223 1ST Street
EATON, CO 80615
PHONE: (970) 454-3338
FAX: (907) 454-3339
www.eatonco.org

January 20, 2012

Ms. Veva Deheza, CWCB
1313 Sherman Street, Room 721
Denver, CO 80203

RE: Town of Eaton Water Conservation Plan

Dear Ms. Deheza:

The Town of Eaton would like to submit a locally adopted Water Conservation Plan for review and approval by the Colorado Water Conservation Board's Office of Water Conservation and Drought Planning. This letter is also intended to meet the Cover Letter Submittal Requirements for CWCB review.

Name and contact information:

Town of Eaton
Attn: Gary Carsten, Town Manager
223 First Street
Eaton, CO 80615

List of organizations and individuals that assisted in plan development:

Clear Water Solutions, Inc.
Michelle Hatcher & Kim Frick

Quantify retail water delivery and population for past five years:

Table 1 –Water Demand by Customer Category

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Year	Potable - Residential AF	Potable - Commercial AF	Potable - Irrigation AF	Potable - Municipal AF	Non-Potable Irrigation AF	**Total AF**
2006	661	37	17	7	348	**1,070**
2007	605	34	15	6	347	**1,007**
2008	588	33	15	6	345	**987**
2009	514	29	13	5	269	**831**
2010	580	32	15	6	327	**960**

Note: Total potable water use is pro-rated based on number of taps per customer category. 2010 Non-Potable Irrigation demand is average of 2004-2009 data.

Table 2 – Town of Eaton
Population

Year	Population	Growth Rate
2000	2,690	-
2001	3,115	15.8%
2002	3,461	11.1%
2003	3,635	5.0%
2004	3,730	2.6%
2005	3,868	3.7%
2006	3,960	2.4%
2007	4,050	2.3%
2008	4,119	1.7%
2009	4,197	2.0%
2010	4,365	2.0%
10 year Average (2001-2010)	**3,850**	**4.9%**
5 year Average (2006-2010)	**4,138**	**2.1%**
2011	4,452	2.0%
2012	4,541	2.0%
2013	4,632	2.0%
2014	4,725	2.0%
2015	4,819	2.0%
2016	4,916	2.0%
2017	5,014	2.0%
2018	5,114	2.0%
2019	5,217	2.0%
2020	5,321	2.0%
2021	5,427	2.0%

Notes: 2000 and 2010 estimates are from Census data. 2001-2009 estimates provided by Colorado Demographic Office. Assumed a 2% growth for the future per Town Staff

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Public review and comment information:

The Town of Eaton held its public-review period from October 27 through December 26, 2011. Notification was posted in the North Weld Herald on October 27, 2011 announcing the public review timeframe and that a draft plan would be available for the public to review at the Town's office. The draft plan was also posted on the Town of Eaton's website on October 27, 2011. During the public review period the Town did not receive any public comment on the Water Conservation Plan.

The Town is pleased with the water conservation plan that has been developed and will commit the resources necessary, as they become available, for the implementation of the plan.

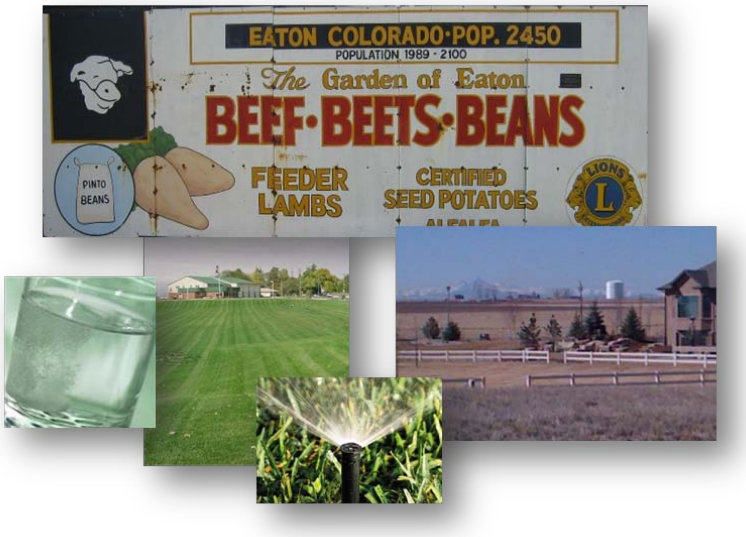
Please let me know if you have any further requirements.

Sincerely,

Gary Carsten
Town Manager

TOWN OF EATON

2011 WATER CONSERVATION PLAN



clearWATERsolutions
water rights • planning • engineering

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EXECUTIVE SUMMARY

The Town of Eaton ("Town" or "Eaton") is a growing community along the Front Range in Weld County, Colorado approximately eight miles north of Greeley. Eaton's current population is 4,500 people within a future build-out area of 4,790 acres.

Eaton has developed a Water Conservation Plan in accordance with the Water Conservation Act of 2004 and to meet the provisions of Colorado Revised Statute section 37-60-126. As part of CRS 37-60-126, a State-approved Plan will qualify Eaton for funding from the Colorado Water Conservation Board (CWCB) and the Colorado Water Resources and Power Development Authority for water supply and delivery projects.

In 2010, Eaton's water customers used approximately 960 acre-feet (AF). By 2021, which is the end of the planning horizon for this Plan, it is projected that Eaton will need to provide approximately 1,194 AF annually. Water savings from this water conservation planning effort is estimated to save the 965 AF over the planning period of 2012 to 2021.

For some of the selected water conservation measures and programs, estimated savings over the planning period is calculated by compounding the estimated annual water savings per the total number of annual participants. The savings from this planning effort will make a considerable contribution toward the water supplies needed to serve the 2021 demand.

This report documents Eaton's water system, past and future water use, planned capital improvement projects, and the water conservation planning process used in accordance with CWCB's Water Conservation Plan guidelines and policies.

Water Conservation Goals

Eaton has considered water conservation in its planning for many years and has developed a number of measures to promote efficient water use. The Town has implemented the following water conservation measures and programs:

- Eaton periodically updates its billing software
- Leak detection is performed every four years by an outside contractor
- Billing statements show customers their previous year's water use to encourage wise water use
- Water waste and water restriction ordinance

The Town is uncertain of the reduction in water use attributable to the existing water conservation efforts. However, over the ten-year planning period (2012 to 2021), tracking efforts will be implemented to quantify water savings and costs to operate this Water Conservation Plan.

Water savings goals were established for this Water Conservation Plan by completing the following steps:

- Establishing an initial water savings goal estimate
- Selecting water conservation measures or programs to meet those goals
- Comparing the expected water savings to the original goals

In order to select water conservation measures and programs to meet the water savings goals, a universal list of measures and programs were subject to an initial screening, cost-benefit analysis and final screening. This process pared the universal list down to the final selection of measures/programs that Eaton will implement. The screening criteria used consisted of the following:

1. Staff availability
2. Financial implications

The goal for this Water Conservation Plan is to reduce the overall water use by 8% or 965 AF over a ten-year planning period. This savings will come from water use categories that were identified through the planning process for potential water savings:

- Residential
- Commercial
- Potable Irrigation
- Municipal
- Non-potable irrigation
- Unaccounted-For Losses

The Town's water conservation goals are shown in **Table ES-1**.

Implementation Plan

All of the proposed water conservation measures and programs chosen will require staff and financial resources for implementation. This will require some strategy in implementing the most beneficial measures first. For illustrative purposes, a three-year schedule has been proposed and should be interpreted that Year 1 is the Town's first priority of projects followed by Year 2 and then Year 3 and will not be within three years exactly. The proposed implementation of this Water Conservation Plan will occur as the necessary resources become available.

Table ES-1 – Water Conservation Goals

Water Use Categories:	Total Projected Water Use (2012 to 2021)	Reduction Goals for Planning Horizon		Adjusted Reduction Goals for Planning Horizon	
	(AF)	(%)	(AF)	(%)	(AF)
Residential	6,611	10.0%	661	6.3%	414
Commercial	370	5.0%	18	5.7%	21
Irrigation	168	12.0%	20	21.4%	36
Municipal	67	8.0%	5	0.4%	0.27
Non-Potable - Irrigation	3,725	12.0%	447	2.4%	90
Unaccounted-for Losses (currently 12%)	866	2.0%	144	5.6%	404
Total Water Production:	11,807				
Total Demand Reduction:			1,296		965
Total Percent Reduction:			11%	8%	

Eaton is committed to implementing the selected water conservation programs and will budget money and pursue CWCB water-efficiency grant money to accomplish this goal. **Table ES-2** shows the implementation schedule of the selected measures/programs, the cost to implement and maintain each one, the percent each measure/program contributes to the overall water savings, and those that have been identified for grant money.

Monitoring of the Plan will be completed on an annual basis and a formal update is required by CWCB within seven years. Public feedback is an integral part of this Plan and comments were solicited and incorporated into the final Plan.

Table ES-2 – Implementation Plan for Eaton's Water Conservation Plan

Measure/Program	Cost to Implement (includes 1st year annual cost)	Annual On-going Costs (programs in 2nd or 3rd year of implementation or existing measures)	% of Total Water Savings	Implementation Considerations	Grant Request
YEAR 1 (1ST PRIORITY)					
Utility Maintenance Programs (Phase 1)					
Billing Software Upgrades	$4,500		8.4%	Staff time, Funding	Yes
Leak Detection & Repair	$9,760		8.4%	Funding & Third Party Consultant	Yes
Regulatory Standards Program (Phase 1)					
Water Waste Ordinance	$500		3.6%	Staff Time & Governmental Action	Unknown
Water Restrictions	$150		5.8%		Unknown
General Evaluation of Policies that Encourage Water Savings	$750		0.5%		Unknown
Turf & Landscape Standards for New Development	$500		0.5%		Unknown
Irrigation System Standards for New Development	$500		0.5%		Unknown
Soil Amendment Ordinance for New Landscapes	$500		0.5%		Unknown
Educational Programs (Phase 1)					
Website Upgrades/Public Education	$5,500		7.4%	Staff Time & Funding	Yes
Distribute ET Scheduling in Water Bill	$1,000		5.8%	Staff Time	Unknown
YEAR 1 TOTAL	**$23,660**	**$0**	**41%**		
YEAR 2 (2ND PRIORITY)					
Utility Maintenance Programs (Phase 1 & 2)					
Billing System Upgrades		$500	See Year 1		
Metering of Non-potable	$281,000		9.3%	Funding & Staff Time	Yes
Regulatory Standards Program (Phase 1 & 2)					
Water Rate Study	$50,000		14.5%	Funding & Staff Time	Yes
Water Restrictions		$150	See Year 1		
Educational Programs (Phase 1 & 2)					
Website Upgrades/Public Education		$500	See Year 1		
Distribute ET Scheduling in Water Bill		$500	See Year 1		
School Education Program	$4,300		3.4%	Funding & Staff Time	Yes
Rebate Program (Phase 1)					
Irrigation System Efficiency Device Rebates	$1,400		1.2%	Funding & Staff Time	Yes
YEAR 2 TOTAL	**$336,700**	**$1,650**	**28%**		

Note: Green shaded cells equate to existing measures

Table ES-2 cont. – Implementation Plan for Eaton's Water Conservation Plan

Measure/Program	Cost to Implement (includes 1st year annual cost)	Annual On-going Costs (programs in 2nd or 3rd year of implementation or existing measures)	% of Total Water Savings	Implementation Considerations	Grant Request
YEAR 3 (3RD PRIORITY)					
Utility Maintenance Programs (Phase 1, 2 & 3)					
Billing System Upgrades		$500	See Year 1		
Metering of Non-potable		$1,000	See Year 2		
Advanced Metering Infrastructure	$375,000		25.1%	Funding & Staff Time	Yes
Regulatory Standards Program (Phase 1, 2 & 3)					
Water Restrictions		$150	See Year 1		
Educational Programs (Phase 1, 2 & 3)					
Website Upgrades/Public Education		$500	See Year 1		
Distribute ET Scheduling in Water Bill		$500	See Year 1		
School Education Program		$1,300	See Year 2		
Rebate Program (Phase 1 & 2)					
Irrigation System Efficiency Device Rebates		$1,000	0.0%	Staff Time, Funding & Procurement of Materials	Yes
Audit Programs (Phase 1)					
Indoor Residential Audit Kits	$5,850		0.3%	Staff Time, Funding & Procurement of Materials	Yes
Outdoor Residential Audit Kits	$12,693		4.8%		Yes
YEAR 3 TOTAL	**$393,543**	**$4,950**	**30%**		
Total Combined 3-Year Cost (implementation and annual costs)	**$760,502**				
Total Implementation Costs	**$753,902**				
Estimated Annual Costs (for measures shown)	**$6,600**				

Note: Green shaded cells equate to existing measures

CHAPTER 1 – INTRODUCTION

The Town of Eaton ("Town" or "Eaton") is growing community along the Front Range in Weld County, Colorado approximately eight miles north of Greeley. The Town has a current population of approximately 4,500 people within a future build-out planning area of 4,790 acres.

The Town got its start with agriculture and soon became a mainline for the Union Pacific Railroad and developed the first sugar factory in Weld County, Colorado. The agriculture foundation still remains a strong focus for the Town.

The planning area for the Town of Eaton includes 4,790 acres that is bounded to the north by Weld County Road 78, to the south by Weld County Road 72 and to the west by Weld County Road 35. The Town has one distribution system that has older sections of pipe in addition to more recent PVC pipelines. The Town has two storage tanks which they own and operate and one waste water treatment plant.

Prior to 1984, the Town's sole source of water was from wells. Since then they have built a supply of Colorado Big Thompson (CBT) water that is treated by North Weld County Water District (NWCWD). Additionally, they own shares in the North Poudre Irrigation Company, in which the Town uses the CBT component while leasing the agricultural component back to farmers. The Town has several subdivisions that utilize non-potable water for irrigation.

In 2002, the Town completed a Water System Master Plan with the purpose of providing a guide for its water distribution system. In response to recommendations resulting from the Master Plan, the Town completed a well study in 2004 (updated in 2005). The purpose of the well study was to determine if the Town could supplement their NWCWD treated water with existing well supplies. A Comprehensive Plan was adopted by the Town Board in 2006 and provides an overall guidance document for future growth for the Town. Eaton does not currently have a Drought Management Plan but is interested in pursuing one.

Eaton has determined that implementing a water conservation plan for its service area will maximize its available water while planning for future use and during times of drought. A thorough and feasible Water Conservation Plan for the Town can assist this community to manage its water resources and plan appropriately for the expected growth. Water conservation will provide added stability for this utility.

Additionally, within their agreement with NWCWD, the Town has agreed to create and implement a water conservation plan. The purpose of the plan is to encourage wise water use throughout the Town's service area.

Eaton is committed to optimizing its water supplies and system through practical water conservation practices. The purpose of this Water Conservation Plan is to guide Eaton in the process of water conservation planning and implementation. The planning horizon for this plan is ten years, from 2012 to 2021.

CHAPTER 2 – PROFILE EXISTING WATER SYSTEM

Characteristics of Town of Eaton Water Supply System

Population and Service Area

The 2010 Census data for Eaton showed a population of 4,365 people. The 2000 through 2010 population according to the Colorado Demographer's Office and Census data is shown in **Table 2.1**. The growth rate over the last five years has slowed to 2.5% from the previously higher growth rates. The Town estimates a future growth rate of about 2%.

Table 2.1 – Town of Eaton Population

Year	Population	Growth Rate
2000	2,690	-
2001	3,115	15.8%
2002	3,461	11.1%
2003	3,635	5.0%
2004	3,730	2.6%
2005	3,868	3.7%
2006	3,960	2.4%
2007	4,050	2.3%
2008	4,119	1.7%
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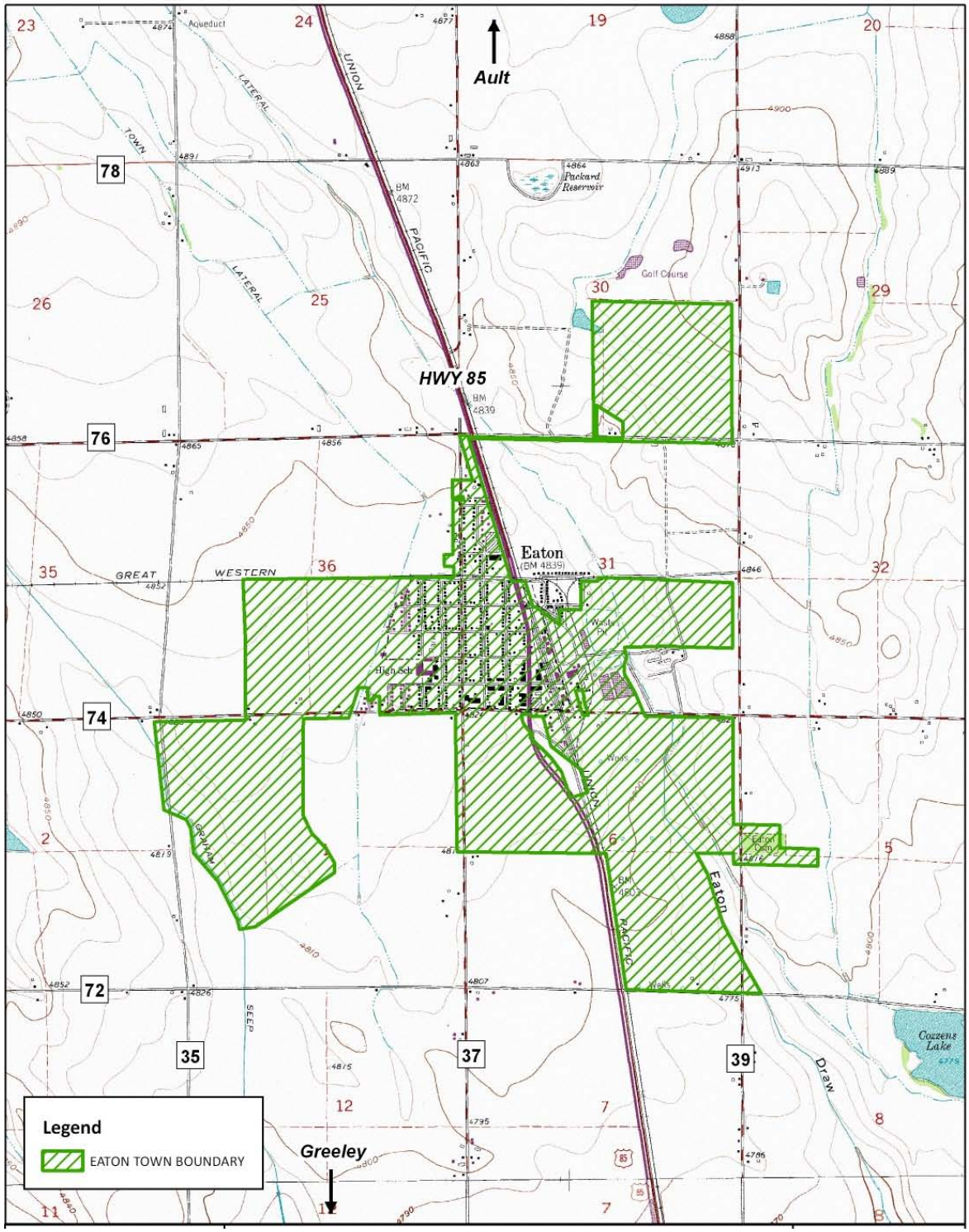
2016	4,916	2.0%
2017	5,014	2.0%
2018	5,114	2.0%
2019	5,217	2.0%
2020	5,321	2.0%
2021	5,427	2.0%

Notes: 2000 and 2010 estimates are from Census data. 2001-2009 estimates provided by Colorado Demographic Office. Assumed a 2% growth for the future per Town Staff

Approximately 1,595 acres of land are contained within Eaton's current jurisdictional boundaries. The Town's current boundaries are shown in **Figure 2.1**.

Figure 2.1 – General Location Map



Water Distribution System

Eaton receives its potable water supply from NWCWD, which it delivers up to the master meter location. The Town is responsible for operating and maintaining its distribution system to its customers after the master meter. The Town has one distribution system that consists of 30.5 miles of pipelines that includes older four-inch pipe constructed out of cast iron and steel to more recent eight to twelve-inch PVC pipes. Eaton has two storage tanks: one 1.5 million gallon (MG) in the northeast part of Town and another 2.6-MG tank near the southwest part of Town. The 2.6-MG tank's location was chosen because of a future connection with NWCWD as they are proposing a new 36-inch line extending from Severance. The tanks allow the Town to reduce peak flow demands. However, on occasion the Town's demand comes close to reaching the maximum daily flow.

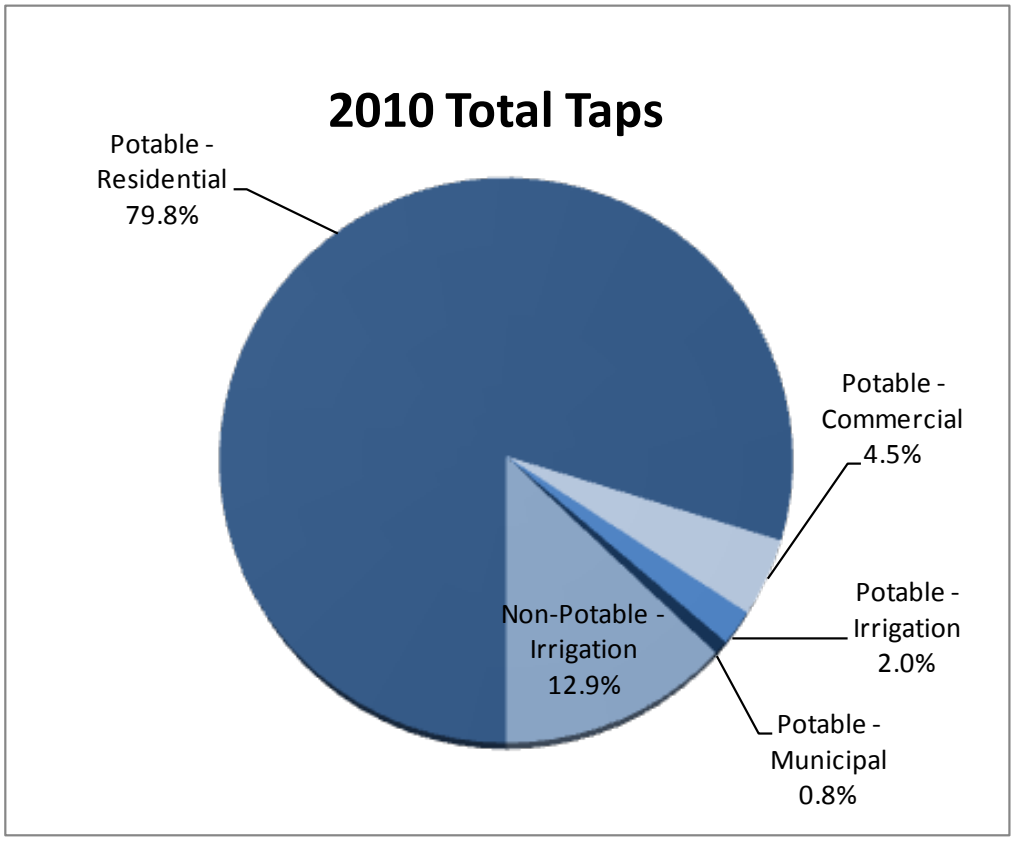
There are currently four subdivisions in Eaton that have dual distribution systems. Dual systems are water supply distribution systems employing two sources consisting of one fresh water system for potable use, and another system of untreated raw water for irrigation purposes. The dual systems for the Governor's Ranch and Maplewood subdivisions are operated by the Town while the system for the Hawkstone subdivision is controlled by the home owners associations.

Service Connections and Water Demand

Eaton currently serves approximately 1,970 potable and non-potable taps with a large majority of those taps providing water to residential water users. There are only about 88 commercial taps with low water use. Each of the customer categories are shown in **Figure 2.2** below with the coinciding percentage of total taps.

The Town's current billing system does not allow for differentiation between customer categories for billing potable water deliveries. Therefore, to determine the current water use and the future demand for each potable customer category, the total annual water use is pro-rated by the tap distribution shown in **Figure 2.2**. In 2010, Eaton's total potable water demand was 633 acre-feet (AF) and the non-potable demand was estimated at 327 AF. While non-potable water users consist of 12.9% of the taps, they contribute 34% of the water use. This is helpful to consider when selecting conservation measure to target certain categories.

Figure 2.2 – Percentage of Taps per Customer Category



Sources of Water Supply

The Town's raw water supply is owned by Eaton but is diverted, treated and delivered to Eaton's master meter by NWCWD. Based on the Water Service Agreement between Eaton and NWCWD, the Town provides the raw water in the amount of 110% of the total measured potable water usage at the master meter for the previous year, plus any anticipated increases in use. The 10% is used to cover shrinkage that occurs as the water is being delivered from the water treatment plant to the master meter. The Town's raw water is derived from CBT units and North Poudre Irrigation Company (NPIC) shares. The non-potable supply evaluated within this water conservation plan is provided by large irrigation wells that are owned by Eaton.

The raw water supplies owned by the Town are shown in **Table 2.2** with a brief description of each source following the table.

Table 2.2 – Town of Eaton Water Rights

Water Right Name or Source	No. of Shares or Units Owned	Yield (AF/Unit)		Total Yield (AF)	
		Average Year Yield	Dry-Year or 2002	Average Year Yield	Firm or Dry Year Annual Yield
Potable Sources					
C-BT	936	0.7	0.6	655	562
NPIC - CBT Component*	171	0.7	0.6	479	410
NPIC - Ag Component	171	2.8	2	479	342
			Potable Total =	**1,613**	**1,314**

*NOTE: * Each share of NPIC has four shares of CBT*

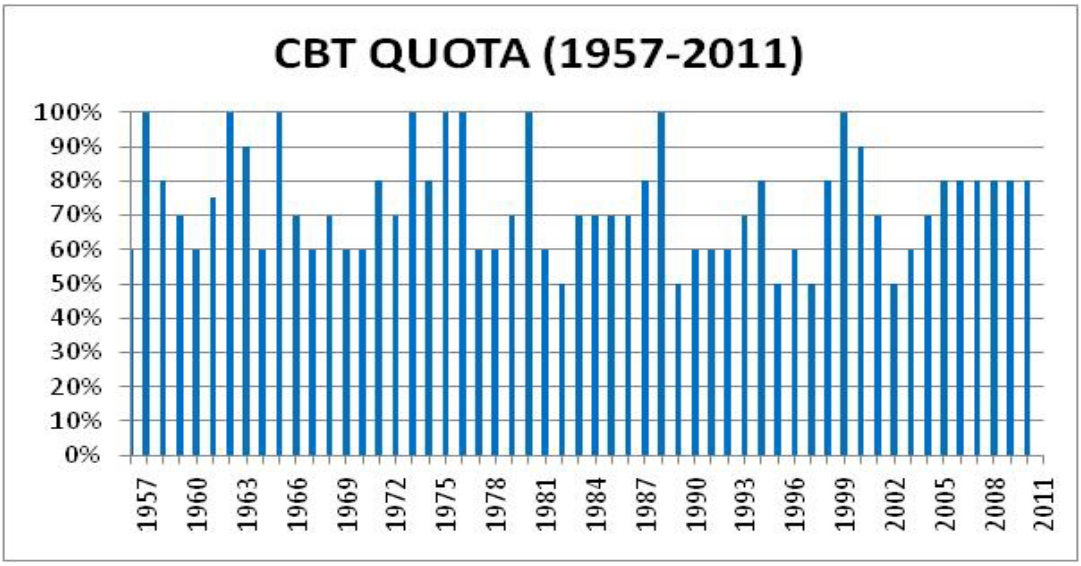
Colorado-Big Thompson Project Water

CBT facilities divert water from the western slope of Colorado to the Front Range to supplement the region's native water supplies. It is the largest trans-mountain water diversion project in Colorado. It was constructed by the Bureau of Reclamation between 1938 and 1957 and is maintained by the Northern Colorado Water Conservancy District (Northern Water). The Project imports an average of 213,000 AF of water each year to many public and private water users along the northern Front Range and northeastern Colorado for agricultural, municipal and industrial uses.

The yield of CBT units is established each year by the Northern Water Board through what is known as the quota setting process. The basis for setting the quota is to attempt to make every year look like an average year. The Northern Water Board examines the region's native supplies and local storage before declaring a quota that meets the supplemental need of the region as a whole. As a result, the quota is typically lower in wet years because native supplies are plentiful and local reservoirs are full, so less CBT water is required to satisfy water demands. In dry years, the quota is typically higher to meet the higher demand for water. As CBT continues to transfer from agricultural to municipal use, the landscape of using the Project as a supplemental supply is changing.

In over fifty years of operation, the average yield has been 0.73 AF per unit (238,000 gallons per unit) and the commonly used average quota is 70%. The yield has never been less than 0.50 AF per unit (50% quota) or more than 1.0 AF per unit (100% quota). The annual quota established by the Northern Water Board over the years is shown in **Figure 2.3**.

Figure 2.3 – Annual CBT Quota History



North Poudre Irrigation Company

NPIC owns 40,000 CBT units, so their shares include a CBT portion and a native agricultural portion. The CBT water is delivered equally among the 10,000 shares within the NPIC system. Delivery of the CBT portion can be taken anywhere that CBT units can be delivered, so an entity outside of the NPIC service area can actually own NPIC shares and lease the native portion back to shareholders within the NPIC service area.

NPIC diverts their Poudre basin rights and CBT water through the Munroe Canal and uses the Livermore Diversion for their North Poudre Basin rights. NPIC has numerous reservoirs with an estimated total storage capacity of 63,000 AF. Municipal ownership in NPIC has increased over the years and is currently approximately 65%. Eaton currently owns 171 NPIC shares.

Agreement with NWCWD

Eaton has a water service agreement with NWCWD to provide water for the Town. This agreement has a clause that limits Eaton's water deliveries to a 10% increase from the average minimum flow over the previous three years. This means if NWCWD would enforce this clause, the Town will not be able to grow more than 10% per year. Eaton is also limited to water sources that can be treated within NWCWD's system such as CBT, Windy Gap and/or Northern Integrated Supply Project (NISP) water.

Non-Potable Well Supply for Irrigation

Currently, the Town utilizes their wells for non-potable irrigation water within several of its subdivisions such as Maplewood, Governors Ranch, Hawkstone and Eaton Commons. The source of this non-potable water is mainly from shallow wells. However, Hawkstone owns several shares of agricultural water they use for irrigation of their park as well as some of their lots. The non-potable water for Governors Ranch and Maplewood is used to irrigate individual homeowner lots. Eaton Commons will only irrigate their park with non-potable water, individual lots are served with potable water.

Well Supplies

The Town could utilize its wells for potable purposes if treated to drinking water standards. Eaton has studied the possibility of using a reverse osmosis treatment system to treat its wells.

Water Costs and Pricing

Water Fund

The water fund for Eaton is used to finance the cost of service for current and future water delivery. It is made up of water tap fees and monthly water sales. Monthly water sales cover the Town's cost of water service.

Table 2.3 shows the water tap fee that covers costs associated with connection to the Town's system. The total tap fees range from $6,500 for a 3/4-inch tap, up to $110,500 for a 4-inch tap. This includes passing on the tap fee costs from NWCWD along with other fees for the Town, parts and administration.

Table 2.3 – Town of Eaton Water Tap Fee

Tap Size	Fee
3/4 inch	$6,500
1 inch	$11,050
1-1/2 inch	$21,450
2 inch	$34,450
3 inch	$71,500
4 inch	$110,500

Charges for Water Service

All water users are charged the same monthly base rate of $23.65, which reflects the fixed costs associated with providing water services as shown on **Table 2.4**. This base

rate includes the first 4,000 gallons. If a customer uses over 4,000 gallons, they will be charged $2.65 per 1,000 gallons. These water rates are stated in Resolution 2010-10.

Table 2.4 – Town of Eaton Water Rates

	Base Fee	Rate per 1,000 gal
first 4000 gal/month	$23.65	
over 4000 gal/month	$23.65	$2.65

Billing and Collections

Eaton water customers are billed for their water usage on a monthly basis. The water bills are mailed out by the 10th day of each month and payments are due at the end of each month. When accounts become 60 days overdue, a notice is sent for payment due. If not paid within 30 days a shutoff tag is placed on the door specifying that if not paid within 5 days the service will be discontinued. There will be a $10.00 charge to turn on water. Any accounts which are delinquent as of December 1st of each year may be certified to the Weld County Treasurer to be collected in the same manner as property taxes.

Water charges reflected on monthly utility bills are a combination of a base service delivery charge and a metered consumption usage charge if the base use is surpassed. Potable water sales in 2010 were estimated at approximately $804,931 (**Table 2.5**).

Table 2.5 – Town of Eaton Water Revenue

2006	2007	2008	2009	2010
$778,806	$747,439	$740,460	$740,787	$804,931

System Limitations

Along with areas of high water use, system limitations can provide insight into how and where to set water conservation goals. Discussions here will include both current and potential system limitations. Ideally, conservation can help mitigate a portion of the limitations and improve the reliability and efficiency of the system.

Growth and Augmentation Demand

Growth is expected to occur for Eaton and with future availability of CBT units uncertain for municipalities, the Town needs to expand its water portfolio to include other sources. Agricultural water could be acquired for immediate non-potable irrigation use and for future potable treatment if a local water treatment facility was constructed.

Conversion of native water rights from agricultural to municipal use requires detailed engineering analyses and applications to Water Court. The engineering analyses involves the change of use of agricultural water, which includes quantifying the historical consumptive use of the crops grown with the water right and return flows resulting from irrigation of those crops.

Water Treatment and System Capacity

All of the Town's CBT water is treated by NWCWD. The services agreement between Eaton and NWCWD sets forth a maximum annual and peak demand limit of 365 MG and 1,389 gallons per minute (gpm), respectively. According to Town Staff, they have come close to the peak demand limit during high use in the summer months. However, due to the existing storage tank capacities, exceeding the peak demand has not yet become an issue.

If Eaton was interested in developing its own Water Treatment Plant, they could buy agricultural water rights to be used within that system. Currently, Eaton can only buy water that NWCWD is able to treat and deliver within its system.

Unaccounted-for Water Use

There are two types of water losses that occur in municipalities, apparent losses and real losses. Apparent losses are paper losses that can be caused by customer meter inaccuracies, billing system data errors or unauthorized consumptions. Real losses are those that are physically lost within the distribution system, including the water treatment process.

Eaton's system losses have averaged 12% for the last few years, which is higher than the 10% that is considered good by industry standards. The Town recognizes this is an area for great improvement and would like to actively pursue leak detection in this Water Conservation Plan to reduce losses.

Future Water Supply

NISP is a regional water supply project coordinated by Northern Water to provide 40,000 AF of new water supply and storage to 15 different water providers along the Front Range. This project proposes two large reservoirs: Glade and Galeton. This

project is currently undergoing permitting by the Army Corps of Engineers. The Town has estimated a need of approximately 1,300 AF from NISP.

Statewide Water Supply Initiative

In 2003, the Colorado General Assembly authorized Colorado Water Conservation Board (CWCB) to implement the Statewide Water Supply Initiative (SWSI) as a result of growing pressure on water supplies in Colorado and the 2002 drought. The study identified current and future water demands, available water supplies, and existing and planned water supply projects in eight major river basins in the State. SWSI was recently updated to SWSI 2010, which projects demands to 2050 and includes passive water conservation savings. Passive savings includes such things as future development using more efficient water fixtures in their building process.

The Town of Eaton is located in the South Platte River Basin where SWSI 2010 identified a 58% gap between water needs and water supplies in the Basin by 2050. Water conservation is one method the SWSI report identified for meeting this gap.

Policies and Planning Initiatives Affecting Water Use

Municipal Code

Eaton's municipal code includes an ordinance making it unlawful to sprinkle lawns, gardens and trees except during times and hours permitted by the Town Board by resolution (Ord. 377 §19, 1984). Additionally, Eaton has an ordinance making it unlawful to permit waste of water through failure to make prompt repairs to faulty plumbing, through sprinkling or otherwise (Ord. 253 §14, 1961). The ordinance specifically states that sprinkling water running onto a street is legally sufficient evidence of water waste and is unlawful and that permitting sprinkling off of one's property is unlawful.

Current Water Conservation Activities

In addition to the regulatory controls listed above, Eaton has already incorporated the following water conservation measures and programs:

- Billing Software Upgrades – Eaton periodically upgrades its billing software
- Leak Detection and Repair - A leak detection company is hired, every four years, to analyze Eaton's system and pinpoint leaks. Leaks are repaired accordingly.
- Billing Statements that Encourage Water Savings – Currently, the Town's water bills include a 12-month accounting of the customer's water usage. Showing previous water usage encourages efficient water use.

Use by Customer Category

Within the 4,790-acre planning area for the Town of Eaton, there are approximately 3,200 acres of planned residential development and 420 acres of planned commercial/industrial area. The remainder of the land is designated open space, public use or currently unclassified.

In 2010, Eaton's billed water demand for potable customers totaled 633 AF and non-potable irrigation totaled 327 AF as shown in **Table 3.1**. The water use shown below does not include fire hydrant or construction water use as these uses constitute very small portions of the overall water use and will not be included in the calculations presented in this plan.

Table 3.1 – 2010 Water Use by Customer Category

Water Use Category	2010 Billed Water Demand (AF)	Percent of Total
Potable - Residential	580	60%
Potable - Commercial	32	3%
Potable - Irrigation	15	2%
Potable - Municipal	6	1%
Non-Potable Irrigation	327	34%
Total	**960**	**100%**

Note: 2010 Non-Potable Irrigation demand is average of 2004-2009 data

Potable Water Use

As described in Chapter 2, the Town's current billing system does not allow for differentiation between customer categories for billing potable water deliveries. Therefore, the current water demand for each potable customer category is pro-rated by the tap distribution shown in **Figure 2.2**. Residential water use, which includes both indoor and outdoor uses, constitutes the largest water use in Eaton at 60% of the total water use. This equates to 580 AF per year of water consumption.

Most of the commercial businesses in Eaton are located along Highway 85 and the new Maplewood center. The commercial water uses include office buildings, retail stores, restaurants, and other similar businesses. Water use for this

category is estimated at 32 AF per year or 3% of the total water use for the Town.

The potable irrigation water is used for parks and businesses. Water use for this category is estimated at 15 AF or 2% of the total water supplied by Eaton. The Municipal usage category includes buildings and other areas owned and operated by the Town that are not billed. Municipal usage totals 6 AF or 1% of the total water use.

Non-Potable Water Use

Non-potable irrigation water use constitutes the second largest water use in Eaton at 34% of the total water use. This equates to 327 AF per year of water consumption. Non-potable irrigation water uses include irrigation water used at the Town's four subdivisions with dual systems as well as for the Town parks.

Taps and Water Use Summary

The total number of taps per customer category is estimated as shown in **Table 3.2**.

Table 3.2 – Town of Eaton Taps by Customer Category

Year	Potable - Residential taps	Potable - Commercial taps	Potable - Irrigation taps	Potable - Municipal taps	Non-Potable Irrigation taps	**Total Taps**
2006	1,513	82	40	16	254	**1,905**
2007	1,513	82	40	16	254	**1,905**
2008	1,573	88	40	16	254	**1,971**
2009	1,573	88	40	16	254	**1,971**
2010	1,573	88	40	16	254	**1,971**

Table 3.3 shows the estimated water use for each customer category from 2006 through 2010.

Table 3.3 – Town of Eaton Historical Water Use

Year	Potable - Residential AF	Potable - Commercial AF	Potable - Irrigation AF	Potable - Municipal AF	Non-Potable Irrigation AF	**Total AF**
2006	661	37	17	7	348	**1,070**
2007	605	34	15	6	347	**1,007**
2008	588	33	15	6	345	**987**
2009	514	29	13	5	269	**831**
2010	580	32	15	6	327	**960**

Note: Total potable water use is pro-rated based on number of taps per customer category. 2010 Non-Potable Irrigation demand is average of 2004-2009 data.

The water use per tap is shown in **Table 3.4**. The average residential use is 0.38 AF per tap. The commercial and municipal use averaged 0.39 AF per tap and for customers with potable irrigation, uses averaged 0.37 AF per tap. The average non-potable irrigation use is the highest use per tap at 1.29 AF. This is due in part to the fact these taps are unmetered, allowing for unlimited water use at a flat rate.

Table 3.4 – Town of Eaton Historical Water Use per Tap (AF/tap)

Year	Potable - Residential (AF/tap)	Potable - Commercial (AF/tap)	Potable - Irrigation (AF/tap)	Potable - Municipal (AF/tap)	Non-Potable Irrigation (AF/tap)
2006	0.44	0.45	0.42	0.42	1.37
2007	0.40	0.41	0.38	0.38	1.36
2008	0.37	0.37	0.37	0.37	1.36
2009	0.33	0.33	0.33	0.33	1.06
2010	0.37	0.37	0.37	0.37	1.29
AVG	**0.38**	**0.39**	**0.37**	**0.39**	**1.29**
Note: 2010 Non-Potable use per tap is average of 2006-2009 data					

Per Capita Water Use

Per capita water use, both system-wide and residential only, is a commonly used way to gage an entity's water use habits. System-wide per capita use can vary significantly between entities depending on the type of non-residential customers within the system.

Eaton averages 210 gallons per capita per day (gpcd) system-wide with 193 gpcd for Residential uses from 2006 to 2010 as shown in **Table 3.5**. The Residential gpcd includes non-potable irrigation use.

Table 3.5 – Town of Eaton per Capita Water Use

Year	Total Water Use* (AF)	Residential Water Use* (AF)	Population	System Wide GPCD	Residential GPCD
2006	1,070	982	3,960	241	221
2007	1,007	926	4,050	222	204
2008	987	908	4,119	214	197
2009	831	764	4,197	177	162
2010	960	883	4,365	196	181
Avg	971	893	4,138	210	193
NOTE: * Includes nonpotable water					

Indoor vs. Outdoor Use

In Colorado, a significant portion of water use typically occurs outdoors for irrigation. To determine Eaton's average outdoor use, we examined the average water use during the winter months (Dec to Feb) and the average use during the summer months (Mar to Nov), for 2006 through 2010. Approximately 40% of total water use for Residential water users is estimated as outdoor water use.

Demand Forecast

Using a projected population growth rate of 2% (estimated by Town staff), we calculated projected demands for Eaton as shown on **Table 3.6**. The total water use for 2010 is 960 AF with a projected increase to 1,194 AF by 2021. The total projected demand was split between each customer category based on the percentage of total water use presented in **Table 3.1**

Table 3.6 – Town of Eaton Demand Projections

Year	TOTAL Water Use AF	Potable Residential 60% AF	Potable Commercial 3% AF	Potable Irrigation 2% AF	Potable Municipal 1% AF	Non-Potable Water 34% AF
2010	960	580	32	15	6	327
2011	980	592	33	15	6	334
2012	999	604	34	15	6	340
2013	1,019	616	34	16	6	347
2014	1,040	628	35	16	6	354
2015	1,060	641	36	16	7	361
2016	1,082	654	37	17	7	368
2017	1,103	667	37	17	7	376
2018	1,125	680	38	17	7	383
2019	1,148	694	39	18	7	391
2020	1,171	707	40	18	7	399
2021	1,194	722	40	18	7	407

We also calculated the volume of water needed to produce enough water to meet the demand considering the average system loss and estimated NWCWD surcharge from the last several years. Therefore, for 2010, 773 AF of raw water supplies were required to meet the demand and we estimate that for 2021, Eaton will need 961 AF of raw water supplies to meet the estimated demand of 788 AF as shown on **Table 3.7**.

Table 3.7 – Total Projected Potable Demand

Year	Total Projected Potable Water Use AF	Estimated Surcharge (10%) AF	System Losses (12%) AF	Total Potable Demand AF
2010	633	63	76	773
2011	646	65	78	788
2012	659	66	79	804
2013	672	67	81	820
2014	686	69	82	836
2015	699	70	84	853
2016	713	71	86	870
2017	728	73	87	888
2018	742	74	89	905
2019	757	76	91	924
2020	772	77	93	942
2021	788	79	95	961

CHAPTER 4 - PROPOSED FACILITIES

Proposed Facilities

Potential Facility Needs

In the December 2002 Water System Master Plan performed by The Engineering Company (TEC), TEC evaluated supply capacity, transmission systems, system pressure, and storage. Several recommendations were made and have since been implemented, including additional storage. Other recommendations included additional supply capacity from NWCWD that have significant costs. In 2004, a study was performed by TEC to evaluate alternatives to acquiring additional supply capacity from NWCWD. As a response to TEC's recommendations, Eaton began establishing dual use systems.

Eaton has one Waste Water Treatment Plant (WWTP) that was completed in 2006. The maximum capacity of the WWTP is 0.75 million gallons per day (MGD). According to Town staff, Eaton's current treated use is 0.3 MGD.

Eaton currently has no facility upgrades planned within this planning period. Currently, Eaton's water facilities are adequate to meet demands during peak days. Current water conservation activities, such as Eaton's Leak Detection and Repair Program, have assisted the Town in meeting their demands. The additional conservation programs outlined in this plan will help Eaton meet future demands and possibly delay facility expansions.

CHAPTER 5 - WATER CONSERVATION GOALS

Goal Development Process

The development of water-savings goals for Eaton was a collaborative process involving Clear Water Solutions and Town staff. Information was gathered from billing records and existing planning documents to properly characterize the system, resources and water use. Development of this data showed the Town's largest water use customer categories, seasonal usage, system limitations and losses, and outlined the Town's existing conservation efforts and their estimated effectiveness.

Once the water use for each customer category was identified, we met with staff to discuss water-savings goals and the potential methods to reach those goals. Initial reduction percentages were established and a universal list of measures and programs were compiled for consideration. The goals focused on the water use areas that could be successfully impacted considering factors such as water savings potential, costs, control, and public acceptance.

Water Conservation Goals

Establishing water conservation goals is an iterative process that begins with quantifying the future demand for water based on current water-use habits and identifying areas water use can feasibly and effectively be reduced. Reduction of future water demand through water conservation can potentially delay planned water supply acquisition and delay the need for infrastructure improvements.

Discussions with Town staff focused on their desire to improve their system losses and develop water conservation standards for new construction as well as develop general community outreach and education.

In setting initial water savings goals for the Town, we looked at the current water use per customer category and the limitations of the water supply system. **Table 5.1** shows initial goals established for each customer category.

Table 5.1 – Eaton's Water Conservation Goals

Water Use Categories:	Total Projected Water Use (2012 to 2021)	Reduction Goals for Planning Horizon	
	(AF)	(%)	(AF)
Residential	6,611	10.0%	661
Commercial	370	5.0%	18
Irrigation	168	12.0%	20
Municipal	67	8.0%	5
Non-Potable Irrigation	3,725	12.0%	447
Unaccounted-for Losses (currently 12%)	866	2.0%	144
Total Water Production:	11,807		
Total Demand Reduction:			1,296
Total Percent Reduction:			11.0%
Notes:			
Unaccounted-For Loss (UL) equals loss rate (above = 12%) times estimated POTABLE projected water use (above = 7,216)			
Reduction Goal for UL equals the difference between ULs at 12 % and the ULs at the reduced rate goal.			

Potable Categories

Residential use is the largest category for Eaton, so a savings goal of 10% was set to target this category. Since Eaton does not have a lot of commercial customers, the Town will set a goal of 5% for this category. Eaton does have a lot of area that is irrigated by potable water. There is a potential for a lot of savings when examining irrigation uses, so the Town set a goal of 12% for this category. Eaton does not have a significant amount of water use associated with its municipal category, but has set a reduction goal of 8%.

Non-Potable Irrigation

Eaton has a significant amount of water use tied to its non-potable water source. The Town has set a goal of 12% for this customer category.

Unaccounted-for Losses

This category is where Eaton is hopeful to achieve large water savings. The average loss in the system due to leaks, record-keeping errors, theft, or lack of measurement is approximately 12% of the water production. This is the average for the last eight years

from 2003 to 2010. The goal for the Town is to reduce the system losses by 2% to a system wide average loss rate of 10%.

CHAPTER 6 – CONSERVATION MEASURES AND PROGRAMS

Water Conservation Measures and Programs

We developed a universal list of conservation measures and programs. The measures and programs were placed into five major categories: Utility Maintenance Programs, Regulatory Controls and Standards, Educational Programs, Rebates and Incentive Programs, and Audit Programs. The universal list is shown in **Table 6.1** with existing measures highlighted in green.

Screening Criteria

The following screening criteria were compiled based on discussions with staff. The criteria were chosen as a general screening to pare down the universal list to a list of measures and programs to evaluate further, including reviewing costs to implement, expected water savings, and loss of revenue from the water savings. Each measure and program in **Table 6.**1 was screened with the following criteria.

1. Staff availability
2. Financial implications

Screening of Conservation Measures and Programs

The purpose of the initial screening was to create a list of measures and programs that would be evaluated further in the planning process via a cost-benefit analysis. A meeting was held with Town staff to discuss each measure/program on the universal list and eliminate ones that were not feasible using the established screening criteria.

The list of measures was also evaluated to determine if the CWCB Minimum Required Water Conservation Plan Elements were addressed. The required elements that CWCB wants to see evaluated include:

- Water-efficient fixtures and appliances, including toilets, showerheads, and faucets
- Low water use landscapes, drought resistant vegetation, removal of phreatophytes (a deep-rooted plant that obtains water from the water table or the layer of soil just above it. Includes cottonwoods, tamarisk, etc.), and efficient irrigation
- Water-efficient industrial and commercial water use processes
- Water reuse systems
- Distribution system leak identification and repair

- Dissemination of information regarding water use efficiency measures, including by public education, customer water use audits, and water-saving demonstrations
- Water rate structures and billing systems designed to encourage water use efficiency in a fiscally responsible manner
- Regulatory measures designed to encourage water conservation
- Incentives to implement water conservation techniques, including rebates to customers

The screening was completed on February 22, 2011. The resulting decisions are noted on **Table 6.1**.

Table 6.1 – Universal List of Conservation Measures and Programs

Conservation Measure or Program		Existing	Further Evaluation	Comment
Supply side measures & programs	**Utility Maintenance Programs**			
	Billing Software Upgrades	Yes	Yes	Eaton will continue to upgrade their billing software.
	Water Reuse System	No	No	Town does not have their own WTP and cannot reuse CBT water.
	Leak Detection & Repair Program	Yes	Yes	A leak detection company is hired regularly to find leaks. Leaks are repaired accordingly.
	Installation of Advance Metering Infrastructure (AMI)	No	Yes	AMI, such as Sensus FlexNet, provides data and information that the Town can share with their customers, giving them the tools they need to conserve.
	Sub-Meter Master Meter communities	No	No	Re-evaluate with future planning efforts.
	Leak Detection for Master Meter Communities	No	No	Re-evaluate with future planning efforts.
	Meter Testing and Replacement Program	No	No	The Town will continue to test meters as needed.
	Individual meters for non-potable water	No	Yes	Metering non-potable water uses will help to track use and encourage conservation.
Demand side measures & programs	**Regulatory Controls and Standards**			
	Water Waste Ordinance	Yes	Yes	The Town would like to explore expanding ordinances that prohibit water waste
	Removal of Phreatophytes e.g. Cottonwoods	No	No	Eaton does not have any vegetation that has a large water use within their system.
	Drought Mitigation Plan	No	No	The Town will pursue drought mitigation planning separately from this conservation planning effort.
	Water Restrictions-Hours/Days	Yes	Yes	Continue as is.
	General Evaluation of Policies that Encourage Water Savings	No	Yes	Town staff would like to evaluate further.

Note: Green shaded cells equate to existing measures

Table 6.1 cont.

Conservation Measure or Program		Existing	Further Evaluation	Comment
	Regulatory Controls and Standards, continued			
	Water Rate Structure Changes	No	Yes	A rate study may be conducted to determine a fair structure that will help maximize water savings.
	Turf and Landscape Restrictions/Standards for New Construction	No	Yes	Town staff would like to evaluate further.
	Irrigation System Requirements/Standards for New Construction	No	Yes	Town staff would like to evaluate further.
	Soil Amendment Ordinance for New Landscapes	No	Yes	Town staff would like to evaluate further.
	Requiring Wind and/or Rain Sensors for Commercial and Open Space Irrigation	No	Yes	Town staff would like to evaluate further.
	Restrictive Covenants Ordinance	No	No	They do not have many areas that do this.
	Educational Programs			
	Billing Statements that Encourage Water Savings	Yes	Yes	Combine with ET Scheduling in Water Bill.
	Children's Water Festival	No	No	Staff limitations.
	Xeriscape Garden Demonstration	No	No	Not enough staff to implement.
	Xeriscape Gardening Classes	No	Yes	Town staff would like to evaluate further.
	Xeriscape Program for Commercial	No	No	Not enough commercial use to target at this time.
	Xeriscape Program for Open Space (HOAs)	No	No	Staff limitations.
	School Education Program (K-12 Education)	No	Yes	Town staff would like to evaluate further.
	Post Commercial, Industrial, and Public BMPs on Website or as Bill Stuffers	No	Yes	Combined with Public Education -Newsletter & Website Measure below
	Property Manager/HOA Education and Training	No	No	Staff limitations.
	Public Education - Newsletter & Website	No	Yes	Combined with BMP Measure above.
	Send ET Irrigation Scheduling in Water Bill	No	Yes	Combined with Billing Statement Measure above.
	Rebates and Incentive Programs			
	Commercial Toilet and Waterless Urinal Rebates	No	No	Not enough commercial use to target at this time.
	Distribute Toilet Retrofit Devices	No	No	Re-evaluate with future planning efforts.

Note: Green shaded cells equate to existing measures

Table 6.1 cont.

Conservation Measure or Program		Existing	Further Evaluation	Comment
	Rebates and Incentive Programs, continued			
	Distribute Pre-rinse Spray Heads to Restaurants & Institutions	No	No	Not enough commercial use to target at this time.
	Rebate Programs for Toilets, Clothes Washers, Dishwashers, Faucets and Showerheads	No	No	Town staff estimates that a majority of the Town (2/3rds) are new construction and already have water saving fixtures. Town will not evaluate at this time.
	Rebates for ET (SMART) Sprinkler System Controllers	No	Yes	Town staff would like to evaluate further.
	Turf Replacement Incentives	No	No	Not interested for financial reasons.
	Zero Interest Loans for Washers	No	No	Not interested for financial reasons.
	Water Conservation Upgrades for City Facilities-Outdoor	No	No	Town parks already have rain controllers
	Water Conservation Upgrades for City Facilities-Indoor	No	No	Not much to be gained with retrofitting these buildings as there is not many fixtures
	Xeriscape Incentives for all customer categories	No	No	Not interested for financial reasons.
	Irrigation System Efficiency Device Rebates	No	Yes	Combined with ET Controller Rebate (above) and Wind/Rain Rebate (below).
	Wind and/or Rain Sensor Rebates for Residential or Commercial	No	Yes	Combined with ET Controller Rebate and Irrigation System Efficiency Device Rebate (above).
	Low Income Retrofit Program	No	No	Re-evaluate with future planning efforts.
	Audit Programs			
	Commercial Water Audits	No	No	Not enough commercial use to target at this time.
	Residential Audit Kit	No	Yes	Town staff would like to evaluate further.
	Sprinkler System Audit Kit and Instructions	No	Yes	Town staff would like to evaluate further.
	Irrigation Audit of City Parks and Properties	No	No	Re-evaluate with future planning efforts.

Note: Green shaded cells equate to existing measures

CHAPTER 7 – EVALUATION AND SELECTION

The initial screening of the measures and programs with Town staff resulted in eliminating 25 measures and selecting 22 measures for further evaluation. Eliminated measures will be evaluated with future planning efforts. Some of the measures have been combined as noted in **Table 6.1** (resulting in 19 measures selected for evaluation). The benefits and costs of the selected measures and programs are shown in **Table 7.1**. The grouping of the measures enabled us to consider like measures and avoid double counting savings. Details about the cost-benefit evaluation and information about each measure can be found in the following section with further detail available in **Appendix A**.

Utility Maintenance Programs

- Billing Software Upgrades
  Eaton has upgraded their billing software; however, the Town's software does not distinguish water use for different customer categories. Eaton would like to upgrade its billing system to include tracking of customer categories and similar upgrades to allow for increased water use monitoring and conservation.

- Leak Detection and Repair Program
  Currently, Eaton hires a consultant with sounding equipment to pinpoint the physical leaks within its system for repair. The Town evaluates approximately 25% of its system every four years. Eaton's system loss rate has averaged 12% from 2003 to 2010. This loss is calculated from comparing the total volume billed from NWCWD to the amount Eaton bills monthly. This loss calculation includes real and apparent losses. The Town will continue periodic leak detection and repair.

- Advanced Metering Infrastructure Program
  Advanced Metering Infrastructure (AMI) refers to metering systems that measure, collect and analyze water or energy usage, and interact with water meters, through various communication media either on on-demand or on pre-defined schedules. AMI technology can help water utilities automate water systems, detect problem areas earlier, give customers tools to monitor water use, provide rates that are more accurate and reduce demand.

- Metering of Non-Potable Irrigation
  The Town of Eaton provides non-potable irrigation water to several subdivisions for irrigation of lawns. This measure would add individual

meters at each customer's property, so they would be charged for water used instead of by the square footage of their lawn.

Regulatory Controls and Standards

- Water Waste Ordinance
  The Town currently has an ordinance prohibiting the waste of water and will evaluate the policy again to determine if more can be done with it.

- Water Restrictions
  Eaton's municipal code states that it is unlawful to water lawns, gardens and trees except when permitted by the Town Board by resolution (Ord. 377 19, 1984). The Town Board determines restrictions based on current water conditions.

- Water Rate Structure Changes
  The Town currently does not have a tiered rate structure that encourages water conservation. Inclining block water rate designs effectively encourages efficient water use. A rate study may be necessary to ensure maximum water conservation savings.

- General Evaluation of Policies
  The Town would like to evaluate internal policies that could involve water conservation principles. The Town would like to evaluate policies that would allow the Town to encourage water savings at Town facilities.

- Turf and Landscape Standards for New Construction
  These standards are usually enforced in the Building Codes for municipalities. They can include the use of Xeriscape principles such as incorporation of low water-use plants, efficient irrigation systems, and grouping of similar water-use plants in irrigation zones. The turf and landscape standards may require a certain percentage of new landscapes to be low water use. Certificates of occupancy for new construction are given only after review of the turf and landscape standards that shows compliance with the standards.

- Irrigation System Standards for New Construction
  These standards are usually enforced in the Building Codes for municipalities. Minimum standards for irrigation systems can be set as part of the building permit review process and certificates of occupancy for new construction are given only after review that the irrigation standards have been met.

- Soil Amendment Standards for New Landscapes
  Soil amendments include the addition of organic and inorganic matter to soil to improve its texture nutrient load, moisture-holding capacity and infiltration rate.

The Town can make soil amendments a requirement for the building permit process.

- Require Wind and/or Rain Sensor for Commercial
  This measure would include requiring wind and/or rain sensors on all outdoor commercial properties as well as open space development. The Town could also target existing businesses to adhere to this requirement.

Educational Programs

- Water Conservation Upgrades to Website
  The Town already has a very user friendly interactive website. A water conservation link could be added to provide information such as water conservation tips, lawn watering guides, residential water use calculator, promotion of the EPA Water Sense program and links to other water conservation websites. The website can also include customer surveys as well as other water conservation program information that the Town is doing such as rebates and/or audits.

- School Education
  This program includes time for Project WET (Water Education and Training) to work with local educators to develop water conservation education programs within the school systems. Project WET has dedicated itself to the mission of reaching children, parents, teachers and community members of the world with water education. Project WET has helped many schools along the Front Range.

- Xeriscape Gardening Classes
  The Town has access to a local extension service and/or local master gardeners that offer small gardening classes. This could be done a couple times a year at no cost to water users, on a first come first served basis.

- Distribute ET Irrigation Scheduling in Water Bill
  Evapotranspiration (ET) is a term used to describe the sum of evaporation and plant transpiration from the Earth's land surface to atmosphere. Established values of ET for certain areas and certain plants, such as turf grass, provide an estimate of how much water the plant needs. ET irrigation schedules use historical averages of weather data, which can be prepared by the Town prior to the irrigation season and sent out to all customer categories to reference when programming their irrigation systems. Northern Water also has tools on their website that can aid with this calculation. The schedule could be printed on the bill or posted on the web at the beginning or for the duration of the irrigation season.

Rebates and Audits

As with similar small towns in northern Colorado, Eaton experienced a housing boom in the early 2000's. Due to this housing boom, the population of the Town increased by nearly 16% in one year and is the reason that approximately 2/3rds of the Town is considered to be new construction. Eaton considered including an indoor rebate program but due to the fact that a majority of the homes in Town is newer construction, Town staff would like to postpone an indoor rebate program until more of the population can benefit from this measure.

- Irrigation System Efficiency Device Rebate for Residential and Commercial
  Rebates could be offered for residential and commercial customers to install irrigation system efficiency devices. Irrigation System Efficiency Devices may include ET (SMART) Sprinkler system controllers and/or wind and rain sensors. Smart controllers for sprinkler systems use real-time weather data or a soil moisture sensor to determine an irrigation schedule. These controllers can be programmed to accommodate different zones with varying landscapes. Smart controllers are the most efficient surface irrigation technology. Wind and rain sensors cost from $25 to $45 while automatic irrigation system controllers range from $50 to $250.

- Indoor Residential Audit Kits
  Self-guided residential audit kits can be designed to include items such as leak detection tablets, surveys, and water saving fixtures. Instructions for conducting the audit and evaluating the results can give residential customers insight and direction on how they can save water and money. The guidance offered in the instructions could lead the customer to take part in other conservation programs offered.

- Outdoor Residential Audit Kits
  Self-guided outdoor residential audit kits can be designed to include items such as water saving hose nozzle, hose timer, hose repair kit, and rain gauge. Instructions for conducting the audit and evaluating the results can give residential customers insight and direction on how they can save water and money. The guidance offered in the instructions could lead the customer to take part in other conservation programs offered, including rebates.

Costs and Water Savings of Conservation Options

Prior to evaluating the potential cost effectiveness of the measures/programs, it is important to understand the magnitude of typical indoor and outdoor uses and the contribution of each to total demand. There is a wide range of use related to each indoor and outdoor measure that can affect the potential water savings and cost effectiveness accordingly. The assumptions for calculating water savings used for this analysis were on the conservative end of the ranges found in the available water conservation research to avoid overestimating savings.

Many resources were used to estimate water savings including Amy Vickers Handbook of Water Use and Conservation, studies and papers from California and Arizona, local studies available from the American Water Resources Association, the Environmental Protection Agency, Western Resource Advocates, information from other Colorado municipalities, and the CWCB website.

Table 7.1 provides a cost-benefit analysis for all of the measures and programs previously identified to be evaluated further. A planning horizon of ten years is used to quantify the full benefit of these measures and programs. The costs and water savings over the planning period are calculated assuming the measures/programs all start in Year 1. This provides an equitable ranking of the measures, so they can be compared on an apples-to-apples basis. In reality, the measures and programs will be implemented according to the implementation schedule developed in Chapters 8 and 9.

The first five columns (Columns A-E) of **Table 7.1** identify the conservation measure or program and quantify the costs to the Town. These costs include unit or annual costs for materials, staff time, and one-time start up costs. The table then quantifies water savings annually and for the entire ten-year planning horizon. Annual water savings and projected lost revenue are based on full implementation. This gives the Town an idea of the anticipated water savings and estimated revenue impacts after full implementation.

The cost per 1,000 gallons of water saved is found by dividing the total cost by the total water savings for the entire ten-year period. The measures and programs are then ranked by cost per 1,000 gallons saved. This ranking helps to determine which measures will be more effective and to suggest a useful order of implementation.

Table 7.1 – Cost-Benefit Analysis of Conservation Measures and Programs

Conservation Measure or Program	Total Cost to Water Provider				# of Participants per Year	Gallons Saved per Unit per Year	Estimated Annual Water Savings (gallons)	Estimated Total Water Savings over Planning Period (gallons)	Annual Revenue Loss Related to Water Savings	Estimated Annual Cost	Estimated Total Cost over Planning Period including Set-up	Cost per 1000 Gallons Saved	Rank
	Rebate	One time Labor and Material Cost	Annual Labor	Annual Materials									
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
SUPPLY SIDE MEASURES & PROGRAMS													
Utility Maintenance Programs													
Billing Software Upgrades	$0	$4,000	$500	$0	0	0	2,633,503	26,335,032	$0	$500	$9,000	$0.34	1
Leak Detection & Repair	$0	$0	$9,760	$0	0	0	2,633,503	26,335,032	$0	$9,760	$29,279	$1.11	3
Advanced Metering Infrastructure (AMI)	$0	$375,000	$0	$0	0	0	7,900,510	79,005,096	$0	$0	$375,000	$4.75	14
Metering Non-Potable Irrigation	$0	$280,000	$1,000	$0	0	0	2,928,548	29,285,476	$0	$1,000	$290,000	$9.90	17
DEMAND SIDE MEASURES & PROGRAMS													
Regulatory Controls and Standards													
Water Waste Ordinance	$0	$500	$0	$0	0	0	1,137,327	11,373,265	$1,206	$1,206	$12,556	$1.10	2
Water Restrictions		$0	$150	$0	0	0	1,819,722	18,197,224	$4,822	$4,972	$49,723	$2.73	6
Water Rate Study	$0	$50,000	$0	$0	0	0	4,549,306	45,493,061	$12,056	$12,056	$62,056	$1.36	4
Evaluation of Policies to Encourage Water Savings		$750	$0	$0	0	0	165,046	1,650,459	$241	$241	$3,161	$1.92	5
Turf & Landscape Standards for New Development	$0	$500	$0	$0	0	0	27,306	1,501,847	$398	$398	$4,480	$2.98	7
Irrigation System Standards for New Development	$0	$500	$0	$0	0	0	27,306	1,501,847	$398	$398	$4,480	$2.98	8
Soil Amendment Ordinance for New Landscapes	$0	$500	$0	$0	0	0	27,306	1,501,847	$398	$398	$4,480	$2.98	9
Requiring Wind/Rain Sensors for Commercial		$500	$0	$0	0	0	87,645	876,447	$255	$255	$3,055	$3.49	11
Educational Programs													
Website Upgrades/ Public Education	$0	$5,000	$500	$0	0	0	2,329,431	23,294,310	$6,173	$6,673	$71,730	$3.08	10
School Education Program	$0	$3,000	$800	$500	0	0	1,077,071	10,770,708	$2,854	$4,154	$44,542	$4.14	13
Xeriscape Classes		$0	$800	$1,000	25	1,559	38,972	2,143,448	$568	$2,368	$23,680	$11.05	18
Distribute ET Irrigation Scheduling in Water Bill	$0	$500	$500	$0	0	0	1,832,869	18,328,691	$9,245	$9,745	$97,948	$5.34	15
Rebate and Incentive Programs													
Irrigation System Efficiency Device Rebates	$25	$400	$500	$500	20	3,381	67,614	3,718,775	$985	$1,985	$20,255	$5.45	16
Audit Programs													
Indoor Residential Water Audit Kits	$0	$5,150	$700	$0	50	371	18,574	1,021,543	$271	$971	$14,857	$14.54	19
Outdoor Residential Water Audit Kits	$0	$700	$700	$0	75	3,660	274,529	15,099,121	$4,001	$4,701	$59,005	$3.91	12

Note: Green shaded cells equate to existing measures

Column Explanations:

(A) Name of conservation measure or program

(B) A rebate provided upon approval of customer application application

(C) One time labor and material costs involved in set up program or measure

(D) Labor involved each year for operation of measure or program

(E) Materials needed each year for each unit if listed or for the whole measure or program

(F) Number of participants expected to participate and resulting units or audits needed

(G) Gallons of water saved per unit as a result of participating in the program or measure

(H) Total water savings seen in a year from the measure or program

(I) Total water savings seen over entire ten year planning period; could be based on increasing water demand or a fixed use per account

(J) Revenue the water provider will not be paid if the water savings occur.

(K) Total annual cost to water provider plus the annual revenue loss.

(L) Total cost to implement and operate measure or program over entire planning period, including annual operation, one time set up costs and annual revenue lost due to water savings

(M) Cost per 1000 gallons saved = total cost over planning period divided by total water saved over planning period

(N) Ranks the measures and programs according to the price per 1000 gallons of water saved, lowest to highest

Comparison of Benefits and Costs

The resulting ranking of measures by cost-benefit is shown in **Table 7.2** below. The cost per 1,000 gallons saved ranges from $0.34 to $14.54. The educational, audit and rebate programs and measures included higher ranked programs while the utility maintenance programs, regulatory controls and standards measures, and rebate and incentive programs have a mix of high and low rankings.

The rankings are a result of the ratio of cost, including lost revenue due to water savings. For instance, Xeriscape classes do not save a significant amount of water compared to their cost, so they rank lower in the cost-benefit ranking. This is only a cost per water saved ranking. There are other factors to consider, which will be accomplished in a second screening.

Table 7.2 – Cost-Benefit Ranking

Rank	Conservation Measures and Programs
1	Billing Software Upgrades
2	Water Waste Ordinance
3	Leak Detection & Repair
4	Water Rate Study
5	Evaluation of Policies to Encourage Water Savings
6	Water Restrictions
7	Turf & Landscape Standards for New Development
8	Irrigation System Standards for New Development
9	Soil Amendment Ordinance for New Landscapes
10	Website Upgrades/ Public Education
11	Requiring Wind/Rain Sensors for Commercial
12	Outdoor Residential Water Audit Kits
13	School Education Program
14	Advanced Metering Infrastructure (AMI)
15	Distribute ET Irrigation Scheduling in Water Bill
16	Irrigation System Efficiency Device Rebates
17	Metering Non-Potable Irrigation
18	Xeriscape Classes
19	Indoor Residential Water Audit Kits

Note: Green shaded cells equate to existing measures

Evaluation Criteria

After each of the conservation measures and programs were ranked by *cost per 1,000 gallons saved*, as shown in **Table 7.2**, the next step was to select conservation measures and programs for implementation.

The criteria used for selection are:

1. Staff availability
2. Financial implications

Selected Conservation Measures and Programs

The second screening was accomplished by evaluating each measure/program based on the screening criteria and Eaton's overall goal for this Water Conservation Plan. The following two measures were eliminated in the second screening process;

- Requiring Wind & Rain Sensors for Commercial
- Xeriscape Gardening Classes

The Town will re-evaluate these measures with future planning efforts.

In Chapter 5, conservation goals were established for the customer categories:

- Residential: 10% - 661 AF
- Commercial: 5% - 18 AF
- Irrigation: 12% - 20 AF
- Municipal: 8% - 5 AF
- Non-Potable Irrigation: 12% - 447 AF
- Unaccounted-for Losses: 2% - 144 AF

The selected conservation measures/programs and associated water savings were arranged within the targeted customer categories to more easily compare the anticipated savings to the original goals. Some of the measures contribute savings to more than one category. **Table 7.3** shows the water savings for the selected measures, sub-totaled for each category.

Table 7.3 – Combined Water Savings of Selected Conservation Measures and Programs

Conservation Measures and Programs	Estimated Annual Water Savings after full Implementation (gallons)	Estimated Total Water Savings over Planning Period (gallons)
System Losses		
Billing Software Upgrades	2,633,503	26,335,032
Leak Detection & Repair	2,633,503	26,335,032
Advanced Metering Infrastructure (AMI)	7,900,510	79,005,096
Subtotal - Gallons	13,167,516	131,675,159
Acre-Feet	40	404
Residential		
Water Waste Ordinance	1,077,071	10,770,708
Water Restrictions	1,723,313	17,233,133
Evaluation of Policies to Encourage Water Savings	86,166	861,657
Water Rate Study	4,308,283	43,082,832
Turf & Landscape Standards for New Development	24,765	1,362,057
Irrigation System Standards for New Development	24,765	1,362,057
Soil Amendment Ordinance	24,765	1,362,057
Website Upgrades/ Public Education	2,154,142	21,541,416
School Education	1,077,071	10,770,708
ET Scheduling in Water Bills	1,723,313	17,233,133
Irrigation System Efficiency Device Rebates	24,765	1,362,057
Indoor Residential Water Audit Kits	18,574	1,021,543
Outdoor Residential Water Audit Kits	123,823	6,810,286
Subtotal - Gallons	12,390,814	134,773,645
Acre-Feet	38	414
Commercial		
Water Waste Ordinance	60,256	602,557
Water Restrictions	96,409	964,091
Evaluation of Policies to Encourage Water Savings	48,205	482,046
Water Rate Study	241,023	2,410,228
Turf & Landscape Standards for New Development	2,542	139,790
Irrigation System Standards for New Development	2,542	139,790
Soil Amendment Ordinance	2,542	139,790
Water Conservation Website Upgrades/ Public Education	120,511	1,205,114
Irrigation System Efficiency Device Rebates	12,708	698,950
Subtotal - Gallons	586,737	6,782,357
Acre-Feet	2	21
Potable Irrigation		
Evaluation of Policies to Encourage Water Savings	21,911	219,112
Water Conservation Website Upgrades/ Public Education	54,778	547,779
Irrigation System Efficiency Device Rebates	30,141	1,657,767
ET Scheduling in Water Bills	109,556	1,095,558
Outdoor Residential Water Audit Kits	150,706	8,288,835
Subtotal - Gallons	367,092	11,809,051
Acre-Feet	1	36
Municipal		
Evaluation of Policies to Encourage Water Savings	8,764	87,645
Subtotal - Gallons	8,764	87,645
Acre-Feet	0.03	0.27
Nonpotable Irrigation		
Metering Non-Potable Irrigation	2,928,548	29,285,476
Subtotal - Gallons	2,928,548	29,285,476
Acre-Feet	9	90
Grand Total - (Gallons)	**29,449,471**	**314,413,333**
Acre-Feet	**90**	**965**
Grand Total Savings from Existing Measures (Acre-Feet)	**25**	**248**

Note: Green shaded cells equate to existing measures

These savings were compared to the original goals set in Chapter 5. As mentioned earlier, water conservation goal setting is an iterative process; original goals are established, conservation measures are evaluated and selected based on appropriate criteria, and the resulting water savings are compared to the original goals. **Table 7.4** compares the anticipated water savings from the selected measures with the original goals and then adjusts the water saving goals for this plan.

Table 7.4 – Water Conservation Goals Comparison

Water Use Categories:	Total Projected Water Use (2012 to 2021)	Reduction Goals for Planning Horizon		Total Water Savings from Selected Programs	Resulting Reduction	Adjusted Reduction Goals for Planning Horizon	
	(AF)	(%)	(AF)	(AF)	(%)	(%)	(AF)
Residential	6,611	10.0%	661	414	6.3%	6.3%	414
Commercial	370	5.0%	18	21	5.7%	5.7%	21
Irrigation	168	12.0%	20	36	21.4%	21.4%	36
Municipal	67	8.0%	5	0.27	0.4%	0.4%	0.27
Non-Potable - Irrigation	3,725	12.0%	447	90	2.4%	2.4%	90
Unaccounted-for Losses (currently 12%)	866	2.0%	144	404	5.6%	5.6%	404
Total Water Production:	11,807						
Total Demand Reduction:			1,296	965			965
Total Percent Reduction:			11.0%		8%	8%	

Over the ten-year planning period, the selected measures/programs provide an overall estimated water savings of 965 AF. Goals were adjusted up from the original goals for the Commercial, Potable Irrigation and Unaccounted-for Loss categories. The Residential, Municipal and Non-Potable Irrigation water use category goals were adjusted down to match the estimated water savings resulting from the cost-benefit analysis. The adjusted goals reflect the goals believed to be obtainable by Town staff.

After the goals were adjusted to reflect the expected water savings, the estimated water use reduction is 8%. Therefore, Eaton will target a reduction in its water use by 8% over the next ten year because of implementation of this plan.

Implementation Schedule

Water savings resulting from implementation of this Water Conservation Plan will occur gradually as the Town has the resources to implement each selected measure and program and the water users respond to that implementation. Implementation grant availability will be crucial in the timing of implementation.

The following table proposes a schedule of implementation that prioritizes the effort over a three-year period. This allows the Town to work on implementation with three levels of priorities. This also allows the Town to apply for water-efficiency grants to implement some of the programs. The annual costs shown reflect the cost to implement the measure/program and maintain it. Any grant money obtained would reduce these yearly costs. The table also shows the percent of the total water saved over the planning period from each measure.

Table 8.1 – Eaton Water Conservation Plan Implementation Schedule

Measure/Program	Cost to Implement (includes 1st year annual cost)	Annual On-going Costs (programs in 2nd or 3rd year of implementation or existing measures)	% of Total Water Savings	Implementation Considerations	Grant Request
YEAR 1 (1ST PRIORITY)					
Utility Maintenance Programs (Phase 1)					
Billing Software Upgrades	$4,500		8.4%	Staff time, Funding	Yes
Leak Detection & Repair	$9,760		8.4%	Funding & Third Party Consultant	Yes
Regulatory Standards Program (Phase 1)					
Water Waste Ordinance	$500		3.6%	Staff Time & Governmental Action	Unknown
Water Restrictions	$150		5.8%		Unknown
General Evaluation of Policies that Encourage Water Savings	$750		0.5%		Unknown
Turf & Landscape Standards for New Development	$500		0.5%		Unknown
Irrigation System Standards for New Development	$500		0.5%		Unknown
Soil Amendment Ordinance for New Landscapes	$500		0.5%		Unknown
Educational Programs (Phase 1)					
Website Upgrades/Public Education	$5,500		7.4%	Staff Time & Funding	Yes
Distribute ET Scheduling in Water Bill	$1,000		5.8%	Staff Time	Unknown
YEAR 1 TOTAL	**$23,660**	**$0**	**41%**		

Note: Green shaded cells equate to existing measures

Table 8.1 cont.

Measure/Program	Cost to Implement (includes 1st year annual cost)	Annual On-going Costs (programs in 2nd or 3rd year of implementation or existing measures)	% of Total Water Savings	Implementation Considerations	Grant Request
YEAR 2 (2ND PRIORITY)					
Utility Maintenance Programs (Phase 1 & 2)					
Billing System Upgrades		$500	See Year 1		
Metering of Non-potable	$281,000		9.3%	Funding & Staff Time	Yes
Regulatory Standards Program (Phase 1 & 2)					
Water Rate Study	$50,000		14.5%	Funding & Staff Time	Yes
Water Restrictions		$150	See Year 1		
Educational Programs (Phase 1 & 2)					
Website Upgrades/Public Education		$500	See Year 1		
Distribute ET Scheduling in Water Bill		$500	See Year 1		
School Education Program	$4,300		3.4%	Funding & Staff Time	Yes
Rebate Program (Phase 1)					
Irrigation System Efficiency Device Rebates	$1,400		1.2%	Funding & Staff Time	Yes
YEAR 2 TOTAL	**$336,700**	**$1,650**	**28%**		
YEAR 3 (3RD PRIORITY)					
Utility Maintenance Programs (Phase 1, 2 & 3)					
Billing System Upgrades		$500	See Year 1		
Metering of Non-potable		$1,000	See Year 2		
Advanced Metering Infrastructure	$375,000		25.1%	Funding & Staff Time	Yes
Regulatory Standards Program (Phase 1, 2 & 3)					
Water Restrictions		$150	See Year 1		
Educational Programs (Phase 1, 2 & 3)					
Website Upgrades/Public Education		$500	See Year 1		
Distribute ET Scheduling in Water Bill		$500	See Year 1		
School Education Program		$1,300	See Year 2		
Rebate Program (Phase 1 & 2)					
Irrigation System Efficiency Device Rebates		$1,000	0.0%	Staff Time, Funding & Procurement of Materials	Yes
Audit Programs (Phase 1)					
Indoor Residential Audit Kits	$5,850		0.3%	Staff Time, Funding & Procurement of Materials	Yes
Outdoor Residential Audit Kits	$12,693		4.8%		Yes
YEAR 3 TOTAL	**$393,543**	**$4,950**	**30%**		
Total Combined 3-Year Cost (implementation and annual costs)	**$760,502**				
Total Implementation Costs	**$753,902**				
Estimated Annual Costs (for measures shown)	**$6,600**				

Note: Green shaded cells equate to existing measures

The total cost to implement the conservation plan is $753,902. The cost to implement the plan including the annual costs for the first three years of on-going programs is $760,502. Annual on-going costs for the measures shown in **Table 8.1** total $6,600 per year. The implementation schedule will be most affected by available funding and staff time. While this schedule is optimistic, the goal is to allow time for researching and obtaining grants to develop sound programs for a higher probability of success.

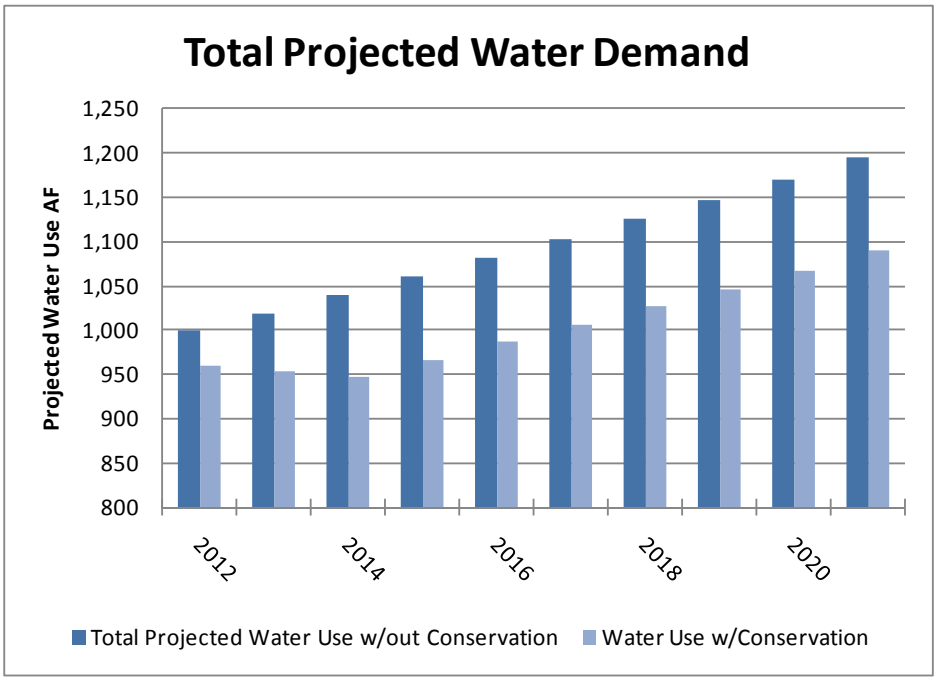
It should be noted that the implementation costs include both cost to implement the water conservation measure/program and staff time associated with the implementation and is not necessarily representative of the capital outlay requirement. Please refer to **Appendix A** for the detailed breakdown of costs for each measure/program.

Modified Demand Forecast

The total water demands for Eaton are shown in the following graph with and without water conservation. The anticipated water savings follow the implementation schedule. The savings are compiled according to the assumptions used in the cost-benefit analysis and are carried through the end of the planning period. Effects of implementing the water conservation measures will last well beyond the planning horizon.

The annual savings after all of the measures/programs have been implemented is 100 AF per year, this includes compounded savings from measures like rebates and also includes savings from existing measures that will be carried forward like the water waste ordinance.

Figure 8.1 – Comparison of Demand Forecast with and without Conservation



Water Supply Forecast Modification

Along with lowering the overall demand for water, there are two areas that can be directly affected by water conservation; water supply acquisition and system capacity upgrades. While Eaton does not have planned capacity upgrades or water supply acquisition within the next ten years, efforts in these areas may be modified and/or delayed when they become necessary in the future, which could provide substantial financial savings to Eaton in the future. With this water conservation plan, Eaton is able to set standards for future growth, so they use water most effectively. This plan also addresses wise water use within their non-potable system.

Benefits of Water Conservation

Table 8.2 shows the annual estimate increase in demand, without conservation and the annual savings that will result as the plan is implemented.

Table 8.2 – Estimated Water Savings and Water Supply Needs

Savings from Conservation	Cumulative Increase in Demand w/out Conservation AF	Cumulative Water Saved per Year w/ Conservation AF
Year 1	20	88
Year 2	40	179
Year 3	60	270
Year 4	81	364
Year 5	102	460
Year 6	124	557
Year 7	146	657
Year 8	168	758
Year 9	191	860
Year 10	215	965

The total estimated water savings for this planning period is 965 AF (314.4 MG). This savings will help delay the increase in demand (215 AF) as shown on **Table 8.2.**

CHAPTER 9 – PLAN OF IMPLEMENTATION AND MONITORING

The schedule for implementation is presented in **Table 8.1** in Chapter 8. The process for implementing the plan and monitoring its success is outlined in this chapter.

Public Participation

One of CWCB's requirements for a State-approved Water Conservation Plan is to solicit public comments on the draft plan for not less than a 60-day period unless otherwise specified by Town policy.

Through this water conservation planning process, the public was notified and given 60 days to comment. **Appendix B** includes affidavits from the local newspapers that legal notice was published. The plan was also available on Eaton's website and at Town Hall for review. No comments were received during the public comment period.

Monitoring and Evaluation

Monitoring the success of this Water Conservation Plan includes measuring water use as well as money spent on the selected conservation measures and programs. Individual customer water use can be tracked for rebates, which will involve customer's water use prior to installation, verification of installation, and post installation water use. Customer class water use will be monitored for programs such as a water rate study. **Table 9.1** presents the information that will be tracked for each measure proposed by the Town. More specific monitoring information will be developed as each measure is implemented.

Many of the costs evaluated in the cost-benefit analysis include annual costs for follow up. This will allow staff to specifically set aside time to monitor and evaluate the success of the conservation measures and programs. Expenditures for conservation will be documented by staff and reported to Town Board on a regular basis. This will be valuable information in evaluating the cost-benefit ratio and to validate the success of implementing the selected conservation measures and programs. Since the programs will be implemented in phases, there will be time to evaluate and establish the appropriate method to monitor success of each program and measure. The Town will consider using data and results from their monitoring as part of the overall public education process.

The Town will prepare an annual report summarizing the monitoring efforts for the water conservation measures that have been implemented and that are on-going. This will be presented to Town Board annually, so they can evaluate the success of the program.

Table 9.1 – Tracking Matrix for Monitoring Water Conservation Measures

Conservation Measures and Programs	Number of Rebates/ Giveaways (A)	Individual Customer Water use (B)	Customer Class Water Use (C)	Per Capita water use (D)	Unaccounted for Water (E)	Peak & Annual Treated & Total Water Demand (F)
Billing Software Upgrades			✓	✓		✓
Leak Detection & Repair				✓	✓	✓
Water Waste Ordinance				✓		✓
Water Restrictions			✓	✓		✓
General Evaluation of Policies that Encourage Water Savings			✓	✓		✓
Turf & Landscape Standards for New Development			✓	✓		✓
Irrigation System Standards for New Development			✓	✓		✓
Soil Amendment Ordinance for New Landscapes			✓	✓		✓
Website Upgrades/Public Education				✓		✓
Distribute ET Scheduling in Water Bill				✓		✓
Metering of Non-potable		✓	✓	✓		✓
Water Rate Study			✓	✓		✓
School Education Program				✓		✓
Irrigation System Efficiency Device Rebates	✓	✓		✓		✓
Advanced Metering Infrastructure		✓	✓	✓	✓	✓
Indoor Residential Audit Kits	✓	✓		✓		✓
Outdoor Residential Audit Kits	✓	✓		✓		✓

NOTES:

(A) giveaways will be tracked for those installations that have been proven.

(B) Water use prior and post installation will be tracked to determine if a savings has occurred.

(C) These measures affect specific customer classes that can be tracked to determine savings.

(D) A reduction in the Gallons per Capita Water Use will show an overall savings

(E) These measures track uses that are not billed but are supply-side related.

(F) Reductions in peak and annual water use will show an overall savings

Plan Updates and Revisions

The required schedule for updating the Water Conservation Plan is seven years. The progress towards achieving the water savings goals will be monitored on an annual basis by Eaton. The Town may choose to update this plan prior to seven years if implementation and actual water savings deviate too much from these projections. This deviation may be caused by several factors including higher or lower than expected growth, less than anticipated participation and the inability to implement the plan due to lack of funding.

Plan Adoption and Approval

Following the public comment period, the comments were incorporated into the plan. The Eaton Town Board formally adopted the plan prior to submittal to CWCB for final approval. The resolution is attached as **Appendix C**. Implementation will begin after CWCB approval is received. It is only after final CWCB approval that Eaton will be eligible for a water-efficiency grant through CWCB for plan implementation.

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APPENDIX A

Water Conservation Measures

Billing Software Upgrades - Existing Measure

Software upgrades will allow water providers to quickly and easily retrieve water usage data and relay that data to their customers, helping customers to monitor their water usage and conservation. Software upgrades will also help staff to identify system problems, faulty meters and distinguish between customer categories.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	1%	
Annual Estimated Water Production without Savings	263,350,319	gallons/yr
Estimated Water Production over Planning Period without Savings	2,633,503,185	gallons
Estimated Annual Water Savings	**2,633,503**	gallons/yr
Estimated Savings over Planning Period	**26,335,032**	gallons

Notes:

Current system leakage/loss rate is estimated at 12%. Software upgrades are estimated to reduce apparent losses that occur due to billing system errors by 1 %.

The estimated production (without savings) equals the projected water usage plus 12%.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	10	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$500.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$500.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Staff Costs	$4,000.00	
One Time Labor/Material Cost	**$4,000.00**	

Notes:

Estimate that Staff would spend approximately 80 hours at $50.00/hour to evaluate their billing system and investigate the possibilities of separating their billing into separate customer categories.

This measure also includes regular software upgrades to the system.

Estimated Annual Cost	**$500.00**	/year
Estimated Total Cost over Planning Period Including Set-up	**$9,000.00**	
Cost per 1000 Gallons Saved	**$0.34**	

Leak Detection and Repair Program - Existing Measure

This measure would include electronic leak detection by a third party consultant every 4 years.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Frequency	3	years

Estimated Water Savings

Annual Estimated Savings Rate	1%	
Annual Estimated Water Production without Savings	263,350,319	gallons/yr
Estimated Water Production over Planning Period without Savings	2,633,503,185	gallons
Estimated Annual Water Savings	**2,633,503**	gallons/yr
Estimated Savings over Planning Period	**26,335,032**	gallons

Notes:

Current system leakage/loss rate is estimated at 12%.

The estimated production (without savings) equals the projected water usage plus 12%.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	10	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$500.00	
Third Party Costs (Leak Detection Consult)	$9,259.80	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$9,759.80**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
Third Party Costs (Mapping of System)	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

The Town does approximately 25% of their system every 4 years. Cost estimate for an outside consultant to perform electronic leak detection is $0.23 per foot. Therefore, a 30.5 mile system of pipeline would total $37,039.

Annual staff costs include coordination with consultant.

Estimated Annual Cost	**$9,759.80**	/year
Estimated Total Cost over Planning Period Including Set-up	**$29,279.40**	
Cost per 1000 Gallons Saved	**$1.11**	

Advanced Metering Infrastructure Program

Advanced Metering Infrastructure (AMI) *refers to systems that measure, collect and analyze water or energy usage, and interact with water meters, through various communication media either on-demand or on pre-defined schedules. AMI technology can help water utilities automate water systems, detect problem areas earlier, give customer's tools to monitor water use, provide more accurate rates and reduce demand.*

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	3%	
Annual Estimated Water Production without Savings	263,350,319	gallons/yr
Estimated Water Production over Planning Period without Savings	2,633,503,185	gallons
Estimated Annual Water Savings	**7,900,510**	gallons/yr
Estimated Savings over Planning Period	**79,005,096**	gallons

Notes:

Current system leakage/loss rate is estimated at 12%. A portion of these losses may be attributed to faulty meters or end user infrastructure. The Town of Eaton would like to reduce these losses by 3% over the planning period.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$0.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost and Program setup	$375,000.00	
One Time Labor/Material Cost	**$375,000.00**	

Notes:

Cost estimates only include one time materials and programs setup cost for installation of a Sensus FlexNet AMI system.

More information on Sensus FlexNet systems can be found at www.sensus.com.

Estimated Annual Cost	**$0.00**	/year
Estimated Total Cost over Planning Period Including Set-up	**$375,000.00**	
Cost per 1000 Gallons Saved	**$4.75**	

Metering of Non-Potable Irrigation

Currently, the outdoor irrigation water provided to some of Eaton's subdivisions is not metered. Metering the outdoor irrigation usage will encourage efficient water use.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	5%	
Annual Estimated Water Production without Savings	58,570,952	gallons/yr
Estimated Water Production over Planning Period without Savings	585,709,522	gallons
Estimated Annual Water Savings	**2,928,548**	gallons/yr
Estimated Savings over Planning Period	**29,285,476**	gallons

Notes:

Average Non-potable use from 2004 to 2009 for the Maplewood and Governors Ranch subdivisions is 58,570,952 gallons.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	20	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$1,000.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs	$0.00	/year
Annual Labor	**$1,000.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost and Program setup	$280,000.00	
One Time Labor/Material Cost	**$280,000.00**	

Notes:

Cost estimates include one time materials and programs setup cost for installation of outdoor non-potable meters.

Estimated Annual Cost	**$1,000.00**	/year
Estimated Total Cost over Planning Period Including Set-up	**$290,000.00**	
Cost per 1000 Gallons Saved	**$9.90**	

Water Waste Ordinance - Existing Measure

The Town would like to develop an ordinance to prohibit water waste

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	1	years

Estimated Water Savings

Annual Estimated Savings Rate	0.50%	

Notes:

Estimated savings is 1/2 % and will affect residential & commercial users.

Estimate that approximately 40% of total customer use is outdoor use.

Customer Category	Average Annual Water Use (gallons/yr)	*Estimated Annual Water Savings gallons/yr*
Residential	215,414,162	1,077,071
Commercial	12,051,142	60,256

Estimated Annual Water Savings	**1,137,327**	gallons/yr
Estimated Savings over Planning Period	**11,373,265**	gallons

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs	$0.00	/year
Annual Labor	**$0.00**	/year
Materials Costs		
Annual Materials Budget	$0	/year
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Staff Labor Costs	$500.00	
One Time Material Costs	$0.00	
One Time Labor/Material Cost	**$500.00**	

Notes:

Labor costs include estimated staff time for researching and developing requirements and standards and receiving approval and implementing the ordinance.

Water Rates

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$245,637.87	/year
Estimated Average Annual Revenue with Water Savings	$244,432.30	/year
Estimated Annual Revenue Loss Related to Water Savings	**$1,205.57**	/year

Estimated Annual Cost	**$1,205.57**	/year
Est. Cost over Planning Period not including Lost Revenue	**$500.00**	
Est. Cost over Planning Period Including Set-up and Lost Revenue	**$12,555.66**	
Cost per 1000 Gallons Saved	**$1.10**	

Watering Restrictions - Existing Measure

Eaton Municipal Code states that it shall be unlawful to sprinkle lawns, gardens and trees except during those times and hours permitted by the Town Board by resolution (Ord. 377 §19, 1984). The Town Board determines restrictions based on current water conditions.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate: 2%

Customer Category	Outdoor Water Use Per Tap gallons/tap	*Estimated Annual Water Savings gallons/yr*
Residential	86,165,665	1,723,313
Commercial	4,820,457	96,409

Estimated Annual Water Savings	**1,819,722**	gallons/yr
Estimated Savings over Planning Period	**18,197,224**	gallons

Notes:

Estimate that approximately 40% of total customer use is outdoor use.

Assume a conservative estimate of 2% savings of projected outdoor water usage .

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	2	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$100.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs	$50.00	/year
Annual Labor	**$150.00**	/year
Materials Costs		
Annual Materials Budget	$0	/year
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Labor Costs	$0.00	
One Time Material Costs	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Costs include staff time for implementing water restrictions for existing measure.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$265,213.89	/year
Estimated Average Annual Revenue with Water Savings	$260,391.63	/year
Annual Revenue Loss Related to Water Savings	**$4,822.26**	/year

Estimated Annual Cost	**$4,972.26**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$1,500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$49,722.64**	
Cost per 1000 Gallons Saved	**$2.73**	

Water Rate Structure Changes

Based on many water conservation studies, an inclining block water rate design most effectively encourages efficient water use. A rate study may be necessary to ensure maximum water conservation savings.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	1	year

Estimated Water Savings

Annual Estimated Savings Rate	2%	

Customer Category	Average Water Use (gallons)	*Estimated Annual Water Savings gallons/yr*
Residential	215,414,162	4,308,283
Commercial	12,051,142	241,023

Estimated Annual Water Savings	**4,549,306**	gallons/yr
Estimated Savings over Planning Period	**45,493,061**	gallons

Notes:

Assume a conservative reduction of 2% of projected total billed water. Rate change studies have shown a greater savings (Southwest Florida Water Management District study - 13%).

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$0.00**	/year

Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year

Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year

One Time Labor and Material Costs	
One Time City Staff Labor	$10,000.00
Rate Study performed by Consultants	$40,000.00
One Time Labor/Material Cost	**$50,000.00**

Notes:

Labor costs include estimated staff time for researching water rate options and implementing those options (~200 hours at $50/hour).

Costs also include water rate study completed by a Consultant. Before a new rate structure is adopted, a rate study would need to be completed by an outside consulting firm.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$626,883.72	/year
Estimated Average Annual Revenue with Water Savings	$614,828.06	/year
Estimated Annual Revenue Loss Related to Water Savings	**$12,055.66**	/year

Estimated Annual Cost	**$12,055.66**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$50,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$62,055.66**	
Cost per 1000 Gallons Saved	**$1.36**	

General Evaluation of Policies that Encourage Water Savings

The Town would like to evaluate policies, Town ordinances, etc. that would allow the Town to encourage water savings.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	0.10%	

Notes:

This measure can affect all customer categories. Most policies that encourage water savings are geared toward outdoor uses. Assume a conservative reduction of 0.10% of projected total billed water each year.

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Residential	86,165,665	86,166
Commercial	48,204,568	48,205
Potable - Irrigation	21,911,167	21,911
Municipal	8,764,467	8,764

Estimated Annual Water Savings	**165,046**	gallons/yr
Estimated Savings over Planning Period	**1,650,459**	gallons

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs		/year
Evaluation and Follow-up Costs		/year
Annual Labor	**$0.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Staff Costs	$750.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

Estimated one time staff costs for Staff to spend approximately 15 hours at $50.00/hour to evaluate current policies within the City.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$265,213.89	/year
Estimated Average Annual Revenue with Water Savings	$264,972.78	/year
Estimated Annual Revenue Loss Related to Water Savings	**$241.11**	/year

Estimated Annual Cost	**$241.11**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$3,161.13**	
Cost per 1000 Gallons Saved	**$1.92**	

Turf and Landscape Standards for New Construction

Many water providers require restrictions on turf and low water use landscape standards for new construction within their building permit review process. The turf and landscape standards may require a certain percentage of new landscapes to be low water use.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	5%	

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Residential	49,529	10	24,765
Commercial	50,833	1	2,542

Estimated Annual Water Savings	**27,306**	gallons/yr
Estimated Savings over Planning Period	**1,501,847**	gallons

Notes:

An estimated number of building permits will be obtained in any year. Estimate that approximately 40% of total customer use is outdoor use.
Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$0.00**	/year

Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year

Rebates		
Rebate Cost	$0.00	
		/year
Annual Rebate Cost	**$0.00**	/year

One Time Labor and Material Costs	
One Time City Staff Labor	$500.00
Rate Study performed by Consultants	$0.00
One Time Labor/Material Cost	**$500.00**

Notes:

One time Labor costs include estimated staff time for researching and developing requirements and standards and receiving approval and implementing those options.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers. Estimated Revenue assumes current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$8,749.32	/year
Estimated Average Annual Revenue with Water Savings	$8,351.33	/year
Estimated Annual Revenue Loss Related to Water Savings	**$397.99**	/year

Estimated Annual Cost	**$397.99**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$4,479.90**	
Cost per 1000 Gallons Saved	**$2.98**	

Irrigation System Standards for New Construction

Many water providers encourage or require irrigation system standards within their building permit review process. The irrigation system standards help to design irrigation systems that efficiently use water.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	5%	

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Residential	49,529	10	24,765
Commercial	50,833	1	2,542

Estimated Annual Water Savings	**27,306**	gallons/yr
Estimated Savings over Planning Period	**1,501,847**	gallons

Notes:

An estimated number of building permits will be obtained in any year. Estimate that approximately 40% of total customer use is outdoor use.
Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$0.00**	/year

Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year

Rebates		
Rebate Cost	$0.00	
		/year
Annual Rebate Cost	**$0.00**	/year

One Time Labor and Material Costs	
One Time City Staff Labor	$500.00
Rate Study performed by Consultants	$0.00
One Time Labor/Material Cost	**$500.00**

Notes:

Labor costs include estimated staff time for researching and developing requirements and standards and receiving approval and implementing those options.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers. Estimated Revenue assumes current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$8,749.32	/year
Estimated Average Annual Revenue with Water Savings	$8,351.33	/year
Estimated Annual Revenue Loss Related to Water Savings	**$397.99**	/year

Estimated Annual Cost	**$397.99**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$4,479.90**	
Cost per 1000 Gallons Saved	**$2.98**	

Soil Amendment Ordinance for New Landscapes

Soil amendments include the addition of organic and inorganic materials to soil to improve its texture nutrient load, moisture-holding capacity, and infiltration rate. The Town may make this a requirement in to pass building inspection.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	5%	

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Residential	49,529	10	24,765
Commercial	50,833	1	2,542

Estimated Annual Water Savings	**27,306**	gallons/yr
Estimated Savings over Planning Period	**1,501,847**	gallons

Notes:

An estimated number of building permits will be obtained in any year. Estimate that approximately 40% of total customer use is outdoor use. Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$0.00**	/year

Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year

Rebates		
Rebate Cost	$0.00	
No of Rebates per year		/year
Annual Rebate Cost	**$0.00**	/year

One Time Labor and Material Costs	
One Time City Staff Labor	$500.00
Rate Study performed by Consultants	$0.00
One Time Labor/Material Cost	**$500.00**

Notes:

Labor costs include estimated staff time for researching and developing requirements and standards and receiving approval and implementing those options.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers. Estimated Revenue assumes current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$8,749.32	/year
Estimated Average Annual Revenue with Water Savings	$8,351.33	/year
Estimated Annual Revenue Loss Related to Water Savings	**$397.99**	/year

Estimated Annual Cost	**$397.99**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$4,479.90**	
Cost per 1000 Gallons Saved	**$2.98**	

Requiring Wind and/or Rain Sensors for Commercial and Open Space Irrigation

This measure develop standards that would require wind and/or rain sensor for future commercial and open space development. It would also target getting existing areas into compliance.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	2%	

Notes:

Estimate that approximately 40% of total customer use is outdoor use.

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Commercial	2,191,117	43,822
Potable - Irrigation	2,191,117	43,822

Estimated Annual Water Savings	**87,645**	gallons/yr
Estimated Savings over Planning Period	**876,447**	gallons

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	0	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$0.00	
Estimated Inspection Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$0.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time City Staff Labor	$500.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$500.00**	

Notes:

Labor costs include estimated staff time for researching and developing requirements and standards and receiving approval and implementing those options.

Water Rates (2008)

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$13,011.84	/year
Estimated Average Annual Revenue with Water Savings	$12,756.35	/year
Annual Revenue Loss Related to Water Savings	**$255.48**	/year

Estimated Annual Cost	**$255.48**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$3,054.84**	
Cost per 1000 Gallons Saved	**$3.49**	

Water Conservation Upgrades to Website

This measure includes the creation of a water conservation website that may include customer surveys, EPA WaterSense Program Promotion, water conservation tips, lawn watering guides, and a residential water use calculator on website.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	1%	

Notes:

This measure affects projected water usage for the residential & commercial users as well as potable irrigation water users.

Customer Category	Average Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Residential	215,414,162	2,154,142
Commercial	12,051,142	120,511
Potable - Irrigation	5,477,792	54,778

Estimated Annual Water Savings	**2,329,431**	gallons/yr
Estimated Savings over Planning Period	**23,294,310**	gallons

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	10	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$500.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Website updates, etc.)	$0.00	/year
Annual Labor	**$500.00**	/year

Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	0	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year

Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year

One Time Labor and Material Costs	
One Time Materials Cost	$0.00
One Time Labor Costs (website update)	$5,000.00
One Time Labor/Material Cost	**$5,000.00**

Notes:

Annual staff hours include website promotion and annual maintenance.

Website content may include:
- customer survey
- EPA WaterSense program information http://www.epa.gov/WaterSense/
- General water conservation tips and information
- Lawn watering guides (ET scheduling)
- Water use calculators (example - www.H2OConserve.org)

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$641,988.94	/year
Estimated Average Annual Revenue with Water Savings	$635,815.95	/year
Estimated Annual Revenue Loss Related to Water Savings	**$6,172.99**	/year

Estimated Annual Cost	**$6,672.99**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$10,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$71,729.92**	
Cost per 1000 Gallons Saved	**$3.08**	

School Education Program

This program may include time for educators to work with Project WET to develop water conservation education programs.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	0.50%	
Annual Estimated Water Use without Savings	215,414,162	gallons/yr
Estimated Water Use over Planning Period without Savings	2,154,141,625	gallons
Estimated Annual Water Savings	**1,077,071**	gallons/yr
Estimated Savings over Planning Period	**10,770,708**	gallons

Notes:

This measure only affects Residential water usage.

Assume 0.5% savings of projected water usage.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	16	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$800.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Website updates, etc.)	$0.00	/year
Annual Labor	**$800.00**	/year
Materials Costs		
Annual Materials Budget	$500	/year
Annual Materials	**$500.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
Project WET teacher scholarship	$3,000.00	
One Time Labor/Material Cost	**$3,000.00**	

Notes:

Staff hours include time working with local schools and educators to develop a water conservation education program (16 hours).

Material costs include an annual budget for education materials costs.

One time labor and material costs include a Project WET teacher scholarship. Project WET (Water Education & Training) has dedicated itself to the mission of reaching children, parents, teachers and community members of the world with water education. *A $3000 budget would allow for training 10-15 teachers and give them continuing education credit. More information is available at www.projectwet.org.*

Water Rates

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$593,682.48	/year
Estimated Average Annual Revenue with Water Savings	$590,828.24	/year
Annual Revenue Loss Related to Water Savings	**$2,854.24**	/year

Estimated Annual Cost	**$4,154.24**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$16,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$44,542.38**	
Cost per 1000 Gallons Saved	**$4.14**	

Xeriscape Gardening Classes

Through the recreation department, the Town of Eaton could partner with a local nursery to offer Xeriscape gardening classes for residential customers.

Planning Period	2012 to 2021	
	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	2.00%	

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Residential	49,529	15	14,859
Potable Irrigation	120,565	10	24,113

Estimated Annual Water Savings	**38,972**	gallons/yr
Estimated Savings over Planning Period	**2,143,448**	gallons

Notes:

This measure will impact the outdoor usage for Residential and Potable Irrigation categories. Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	16	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$800.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$800.00**	/year
Materials Costs		
Number of Participants	25	/year
Material Cost per Participant	$40.00	/ participant
Annual Materials	**$1,000.00**	/year
Rebates		
Rebate Cost	$0.00	
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
Third Party Costs	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Cost includes annual cost associated with class development and PR and any costs associated with partnering on classes with local nursery. Additional costs would include educational materials for class participants.

Water Rates

Rate Category	**Current Rates/Fees**
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$30,195.06	/year
Estimated Average Annual Revenue with Water Savings	$29,627.05	/year
Estimated Annual Revenue Loss Related to Water Savings	**$568.01**	/year

Estimated Annual Cost	**$2,368.01**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$18,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$23,680.14**	
Cost per 1000 Gallons Saved	**$11.05**	

Post or Distribute ET Irrigation Scheduling

ET irrigation schedules using historical averages of weather data can be prepared by the Town prior to the irrigation season and sent out to all customer categories to reference when programming their irrigation systems. Northern Colorado Water Conservancy District has tools on their website that can aid with this calculation. The schedule could be printed on the bill or posted on the web at the beginning or for the duration of the irrigation season.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	**2.00%**	

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Residential	86,165,665	1,723,313
Potable Irrigation	5,477,792	109,556

Estimated Annual Water Savings	**1,832,869**	gallons/yr
Estimated Savings over Planning Period	**18,328,691**	gallons

Notes:

This measure affects projected outdoor water usage for the customer categories shown.

Estimate that approximately 40% of potable use is used outdoors.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	8	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$400.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Website updates, etc.)	$100.00	/year
Annual Labor	**$500.00**	/year
Materials Costs		
Unit Cost (cost of Bill Stuffers)	$0.00	/participant
Number of Participants		/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Labor Costs	$500.00	
One Time Labor/Material Cost	**$500.00**	

Notes:

Staff hours include time spent preparing schedules. Send out a schedule one time per year. One time costs include schedule program set up.

Water Rates

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$266,279.18	/year
Estimated Average Annual Revenue with Water Savings	$257,034.39	/year
Estimated Annual Revenue Loss Related to Water Savings	**$9,244.79**	/year

Estimated Annual Cost	**$9,744.79**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$5,500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$97,947.94**	
Cost per 1000 Gallons Saved	**$5.34**	

Irrigation System Efficiency Device Rebates

Irrigation System Efficiency Devices may include ET (SMART) Sprinkler system controllers and/or Wind and Rain sensors.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	5%

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings for all Participants (gallons/yr)*
Residential	49,529	10	24,765
Commercial	50,833	5	12,708
Potable - Irrigation	120,565	5	30,141

Estimated Annual Water Savings	**67,614**	gallons/yr
Estimated Savings over Planning Period	**3,718,775**	gallons

Notes:

Outdoor usage for Residential, Commercial, and Potable Irrigation categories is estimated at 40%.

Wind and Rain Sensors can save an estimated 5% to 10% of water used outdoors and costs approximately $25 to $45. The amount of water that can be saved through improved programming of an irrigation system controller varies but is estimated to be at least 10% to 15%. The cost of automatic irrigation system controllers for residential use ranges from about $50 to $250, depending on the features provided. Commercial-use controllers and central controllers can cost up to several thousand dollars.*

Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of participants for each given year.

**Based on "Handbook of Water Use and Conservation" by Amy Vickers*

Costs

Labor Costs

Staff Hours	10	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$500.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$500.00**	/year

Materials/Rebate Costs

Rebate Cost	$25.00	
Number of Participants	20	/year
Annual Rebate Cost	**$500.00**	/year

One Time Labor and Material Costs

One Time Materials Cost	$0.00
One Time Labor Cost	$400.00
One Time Labor/Material Cost	**$400.00**

Notes:

Annual labor costs include water savings tracking for rebate program. Other one time costs are for initial set-up of rebate program.

The City may provide $25 per controller replaced.

Water Rates

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$21,145.01	/year
Estimated Average Annual Revenue with Water Savings	$20,159.53	/year
Annual Revenue Loss Related to Water Savings	**$985.48**	/year

Estimated Annual Cost	**$1,985.48**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$10,400.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$20,254.75**	
Cost per 1000 Gallons Saved	**$5.45**	

Indoor Residential Audit Kit

Self-guided residential audit kits can be designed to include items such as leak detection tablets, surveys, and water saving fixtures. Instructions for conducting the audit and evaluating the results can give residential customers insight and direction on how they can save water and money. The guidance offered in the instructions could lead the customer to take part in other conservation programs offered, including rebates.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	0.5%

	Water Use (gallons/tap)	Annual Program Participants	Estimated Annual Water Savings (gallons/yr)
Residential	74,294	50	18,574

Estimated Annual Water Savings	**18,574**	gallons/yr
Estimated Savings over Planning Period	**1,021,543**	gallons

Notes:

Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of audit participants for each given year.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours (Website updates, etc.)	8	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$400.00	
Evaluation and Follow up Costs	$300.00	/year
Annual Labor	**$700.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	50	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year

Rebate Cost	$0.00	
Number of Participants	50	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost (Bulk Purchase of 500 Audit Kits)	$5,150.00	
One Time Labor Cost	$0.00	
One Time Labor/Material Cost	**$5,150.00**	

Notes:

Online instruction can be set up on Town Website.

Residential audit kits are available at wholesalers like AM Conservation Group, Inc. for $10.30 per unit for a bulk purchase of 900 - 1800 units. Kits can be customized to include the Town of Eaton's logo.

Water Rates

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers.

Estimated Revenue assumes that the current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$57,730.52	/year
Estimated Average Annual Revenue with Water Savings	$57,459.81	/year
Annual Revenue Loss Related to Water Savings	**$270.71**	/year

Estimated Annual Cost	**$970.71**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$12,150.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$14,857.09**	
Cost per 1000 Gallons Saved	**$14.54**	

Outdoor Residential Audit Kit

Self-guided outdoor residential audit kits can be designed to include items such as water saving hose nozzle, hose timer, hose repair kit, and rain gauge. Instructions for conducting the audit and evaluating the results can give residential customers insight and direction on how they can save water and money. The guidance offered in the instructions could lead the customer to take part in other conservation programs offered, including rebates.

Planning Period	2012 to 2021	
Years in Planning Period	10	
Program Length	10	years

Estimated Water Savings

Annual Estimated Savings Rate	5%

	Water Use (gallons/tap)	Annual Program Participants	Estimated Annual Water Savings (gallons/yr)
Residential	49,529	50	123,823
Potable - Irrigation	120,565	25	150,706

Estimated Annual Water Savings	**274,529.47**	gallons/yr
Estimated Savings over Planning Period	**15,099,121**	gallons

Notes:

Estimated Savings over Planning Period is calculated by compounding the estimated annual water savings per the total number of audit participants for each given year. Outdoor usage is estimated at 40%.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours (Website updates, etc.)	8	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$400.00	
Evaluation and Follow up Costs	$300.00	/year
Annual Labor	**$700.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	75	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$0.00**	/year
Rebate Cost	$0.00	
Number of Participants	75	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost (Bulk Purchase of 500 Audit Kits)	$11,992.50	
One Time Labor Cost	$0.00	
One Time Labor/Material Cost	**$11,992.50**	

Notes:

Online instruction can be set up on Town Website.

Outdoor residential audit kits are available at wholesalers like AM Conservation Group, Inc. for $15.99 per unit for a bulk purchase of 550 - 1000 units. Kits can be customized to include the Town of Eaton's logo.

Water Rates

Rate Category	Current Rates/Fees
Minimum base fee includes 4000 gallons/mo.	$23.65
Excess Water Volume Charged per 1000 gallons over 4000 gallons	*$2.65*

Notes:

The annual revenue loss was estimated based on current rates for all Town customers. Estimated Revenue assumes current rates will not change over the planning period.

Estimated Average Annual Revenue without Water Savings	$85,408.46	/year
Estimated Average Annual Revenue with Water Savings	$81,407.20	/year
Annual Revenue Loss Related to Water Savings	**$4,001.27**	/year

Estimated Annual Cost	**$4,701.27**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$18,992.50**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$59,005.17**	
Cost per 1000 Gallons Saved	**$3.91**	

APPENDIX B

Public-Review Process

Public Review Process

The Town of Eaton held its public review process from October 27, 2011 through December 26, 2011. Notification was posted in the North Weld Herald/the Central Weld Voice newspaper on October 27, 2011 announcing the review period and that a draft plan would be available for the public to review at the City's office. The draft plan was also posted on the Town of Eaton's website on October 27, 2011.

No public comments were received by the City during the public review process.

AFFIDAVIT OF PUBLICATION

STATE OF COLORADO

ss.

COUNTY OF WELD

I, Bruce J. Bormann, of said County of Weld, being duly sworn, say that I am Publisher of

THE NORTH WELD HERALDITHE CENTRAL WELD VOICE

a weekly newspaper having a general circulation in said County and State, published in the Town of Eaton, in said County and State; and that the notice, of which the annexed is a true copy, has been published in said weekly newspaper for one successive week(s), that the notice was published in the regular and entire issue of every number of the paper during the period and time of publication, and in the newspaper proper and not in a supplement, and that the publication of said notice:

Town of Eaton - Draft Water Conservation Plan

was in said newspaper bearing the date(s) of:

Thursday, the 27th day of October, 2011

Thursday, the _____ day of _____, 2011

Thursday, the _____ day of _____, 2011

Thursday, the _____ day of _____, 2011

and that the said *THE NORTH WELD HERALDITHE CENTRAL WELD VOICE* has been published continuously and uninterruptedly for the period of 52 consecutive weeks, in said County and State, prior to the date of first publication of said notice, and the same is a newspaper within the meaning of an Act to regulate printing of legal notices and advertisements, approved May 18, 1931, and all prior acts so far as in force

Bruce J. Bormann

BRUCE J. BORMANN, PUBLISHER

Publication Cost: $ 18.00

Subscribed and sworn to before me

this 27th day of October, 2011

Erika C. Bagley

ERIKA C. BAGLEY, NOTARY PUBLIC

NOTARY PUBLIC
ERIKA C. BAGLEY
STATE OF COLORADO

My Commission Expires 10/21/2015

PUBLIC NOTICE:

The Town of Eaton has completed a Draft Water Conservation Plan. The goal of the plan is to develop programs for efficient and sustainable water use. Before finalizing the Water Conservation Plan, Eaton welcomes input from its customers and will conduct a 60-day public review period from October 27, 2011 through December 26, 2011. A complete copy of the draft will be available for review at Town Hall located at 223 1st St., Eaton, CO 80615 and posted on the City's website at: www.eatonco.org

All written comments are due at the front desk of Town Hall prior to December 26, 2011 and can be dropped off or mailed to 223 1st St. Eaton, CO 80615. Attn: Don Cadwallader.

Published October 27, 2011 in The North Weld Herald/Central Weld Voice, Eaton, CO

APPENDIX C

Eaton Town Board Adoption

TOWN OF EATON, COLORADO

RESOLUTION NO. 2012- 02

ADOPTING A WATER CONSERVATION PLAN

WHEREAS, on October 20, 2011, the Board of Trustees were presented the results of a Water Conservation Plan performed by Clear Water Solutions; and

WHEREAS, the Town is committed to water resource sustainability and water conservation; and

WHEREAS, the Town of Eaton understands the needs and benefits of long term water conservation measures and is committed to implementation of a Water Conservation Plan; and

WHEREAS, a Water Conservation Plan is a valuable tool to implement water conservation measures; and

WHEREAS, the Board of Trustees of the Town of Eaton desires to approve a Water Conservation Plan and submit said Plan to the Colorado Water Conservation Board for approval,

NOW, THEREFORE, BE IT RESOLVED By the Board of Trustees of the Town of Eaton, Colorado, That the Water Conservation Plan developed by Clearwater Solutions for use by the Town be adopted and utilized as the primary resource for Water Conservation in the Town of Eaton.

PASSED, ADOPTED, AND APPROVED at a regular meeting of the Town Board of the Town of Eaton on this 19th day of January 2012.

TOWN OF EATON, COLORADO

By: Scott E. Moser
Mayor Scott E. Moser

ATTEST:

By: Erika C. Bagley
Erika C. Bagley, Town Clerk

TOWN OF EATON
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