Residents of the reservation are currently supplied with poor quality/quantity groundwater, which will be replaced with Tiber Reservoir water.

Goals of the Rocky Boy's/North Central Montana Regional Water System include:

- Ensure a safe and adequate rural, municipal, and industrial water supply for the residents of the Rocky Boy's Reservation; and
- Assist the citizens residing in Choteau, Glacier, Hill, Liberty, Pondera, Teton, and Toole Counties, but outside the Reservation in developing a safe and adequate rural, municipal, and industrial water supply.

The goal of the water conservation plan is to ensure that users of water from the core system, on-Reservation water distribution systems, and non-core system will use the best practicable technology and management techniques to conserve water.

Improvements in water treatment and transmission systems will improve water quality and quantity, and reduce life-cycle costs to off-reservation communities and districts supplied with wholesale water from this project.

The core and non-core systems are new, therefore, there are no existing water conservation plans. The Rocky Boy Reservation has a water conservation plan.

Fundamental water conservation measures, as identified by Reclamation, include water measurement and accounting systems, water pricing structure, information and education program, and water conservation coordinator. Additional water conservation measures include an emergency/drought contingency plan.

The Tribe and the Authority have adopted the water conservation measures described in this plan. The measures were reviewed and agreed-upon by the State of Montana and Bureau of Reclamation.

Tiber Reservoir water provided by this project will replace, not supplement existing water sources. The adopted water conservation measures will maintain average day water use at historic levels or below.¹

The implementation schedule for adopted conservation measures includes pre-water delivery, first year of water delivery, and long-term water conservation measures (Table 1-1).

¹ The reservation and several communities were raised up to a minimum level of 125 gpcpd.

TABLE 1-1
IMPLEMENTATION SCHEDULE

Water Conservation Measures	<i>Stage 1</i> Pre-Water Delivery	<i>Stage 2</i> First Year of Water Delivery	<i>Stage 3</i> Long-Term Water Conservation Program
1. Meter all water deliveries			
2. Adopt water-conserving rate structure for off-reservation systems			
3. Initiate education/outreach and public involvement efforts			
4. Secure supplies of educational materials			
5. Develop drought/emergency preparedness plans			
6. Work with wholesale water purchasers to develop individual water conservation plans (Reclamation provides assistance)			
7. Develop strategies and any necessary ordinances, regulations, contracts or similar arrangements/documents			
8. Develop design criteria to reflect water conservation considerations			
1. Maintain pro-active education/outreach efforts, including public meetings, news articles, etc.			
2. Prepare annual report highlighting conservation program problems, successes, cost-benefit comparisons, etc. and make this information available and responsive to the public			
3. Continue to work with wholesale water purchasers and the Rocky Boy Reservation (Reclamation provides assistance)			
1. An annual review to identify problems, suggest improvements, and solicit input from concerned parties			
2. Continued outreach/education efforts			
3. Targeted public relations activities.			
4. Continued enforcement of applicable rules and regulations			

2.0 INTRODUCTION

2.1 STATEMENT OF PURPOSE

The Rocky Boy's/North Central Montana Regional Water System was authorized by Congress by Public Law 107-331.

The purpose of this water conservation plan is stated in Public Law 107-331, Sec. 911:

SEC. 911. WATER CONSERVATION PLAN.

- (a) In General.--The Tribe and the Authority shall develop and incorporate into the final engineering report a water conservation plan that contains--*
- (1) a description of water conservation objectives;*
 - (2) a description of appropriate water conservation measures; and*
 - (3) a time schedule for implementing the water conservation measures to meet the water conservation objectives.*
- (b) Purpose.--The water conservation plan under subsection (a) shall be designed to ensure that users of water from the core system, on-reservation water distribution systems, and the non-core system will use the best practicable technology and management techniques to conserve water.*
- (c) Coordination of Programs.--Section 210*
- (a) and (c) of the Reclamation Reform Act of 1982 (43 U.S.C. 390jj (a) and (c)) shall apply to activities under section 911 of this title.*

The Reclamation Reform Act of 1982 states:

Sec. 210. [Water conservation.]—

- (a) The Secretary shall, pursuant to his authorities under otherwise existing Federal reclamation law, encourage the full consideration and incorporation of prudent and responsible water conservation measures in the operations of non-Federal recipients of irrigation water from Federal reclamation projects, where*

such measures are shown to be economically feasible for such non-Federal recipients.

(c) The Secretary is authorized and directed to enter into memorandums of agreement with those Federal agencies having capability to assist in implementing water conservation measures to assure coordination of ongoing programs. Such memorandums should provide for involvement of non-Federal entities such as States, Indian tribes, and water user organizations to assure full public participation in water conservation efforts. (96 Stat. 1268; 43 U.S.C. § 390jj)

2.2 STATEMENT OF SCOPE

This report was developed following Bureau of Reclamation Directives and Standards WTR 01-01 (Appendices A and B).

Existing distribution systems delivering water to off-reservation users will receive wholesale water from this project. These systems are not part of this project and are not under the control of the Authority or Tribe. Therefore, these systems will not be discussed in this document. The Tribe/Authority will encourage these systems to develop their own water conservation plans.

2.3 FUTURE AGREEMENTS

Cooperative agreements will be prepared that specify the responsibilities of each party as called for in Public Law 107-331, Sec. 905:

Sec. 905, Non-core System

(d) Cooperative Agreements.—

(1) In General. —The Secretary is authorized to enter into the Cooperative Agreements with the Authority to provide Federal funds and necessary assistance for the planning, design, and construction of the non-core system. The Secretary is further authorized to enter into a tri-partite Cooperative Agreement with the Authority and the Tribe addressing the allocation of operation, maintenance and replacement costs for the core system and action that can be undertaken to keep those costs within reasonable levels.

(2) Mandatory Provisions. —The Cooperative Agreements under paragraph (1) shall specify, in the manner that is acceptable to the Secretary and the Authority—

- (A) the responsibilities of each party to the agreements for—*
(i) the final engineering report;
(ii) engineering and design;
(iii) construction;
(iv) water conservation measures;
(v) environmental and cultural resources compliance activities; and
(vi) administration of contracts relating to performance of the activities described in clauses (i) through (v);
(B) the procedures and requirements for approval and acceptance of the design and construction and for carrying out other activities described in subparagraph (A); and
(C) the rights, responsibilities, and liabilities of each party to the agreements.

2.4 DEFINITION OF TERMS

The Bureau of Reclamation has defined the following terms for use in water conservation planning.

Water Conservation: The management of water to offer the same, equivalent, or better services with less water. This includes measures that will reduce the use, loss and waste of water, improve efficiency in the use of water, and examine potential to recycle or reuse water.

Emergency / Drought Contingency Plan: A plan to be implemented to cause a temporary reduction in water use due to emergency or drought situations.

Goal: A desired or needed result to be achieved over the long term.

Objective: A specific, measurable, intermediate end that is achievable and progresses toward meeting an outcome or goal.

Measure: A step planned or taken as a means to achieve an objective.

Water Conservation Program: All aspects of developing, implementing, monitoring, evaluating, and/or modifying the water conservation plan.

Water Conservation Plan: The written document detailing the goals, measures, and related items regarding projected short and long-term water conservation activities. The water conservation plan should include an implementation plan, and annual reports on the program's results.

Implementation Plan: The written document detailing the time frame, budget, staff/equipment/supply needs and other information necessary to document the well-thought coverage of details relating to the human and physical resources and expected time frame necessary to implement the proposed water conservation plan.

3.0 DESCRIPTION OF PROJECT

3.1 GEOGRAPHIC SETTING

The project is located in north central Montana in Choteau, Glacier, Hill, Liberty, Pondera, Teton and Toole Counties. The project service area is generally defined as the area (Figure 3-1):

- north of the Missouri River and Dutton, MT;
- south of the border between the United States and Canada;
- west of Havre, MT;
- east of Cut Bank Creek in Glacier County, MT; and
- the Rocky Boy's Indian Reservation

The Rocky Boy's/North Central Montana Regional Water System means:

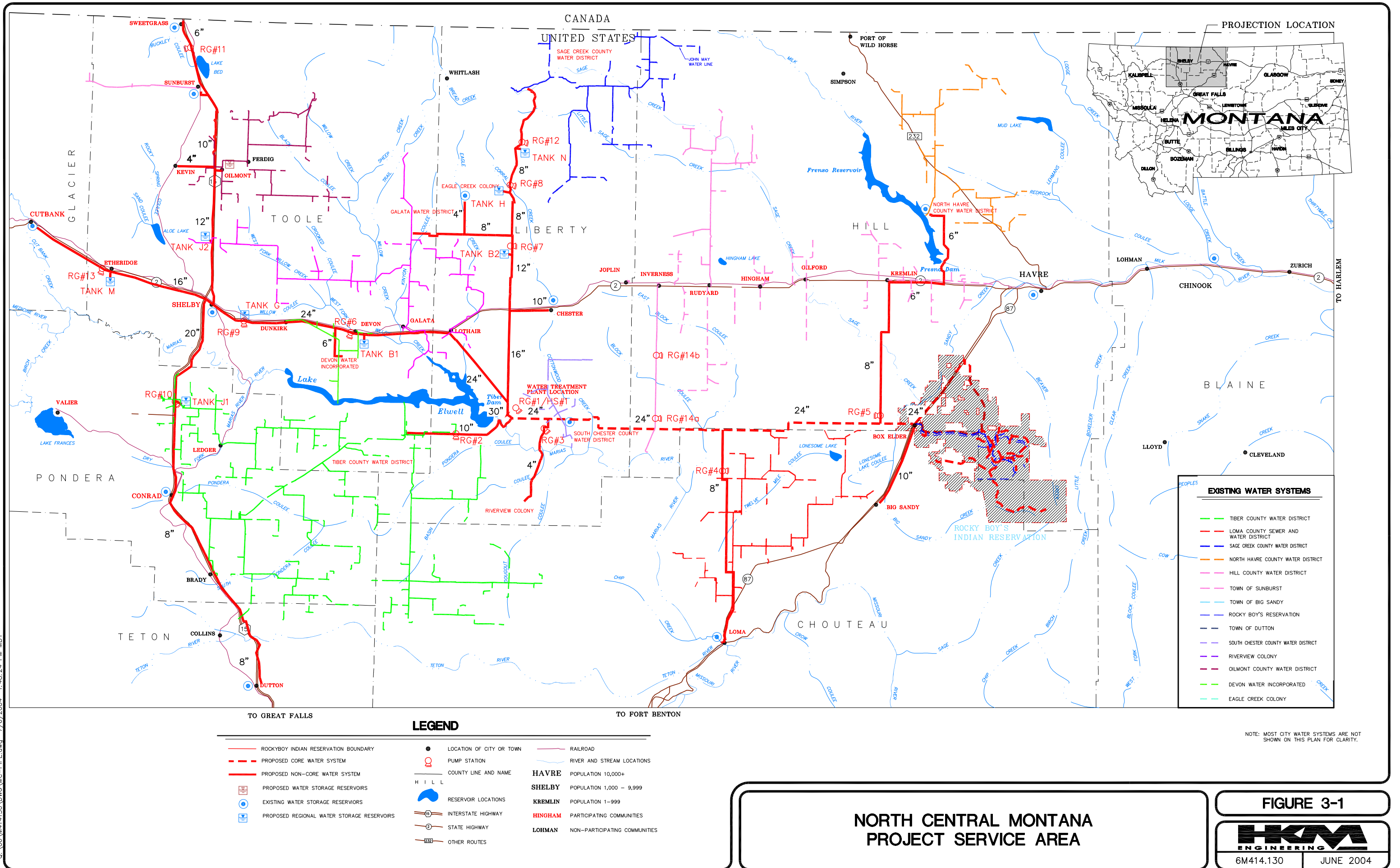
- The core system;
- the on-reservation water distribution systems; and
- the non-core system.

The core system and on-reservation water distribution system provide water to the Rocky Boy's Reservation. The non-core system provides wholesale water to the off-reservation systems.

The core system is held in trust by the United States for the Tribe and consists of:

- intake, pumping, water storage, and treatment facilities;
- transmission pipelines, pumping stations, and storage facilities;
- appurtenant buildings, maintenance equipment, and access roads;
- all property and property rights necessary for these facilities;
- all interconnection facilities at the core pipeline to the non-core system; and
- electrical power transmission and distribution facilities necessary for services to core system facilities.

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NORTH CENTRAL MONTANA PROJECT SERVICE AREA

FIGURE 3-1

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The on-reservation water distribution system consists of:

- water systems in existence on the date of enactment of this title that may be purchased, improved, and repaired in accordance with the Agreements entered into under this project;
- water systems owned by individual members of the Tribe and other residents of the Reservation;
- any water distribution system that is upgraded to current standards, disconnected from low-quality wells; and
- connections.

The non-core system is owned by the North Central Montana Regional Water Authority (Authority), established under Montana state law, and consists of:

- storage, pumping, and pipeline facilities;
- appurtenant buildings, maintenance equipment, and access roads;
- all property and property rights necessary for these facilities;
- electrical power transmission and distribution facilities necessary for service to non-core system facilities; and
- other facilities and services customary to the development of a rural water distribution system in the State.

Existing distribution systems delivering water to off-reservation users will receive wholesale water from this project. These systems are not part of this project and are not under the control of the Authority or Tribe. Therefore, these systems will not be discussed in this document. The Tribe/Authority will encourage these systems to develop their own water conservation plans.

3.2 HYDROLOGIC SETTING

The project is located in the Missouri River Basin. The Milk and Marias Rivers are two major tributaries of the Missouri River in the project area.

3.3 CLIMATE

The Rocky Boy's/North Central Montana project area is located in a climatic transition from the milder winter regime of the Northwest Chinook Zone to the cold winter regime of the Northeastern Zone. Fort Benton, on the western edge of this zone, has a January temperature normal of 18.8 degrees, while Malta, on the eastern edge of zone, has a January normal of 10.9 degrees. The normal central zone of Montana has an annual precipitation of 11.73 inches and is the driest climatic zone in Montana. The Bear Paw Mountains have considerably more precipitation than towns of lower elevations (HKM, 2000).

3.4 WATER SUPPLY

Existing water supplies within the project area include groundwater, surface water, and storage (Tiber Reservoir, Fresno Reservoir and Lake Francis). This project will supply water from Tiber Reservoir (Lake Elwell). The Tiber Reservoir water will replace, not supplement existing water sources. Water for livestock will replace, not supplement existing water sources.

3.5 EXISTING WATER SYSTEMS

The Rocky Boy on-reservation water distribution system is part of this project. Residents of the reservation are currently supplied by groundwater through individual wells or local distribution systems. Under this project, existing on-reservation groundwater sources will be replaced with Tiber Reservoir water.

Existing water systems that have agreed to purchase wholesale water from this project will be served with Tiber Reservoir water.

4.0 INVENTORY OF WATER RESOURCES

Water demands for the Rocky Boy's Reservation and off-reservation communities that will purchase water from the project are provided in Table 4-1.

TABLE 4-1
NORTH CENTRAL SYSTEM COMMUNITY DEMANDS

	Projected Community Information		Other Anticipated Demands		Design Life Demands		Total Demands w/Losses			
Design Year Demands										
Location	Population Growth (%)	End of Life Average Day Demand (gpd) ¹	Other Average Day Demands (gpd) ^{2,3}	Other Peak Day Demands (gpd) ^{2,3}	Design Life Average Day Demands (gpd)	Design Life Peak Day Demands (gpd)	10% Transmission System Losses (gpd)	Adjusted Average Day Demand (gpd)	Adjusted Peak Day Demands (gpd)	Adjusted Peaking Factor
Dutton	4.7%	63,300	11,600	19,000	74,900	176,000	7,490	82,390	183,490	2.23
Hill CWD	11.0%	291,000	45,800	92,500	336,800	613,500	33,680	370,480	647,180	1.75
N.Havre	12.1%	39,200	22,900	31,900	62,100	115,900	6,210	68,310	122,110	1.79
Sage Creek	8.4%	56,000	37,000	55,000	93,000	172,000	9,300	102,300	181,300	1.77
Sage Creek Col.	0.0%	14,900	0	0	14,900	40,100	1,490	16,390	41,590	2.54
Tiber	5.2%	158,000	170,000	233,000	328,000	865,000	32,800	360,800	897,800	2.49
Big Sandy	6.6%	213,000	10,900	11,400	223,900	810,400	22,390	246,290	832,790	3.38
Chester	21.2%	364,000	15,800	10,900	379,800	1,220,900	37,980	417,780	1,258,880	3.01
Conrad	22.7%	422,000	118,000	208,000	540,000	2,658,000	54,000	594,000	2,712,000	4.57
Devon	7.5%	25,800	45,400	68,800	71,200	149,400	7,120	78,320	156,520	2.00
Eagle Cr. Col.	0.0%	14,900	0	0	14,900	40,100	1,490	16,390	41,590	2.54
Galata	5.7%	159,000	114,000	51,900	273,000	284,900	27,300	300,300	312,200	1.04
Loma Rural	9.9%	89,000	63,900	24,600	152,900	202,600	15,290	168,190	217,890	1.30
Loma Town	9.8%	59,700	0	0	59,700	217,000	5,970	65,670	222,970	3.40
Oilmont Rural	10.5%	88,400	77,300	60,900	165,700	299,900	16,570	182,270	316,470	1.74
Oilmont Town	10.5%	11,000	0	0	11,000	27,500	1,100	12,100	28,600	2.36
Riverview Col.	0.0%	14,900	0	0	14,900	40,100	1,490	16,390	41,590	2.54
S.Chester	5.4%	40,000	35,000	28,500	75,000	177,500	7,500	82,500	185,000	2.24
Shelby	22.2%	550,000	324,000	399,000	874,000	2,599,000	87,400	961,400	2,686,400	2.79
Sunburst	6.6%	117,000	18,400	5,310	135,400	452,310	13,540	148,940	465,850	3.13
Sweetgrass	5.2%	34,200	5,590	5,050	39,790	163,050	3,979	43,769	167,029	3.82
Kevin	10.0%	45,100	5,000	8,000	50,100	146,000	5,010	55,110	151,010	2.74
Cut Bank	22.2%	947,000	0	0	947,000	2,652,000	94,700	1,041,700	2,746,700	2.64
Subtotal	16.5%	3,820,000	1,120,000	1,310,000	4,940,000	14,100,000	494,000	5,430,000	14,600,000	2.69
Rocky Boy's	N/A	2,254,000	0	0	2,254,000	5,158,000	225,000	2,479,000	5,383,000	2.17
Total	N/A	6,070,000	1,120,000	1,310,000	7,190,000	19,300,000	719,000	7,910,000	20,000,000	2.53

Notes

- 1 End of Life Average Day Demand is equal to the population growth multiplied by the current Average Day Demand
- 2 Additional Anticipated Demands includes new users and individual requests, livestock use, and future commercial, and industrial demands
- 3 Demands are assumed to be equal to the demands identified in the Environmental Report
- 4 Total raw water delivery will need to be 5 percent greater than total peak day demand to account for in-plant uses

5.0 WATER MANAGEMENT PROBLEMS, GOALS, OBJECTIVES AND OPPORTUNITIES

5.1 PROBLEMS

The Rocky Boy's/North Central Regional Water System is new and does not have problems. Existing on- and off-reservation water systems that will receive wholesale water from this project are in various states of repair and management.

5.2 GOALS

Goals of the Rocky Boy's/North Central Montana Regional Water System include:

- Ensure a safe and adequate rural, municipal, and industrial water supply for the residents of the Rocky Boy's Reservation; and
- Assist the citizens residing in Choteau, Glacier, Hill, Liberty, Pondera, Teton, and Toole Counties, but outside the Reservation in developing a safe and adequate rural, municipal, and industrial water supply.

The goal of the water conservation plan is to ensure that users of water from the core system, on-Reservation water distribution systems, and non-core system will use the best practicable technology and management techniques to conserve water.

5.3 OBJECTIVES

The objectives of the water conservation plan include:

- Keep residential system per capita water use below 196 gallons per capita per day.
- Keep variable operation and maintenance costs under Final Engineering Report (FER) levels.
- Develop drought/emergency preparedness plans to deal with a 12-hour project shutdown.
- Initiate education/outreach and public involvement efforts.
- Limit Tiber Reservoir withdrawals to FER levels.
- Extend the life of the project by conserving water.
- Encourage and assist existing water systems to develop and implement individual water conservation plans.

5.4 CONSERVATION OPPORTUNITIES

Conservation opportunities include the following:

- Implementation of water conservation measures for design of the project. This can reduce project construction costs.
- Provide encouragement/assistance to existing water systems that will purchase water from the project in developing their own water conservation plans. Reclamation has programs to provide assistance.
- Implementation of water conservation measures for operation of the project. This can extend the life of the project.
- Coordination between existing, individual water systems to pool resources and address basin-wide water conservation issues.

6.0 EXISTING WATER CONSERVATION MEASURES

6.1 CORE SYSTEM

The core system is new, therefore, there are no existing water conservation measures.

6.2 NON-CORE SYSTEM

The non-core system is new, therefore, there are no existing water conservation measures. The non-core system provides wholesale water to the off-reservation systems and is owned by the North Central Montana Regional Water Authority. Existing distribution systems deliver water to off-reservation users that will receive wholesale water from this project. These systems are not part of this project and are not under the control of the Authority or Tribe. The Tribe/Authority will encourage these systems to develop their own water conservation plans.

6.3 ON-RESERVATION WATER SYSTEM

The Chippewa-Cree Tribe of the Rocky Boy's Reservation has a water conservation plan.

7.0 WATER CONSERVATION MEASURES CONSIDERED

7.1 CORE SYSTEM

7.1.1 Water Measurement and Accounting System

Meters will be installed at the water treatment plant, at pump stations, and at the delivery point to the Rocky Boy on-reservation distribution system. This will allow measurement and accounting of the volume of water conveyed by the core system to the Rocky Boy's Reservation.

7.1.2 Water Pricing Structure

There is no charge for water to the Rocky Boy's Indian Reservation.

7.1.3 Information and Education Program

Water conservation information will be provided to the Rocky Boy's Reservation supplied by the core system.

7.1.4 Water Conservation Coordinator

One of the staff of the Rocky Boy's/North Central Montana Regional Water System will be assigned the task of water conservation coordinator. The water conservation coordinator will be responsible for implementation and coordination of the adopted water conservation measures.

7.2 NON-CORE SYSTEM

7.2.1 Water Measurement and Accounting System

Meters will be installed at the water treatment plant, at pump stations, and at the delivery point to wholesale water purchasers. This will allow measurement and accounting of the volume of water conveyed by the non-core system to wholesale water purchasers.

7.2.2 Water Pricing Structure

The Tribe and Authority will employ a water pricing structure that provides direct incentives to wholesale water purchasers supplied by the non-core system to encourage efficient water use. Incentives may include charging a fixed fee for a base quantity of water and charging an additional fee per gallon for water usage above the base amount.

7.2.3 Information and Education Program

Water conservation information will be provided to the wholesale water purchasers from the non-core system.

7.2.4 Water Conservation Coordinator

One of the staff of the Rocky Boy's/North Central Montana Regional Water System will be assigned the task of water conservation coordinator.

One of the staff of the Rocky Boy's/North Central Montana Regional Water System will be assigned the task of water conservation coordinator. The water conservation coordinator will be responsible for implementation and coordination of the adopted water conservation measures.

8.0 ADDITIONAL WATER CONSERVATION MEASURES

8.1 EMERGENCY/DROUGHT CONTINGENCY PLAN

The water supply for this project is Tiber Reservoir. Reservoir operation studies performed by the Bureau of Reclamation indicate a firm water supply is available for this project. The plan will be developed to limit project interruption to 24 hours in which storage tanks throughout the project would provide a continual supply. The public will be educated on what measures will be taken during an emergency. There will be no fire hydrants throughout the project pipe system.

8.2 EXISTING WATER SYSTEMS

The Authority and Reclamation will encourage/assist existing water systems that will purchase wholesale water from the project to prepare their own water conservation plans.

9.0 SELECTED MEASURES AND PROJECTED RESULTS

9.1 SELECTED MEASURES

The Tribe and the Authority have adopted the water conservation measures described in this plan. The measures were reviewed and agreed-upon by the State of Montana and Bureau of Reclamation.

9.2 PROJECTED RESULTS

This is a regional municipal, rural, and industrial water project that will provide water to the Rocky Boy's Reservation and also provide wholesale water to purchasers not currently involved in water conservation programs. Tiber Reservoir water provided by this project will replace, not supplement existing water sources. The adopted water conservation measures will maintain average day water use at historic levels or below. Water provided for livestock will replace, not supplement existing water sources.

Annual reports will be prepared highlighting plan problems and successes. Annual reports will be reviewed and the plan will be modified as necessary to meet plan goals.

The core and non-core systems of this project are new. Design related water conservation measures will insure the constructed project conserves water to the maximum extent possible.

10.0 ENVIRONMENTAL REVIEW

Environmental review of conservation measures adopted by this plan have been incorporated in the Environmental Assessment and Finding of No Significant Impact required for project implementation.

11.0 IMPLEMENTATION SCHEDULE FOR ADOPTION OF THE PLAN AND BUDGET

11.1 IMPLEMENTATION SCHEDULE

11.1.1 Stage 1 Pre-Water Delivery

For new water delivery projects, parts of the water conservation plan should be implemented before water is actually delivered. Items to consider for implementation prior to beginning actual water delivery include the following.

1. Meter all water deliveries.
2. Adopt water-conserving rate structures. The rate structure should be based on volume and the unit price should not decrease with increasing volume. Water rates include loan repayment and payment of existing and future operation and maintenance.
3. Initiate education/outreach and public involvement efforts.
4. Secure supplies of educational materials.
5. Develop drought/emergency preparedness plans.
6. Work with wholesale water purchasers to develop individual water conservation plans.
7. Develop strategies and any necessary ordinances, regulations, contracts or similar arrangements/documents.
8. Develop design criteria to reflect water conservation considerations.

11.1.2 Stage 2 First Year of Water Delivery

The following suggestions should be considered for implementation during the first year of water delivery.

1. Maintain pro-active education/outreach efforts, including public meetings, news articles, etc.
2. Prepare annual report highlighting conservation program problems, successes, cost-benefit comparisons, etc. and make this information available and responsive to the public.
3. Continue to work with wholesale water purchasers and the Rocky Boy Reservation.

11.1.3 Stage 3 Long-Term Water Conservation Program

As time passes, changing needs and new technologies will affect the current water conservation plan. The plan needs to be adaptable to meet these changes without losing sight of its primary goals: to enhance water quality, avoid water waste or misuse, and use existing water supplies as efficiently as possible. The following suggestions should be considered for the long-term water conservation program.

1. An annual review to identify problems, suggest improvements, and solicit input from concerned parties.
2. Continued outreach/education efforts.
3. Targeted public relations activities.
4. Continued enforcement of applicable rules and regulations.

11.2 BUDGET

The budget for implementing conservation measures adopted in this plan is included in the project construction costs and the annual operation, maintenance and replacement budgets developed in the Final Engineering Report.

APPENDIX A

BUREAU OF RECLAMATION WATER CONSERVATION GUIDELINES 2003

APPENDIX B

BUREAU OF RECLAMATION WATER CONSERVATION GUIDELINES 1996