May 7, 2009

Ms. Veva Deheza
Colorado Water Conservation Board
1313 Sherman Street, Room 721
Denver, CO 80203

RE: City of Evans Water Conservation Plan

Dear Ms. Deheza:

The City of Evans has completed the final draft of its Water Conservation Plan. This letter includes the Cover Letter Submittal Requirements for CWCB review and approval of our Water Conservation Plan.

Name and contact information for City of Evans:

Mr. Earl Smith, P.E.
Director of Public Works
1100 37th Street
Evans, CO 80620

List of organizations and individuals that assisted in plan development:

Clear Water Solutions, Inc.
Michelle Hatcher
Steve Nguyen, P.E.

Quantify retail water delivery and population for past five years:

Table 1 –Potable Water Demand by Customer Category

Year	Potable - Residential AF	Potable - Multi-Family AF	Potable - Commercial AF	Potable - Irrigation AF	Potable - City Usage AF	**Potable Total AF**
2003	1,543	0	335	18	55	**1,951**
2004	1,375	241	385	38	73	**2,112**
2005	1,330	449	422	55	103	**2,359**
2006	1,328	474	444	71	99	**2,416**
2007	1,260	477	432	55	101	**2,326**
2008	1,237	479	418	81	93	**2,308**

Table 2 –Non - Potable Water Demand by Customer Category

	Non-Potable Residential AF	Non-Potable Multi-Family AF	Non-Potable Commercial AF	Non-Potable City Usage AF	**Non-Potable Total AF**
2003	5	0	31	2	**39**
2004	36	0	14	7	**57**
2005	73	0	25	26	**124**
2006	95	0	36	52	**183**
2007	119	5	43	35	**202**
2008	115	9	33	45	**202**

Table 3 – City of Evans Population

Year	Population	Arrowhead and Hill-N-Park Population	Total Population (with Hill-N-Park and Arrowhead)	Percent Increase
1999 (July 1 - Census est)	8,271	2,394	10,665	n/a
2000 (Census)	9,514	2,394	11,908	11.65%
2001 (CDOLA)	11,534	2,394	13,928	16.96%
2002 (CDOLA)	13,282	2,394	15,676	12.55%
2003 (CDOLA)	15,040	2,394	17,434	11.21%
2004 (CDOLA)	16,251	2,394	18,645	6.95%
2005 (CDOLA)	17,518	2,394	19,912	6.80%
2006 (CDOLA)	17,493	2,394	19,887	-0.13%
2007 (July 1 - Census est)	17,912	2,394	20,306	2.11%
2008 (Staff est)	18,000	2,394	20,394	0.43%
10 year Average (1999-2008)	**14,482**	**2,394**	**16,876**	**7.62%**
5 year Average (2004-2008)	**17,956**	**2,394**	**20,350**	**3.23%**

Notes: 2000 represents Census data and 1999 and 2007 shows the Census estimate. 2001-2006 show CDOLA estimates. 2008 shows Evans staff estimates.

Public review and comment information:

The City of Evans held its public-review period from February 8, 2009 through April 4, 2009. Notification was posted in the Greeley Tribune on February 8, 2009, announcing the review period and that a draft plan would be available for the public to review at the City's office. An announcement asking for public comments and draft plan was also posted on the City of Evans' website on February 8, 2009. During the public review period the City did not receive any public comment on the Water Conservation Plan.

On behalf of the City of Evans, I would like to assure you we are fully prepared to commit the resources necessary for the implementation of the water conservation plan.

Please let me know if you have any further requirements. I can be reached at (970) 475-1110 or at esmith@ci.evans.co.us.

Sincerely,

Earl H. Smith, P.E.
Director of Public Works

Pc: Aden Hogan, City Manager
Cameron Parrott, P.E., City Engineer
Jessica Gonifas, Finance Director
Michelle Hatcher, Clear Water Solutions, Inc.

CITY OF EVANS

2009 WATER CONSERVATION PLAN

clearWATERsolutions
water rights • planning • engineering

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EXECUTIVE SUMMARY

The City of Evans, Colorado ("City" or "Evans") is a Northern Colorado community located within Weld County. Similar to other communities along the Front Range of Colorado, Evans is experiencing significant growth and development. Evans has been careful to plan for its future growth by coordinating with the planning efforts of the surrounding municipalities and Weld County as wells as incorporating the vision and desires of its community. Evans has determined that implementing a water conservation plan for its service area will maximize its available water while planning for future growth and times of drought.

Evans 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 Evans 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 2008, Evans potable and non-potable water customers used approximately 2,511 acre-feet (AF) or 818 million gallons (MG). By 2018, which is the end of the planning horizon for this Plan, it is projected that Evans will need to provide approximately 4,381 AF (1.4 billion gallons (BG)) annually. Water savings from this water conservation planning effort is estimated to save the City 493 AF (161 MG) per year. This savings will make a considerable contribution toward the water supplies needed to serve the 2018 demand.

This report documents Evans' 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

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

- Water Reuse System at the WWTP, which saves approximately 6-8 AF (2-2.6 MG) each year.
- Evans sends out billing statements that encourage water savings. Bills show the customers water usage for the past 12 months, in graphical form.
- ET/rain sensors and a centralized computer to control the irrigation systems in City parks.

- A Xeriscape program which includes demonstration gardens and public education.
- A tiered rate structure was implemented in 2001 and encourages water savings.
- Participation in area Children's Water Festivals.

Additionally, Evans has established water saving ordinances as set forth in the City's municipal code and it is the City's policy to encourage the use of non-potable water for private development landscaping. The City has a drought response plan in place as well, which defines the severity of drought and the City's responses. It is uncertain the exact reduction in water use that the City has seen as a result of these efforts. Tracking efforts will be increased for this planning period to quantify water savings and costs of the 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

The goal for this Water Conservation Plan is to reduce the overall water use by 13 percent or 6,627 acre-feet AF (2.2 BG) over a ten-year planning period from 2009 to 2018. This savings will come from water use categories that were identified through the planning process for potential water savings:

- Potable - Residential
- Potable - Multi-Family
- Potable - Commercial
- Potable - Irrigation
- Potable - City Usage
- Non-Potable - Residential
- Non-Potable - Multi-Family
- Non-Potable - Commercial
- Non-Potable - City Usage

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

Table ES-1 – Water Conservation Goals

Water Use Categories:	Total Projected Water Use (2009 to 2018)	Reduction Goals for Planning Horizon		Total Water Savings from Selected Programs	Resulting Reduction	Adjusted Reduction Goals for Planning Horizon	
	(AF)	(%)	(AF)	(AF)	(%)	(%)	(AF)
Potable - Residential	23,170	12.0%	2,780	2,623	11.3%	11%	2,623
Potable - Multi-Family	8,804	5.0%	440	1,051	11.9%	10.0%	880
Potable - Commercial	7,885	12.0%	946	1,172	14.9%	14.0%	1,104
Potable - Irrigation	1,445	15.0%	217	496	34.3%	20.0%	289
Potable - City Usage	1,751	1.5%	26	32	1.8%	1.8%	32
Non-Potable - Residential	1,925	12.0%	231	409	21.2%	15.0%	289
Non-Potable - Multi-Family	132	5.0%	7	6	4.2%	10.0%	13
Non-Potable Commercial	571	12.0%	68	211	37.0%	20.0%	114
Non-Potable City Usage	758	1.5%	11	8	1.0%	1.0%	8
Unaccounted-for Losses (currently 9%)	4,593.0	2.5%	1,276	1,294	2.5%	2.5%	1,276
Total Water Production:	51,033						
Total Demand Reduction:			6,003	7,300			6,627
Total Percent Reduction:			11.8%		14%	13%	

Evaluation and Selection of Conservation Measures and Programs

In order to select water conservation measures and programs to meet the water savings goals, a universal list of measures and programs was 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 Evans will implement. The screening criteria used consisted of the following:

1. Financial implications
2. Staff availability
3. Staff and Council approval

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. The proposed implementation of this Water Conservation Plan will occur over the next three years, provided the necessary resources are available.

Evans 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.

Implementation will begin upon approval of this Plan according to the following schedule. 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 Evans' 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)	% of Total Water Savings	Implementation Considerations	Grant Request
2010					
Utility Maintenance Programs					
Billing System Upgrades	$50,000		5.7%	Staff time, Funding	Yes
Leak Detection & Repair	$8,500		5.7%	Funding, obtaining 3rd Party	Yes
Leak Detection & Repair in Mobile Home Parks	$2,000		0.5%	Funding, obtaining 3rd Party	Yes
Regulatory Standards Program (Phase 1)					
Water Rate Changes	$40,000		4.3%	Funding	Yes
General Evaluation of Policies that Encourage Water Savings	$6,000		0.5%	Staff time	
Total 2010 Cost	**$106,500**				
2011					
Utility Maintenance Programs					
Leak Detection & Repair		$8,500	see above	2nd Year of Program, obtaining 3rd Party	
Leak Detection & Repair in Mobile Home Parks		$2,000	see above	2nd Year of Program, obtaining 3rd Party	
Regulatory Standards Program (Phase 2)			14.8%	Staff time	
Soil Amendment Ordinance for New Landscapes (improvements to existing ordinance)	$750				
Water Waste Ordinance (improvements to existing ordinance)	$750				
Restrict High Water-Use Turf on Medians and in Parking Lot Plantings	$750				
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation	$2,450				Yes
Restrictive Covenants Ordinance	$750				
New Car Wash Standards (New Construction)	$1,750				Yes
Irrigation System Standards for New Development	$17,250				Yes
10% of Lot Irrigation Restriction	$16,301				Yes
Education Programs (Phase 1 - Web related measures)			2.9%	Staff time, Funding	Yes
Post or Distribute ET Irrigation Scheduling	$1,100				
Water Conservation Website Upgrades	$2,900				
Public Education - Bill Stuffers & Website	$10,678				
Audit Program (Phase 1)			5.1%	Staff time, funding	Yes
Residential Water Audit Kits	$16,175				
Total 2011 Cost	**$82,105**				

Measure/Program	Cost to Implement (includes 1st year annual cost)	Annual On-going Costs (programs in 2nd or 3rd year of implementation)	% of Total Water Savings	Implementation Considerations	Grant Request
2012					
Utility Maintenance Programs					
Leak Detection & Repair		$8,500	see above	3rd Year of Program, obtaining 3rd Party	
Leak Detection & Repair in Mobile Home Parks		$2,000	see above	4th Year of Program, obtaining 3rd Party	
Meter Testing and Replacement Program	$116,250		5.7%	Staff time, Funding	Yes
Regulatory Standards Program (Phase 2, continued)					
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation		$1,700	see above	The annual costs shown are for inspections. Staff time will be a consideration for implementation.	
New Car Wash Standards (New Construction)		$1,000			
Irrigation System Standards for New Development		$16,500			
10% of Lot Irrigation Restriction		$15,551			
Education Programs (Phase 1, continued)			see above	Staff time, Funding	
Post or Distribute ET Irrigation Scheduling		$500			
Water Conservation Website Upgrades		$400			
Public Education - Bill Stuffers & Website		$8,678.25			
Education Programs (Phase 2)			2.9%	staff time, Funding, & cooperation with the City of Greeley	Yes
Xeriscape Programs	$5,500				
Property Manager/HOA Education and Training	$2,625				
School Education Program (K-12)	$2,000				
Rebate and Incentive Program			6.6%	Staff time, funding	Yes
Distribute Pre-Rinse Spray Heads to Restaurants and Institutions	$3,000				
Irrigation System Efficiency Device Rebates	$4,200				
Commercial Toilet Rebate	$2,325				
Residential Rebate for Low-Flow Toilets	$2,075				
Rebate for High Efficiency Clothes Washers	$3,325				
Audit Program (Phase 1, continued)			see above	Staff time, funding	
Residential Water Audit Kits		$800			
Audit Program (Phase 2)			4.0%	Staff time, funding	Yes
Commercial Water Audits	$4,100				
Total 2012 Cost	**$201,030**				
Total Implementation Costs	**$323,505**				
Estimated Annual Costs (for measures shown)	**$195,730**				

CHAPTER 1 – INTRODUCTION

The City of Evans, Colorado ("City" or "Evans") is a Northern Colorado community located within Weld County. Named for Territorial Governor John Evans, Evans was established in 1869 and was Weld County's seat of government twice before Greeley finally captured the honor. Today, Evans is a highly diversified and stable community experiencing significant growth and development. Evans' philosophy of planned, responsible and sustained growth consistently aimed at improving the community's quality of life brings Evans great economic potential.

The City has traditionally developed as a residential community with most of the labor force working elsewhere. Evans continues to grow as a residential community and strives to find ways to increase local employment opportunities as well as local services and commercial development for the community. The City is also focused on continued growth of their parks and open space programs which they recognize as critical to maintaining the quality of life for both existing and future residents of the City.

The City formulated nine planning goals in the 2002 Comprehensive Plan. Evans supports an orderly and efficient growth pattern, quality design and development, stable and cohesive neighborhoods, and improved community identity. Additionally the City plans on bolstering further economic development opportunities, providing adequate public facilities and services, having an efficient transportation system, increasing recreation and tourism opportunities, and growing natural areas and resource conservation.

The City of Evans distributes water to a service area that includes customers in the incorporated City limits and portions of the unincorporated area. The current water distribution system was constructed beginning in 1904 and has had many recent additions to improve and expand delivery. The City has an estimated population of 18,000 people and includes about 17,850 acres (27.9 sq miles).

The Colorado Revised Statute 37-60-126 prompted by the Water Conservation Act of 2004, declares that water providers delivering over 2,000 acre-feet (AF) or 652 million gallons (MG) of water are required to have a State-approved Water Conservation Plan on file with the Colorado Water Conservation Board (CWCB), Office of Water Conservation and Drought Planning. A State-approved Water Conservation Plan must be in place to qualify for funding from CWCB or the Colorado Water Resources and Power Development Authority to build water projects.

In addition to the Water Conservation Act requirements, Evans has determined that implementing a water conservation plan for its service area will maximize its available water while planning for future use and times of drought. A thorough and feasible Water Conservation Plan for the City can assist this fast-growing community to manage its water resources and plan appropriately for the expected growth. Water conservation will provide added stability for this utility.

The City is responsible for securing and providing the raw water necessary to meet the demands of its service area. The City of Greeley provides treatment of all potable water use for Evans.

Evans water supplies come from both native ditch shares and transbasin water. The transbasin water supplies include both Windy Gap and Colorado-Big Thompson Project (CBT) units.

Evans has begun implementing several water conservation metrics including a water reuse system at the wastewater treatment plant (WWTP), which saves approximately 6-8 AF (2-2.6 MG) each year, ET sensors and a centralized irrigation control for all City parks, a Xeriscape program participation in area Children's Water Festivals, metering, use of non-potable supplies for residential irrigation, and implementing monthly billing cycle instead of a quarterly billing cycle.

Evans is committed to optimizing its water supplies and system through practical water conservation practices. The benefits may include delaying the purchase of costly water supplies and infrastructure upgrades and reducing wastewater flows and treatment. The purpose of this Water Conservation Plan is to guide Evans in the process of water conservation planning and implementation. The planning horizon for this plan is ten years, from 2009 to 2018.

CHAPTER 2 – PROFILE EXISTING WATER SYSTEM

Characteristics of City of Evans Water Supply System

Population and Service Area

The City is located in south-central Weld County just south of the City of Greeley. The population of Evans grew about 156 percent from 1990 to 2003 increasing from 5,876 to 15,040 residents. The City's long-term growth boundary, as shown in Figure 2.1, encompasses a total area of about 17,850 acres (27.9 square miles) and includes an incorporated area of 5,930 acres and an unincorporated area of about 11,919 acres.

The rapid growth experienced in the 90's and early 2000's has tapered off since 2004 with the slowdown in growth along the Front Range, but still remains higher than some areas. The average growth rate over the last five years is approximately three percent. The population according to the Colorado Department of Local Affairs (CDOLA) and Census data are shown in Table 2.1.

Table 2.1 – City of Evans Historical Population

Year	Population	Arrowhead and Hill-N-Park Population	Total Population (with Hill-N-Park and Arrowhead)	Percent Increase
1999 (July 1 - Census est)	8,271	2,394	10,665	n/a
2000 (Census)	9,514	2,394	11,908	11.65%
2001 (CDOLA)	11,534	2,394	13,928	16.96%
2002 (CDOLA)	13,282	2,394	15,676	12.55%
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10 year Average (1999-2008)	**14,482**	**2,394**	**16,876**	**7.62%**
5 year Average (2004-2008)	**17,956**	**2,394**	**20,350**	**3.23%**

Notes: 2000 represents Census data and 1999 and 2007 shows the Census estimate. 2001-2006 show CDOLA estimates. 2008 shows Evans staff estimates.

Evans served approximately 18,000 residents within the City in 2008. The City is also responsible for providing water to the 2,394 residents within the Arrowhead and Hill-N-Park subdivisions.

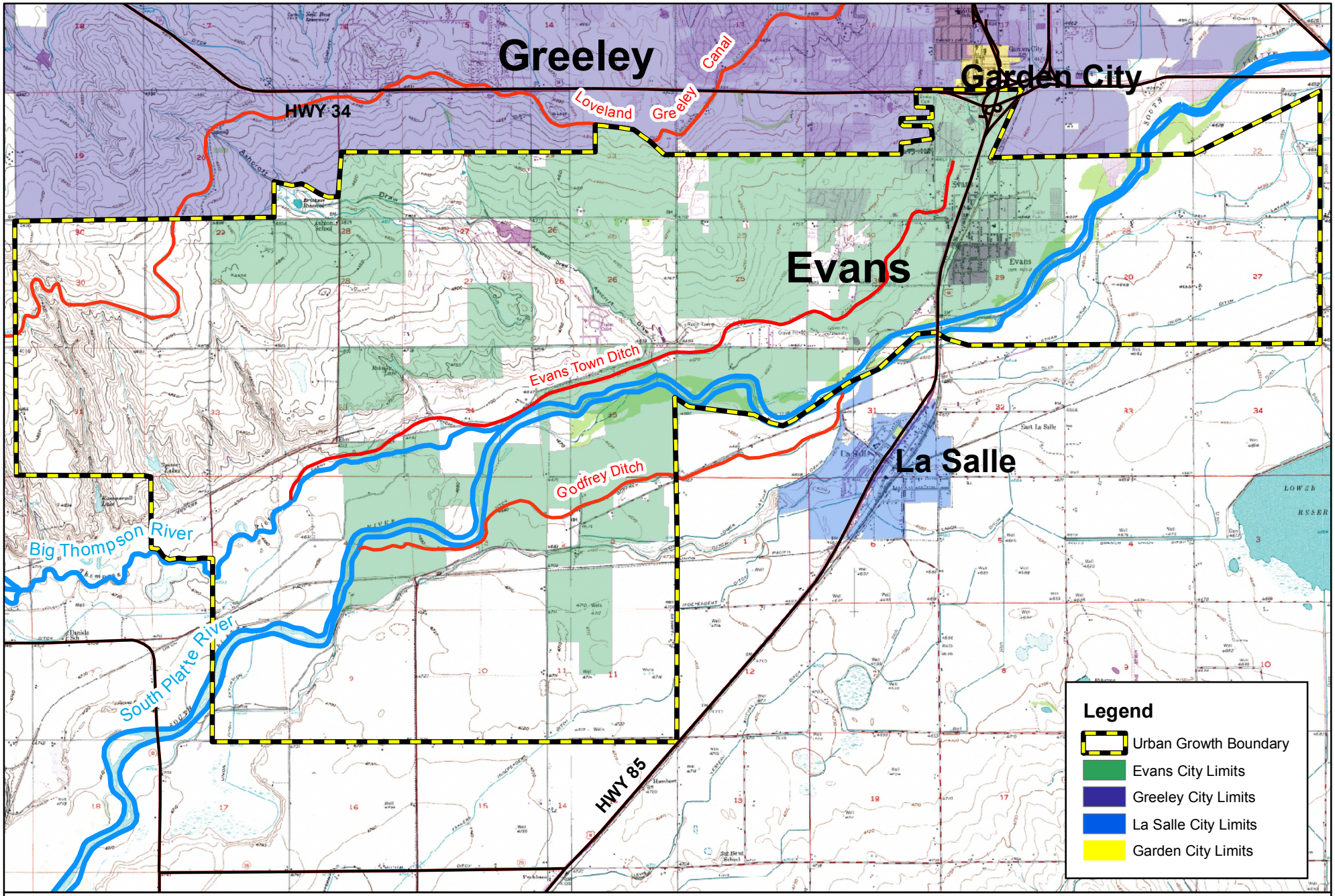

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Figure 2.1
EVANS VICINITY MAP

Water Distribution System

Evans has a 25-year agreement (expires April 2023) with the City of Greeley where Greeley provides treated potable water to Evans through 14 master meters. The current agreement was effective in 1998 and expires in April 2028. In the agreement, Evans transfers raw water they own to Greeley in the amount of their projected annual water demand plus 15 percent for shrinkage. The water supply provided by the City of Greeley is limited annually. If Evans exceeds their annual allotment, charges are incurred for overuse. Evans water is turned over to Greeley and treated either at Greeley's Bellevue Water Treatment Plant (WTP) or Boyd Lake WTP according to Greeley's operation. Most of Evans' mutual irrigation company rights are available at the Boyd WTP and their CBT water is available at both plants. The City also provides non-potable water supply to dual use customers. The non-potable supplies are delivered via the Evans Town Ditch and through the historical mutual ditch systems.

The City's water distribution system is served by three pressure zones. Most of the existing service area is within Zone 1. Pressure Zones 2 and 3 serve a majority of the future western area. The existing water distribution system was originally installed between 1904 and 1907. The City's water distribution system does not include any pump stations or treated water storage. Table 2.2 shows the pipe sizes and lengths for the water distribution system.

Table 2.2 – Miles of City of Evans Distribution System Pipeline

Diameter (in)	Total Length (miles)
4	3
6	30
8	39
10	5
12	7
Total	**83**

source: Water Master Plan Update (May 2005)

Service Connections and Water Demand

By the end of 2008, Evans was serving 6,167 taps; 5,702 potable taps and 473 non-potable taps. The potable tap categories include the following:

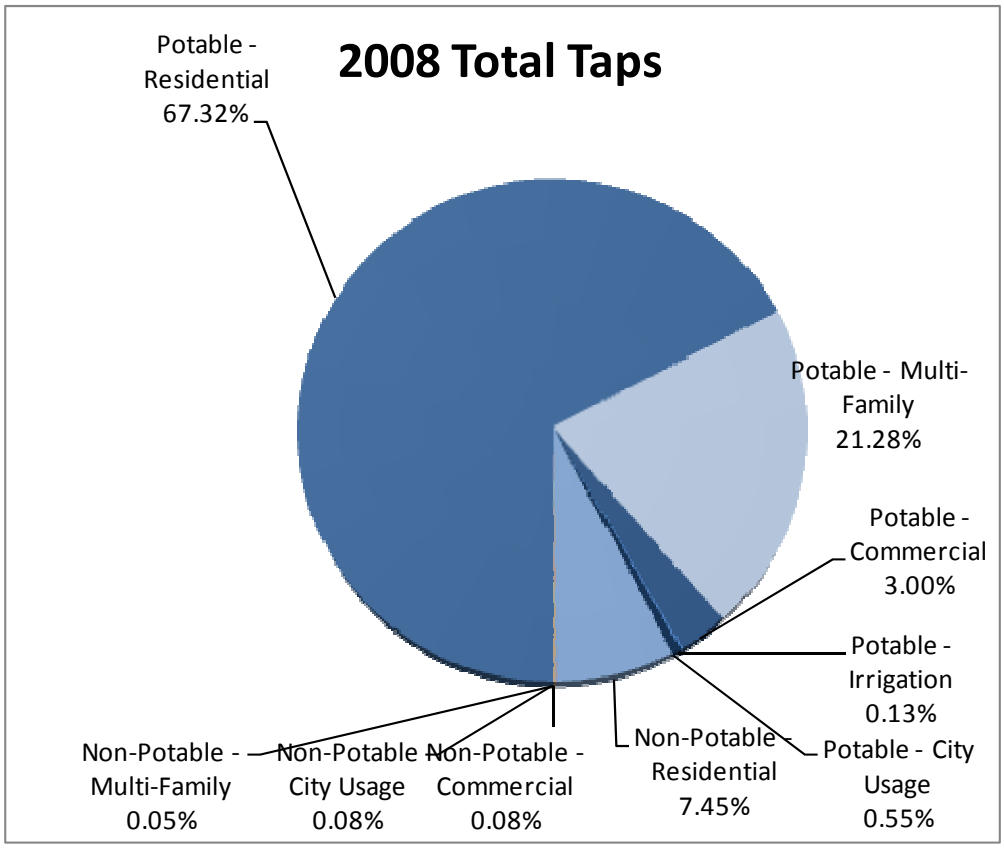
- Residential
- Multi-Family
- Commercial
- Irrigation
- City Usage

The non-potable tap categories include the following:

- Residential
- Multi-Family
- Commercial
- City Usage

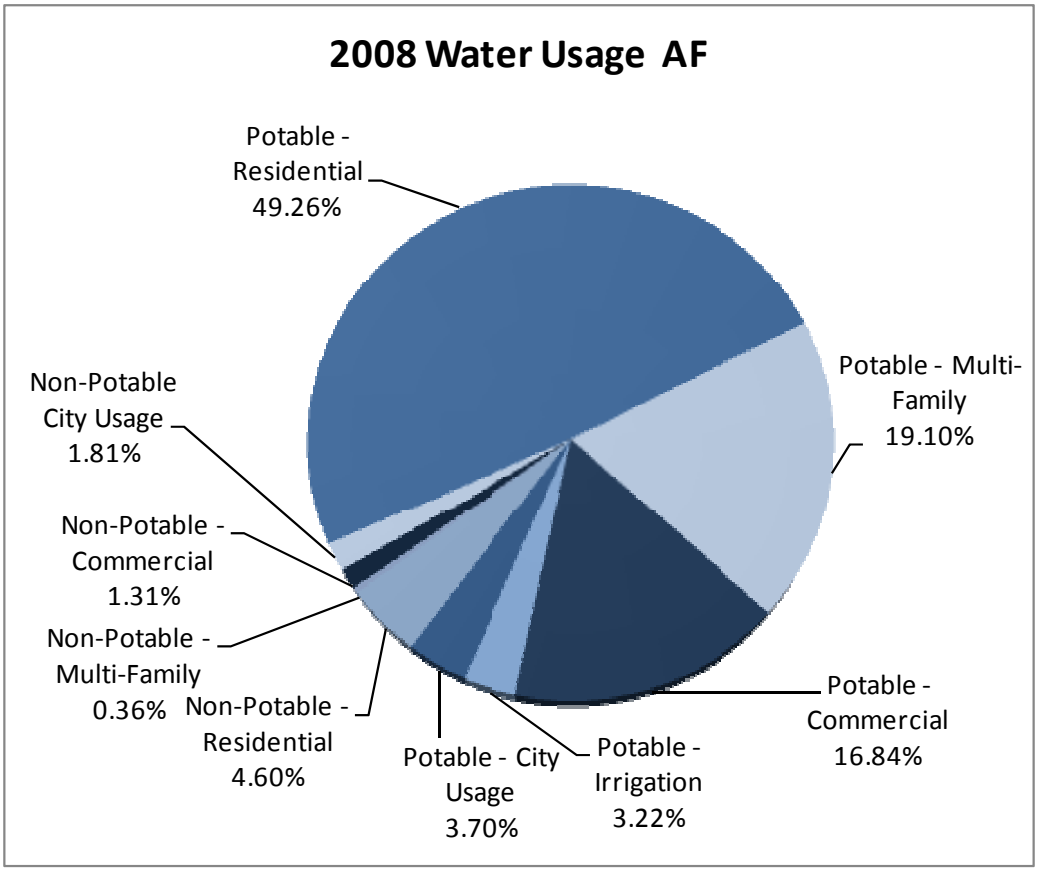
Each of the customer categories are shown in Figure 2.2 below with the coinciding percentage of total taps. The non-potable Multi-Family, Commercial, and City Usage categories make up a very small portion of the customers.

Figure 2.2 – Percentage of Taps per Category



The water use distribution for the same customer categories looks a little different than the tap distribution and is shown below in Figure 2.3. While potable Residential water users consist of 67 percent of the taps, they only contribute 49 percent of the water use. Similarly, while potable Commercial taps only consist of three percent of the taps, they contribute 17 percent of the water use. This is helpful to consider when selecting conservation measures to target certain categories.

Figure 2.3 – Percentage of Water Use per Category



Sources of Water Supply

The water supplies owned by the City are shown in Table 2.3 with a brief description of each source following the table.

Table 2.3 – City of Evans Water Rights

		Yield (AF/Unit)		Total Yield (AF)	
Water Right Name or Source	No. of Shares or Units Owned	Average Year Yield	Dry-Year or 2002	Average Year Yield	Firm or Dry Year Annual Yield
Potable Sources					
C-BT	3,426	0.7	0.6	2398	2056
Windy Gap Project	5	60	0	300	0
Greeley-Loveland System*	127.93	10.5	0.5	1343	64
Lake Loveland System	15.75	33.1	23.6	521	372
Seven Lakes System	40.83	15	5.1	612	208
			Potable Total =	**5,175**	**2,699**
Non-Potable Only Sources					
Evans Town Ditch	100%			29.3 cfs	29.3 cfs
Godfry Ditch	25			1344	667**

* The City owns 145.93 shares with some being leased back to farmers; The City uses 127.93 shares for potable and non-potable use

**1957 Yield.

Share Ownership Data Source: 2004 Windy Gap Firming

Yield Data Source: 2003 Tetra Tech September 8, 2003 Memo, NISP Report, & info from Staff.

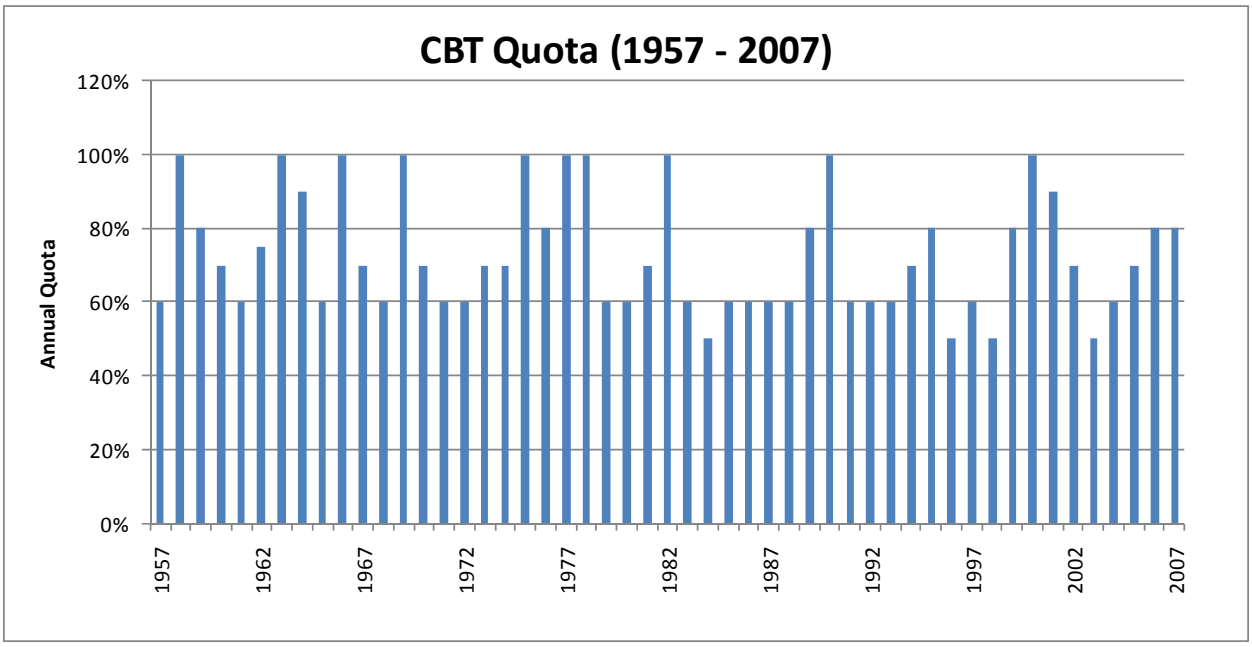
Colorado-Big Thompson Project Water

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 (69 Billion Gallons (BG)) 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. 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 percent. The yield has never been less than 0.50 AF (163,000 gallons) per unit (50 percent quota) or more than 1.0 AF (325,851 gallons) per unit (100 percent quota). The annual quota established by the Northern Water Board over the years is shown in Figure 2.4.

Figure 2.4 – Annual CBT Quota History



Windy Gap Project

In 1985, Northern Water finished constructing the Windy Gap Project near Granby, Colorado. Windy Gap pumps water from the Colorado River into Lake Granby and diverts water to the Front Range via the CBT Project facilities on a space-available basis. Windy Gap is junior to CBT, so it has limited delivery in wet years when CBT water occupies most of the system. The proposed Windy Gap Firming Project will store Windy Gap water and improve the reliability of this water supply.

In 2004, Evans completed a lease/purchase contract with the City of Greeley to acquire five units of Windy Gap water. Evans will exercise its purchase of the Windy Gap units upon completion of the Firming Project permitting and in the interim will receive delivery of Windy Gap water when available.

Native Water Supplies

The City owns agricultural water rights that divert water from the Cache la Poudre and Big Thompson Rivers. These include shares in the following ditch companies: Evans Town Ditch, Greeley and Loveland Irrigation Company, Seven Lakes Irrigation

Company, Loveland Reservoir Company, and the Godfrey Ditch. Water from all sources, except the Evans Town Ditch, can be treated and delivered to Evans for potable use.

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

The location of Evans makes it attractive as a place to live as well as a place for business. The population growth rates over the past two decades have reflected this trend, and even in the current slower economy, the growth rate is still at three percent. Future water demand is expected to increase steadily up to the City's ultimate build out projected in 2037.

Careful planning is required to provide adequate water supply for future growth. The projected water demand is 5,374 AF (1.75 BG) in 2025 and 7,708 AF (2.5 BG) at build-out. This potentially leaves a shortfall in water supply from the current available treated water supplies owned by the City. These shortages will need to be met through water acquisition, participation in new water supply projects and water conservation.

Statewide Water Supply Initiative

In 2003, the Colorado General Assembly authorized 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.

The SWSI study found a statewide water supply gap of 118,200 AF (39 BG) by 2030 between projected demands and fully implemented water supply processes and projects, which are 20 percent of the 2030 demand. The gap in the South Platte Basin, where Evans is located, is 90,600 AF (30 BG) or 22 percent of the South Platte Basin 2030 demand. This makes pursuit of possible future water supplies and water conservation very important for Evans.

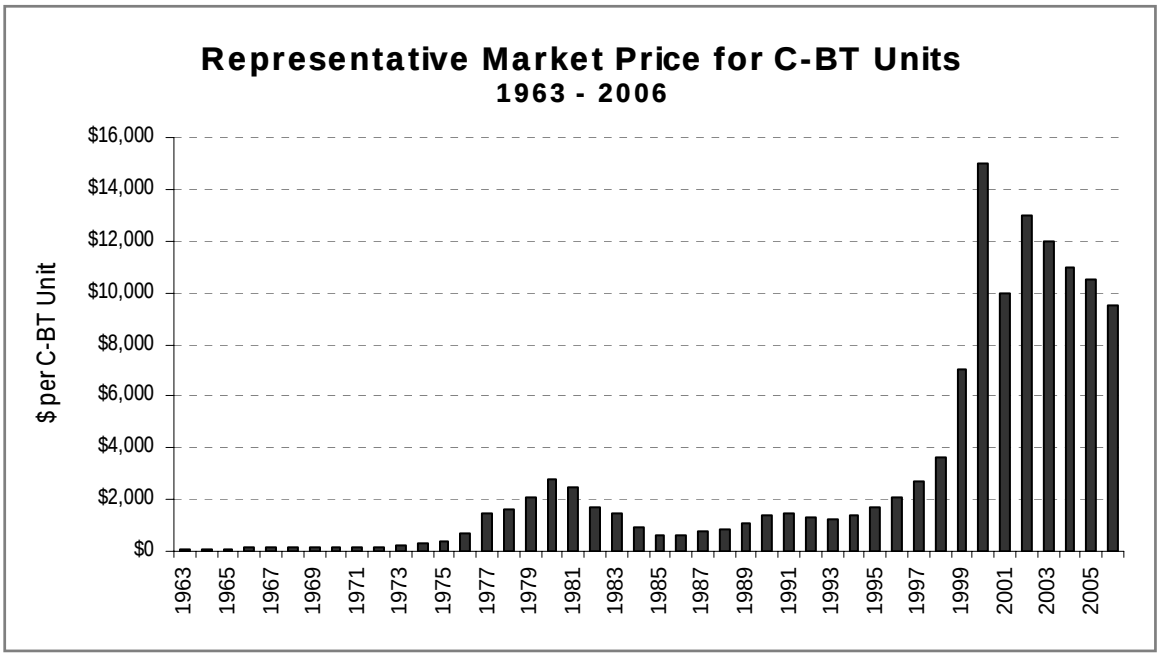
Future Water Supply

Increasing pressure on water from population growth in the Front Range has driven the price of water up significantly in the last ten to 15 years. The primary water sources that Evans is considering for future supply are CBT, Windy Gap, native Poudre and Big

Thompson River water, and a new water supply project called the Northern Integrated Supply Project (NISP).

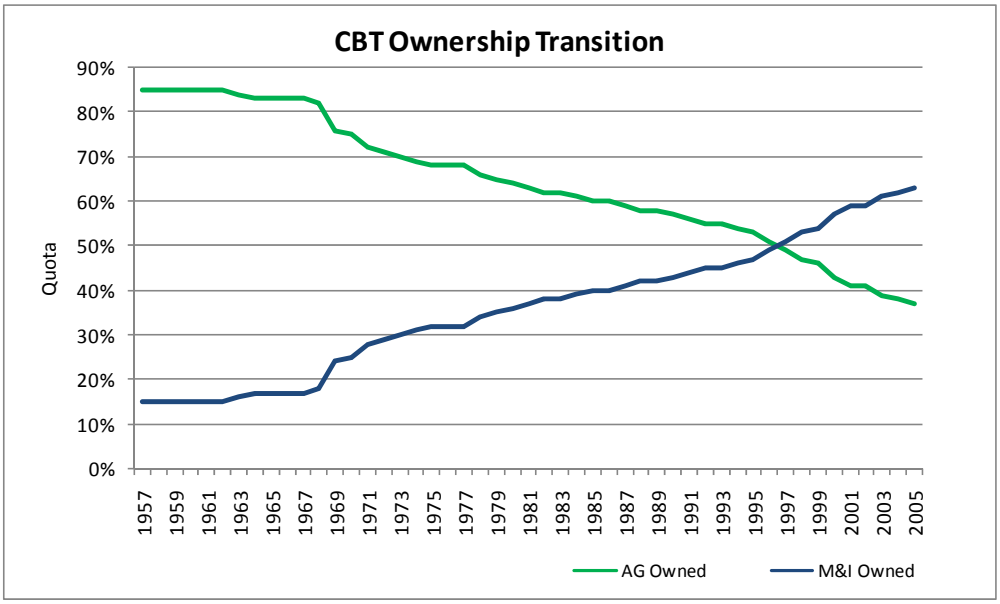
In 1963, CBT water could be purchased for $100 per unit from farmers that felt they had more water than they could use. Since CBT water is so versatile, the market value of its shares has increased substantially and is a good indication of the price for municipal water. The current market price for CBT is approximately $9,500 per unit or $13,600 per AF ($417 per 1,000 gallons) assuming a 70 percent quota. Figure 2.5 shows how the price of CBT units has varied from 1963 to 2006.

Figure 2.5 – Price of CBT Units



CBT water can still be purchased from farmers and ditch companies, but it rarely represents a farmer's surplus water supply as it did historically. It is usually sold to finance continued agricultural operations, settle an estate or accommodate development of farmland. In 1957, 85 percent of the CBT units were owned by individual farmers and mutual ditch companies. By the end of 2005, only 35 percent of the CBT units were owned by individuals and mutual ditch companies. Figure 2.6 shows the transfer of CBT units from agricultural ownership to municipal and industrial ownership over the life of the CBT Project.

Figure 2.6 – CBT Ownership Transfer



At the current rate of acquisition by cities and water districts, it is projected that few if any CBT units will be available for purchase by the year 2020. However, the construction of other regional projects such as the Windy Gap Firming Project and NISP may take some pressure off of the CBT system. If so, CBT supplies could be available through 2025 or 2030.

It is Evans' policy for new developments in certain areas to build dual systems using agricultural water. This works if developers buy farms that still have water attached. However, many times the native shares of water sold off long before the land is developed. The market for these native supplies has also increased.

NISP is a regional project that is being financed by and will be owned by 15 municipalities and water districts in northern Colorado. The project includes two reservoirs, water rights on the Poudre and South Platte River and an exchange with two local ditch companies. This is a good example of the kind of projects identified to fill the water need gap described in the SWSI Report. The project is in the permitting phase of the National Environmental Policy Act process. If all environmental issues are address satisfactorily, a permit will be issued and the project can be built. This will involve a large capital outlay from participating entities in the short term, but will provide water supply well past 2025 for Evans.

Change of Use

Conversion of native water rights from agricultural to municipal use requires detailed engineering analyses and applications to Water Court. The easiest change cases take at least three to five years before a decree is entered. The more complicated change cases can take as long as ten years and could cost tens of thousands of dollars.

The engineering analyses required in Water Court applications that change the use of agricultural water focuses on the historical consumptive use of the crops grown with the water right and return flows resulting from irrigation of those crops. Determination of the consumptive use and identifying the amount, location and timing of return flows makes change cases increasingly complicated and costly. Additional applications will be necessary if the location or type of use changes for any future native water acquired by Evans.

Water Treatment

As stated previously, Evans has a 25-year agreement (expires April 2023) with the City of Greeley where Greeley provides treated potable water to Evans through 14 master meters. This leaves the City reliant on capacity upgrades and delivery according to the timing of the City of Greeley's needs. Also, included in the contract for water delivery is a water surcharge to cover treatment and delivery losses. According to City staff the surcharge ranges from 10 percent to 20 percent. This volume of water must be included in planning for future water supply.

Additionally, the City is limited by a cap on annual water use from Greeley. If the City exceeds their allotted cap, charges are incurred for overuse. System development charges are also applied annually.

Unaccounted-for Water Use

There are two types of water losses that occur in water utilities, 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.

Evan's system losses have averaged nine percent for the last few years. Even though unaccounted for water loss ratios of less than 10 percent are considered good by industry standards, the City desires to reduce those losses to 6.5 percent. The City has actively pursued leak detection in the past and would like to bolster its efforts with leak detection and meter testing and replacement to reduce losses.

Water Costs and Pricing

Water Fund

The water fund for Evans is used to finance the cost of service for current and future water delivery. It is made up of water development fees and monthly water sales. Monthly water sales cover the City's cost of water service. Fees and water rates are evaluated yearly to ensure that water supply and cost of service is not jeopardized.

The water development fee covers costs associated with connection to the City's system. Fees are adjusted for taps larger than a ¾" residential tap and for taps that are inside or outside the City limits. The water development fee for a ¾" residential tap is $10,400 if inside the City limits and $15,600 for taps established outside the City limits.

Evans water customers are billed for their water usage on a monthly basis. Water charges reflected on monthly utility bills are a combination of a base service delivery charge and a metered consumption usage charge. In June 2006, Evans City Council adopted a tiered rate structure for residential water usage. Evans would like to evaluate additional structure changes through a rate study to ensure maximum water conservation savings. Potable and non-potable water sales in 2007 were estimated at approximately $2,200,000.

Charges for Water Service

All water users are charged a monthly base rate, which reflects the fixed costs associated with providing water services. Based on the current water rates, this fee ranges from $8.73 for smaller taps to $440.39 for a 12-inch commercial tap, located outside the City limits. Table 2.4 shows the current rates and base charge for each customer category.

Table 2.4 – City of Evans Water Rates

Type of Use*		Base Fee	Rate per 1,000 gal
Single & Multi Family Potable Only			
Tier 1 = 1,000-16,000 gal		$8.73	$2.63
Tier 2 = 16,001 - 22,000 gal		$8.73	$4.39
Tier 3 = over 22,000 gal		$8.73	$7.31
Single & Multi Family W/ Non-Potable			
Tier 1 = 1,000-16,000 gal		$8.73	$2.63
Tier 2 = 16,001 - 22,000 gal		$8.73	$4.39
Tier 3 = over 22,000 gal		$8.73	$7.31
Commercial /Manufactured Home Communities	3/4"	$8.73	$3.30
	1"	$12.22	$3.30
	1.5"	$15.71	$3.30
	2"	$25.32	$3.30
	3"	$96.01	$3.30
	4"	$122.20	$3.30
	6"	$183.30	$3.30
	8"	$253.13	$3.30
	10"	$322.95	$3.30
	12"	$392.78	$3.30
Non-Potable Water Usage		Same as Potable	$1.98

* This table does not include fees for out of city limit customers, which are slightly higher in most cases.

Policies and Planning Initiatives Affecting Water Use

Municipal Code

Lawn watering restrictions are incorporated into the municipal code on an annual basis. The most recent City ordinance outlines an odd/even address lawn watering schedule from April 16 to October 19, 2008. Additionally the ordinance restricts watering between noon and 5 pm, states that water waste of any kind is subject to fines, allows for drip irrigation systems, outlines proper soil amendment for new lawns, and allows home car washing with a restrictive nozzle hose and bucket with minimal runoff.

Policies

It is the City's policy to encourage the use of non-potable water for private development landscaping. Evans currently has several developments that are supplied non-potable water for landscape and lawn watering. The City will continue to use their non-potable water from the Evans Town Ditch for irrigation as a viable alternative to treated water.

Previous Studies

A Water Master Plan was completed by the City in 1996 and updated in May 2005. This plan addresses system upgrades needed to meet the future demands to build-out.

A Comprehensive Plan for the City was completed in May 2002. The Plan outlines policies to help guide the City in establishing goals for land use, recreation, housing, public utilities, cultural resources, and transportation.

The NISP Draft Environmental Impact Statement was made available to the public for comment in April 2008. A supporting document, Water Supplies and Demands for Participants in the NISP, outlines the future water needs and existing resources for the City. The purpose of the document is to show the need for NISP. Additionally, a similar report was completed in October 2004 for the Windy Gap project.

Current Water Conservation Activities

Evans has considered water conservation in its planning for many years and has developed a number of measures to promote efficient water use. Per Capita water use has decreased since 1990 due to the City's current water conservation measures and programs. As mentioned previously, it is the City's policy to encourage the use of non-potable water for private development landscaping. While this measure does not necessarily conserve water, it does help people be more aware of their water source and eases the burden on the City's potable supplies.

In addition to the water conservation ordinances mentioned above, the City has instituted the following water conservation measures and programs:

- Water Reuse System at the WWTP, which saves approximately 6-8 AF (2-2.6 MG) each year.
- Evans sends out billing statements that encourage water savings. Bills show the customers water usage for the past 12 months, in graphical form.
- ET/rain sensors and a centralized computer to control the irrigation systems in City parks.
- A Xeriscape program which includes demonstration gardens and public education.
- A tiered rate structure was implemented in 2001 and encourages water savings.
- Participation in area Children's Water Festivals.

The City has a drought response plan in place which outlines the various criteria considered when determining the extent of water conservation measures. The plan defines the severity of drought and the City's responses.

Use by Customer Category

In 2008, Evans billed water demand for potable customers totaled 2,308 AF (752 MG). Billed water demand for non-potable customers totaled 202 AF (66 MG). Tables 3.1 and 3.2 summarize potable and non-potable water use per customer category.

Table 3.1 – 2008 Potable Water Use by Customer Category

Potable Water Use Category	2008 Billed Water Demand (AF)	Percent of Total
Residential	1,237	54%
Multi-Family	479	21%
Commercial	418	18%
Irrigation	81	4%
City Usage	93	4%
Total	**2,308**	**100%**

Table 3.2 – 2008 Non-Potable Water Use by Customer Category

Non-Potable Water Use Category	2008 Billed Water Demand (AF)	Percent of Total
Residential	115	57%
Multi-Family	9	4%
Commercial	33	16%
City Usage	45	22%
Total	**202**	**100%**

The water use shown above does not include fire hydrant or construction water use. These uses constitute very small portions of the overall water use and will not be included in the calculations presented in this plan.

Residential Water Uses

Residential water use, which includes both indoor and outdoor uses, constitutes the largest water use in Evans at 54 percent of all potable water used and 57

percent of all non-potable water used. Total potable and non-potable Residential water use is 1,352 AF (440 MG) per year.

Multi-Family Water Uses

Total Multi-Family water use (potable and non-potable) is 483 AF (157 MG) per year. This water use makes up approximately 21 percent of total potable water use and only 4 percent of total non-potable water use.

Commercial Water Uses

Commercial water users in the City include office buildings, hotels, retail stores, restaurants, car washes, and other similar businesses. This customer category also includes the five mobile home parks within the City. Potable water use for this category is 422 AF (137.5 MG), which constitutes 18 percent of the total water supplied by the City. Non-potable water use for this category is 33 AF (11 MG), which constitutes 16 percent of the total non-potable water supplied by the City.

The largest Commercial water users in the City include the five mobile home parks, institutional facilities, hotels, and restaurants.

Potable Irrigation Water Uses

This category includes taps that use treated water for outdoor irrigation. Irrigation water use totaled 81 AF (26 MG), which constitutes four percent of the total water supplied by the City.

City Water Uses

This category includes buildings, parks, and generally areas owned and operated by the City. City water use totaled 138 AF (45 MG) for both potable and non-potable City usage. This water use makes up approximately four percent of total potable water use and 22 percent of total non-potable water use.

Taps and Water Use Summary

The total number of taps per customer category is shown in Tables 3.3 and 3.4. The number of new taps added annually averaged approximately 214 taps.

Table 3.3 – City of Evans Potable Taps by Customer Category

Year	Potable - Residential taps	Potable - Multi-Family taps	Potable - Commercial taps	Potable - Irrigation taps	Potable - City Usage taps	**Potable Total Taps**
2003	4,892	0	57	52	25	**5,026**
2004	3,976	1,068	163	2	27	**5,236**
2005	3,991	1,236	170	11	27	**5,435**
2006	4,058	1,271	176	1	9	**5,514**
2007	4,156	1,306	181	8	30	**5,681**
2008	4,157	1,314	189	8	34	**5,702**

Table 3.4 – City of Evans Non-Potable Taps by Customer Category

Year	Non-Potable - Residential taps	Non-Potable - Multi-Family taps	Non-Potable - Commercial taps	Non-Potable City Usage taps	**Non-Potable Total Taps**
2003	73	0	2	2	**77**
2004	215	0	2	3	**220**
2005	316	0	3	3	**322**
2006	383	0	2	13	**398**
2007	436	2	5	6	**449**
2008	460	3	5	5	**473**

Tables 3.5 and 3.6 below, show the water use for each customer category from 2003 through 2008.

Table 3.5 – City of Evans Potable Water Use

Year	Potable - Residential AF	Potable - Multi-Family AF	Potable - Commercial AF	Potable - Irrigation AF	Potable - City Usage AF	**Potable Total AF**
2003	1,543	0	335	18	55	**1,951**
2004	1,375	241	385	38	73	**2,112**
2005	1,330	449	422	55	103	**2,359**
2006	1,328	474	444	71	99	**2,416**
2007	1,260	477	432	55	101	**2,326**
2008	1,237	479	418	81	93	**2,308**

Table 3.6 – City of Evans Non-Potable Water Use

	Non-Potable Residential AF	Non-Potable Multi-Family AF	Non-Potable Commercial AF	Non-Potable City Usage AF	**Non-Potable Total AF**
2003	5	0	31	2	**39**
2004	36	0	14	7	**57**
2005	73	0	25	26	**124**
2006	95	0	36	52	**183**
2007	119	5	43	35	**202**
2008	115	9	33	45	**202**

Table 3.7 shows the total potable and non-potable water use for Evans.

Table 3.7 – City of Evans Total Water Use

Year	**Total Potable and Non-Potable Water Use (AF)**
2003	1,990
2004	2,169
2005	2,483
2006	2,599
2007	2,528
2008	2,511

The water use per tap is shown in Tables 3.8 and 3.9. The average Residential use is 0.32 AF (104,272 gallons) per tap for potable customers and slightly higher, 0.34 AF (110,789 gallons) per tap, for potable Multi-Family water customers. This is a relatively low water use compared to others along the Front Range. Residential non-potable water users averaged 0.21 AF (68,428 gallons) per tap and non-potable Multi-Family water users average 2.65 AF (863,505 gallons) per tap. As shown in Table 3.9, the Multi-Family tap data was only available for two years, so this AF per tap figure may change as more data becomes available.

Commercial use averaged 2.97 AF (967,777 gallons) per tap for potable customers and 10.77 AF (3.5 MG) per tap for non-potable water users. City Usage average 4.3 AF (1.4 MG) per tap for potable uses and 5.2 AF (1.7 MG) per tap for non-potable water uses.

It is difficult to determine Potable Irrigation water use per tap due to the temporary nature of Potable Irrigation customer accounts. Typically potable irrigation water will temporarily be delivered to a water customer through the non-potable system. In 2006

there may have been more than one Potable Irrigation tap as evident from water consumption data provided by the City. The low number of taps combined with the significant usage of Potable Irrigation taps shows an inflated water use per tap. To determine an average Potable Irrigation water use per tap, we omitted the water use per tap of 2006. Potable Irrigation water users average 8.23 AF (2.7 MG) per tap.

Table 3.8– City of Evans Historic Potable Water Use per Tap

Year	Potable - Residential (AF)	Potable - Multi-Family (AF)	Potable - Commercial (AF)	Potable - Irrigation (AF)	Potable - City Usage (AF)
2003	0.32	n/a	5.87	0.35	2.19
2004	0.35	0.23	2.36	18.86	2.69
2005	0.33	0.36	2.48	4.96	3.83
2006	0.33	0.37	2.53	71.27	10.97
2007	0.30	0.37	2.39	6.85	3.37
2008	0.30	0.36	2.21	10.11	2.74
AVG	0.32	0.34	2.97	8.23	4.30

Table 3.9– City of Evans Historic Non-Potable Water Use per Tap

Year	Non-Potable Residential (AF)	Non-Potable Multi-Family (AF)	Non-Potable Commercial (AF)	Non-Potable City Usage (AF)
2003	0.07	n/a	15.64	1.22
2004	0.17	n/a	7.08	2.37
2005	0.23	n/a	8.48	8.63
2006	0.25	n/a	18.25	3.99
2007	0.27	2.32	8.62	5.89
2008	0.25	2.99	6.56	9.07
AVG	0.21	2.65	10.77	5.20

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.

The system-wide and Residential (includes Multi-Family) per capita water use for the City is shown in Table 3.10.

Table 3.10 – City of Evans Per Capita Water Use

Year	Total Water Use (AF)	Residential Water Use (AF)	Population*	System Wide GPCD	Residential GPCD
2003	1,990	1,549	17,434	102	79
2004	2,169	1,652	18,645	104	79
2005	2,483	1,852	19,912	111	83
2006	2,599	1,897	19,887	117	85
2007	2,528	1,861	20,306	111	82
2008	2,511	1,841	20,394	110	81
Avg	2,380	1,775	19,430	109	82

* Population includes the Hill-N-Park and Arrowhead subdivisions.

Demand Forecast

For this plan, projected water demands were calculated based on previous studies and planning efforts completed by the City. In the City's Water Master Plan, potable and non-potable water demands were projected for inside and outside the dwellings, assuming lot sizes and irrigation requirements. Dwelling units were related to population through person per household assumptions.

A demand study performed for the NISP project in 2004, built on the assumptions presented in the City's Water Master Plan. The NISP study modified the projections for population by assuming a growth rate of four percent through 2010, three percent through 2020, and 2.5 percent thereafter. Also, the NISP study updated land area estimates within the City's growth boundary. Table 3.11 provides a summary of the land use projections used to determine future demands.

Table 3.11 – City of Evans NISP Land Use Projections

Residential	Acres	Non-Residential	Acres
Rural Density	1,112	Local	124
Low Density	850	General	280
Medium Density	232	Industrial	478
Urban Density	1,271	Mixed Use/Employment	261
High Density	205	Parks/Trails/Open Space	1,117
Subtotal	3,670	*Subtotal*	2,260
		Total, Residential and Non-Residential Land Use	**5,930**

The total area presented in Table 3.11 is capable of accommodating approximately 38,000 people, excluding the Arrowhead and Hill-N-Park subdivisions. Assuming population growth consistent with the NISP study projections, Evans will be fully developed by 2037.

Using updated population estimates and following the assumptions of both these previous studies, we calculated projected demands for Evans. Table 3.12 shows the resulting potable projected demands. The shaded cells show the demand projections as presented in the NISP report. The total projected demand was split between each customer category based on the percentage of total water use presented in Table 3.1

Table 3.12 – City of Evans Potable Demand Projections

Year	TOTAL Potable Water Use AF	Potable Residential 54% AF	Potable Multi-Family 21% AF	Potable Commercial 18% AF	Potable Irrigation 4% AF	Potable City Usage 4% AF
2009	2,565	1,374	533	464	90	103
2010	2,751	1,474	572	498	96	111
2011	2,938	1,574	610	532	103	118
2012	3,124	1,674	649	566	110	126
2013	3,310	1,774	688	599	116	133
2014	3,497	1,874	726	633	123	141
2015	3,683	1,973	765	667	129	148
2016	3,805	2,039	791	689	133	153
2017	3,928	2,105	816	711	138	158
2018	4,051	2,171	842	734	142	163
2019	4,174	2,236	867	756	146	168
2020	4,296	2,302	893	778	151	173
2021	4,419	2,368	918	800	155	178
2022	4,542	2,434	944	822	159	183
2023	4,665	2,500	969	845	164	188
2024	4,787	2,565	995	867	168	193
2025	4,910	2,631	1,020	889	172	198
2026	5,094	2,730	1,058	922	179	205
2027	5,278	2,828	1,097	956	185	213
2028	5,463	2,927	1,135	989	192	220
2029	5,647	3,026	1,173	1,022	198	228
2030	5,831	3,124	1,211	1,056	204	235
2031	6,015	3,223	1,250	1,089	211	242
2032	6,199	3,322	1,288	1,122	217	250
2033	6,383	3,420	1,326	1,156	224	257
2034	6,567	3,519	1,364	1,189	230	265
2035	6,752	3,618	1,403	1,223	237	272
2036	6,813	3,651	1,415	1,234	239	275
2037	6,874	3,683	1,428	1,245	241	277

Notes: Shaded cells match NISP demand projections.

In addition to the population update incorporated into the projection used for the planning effort, we discovered that non-potable projections presented in the NISP report appear to be over estimated by a factor of ten. This discovery was made when the NISP projections for 2005 (1,319 AF) were compared to the actual non-potable water use for 2005 (124 AF). By reducing the NISP figure, the NISP estimate becomes very similar to actual water use.

Additionally, it appears that the rate of increase in non-potable use is actually higher than predicted by the NISP study. Actual non-potable water use increased at an average rate of five percent over the last three years vs. the percent used in the NISP report of four percent through 2010, 3 percent through 2020, and 2.5 percent thereafter. Therefore, for calculation of the projected non-potable water use, we assumed a five percent growth rate annually for non-potable usage. We will update these assumptions with future water conservation planning efforts as more information becomes available. Table 3.13 shows the resulting non-potable water demand projections for the City.

Table 3.13 – City of Evans Non-Potable Demand Projections

Year	TOTAL Non-Potable Water Use** AF	Non-Potable Residential 57% AF	Non-Potable Multi-Family 4.4% AF	Non-Potable Commercial 16% AF	Non-Potable City Usage 22% AF
2009	213	121	9	34	48
2010	223	127	10	36	50
2011	234	134	10	38	53
2012	246	140	11	40	55
2013	258	147	11	42	58
2014	271	155	12	44	61
2015	285	162	13	46	64
2016	299	170	13	48	67
2017	314	179	14	51	70
2018	330	188	15	53	74
2019	346	197	15	56	78
2020	364	207	16	59	81
2021	382	218	17	62	86
2022	401	228	18	65	90
2023	421	240	19	68	94
2024	442	252	20	72	99
2025	464	264	21	75	104
2026	487	278	22	79	109
2027	512	292	23	83	115
2028	537	306	24	87	120
2029	564	321	25	91	126
2030	592	338	26	96	133
2031	622	354	28	101	139
2032	653	372	29	106	146
2033	686	391	30	111	154
2034	720	410	32	117	161
2035	756	431	33	122	169
2036	794	452	35	129	178
2037	833	475	37	135	187

** Based on a 5% growth estimate, Not on NISP report estimates.

Total water usage is projected to reach 4,381 AF (1.4 BG) in ten years (2018) and approximately 7,708 AF (2.5 BG) by build out. Water usage is projected to increase 1,871 AF (610 MG) by 2018.

Total Future Water Demand

The projected water demand is for water delivered from the City of Greeley to Evans' master meters or native water deliveries through ditches. Water demands account for ditch losses for non-potable water, system losses for both potable and non-potable deliveries, and additional water required by the City's water suppliers.

Total potable water demand was calculated by applying the nine percent system loss rate in addition to a 15 percent estimated surcharge per the City of Greeley contract.

Total non-potable water demand was calculated by again applying the nine percent system loss rate in addition to an estimated ditch loss of 15 percent. The total projected water demand for the City, including losses, is shown in Tables 3.14 and 3.15. Total water demand (potable and non-potable) is projected to reach 5,432 AF (1.8 BG) in 2018 and approximately 9,558 AF (3.1 BG) by build out.

Table 3.14 – Total Projected Potable Water Demand

Year	Total Projected Potable Water Use AF	Estimated Surcharge (15%) AF	System Losses (9%) AF	Total Potable Demand AF	Total Potable Demand MG
2009	2,565	420	252	3,471	1,131
2010	2,751	413	248	3,412	1,112
2011	2,938	441	264	3,643	1,187
2012	3,124	469	281	3,874	1,262
2013	3,310	497	298	4,105	1,338
2014	3,497	524	315	4,336	1,413
2015	3,683	552	331	4,567	1,488
2016	3,805	571	342	4,719	1,538
2017	3,928	589	354	4,871	1,587
2018	4,051	608	365	5,023	1,637
2019	4,174	626	376	5,175	1,686
2020	4,296	644	387	5,328	1,736
2021	4,419	663	398	5,480	1,786
2022	4,542	681	409	5,632	1,835
2023	4,665	700	420	5,784	1,885
2024	4,787	718	431	5,936	1,934
2025	4,910	737	442	6,089	1,984
2026	5,094	764	458	6,317	2,058
2027	5,278	792	475	6,545	2,133
2028	5,463	819	492	6,774	2,207
2029	5,647	847	508	7,002	2,282
2030	5,831	875	525	7,230	2,356
2031	6,015	902	541	7,459	2,430
2032	6,199	930	558	7,687	2,505
2033	6,383	957	574	7,915	2,579
2034	6,567	985	591	8,144	2,654
2035	6,752	1,013	608	8,372	2,728
2036	6,813	1,022	613	8,448	2,753
2037	6,874	1,031	619	8,524	2,778

Table 3.15 – Total Projected Non-Potable Water Demand

Year	Total Non-Potable Projected Water Use AF	Estimated Ditch Loss (15%) AF	System Losses (9%) AF	Total Non-Potable Demand AF	Total Non-Potable Demand MG
2009	213	32	19	264	86
2010	223	33	20	277	90
2011	234	35	21	291	95
2012	246	37	22	305	99
2013	258	39	23	320	104
2014	271	41	24	336	110
2015	285	43	26	353	115
2016	299	45	27	371	121
2017	314	47	28	390	127
2018	330	49	30	409	133
2019	346	52	31	429	140
2020	364	55	33	451	147
2021	382	57	34	473	154
2022	401	60	36	497	162
2023	421	63	38	522	170
2024	442	66	40	548	179
2025	464	70	42	576	188
2026	487	73	44	604	197
2027	512	77	46	634	207
2028	537	81	48	666	217
2029	564	85	51	700	228
2030	592	89	53	735	239
2031	622	93	56	771	251
2032	653	98	59	810	264
2033	686	103	62	850	277
2034	720	108	65	893	291
2035	756	113	68	937	305
2036	794	119	71	984	321
2037	833	125	75	1,034	337

CHAPTER 4 - WATER CONSERVATION GOALS

Goal Development Process

The development of water-savings goals for Evans was a collaborative process involving Clear Water Solutions and City 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 City's largest water use customer categories, seasonal usage, system limitations and losses, and outlined the City'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. Between 2000 and 2002, Evans ranked among the fastest growing cities in Colorado. The increase in population is reflective of growth along the entire North Front Range. While population growth has slowed in the last couple of years, a population boom is likely to occur again in the future. Reduction of future water demand through water conservation can potentially delay planned water supply acquisition, reduce surcharges from the City of Greeley, and delay the need for infrastructure improvements.

Discussions with City staff focused on the desire to continue and potentially expand Evans' water education programs. Educational programs encourage Residential category water conservation and may also impact the Commercial and Irrigation customers as well. In addition, City staff discussed the need for a water rate study which would ensure that the City has a fair rate structure that also provides incentive for customers to save water. The need for updated billing software was discussed as the City's software is twenty years old. New software will give the City flexibility and ability to help their customers save water. Leak detection and meter replacement programs are also high priorities for the City.

In setting initial water savings goals for the City, we looked at the current water use per customer category and the limitations of the water supply system. Table 4.1 shows initial goals established for each customer category.

Table 4.1 – Evans Water Conservation Goals

Water Use Categories:	Total Projected Water Use (2009 to 2018)	Reduction Goals for Planning Horizon	
	(AF)	(%)	(AF)
Potable - Residential	23,187	12.0%	2782
Potable - Multi-Family	8,871	5.0%	444
Potable - Commercial	7,809	12.0%	937
Potable - Irrigation	1,441	15.0%	216
Potable - City Usage	1,752	1.5%	26
Non-Potable - Residential	1,925	12.0%	231
Non-Potable - Multi-Family	132	5.0%	96
Non-Potable Commercial	571	12.0%	16
Non-Potable City Usage	758	1.5%	9
Potable Unaccounted-for Losses (currently 9%)	4,083.2	2.5%	1,276
Total Water Production:	51,040		
Total Demand Reduction:			6033
Total Percent Reduction:			11.8%

Residential and Multi-Family Conservation Goals

The per-capita Residential and Multi-Family use in Evans is low compared to the average in Colorado. This is most likely due to the water conservation measures that the City already has in place. Considering that there are a number of existing water conservation measures that can be improved and new measures that can be introduced, the reduction goal was set at 12 percent for Residential and five percent for Multi-Family.

Commercial Conservation Goals

The Commercial category includes but is not limited to hospitality, restaurants, retail, healthcare, mobile home parks, and grocery stores. Little is known about the water use habits of these customers and until results from conservation measures have been monitored, the actual savings are difficult to predict. For now, the City will set a goal of 12 percent for potable and non-potable Commercial customers. Savings for the next water conservation plan will be easier to estimate.

Irrigation Conservation Goals

The Irrigation category includes water used to irrigate areas surrounding parking lots, medians, and landscaped areas associated with commercial properties. The water savings goal for the Irrigation category was set at 15 percent.

City Usage

Evans tracks water use in and surrounding City owned properties. The City believes that a 1.5 percent savings can be achieved through water conservation measures targeting this category.

Unaccounted-for Losses

This category is where Evans may achieve a large water savings. The average loss in the system due to leaks, record keeping errors, theft, or lack of measurement is nine percent of the water production. The goal for the City is to reduce the system losses by 2.5 percent bringing them to 6.5 percent.

CHAPTER 5 – 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.

- Financial implications
- Staff availability
- Staff and Council approval

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 City 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 CWCB elements 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 September 10, 2008. The resulting decisions are noted on Table 5.1.

Table 5.1 – Universal List of Conservation Measures and Programs

Conservation Measure or Program		Existing	Further Evaluation	Comment
Supply side measures & programs	**Utility Maintenance Programs**			
	Water Reuse System	Yes		The City currently reuses water saved from the WWTP for watering of the facilities surrounding the WWTP. The City will continue this program as is.
	Leak Detection & Repair Program	No	Yes	Currently, problems are fixed on an as needed basis. The City would like to develop a program to find leaks before they become a problem.
	Billing Software Upgrades	No	Yes	Evans current billing system is 20 years old. The City would like to upgrade.
	Sub-Meter Mobile Home Parks	No	Yes	The mobile home parks are high water users. They would benefit from either a leak detection program or sub-metering.
	Leak Detection in Mobile Home Parks	No	Yes	
	Meter Testing and Replacement Program	No	Yes	The City would like to evaluate further.
Demand side measures & programs	**Regulatory Controls and Standards**			
	Water Restrictions-Hours/Days	Yes		Included in municipal code. Continue as is.
	Soil Amendment Ordinance for New Landscapes	Yes	Yes	Briefly mentioned in the municipal code. City may expand on this program
	Water Waste Ordinance	Yes		Briefly included in municipal code. Continue as is. City may expand on this program.
	Temporary Irrigation Taps for Native Landscaping	Yes	No	The City offers this service for customers. They will continue as is.
	Removal of Phreatophytes e.g. Cottonwoods	No	No	There are not phreatophytes using Evan's water supply.
	High Efficiency Appliance Requirements/Standards for New Construction	No	No	Already extensively covered in State and National Plumbing standards and codes.

Conservation Measure or Program		Existing	Further Evaluation	Comment
Demand side measures & programs	**Regulatory Controls and Standards, continued**			
	General Evaluation of Policies that Encourage Water Savings	No	Yes	
	Water Rate Structure Changes	No	Yes	A rate study will be conducted to determine a fair structure that will help maximize water savings.
	10% of Lot Irrigation Restriction	No	Yes	The City would like to evaluate further.
	New Car Wash Standards (New Construction)	No	Yes	The City would like to evaluate further.
	Decorative Water Feature Requirements and Standards on New Construction	No	No	This measure is not needed at this time.
	Turf and Landscape Restrictions/Standards for New Construction	No	Yes	Combined with Irrigation System Requirements/Standards for New Construction measure .
	Irrigation System Requirements/Standards for New Construction	No	Yes	City Staff would like to evaluate further.
	Laundry and Laundromat Requirements/Standards for New Construction	No	No	Re-evaluate with future planning efforts.
	Low Water Use and Appliance Codes	No	No	Already extensively covered in State and National Plumbing standards and codes.
	New Landscape/Lawn Permits	Yes	Yes	Combined with Soil Amendment Ordinance for New Landscapes.
	Requiring Wind and/or Rain Sensors for Commercial and Open Space Irrigation	Yes	Yes	The City would like to evaluate further.
	Restrict High Water-Use Turf on Medians or 6:1 Slopes	Yes	Yes	The City would like to evaluate further.
	Restrictive Covenants Ordinance	No	Yes	The City would like to evaluate further.
	Soil Amendment Ordinance for New Landscapes	No	Yes	The City would like to evaluate further.
	Educational Programs			
	Billing Statements that Encourage Water Savings	Yes		The City provides 12 months of usage information to each customer. They will continue this program.
	Children's Water Festival	Yes	Yes	The City will explore opportunities to grow the City's participation in this program.
	Designated Water Conservation Officer	Yes	Yes	The City hires a summer intern designated for water conservation. The City would like to continue this program.

Conservation Measure or Program		Existing	Further Evaluation	Comment
Demand side measures & programs	**Educational Programs, continued**			
	Designated Water Conservation Officer	Yes	Yes	In the past, the City has hired a designated water conservation officer. They would like to expand this measure in the future.
	Xeriscape Gardening Classes	No	Yes	The City would like to combine all Xeriscape programs and build on any existing Xeriscape educational opportunities.
	Xeriscape Program for Commercial	No	Yes	
	Xeriscape Program for Open Space (HOAs)	No	Yes	
	School Education Program (K-12 Education)	No	Yes	The City would like to evaluate further.
	Website Water Use Calculator	No	Yes	This measure will be combined with other website related measures into the Water Conservation Website Upgrades
	Educational Kits	No	Yes	This effort will be combined with residential audit kits (see below).
	Post Business, Industrial, and Public BMPs on Website or as Bill Stuffers	No	Yes	The City would like to evaluate further.
	Property Manager/HOA Education and Training			The City would like to evaluate further.
	Public Education - Bill Stuffers & Website	No	Yes	The City would like to evaluate further.
	Water Conservation Website Upgrades			Upgrade the website to include information for residents and commercial water users.
	Send ET Irrigation Scheduling in Water Bill	No	Yes	Instead of sending bill stuffers, this measure will be combined with other website related measures into the Water Conservation Website Upgrades
	Rebates and Incentive Programs			
	Commercial Toilet Rebate	No	Yes	The City would like to evaluate further.
	Distribute Toilet Retrofit Devices	No	No	Re-evaluate with future planning efforts.
	Distribute Pre-rinse Spray Heads to Restaurants & Institutions	No	Yes	The City would like to evaluate further.
	Rebate Programs for Toilets, Clothes Washers, Dishwashers, Faucets and Showerheads	No	Yes	The City would like to evaluate rebates specifically for Residential toilets and Clothes Washer.
	Rebates for ET (SMART) Sprinkler System Controllers	No	Yes	This effort will be combined with Irrigation System Efficiency Device Rebates (see below).
	Turf Replacement and Xeriscape Incentives	No	Yes	The City would like to evaluate further.
	Irrigation System Efficiency Device Rebates	No	Yes	The City would like to evaluate further.

Conservation Measure or Program		Existing	Further Evaluation	Comment
Demand side measures & programs	**Rebates and Incentive Programs, continued**			
	Wind and/or Rain Sensor Rebates for Residential or Commercial	No	No	Re-evaluate with future planning efforts.
	Audit Programs			
	Commercial Water Audits	No	Yes	The City would like to evaluate further.
	Residential Audit Kit	No	Yes	Will make this a joint effort between education kits and audit kits.
	Sprinkler System Audit Kit and Instructions	No	No	Re-evaluate with future planning efforts.
	Landscape Customer Category System Audits	No	No	Re-evaluate with future planning efforts.

* Shaded cells represent existing measures.

CHAPTER 6 – EVALUATION AND SELECTION

The initial screening of the measures and programs with City staff resulted in eliminating ten measures and selecting 33 measures for further evaluation. Evans has identified five of the ten eliminated measures that they would like to evaluate with future planning efforts. Some of the measures have been combined as noted in Table 5.1. The benefits and costs of the selected measures and programs are shown in Table 6.1. 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 Appendix A.

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 6.1 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 one. 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 7 and 8.

The first five columns (Columns A-E) of Table 6.1 identify the conservation measure or program and quantify the costs to the City. 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 City 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 6.1 – Cost/Savings 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 (B)	One time Labor and Material Cost (C)	Annual Labor (D)	Annual Materials (E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
Supply side measures & programs	**Utility Maintenance**													
	Water Reuse System	$0	$0	$0	$700	1	0	2,606,808	26,068,080	n/a	$700	$7,000	$0.27	1
	Billing Software Upgrades	$0	$50,000	$0	$0	0	0	12,963,565	129,635,650	$0	$0	$50,000	$0.39	2
	Leak Detection & Repair Program	$0	$0	$8,500	$0	0	0	12,963,565	129,635,650	$0	$8,500	$85,000	$0.66	3
	Leak Detection in Mobile Home Parks	$0	$0	$2,000	$0	703	0	1,079,137	10,791,372	$3,367	$5,367	$53,669	$4.97	23
	Meter Testing and Replacement Program	$0	$0	$0	$116,250	775	0	12,963,565	129,635,650	$0	$116,250	$1,162,500	$8.97	30
	Sub-Meter Mobile Home Parks	$0	$0	$0	$52,950	706	0	1,079,137	10,791,372	$3,367	$56,317	$139,569	$12.93	33
Demand side measures & programs	**Regulatory Controls and Standards**													
	Watering Restrictions	$0	$0	$850	$0	0	0	25,074,572	250,745,722	$96,265	$97,115	$971,155	$3.87	10
	Soil Amendment Ordinance for New Landscapes	$0	$750	$0	$0	311	0	2,201,849	22,018,486	$9,547	$9,547	$96,224	$4.37	20
	Water Waste Ordinance	$0	$750	$0	$0	0	0	5,317,838	53,178,376	$21,989	$21,989	$220,638	$4.15	15
	General Evaluation of Policies that Encourage Water Savings	$0	$6,000	$0	$0	0	0	1,175,829	11,758,294	$4,544	$4,544	$10,544	$0.90	4
	Restrict High Water-Use Turf on Medians and in Parking Lot Plantings	$0	$750	$0	$0	0	0	1,922,192	19,221,917	$5,997	$5,997	$60,722	$3.16	8
	Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation	$0	$750	$1,700	$0	0	0	2,599,791	25,997,915	$7,759	$9,459	$95,336	$3.67	9
	Restrictive Covenants Ordinance	$0	$750	$0	$0	0	0	9,191,170	91,911,702	$38,254	$38,254	$383,293	$4.17	16
	Water Rate Structure Changes	$0	$40,000	$0	$0	0	0	9,952,728	99,527,276	$38,362	$38,362	$423,620	$4.26	18
	New Car Wash Standards (New Construction)	$0	$750	$1,000	$0	0	0	542,938	5,429,375	$1,694	$2,694	$27,690	$5.10	25
	Irrigation System Standards for New Development	$0	$750	$16,500	$0	0	0	10,029,829	100,298,289	$38,506	$55,006	$550,812	$5.49	27
	10% of Lot Irrigation Restriction	$0	$750	$15,551	$0	311	0	2,192,462	21,924,623	$9,530	$25,081	$251,562	$11.47	32
	Educational Programs													
	Billing Statements that Encourage Water Savings	$0	$0	$100	$0	0	0	22,322,430	223,224,296	$90,882	$90,982	$909,818	$4.08	13
	Children's Water Festival	$0	$0	$800	$500	0	0	4,325,073	43,250,734	$18,891	$20,191	$201,914	$4.67	21
	Xeriscape Programs	$0	$2,000	$2,000	$5,000	100	0	1,031,970	10,319,701	$2,899	$9,899	$100,991	$9.79	31
	Designated Water Conservation Officer	$0	$0	$6,750	$0	0	0	23,593,688	235,936,883	$91,026	$97,776	$977,760	$4.14	14
	Post or Distribute ET Irrigation Scheduling	$0	$600	$500	$0	9,000	0	10,029,829	100,298,289	$38,506	$39,006	$390,662	$3.90	11
	Water Conservation Website Upgrades	$0	$2,500	$400	$0	0	0	5,388,388	53,883,882	$22,121	$22,521	$227,707	$4.23	17
	School Education Program (K-12)	$0	$0	$1,000	$1,000	0	0	4,325,073	43,250,734	$18,891	$20,891	$208,914	$4.83	22
	Public Education - Bill Stuffers & Website	$0	$2,000	$2,100	$6,578	8,771	0	8,650,147	86,501,467	$37,783	$46,461	$466,610	$5.39	26
	Property Manager/HOA Education and Training	$0	$0	$2,000	$625	0	0	1,299,896	12,998,957	$3,879	$6,504	$65,043	$5.00	24
	Rebate and Incentive Programs													
	Distribute Pre-Rinse Spray Heads to Restaurants and Institutions	$0	$200	$1,600	$1,200	12	109,200	1,310,400	72,072,000	$9,369	$12,169	$121,894	$1.69	6
	Irrigation System Efficiency Device Rebates	$25	$400	$625	$0	127	Varies	695,855	38,272,015	$12,741	$16,541	$165,806	$4.33	19
	Commercial Toilet Rebate	$50	$200	$625	$0	30	9,125	273,750	15,056,250	$3,915	$6,040	$60,596	$4.02	12
	Residential Rebate for Low-Flow Toilets	$50	$200	$625	$0	25	12,331	308,264	16,954,542	$7,663	$9,538	$95,585	$5.64	28
	Rebate for High Efficiency Clothes Washers	$100	$200	$625	$0	25	5,964	149,095	8,200,236	$3,707	$6,832	$68,515	$8.36	29
	Audit Programs													
	Residential Water Audit Kits	$0	$15,375	$800	$0	250	8,505	2,126,178	116,939,778	$11,344	$12,144	$136,817	$1.17	5
	Commercial Water Audits	$0	$0	$500	$3,600	12	139,138	1,669,661	91,831,329	$23,826	$27,926	$279,259	$3.04	7

Column Explanations:

(B) A rebate provided upon approval of customer 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 rank of measures by cost-benefit is shown in Table 6.2 below. The cost per 1,000 gallons saved ranges from $0.27 to $12.93. The measures are ranked fairly evenly throughout the five categories.

The rankings are a result of the ratio of cost, including lost revenue, to water savings. For instance, rebates for high efficiency clothes washers save a fair amount water. However, the costs of these programs are high, so they rank lower than one might expect. This is only a cost per water saved ranking. There are other factors to consider, which will be accomplished in a second screening.

Table 6.2 – Cost-Benefit Ranking

Rank	Conservation Measures and Programs
1	Water Reuse System
2	Billing Software Upgrades
3	Leak Detection & Repair Program
4	General Evaluation of Policies that Encourage Water Savings
5	Residential Water Audit Kits
6	Distribute Pre-Rinse Spray Heads to Restaurants and Institutions
7	Commercial Water Audits
8	Restrict High Water-Use Turf on Medians and in Parking Lot Plantings
9	Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation
10	Watering Restrictions
11	Post or Distribute ET Irrigation Scheduling
12	Commercial Toilet Rebate
13	Billing Statements that Encourage Water Savings
14	Designated Water Conservation Officer
15	Water Waste Ordinance
16	Restrictive Covenants Ordinance
17	Water Conservation Website Upgrades
18	Water Rate Structure Changes
19	Irrigation System Efficiency Device Rebates
20	Soil Amendment Ordinance for New Landscapes
21	Children's Water Festival
22	School Education Program (K-12)
23	Leak Detection in Mobile Home Parks
24	Property Manager/HOA Education and Training
25	New Car Wash Standards (New Construction)
26	Public Education - Bill Stuffers & Website
27	Irrigation System Standards for New Development
28	Residential Rebate for Low-Flow Toilets
29	Rebate for High Efficiency Clothes Washers
30	Meter Testing and Replacement Program
31	Xeriscape Programs
32	10% of Lot Irrigation Restriction
33	Sub-Meter Mobile Home Parks

Evaluation Criteria

After each of the conservation measures and programs were ranked by *cost per 1,000 gallons saved*, as shown in Table 6.2, the next step was to select conservation measures and programs for implementation. The criteria used for selection are as follows:

1. Additional staff time required
2. Financial implications
3. Staff and Council approval
4. Existing or planned City projects

Selected Conservation Measures and Programs

The second screening was accomplished by evaluating each measure/program based on the screening criteria and Evans' overall goal for this Water Conservation Plan. Only one measure was eliminated in the second screening process. City staff would like to postpone the sub-metering of mobile home parks at this time. The City will re-evaluate this measure with future planning efforts. As mentioned previously, further detail on the conservation measures and programs chosen in the final selection are found in Appendix A.

In Chapter 4, conservation goals were established for eight customer categories:

- Unaccounted-for Losses: 2.5% - 1,276 AF (415 MG)
- Potable Residential: 12% - 2,782 AF (907 MG)
- Potable Multi-Family: 5% - 444 AF (145 MG)
- Potable Commercial: 12% - 937 AF (305 MG)
- Potable Irrigation: 15% - 216 AF (70 MG)
- Potable City Usage: 1.5% - 26 AF (8.5 MG)
- Non-Potable Residential: 12% - 231 AF (75 MG)
- Non-Potable Multi-Family: 5% - 96 AF (31 MG)
- Non-Potable Commercial: 12% - 16 AF (5 MG)
- Non-Potable City Usage: 1.5% - 9 AF (2.9 MG)

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 once category. Table 6.3 shows the water savings for the selected measures, sub-totaled for each category.

Table 6.3 – 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)
Unaccounted for Losses		
Water Reuse System	2,606,808	26,068,080
Billing Software Upgrades	12,963,565	129,635,650
Leak Detection & Repair Program	12,963,565	129,635,650
Meter Testing and Replacement Program	12,963,565	129,635,650
Subtotal - Gallons	41,497,503	414,975,029
Acre-Feet	127	1,274
Potable - Residential		
Watering Restrictions	11,457,546	114,575,461
Billing Statements that Encourage Water Savings	11,751,329	117,513,294
Soil Amendment Ordinance for New Landscapes	1,547,027	15,470,269
Water Waste Ordinance	2,937,832	29,378,323
Children's Water Festival	2,937,832	29,378,323
Xeriscape Programs	68,429	684,287
Designated Water Conservation Officer	11,751,329	117,513,294
General Evaluation of Policies that Encourage Water Savings	587,566	5,875,665
Water Rate Structure Changes	4,583,018	45,830,185
Restrictive Covenants Ordinance	5,728,773	57,287,731
Irrigation System Standards for New Development	4,583,018	45,830,185
10% of Lot Irrigation Restriction	1,547,027	15,470,269
Post or Distribute ET Irrigation Scheduling	4,583,018	45,830,185
Water Conservation Website Upgrades	2,937,832	29,378,323
School Education Program (K-12)	2,937,832	29,378,323
Public Education - Bill Stuffers & Website	5,875,665	58,756,647
Irrigation System Efficiency Device Rebates	171,072	9,408,948
Residential Rebate for Low-Flow Toilets (also includes savings for multi-family category)	308,264	16,954,542
Rebate for High Efficiency Clothes Washers (also includes savings for multi-family	149,095	8,200,236
Residential Water Audit Kits	708,726	38,979,926
Subtotal - Gallons	77,152,234	831,694,414
Acre-Feet	237	2,552
Potable - Multi-Family		
Watering Restrictions	4,441,918	44,419,183
Billing Statements that Encourage Water Savings	4,555,814	45,558,137
Children's Water Festival	1,138,953	11,389,534
Soil Amendment Ordinance for New Landscapes	470,955	4,709,553
Water Waste Ordinance	1,138,953	11,389,534
Xeriscape Programs	34,214	342,144
Designated Water Conservation Officer	4,555,814	45,558,137
General Evaluation of Policies that Encourage Water Savings	227,791	2,277,907
Water Rate Structure Changes	1,776,767	17,767,673
Restrictive Covenants Ordinance	2,220,959	22,209,592
Irrigation System Standards for New Development	1,776,767	17,767,673
10% of Lot Irrigation Restriction	470,955	4,709,553
Post or Distribute ET Irrigation Scheduling	1,776,767	17,767,673
Water Conservation Website Upgrades	1,138,953	11,389,534
School Education Program (K-12)	1,138,953	11,389,534
Public Education - Bill Stuffers & Website	2,277,907	22,779,068

Conservation Measures and Programs	Estimated Annual Water Savings after full Implementation (gallons)	Estimated Total Water Savings over Planning Period (gallons)
Potable - Multi-Family, continued		
Irrigation System Efficiency Device Rebates	85,536	4,704,474
Residential Water Audit Kits	708,726	38,979,926
Subtotal - Gallons	29,936,705	335,108,830
Acre-Feet	92	1,028
Potable - Commercial		
Watering Restrictions	3,871,780	38,717,804
Billing Statements that Encourage Water Savings	3,971,057	39,710,568
Water Waste Ordinance	992,764	9,927,642
Designated Water Conservation Officer	3,971,057	39,710,568
Leak Detection in Mobile Home Parks	1,079,137	10,791,372
General Evaluation of Policies that Encourage Water Savings	198,553	1,985,528
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation	1,548,712	15,487,122
Water Rate Structure Changes	1,548,712	15,487,122
New Car Wash Standards (New Construction)	542,938	5,429,375
Irrigation System Standards for New Development	1,548,712	15,487,122
Post or Distribute ET Irrigation Scheduling	1,548,712	15,487,122
Water Conservation Website Upgrades	992,764	9,927,642
Property Manager/HOA Education and Training	774,356	7,743,561
Distribute Pre-Rinse Spray Heads to Restaurants and Institutions	1,310,400	72,072,000
Commercial Toilet Rebate	273,750	15,056,250
Commercial Water Audits	967,777	53,227,761
Subtotal - Gallons	25,141,182	366,248,559
Acre-Feet	77	1,124
Potable - Irrigation		
Watering Restrictions	1,922,192	19,221,917
Billing Statements that Encourage Water Savings	768,877	7,688,767
Soil Amendment Ordinance for New Landscapes	65,817	658,168
Water Rate Structure Changes	768,877	7,688,767
Xeriscape Programs	557,857	5,578,569
Designated Water Conservation Officer	768,877	7,688,767
General Evaluation of Policies that Encourage Water Savings	38,444	384,438
Restrict High Water-Use Turf on Medians and in Parking Lot Plantings	1,922,192	19,221,917
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation	768,877	7,688,767
Irrigation System Standards for New Development	768,877	7,688,767
10% of Lot Irrigation Restriction	65,817	658,168
Post or Distribute ET Irrigation Scheduling	768,877	7,688,767
Property Manager/HOA Education and Training	384,438	3,844,383
Irrigation System Efficiency Device Rebates	268,175	14,749,646
Subtotal - Gallons	9,838,191	110,449,806
Acre-Feet	30	339
Potable - City		
Designated Water Conservation Officer	883,798	8,837,985
General Evaluation of Policies that Encourage Water Savings	44,190	441,899
Subtotal - Gallons	927,988	9,279,884
Acre-Feet	2.85	28
Non Potable - Residential		
Watering Restrictions	2,482,876	24,828,760
Billing Statements that Encourage Water Savings	993,150	9,931,504
Children's Water Festival	248,288	2,482,876
Soil Amendment Ordinance for New Landscapes	108,663	1,086,633
Water Waste Ordinance	248,288	2,482,876
Xeriscape Programs	20,529	205,286

Conservation Measures and Programs	Estimated Annual Water Savings after full Implementation (gallons)	Estimated Total Water Savings over Planning Period (gallons)
Non Potable - Residential, continued		
Designated Water Conservation Officer	993,150	9,931,504
Water Rate Structure Changes	993,150	9,931,504
Restrictive Covenants Ordinance	1,241,438	12,414,380
Irrigation System Standards for New Development	993,150	9,931,504
10% of Lot Irrigation Restriction	108,663	1,086,633
Post or Distribute ET Irrigation Scheduling	993,150	9,931,504
Water Conservation Website Upgrades	248,288	2,482,876
School Education Program (K-12)	248,288	2,482,876
Public Education - Bill Stuffers & Website	496,575	4,965,752
General Evaluation of Policies that Encourage Water Savings	49,658	496,575
Irrigation System Efficiency Device Rebates	171,072	9,408,948
Residential Water Audit Kits	708,726	38,979,926
Subtotal - Gallons	11,347,102	153,061,917
Acre-Feet	35	470
Non Potable - Multi-Family		
Watering Restrictions	192,753	1,927,531
Soil Amendment Ordinance for New Landscapes	9,386	93,863
Designated Water Conservation Officer	77,101	771,012
Irrigation System Standards for New Development	77,101	771,012
Post or Distribute ET Irrigation Scheduling	77,101	771,012
Subtotal - Gallons	433,443	4,334,430
Acre-Feet	1	13
Non Potable - Commercial		
Watering Restrictions	705,507	7,055,066
Billing Statements that Encourage Water Savings	282,203	2,822,026
Xeriscape Programs	350,942	3,509,415
Designated Water Conservation Officer	282,203	2,822,026
General Evaluation of Policies that Encourage Water Savings	14,110	141,101
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation	282,203	2,822,026
Water Rate Structure Changes	282,203	2,822,026
Irrigation System Standards for New Development	282,203	2,822,026
Post or Distribute ET Irrigation Scheduling	282,203	2,822,026
Water Conservation Website Upgrades	70,551	705,507
Property Manager/HOA Education and Training	141,101	1,411,013
Commercial Water Audits	701,883	38,603,568
Subtotal - Gallons	3,677,309	68,357,828
Acre-Feet	11	210
Non Potable - City		
Designated Water Conservation Officer	310,359	3,103,590
General Evaluation of Policies that Encourage Water Savings	15,518	155,180
Subtotal - Gallons	325,877	3,258,770
Acre-Feet	1	10
Grand Total - (Gallons)	**200,277,535**	**2,296,769,467**
Acre-Feet	**615**	**7,049**

These savings were compared to the original goals set in Chapter 4. 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. In this case, the resulting water savings are close to the original goals.

Table 6.4 compares the anticipated water savings from the selected measures with the original goals and then adjusts the water saving goals for this plan.

Table 6.4 – Water Conservation Goals Comparison

Water Use Categories:	Total Projected Water Use (2009 to 2018)	Reduction Goals for Planning Horizon		Total Water Savings from Selected Programs	Resulting Reduction	Adjusted Reduction Goals for Planning Horizon	
	(AF)	(%)	(AF)	(AF)	(%)	(%)	(AF)
Potable - Residential	23,187	12.0%	2,782	2,552	11.0%	11%	2,552
Potable - Multi-Family	8,871	5.0%	444	1,028	11.6%	10.0%	887
Potable - Commercial	7,809	12.0%	937	1,124	14.4%	14.0%	1,093
Potable - Irrigation	1,441	15.0%	216	339	23.5%	20.0%	288
Potable - City Usage	1,752	1.5%	26	28	1.6%	1.6%	28
Non-Potable - Residential	1,925	12.0%	231	470	24.4%	15.0%	289
Non-Potable - Multi-Family	132	5.0%	7	13	10.1%	10.0%	13
Non-Potable Commercial	571	12.0%	68	210	36.8%	20.0%	114
Non-Potable City Usage	758	1.5%	11	10	1.3%	1.3%	10
Unaccounted-for Losses (currently 9%)	4,593.6	2.5%	1,276	1,274	2.5%	2.5%	1,276
Total Water Production:	51,040						
Total Demand Reduction:			5,999	7,049			6,552
Total Percent Reduction:			11.8%		14%	13%	

Over the ten-year planning period, the selected measures/programs provide an overall estimated water savings of 7,049 AF (2.3 BG). This is close to, but higher than the initial water savings goals set in Chapter 4. The potable Residential category goal was adjusted down to 11 percent from the initial goal of 12 percent, to reflect the estimated savings from the selected Residential programs. Goals for all other categories were adjusted up from the original City goals. The adjusted goals reflect the goals believed to be obtainable by City staff.

After the goals were adjusted to better reflect the expected water savings, the estimated water use reduction is 6,552 AF (2.1 BG) or 13 percent. Therefore, Evans will target a reduction in its water use by 13 percent over the next ten year as a result of implementation of this plan.

CHAPTER 7 – INTEGRATE RESOURCES AND MODIFY FORECASTS

Evans operates in a manner to make the most efficient use of its resources. Each year, a budget is carefully developed with the given funding and personnel available. While water conservation has been an effort that has been gradually incorporated, implementation of the measures and programs selected in this plan will require reevaluation of staff resources and pursuit of additional funding in the form of grants.

Implementation Schedule

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

The following table proposes a schedule of implementation that splits the effort over three years and allows time to apply for and possibly obtain grant money. 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.

This table does not include existing measures that are already implemented and are not scheduled for expansion and improvements. Those measures include the water reuse system, watering restrictions, billing statements that encourage water savings, ET sensors and a centralized irrigation control for all City parks, and participation in Children's Water Festivals. The City will continue these programs as is. However, the City would like to expand upon the existing soil amendment ordinance for new landscapes and the water waste ordinance, so these two measures are included in the implementation schedule.

Table 7.1 –City of Evans 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)	% of Total Water Savings	Implementation Considerations	Grant Request
2010					
Utility Maintenance Programs					
Billing System Upgrades	$50,000		5.7%	Staff time, Funding	Yes
Leak Detection & Repair	$8,500		5.7%	Funding, obtaining 3rd Party	Yes
Leak Detection & Repair in Mobile Home Parks	$2,000		0.5%	Funding, obtaining 3rd Party	Yes
Regulatory Standards Program (Phase 1)					
Water Rate Changes	$40,000		4.3%	Funding	Yes
General Evaluation of Policies that Encourage Water Savings	$6,000		0.5%	Staff time	
Total 2010 Cost	**$106,500**				
2011					
Utility Maintenance Programs					
Leak Detection & Repair		$8,500	see above	2nd Year of Program, obtaining 3rd Party	
Leak Detection & Repair in Mobile Home Parks		$2,000	see above	2nd Year of Program, obtaining 3rd Party	
Regulatory Standards Program (Phase 2)			14.8%	Staff time	
Soil Amendment Ordinance for New Landscapes (improvements to existing ordinance)	$750				
Water Waste Ordinance (improvements to existing ordinance)	$750				
Restrict High Water-Use Turf on Medians and in Parking Lot Plantings	$750				
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation	$2,450				Yes
Restrictive Covenants Ordinance	$750				
New Car Wash Standards (New Construction)	$1,750				Yes
Irrigation System Standards for New Development	$17,250				Yes
10% of Lot Irrigation Restriction	$16,301				Yes
Education Programs (Phase 1 - Web related measures)			2.9%	Staff time, Funding	Yes
Post or Distribute ET Irrigation Scheduling	$1,100				
Water Conservation Website Upgrades	$2,900				
Public Education - Bill Stuffers & Website	$10,678				
Audit Program (Phase 1)			5.1%	Staff time, funding	Yes
Residential Water Audit Kits	$16,175				
Total 2011 Cost	**$82,105**				
2012					
Utility Maintenance Programs					
Leak Detection & Repair		$8,500	see above	3rd Year of Program, obtaining 3rd Party	
Leak Detection & Repair in Mobile Home Parks		$2,000	see above	4th Year of Program, obtaining 3rd Party	
Meter Testing and Replacement Program	$116,250		5.7%	Staff time, Funding	Yes
Regulatory Standards Program (Phase 2, continued)					
Requiring Wind and/or Rain Sensors for Business and Open Space Irrigation		$1,700	see above	The annual costs shown are for inspections. Staff time will be a consideration for implementation.	
New Car Wash Standards (New Construction)		$1,000			
Irrigation System Standards for New Development		$16,500			
10% of Lot Irrigation Restriction		$15,551			
Education Programs (Phase 1, continued)			see above	Staff time, Funding	
Post or Distribute ET Irrigation Scheduling		$500			
Water Conservation Website Upgrades		$400			
Public Education - Bill Stuffers & Website		$8,678.25			
Education Programs (Phase 2)			2.9%	staff time, Funding, & cooperation with the City of Greeley	Yes
Xeriscape Programs	$5,500				
Property Manager/HOA Education and Training	$2,625				
School Education Program (K-12)	$2,000				
Rebate and Incentive Program			6.6%	Staff time, funding	Yes
Distribute Pre-Rinse Spray Heads to Restaurants and Institutions	$3,000				
Irrigation System Efficiency Device Rebates	$4,200				
Commercial Toilet Rebate	$2,325				
Residential Rebate for Low-Flow Toilets	$2,075				
Rebate for High Efficiency Clothes Washers	$3,325				
Audit Program (Phase 1, continued)			see above	Staff time, funding	
Residential Water Audit Kits		$800			
Audit Program (Phase 2)			4.0%	Staff time, funding	Yes
Commercial Water Audits	$4,100				
Total 2012 Cost	**$201,030**				
Total Implementation Costs	**$323,505**				
Total 2010 - 2012 Combined Cost (implementation and annual costs)	**$389,634**				

The total cost to implement the conservation plan is $323,505. The cost to implement the plan including the annual costs for the first three years of on-going programs is $389,634. Annual on-going costs for the measures shown in Table 7.1 total $195,730 per year. The implementation schedule will be most affected by available staff time and funding. While this schedule may be optimistic, the goal is to allow time for researching and obtaining grants to develop sound programs for a higher probability of success.

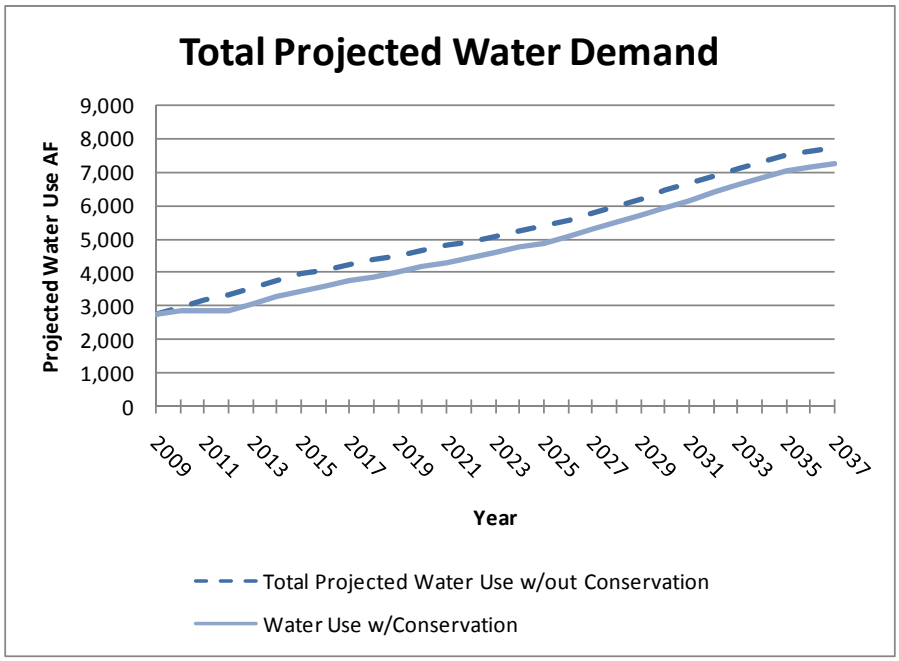
It should be noted that the implementation costs include both cost to implement the water conservation measure/program and staff time associated with the implementation and is not necessarily representative of the capital outlay requirement. Please refer to Appendix A for the detailed breakdown of costs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

Modified Demand Forecast

The total water demands for Evans 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 493 AF (161 MG) per year without considering savings due to measures already in place, like watering restrictions.

Figure 7.1 – Comparison of Demand Forecast with and without Conservation



Water Supply and Capacity Upgrade 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. Efforts in these areas may be modified and/or delayed, which could provide substantial financial savings to the conserving entity.

Water Supply

Based on the potable demand projection for Evans in this report of 6,089 AF (2 BG) in 2025 (includes the surcharge from the City of Greeley) and the current firm water supply of 2,699 AF (879 MG), the water needed by 2025 is 3,390 AF (1.1 BG). This projection is more conservative than previous planning due to the recent slowdown in development. These water shortages will need to be met through additional water purchases, participation in new water supply projects, and conservation. The non-potable supply is sufficient to cover future projected non-potable demand.

Water savings from the Water Conservation Plan (493 AF per year) reduces the need for that amount of new supply.

Capacity Upgrade

Besides regular maintenance and replacing older pipelines, Evans has an evaluation of capacity upgrades that are outlined in the 2005 Water Master Plan. The upgrades include basic infrastructure additions including piping, valves and hydrants that are required as the City grows.

Evans reviews and revises its Capital Improvements Plan (CIP) each year for all of its departments and funding sources according to available City resources. The Water Fund is what is used for system upgrades and water purchases. The plans for the next couple years are primarily maintenance oriented and are driven by age of infrastructure more than capacity concerns.

Benefits of Water Conservation

Currently, the only CIP items that could be affected by water savings from this Water Conservation Plan is raw water purchases and any associated Water Court change of use needed for those raw water shares. Table 7.2 shows the annual savings for each year that will result during the next three years as the plan is implemented.

Table 7.2 – Estimated Water Savings and Water Supply Needs

Savings from Conservation	Cumulative Amount Saved per Year MG	Cumulative Amount Saved MGD	Cumulative Water Saved per Year AF	Projected Increase in Demand AF	Cumulative Increase in Demand AF
2010	38	0.1	117	197	197
2011	98	0.3	302	197	394
2012	160	0.4	493	198	592

The savings are shown in MG per Day (MGD) and , so a person can compare the savings to either storage capacity or water purchases. As can be seen, if the estimated water savings are achieved, the 493 AF (161 MG) saved at the end of three years almost equals the increase in demand of 592 AF (193 MG).

This table illustrates that water purchases could be delay or even eliminated for the next three years without hurting the future water supply for Evans with water conservation. However, this isn't recommended until real water savings are recorded.

Of the water supply currently owned by Evans, average potable supply yield is 5,175 AF (1.7 BG) and firm potable supply yield is 2,699 AF (879 MG). The average supply could serve the City until 2019 and the firm supply can meet the current City's needs. NISP is scheduled to have water available for participants around 2015 if it is permitted. This would provide the City 1,600 AF (521 MG) of new water supply and would get the City through 2028 based on the average potable supply yield. If water savings from the conservation plan are realized in the next three years, new purchases could be delayed for those three years and possibly until NISP comes online.

If NISP is permitted and Evans acquires 1,600 AF (521 MG) by 2015, Evans would need to purchase or potentially change the decreed use in Water Court of approximately 724 AF (236 MG) of new water supplies by 2018 in order to supplement the firm supply deficiency for their potable water needs. We estimate that a reasonable cost to either purchase or change the use of said water rights would cost approximately $10,000 per AF ($30.69 per 1,000 gallons), potentially costing the City $7.3 Million over the next ten years.

If the estimated annual water savings of 493 AF (161 MG) after full implementation of the plan are considered a new supply and that amount of water is not purchased, the cost savings would equal the current market value of the water. As mentioned previously, a reasonable value of $10,000 per AF ($30.69 per 1,000 gallons) can be used, which is slightly less than the cost per AF of NISP water and about $3,000 per AF less than the cost of CBT water. The value of the water savings from conservation is then $4.9 Million (493 AF x $10,000/AF).

CHAPTER 8 – PLAN OF IMPLEMENTATION AND MONITORING

The schedule for implementation is presented in Table 7.1 in Chapter 7. 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 City policy.

Through this water conservation planning process, the public was notified and given 60 days to comment. The plan was available on Evans' website and at City Hall for review. Details on the public notification can be found in Appendix B. Written comments and responses to those comments are included in Appendix D.

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. Water users receiving audits and rebates can be tracked over the next ten years to determine cost of implementation and water savings. In addition, existing customer water uses will be monitored.

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 City Council 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.

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 Evans. The City 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

No public comments were received on the Water Conservation Plan during the public comment period. The Evans City Council 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 Evans will be eligible for a water-efficiency grant through CWCB for plan implementation.

REFERENCES:

American Water Works Association, 2006. Water Conservation Programs – A Planning Manual, Manual of Water Supply Practices M52.

The Brendle Group, June 2006. Northern Colorado Action Plan for Industrial, Commercial, and Institutional (ICI) Water Conservation.

City of Evans, 2008 Budget V3, July 15, 2008.

City of Evans Comprehensive Plan. May 2002.

City of Evans Municipal Code, Section 13.04.080, Newly Adopted Water Rates Effective June Billing Cycle, June 2006.

City of Evans Water Supply and Demand, for Windy Gap Firming, October 13, 2004.

Evans Drought Response Plan, December 2007.

Harvey Economics, Water Supplies and Demands for Participants in the Northern Integrated Supply Project. 2004.

HDR Engineering, Inc. Water/Wastewater Master Plan, 1996.

HDR Engineering, Inc. Water Master Plan Updated, May 2005.

Klien, Bobbie, Kenney, Doug, Lowrey, Jessica, and Goemans, Chris. Factors Influencing Residential Water Demand: A Review of the Literature (Updated 1/12/07).

U.S. Environmental Protection Agency, 2007. Cases in Water Conservation: How Efficiency Programs Help Water Utilities Save Water and Avoid Costs.

U.S. Environmental Protection Agency, August 6, 1998. WATER CONSERVATION PLAN GUIDELINES , Appendix B.

Tetra Tech RMC, Memorandum from Doug Seeley regarding Water Demand Projections, September 8, 2003.

Vickers, Amy, 2001. Handbook of Water Use and Conservation: Home, Landscapes, Business, Industries, Farms. WaterPlow Press, Amherst, MA.

Water Conservation Alliance of Southern Arizona, 2003. Evaluation and Cost Benefit Analysis of Municipal Water Conservation Programs.

Western Resource Advocates, 2006. Water in the Urban Southwest.

APPENDIX A

Water Conservation Measures

Billing Software Upgrades

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 and faulty meters.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	1

Estimated Water Savings

Annual Estimated Water Production without Savings	1,296,356,498	gallons/yr
Estimated Water Production over Planning Period without Savings	12,963,564,981	gallons
Annual Estimated Savings Rate	1.00%	
Estimated Annual Water Savings	**12,963,565**	gallons/yr
Estimated Savings over Planning Period	**129,635,650**	gallons

Notes:

Current system leakage/loss rate is estimated at 8%. 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 8%.

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	$50,000.00	
One Time Staff Costs	$0.00	
One Time Labor/Material Cost	**$50,000.00**	

Notes:

Estimated staff costs include research and selection of a new billing system as well as any transition to a new billing system. Estimate that Staff would spend approximately 80 hours at $50.00/hour, completing the search for billing software, training to understand and utilize that software to it's fullest extent.

Staff estimates that a new billing system would cost approximately $50,000.

Estimated Annual Cost	**$0.00**	/year
Estimated Total Cost over Planning Period Including Set-up	**$50,000.00**	
Cost per 1000 Gallons Saved	**$0.39**	

Leak Detection and Repair Program

This measure would include leak detection and repair for city water delivery infrastructure, master meter communities and mobile home parks.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Water Production without Savings	1,296,356,498	gallons/yr
Estimated Water Production over Planning Period without Savings	12,963,564,981	gallons
Annual Estimated Savings Rate	1.00%	
Estimated Annual Water Savings	**12,963,565**	gallons/yr
Estimated Savings over Planning Period	**129,635,650**	gallons

Notes:

Current system leakage/loss rate is estimated at 9%.

The estimated production (without savings) equals the projected water usage plus 9%.

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 (Leak Detection Consult)	$6,500.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$1,000.00	/year
Annual Labor	**$8,500.00**	/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	
Third Party Costs (Mapping of System)	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Third Party Costs include:
- Leak survey preformed annually by a consultant.

Annual staff costs include coordination with consultants.

Estimated Annual Cost	**$8,500.00**	/year
Estimated Total Cost over Planning Period Including Set-up	**$85,000.00**	
Cost per 1000 Gallons Saved	**$0.66**	

Sub-Meter Mobile Home Parks

All five of the City of Evan's mobile home parks are in the City's top ten water users category. Sub-metering these parks would help residents to conserve water.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	2

Estimated Water Savings

2007 Potable Commercial Water Usage	140,767,632	gallons/yr

Customer Category	Average Water Use gallons	*Estimated Annual Water Savings*
Cave Creek	31,079,075	621,581
Terrace Park	7,703,944	154,079
Green Acres	3,783,709	75,674
Aspen Meadows	3,101,081	62,022
Eastwood Village	8,289,053	165,781

Annual Estimated Savings Rate	2.00%	
Estimated Annual Water Savings	**1,079,137**	gallons/yr
Estimated Savings over Planning Period	**10,791,372**	gallons

Notes:

38% of the total potable Commercial water usage is used by the five City mobile home parks.

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	$150.00	/participant
Number of Participants	353	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$52,950.00**	/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	
Program set up	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Anticipate that there will be approximately 703 units that will require meters. The City can spread meter installation over a couple of years or as time is available.

The $150 unit cost includes meter testing, replacement costs, and labor.

Sub-Meter Mobile Home Parks

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$3,366.91** /year

Estimated Annual Cost	**$56,316.91**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$105,900.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$139,569.08**	
Cost per 1000 Gallons Saved	**$12.93**	

Leak Detection in Mobile Home Parks

All five of the City of Evan's mobile home parks are in the City's top ten water users category.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

2007 Potable Commercial Water Usage	140,767,632	gallons/yr

Customer Category	Average Water Use gallons	*Estimated Annual Water Savings*
Cave Creek	31,079,075	621,581
Terrace Park	7,703,944	154,079
Green Acres	3,783,709	75,674
Aspen Meadows	3,101,081	62,022
Eastwood Village	8,289,053	165,781

Annual Estimated Savings Rate	2.00%	
Estimated Annual Water Savings	**1,079,137**	gallons/yr
Estimated Savings over Planning Period	**10,791,372**	gallons

Notes:

38% of the total potable Commercial water usage is used by the five City mobile home parks.

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	$1,500.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$2,000.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	710	/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	
Program set up	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Third Party Costs include:
- Leak survey preformed annually by a consultant.

Annual staff costs include coordination with consultants and time for repairs.

Leak Detection in Mobile Home Parks

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$3,366.91** /year

Estimated Annual Cost	**$5,366.91**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$20,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$53,669.08**	
Cost per 1000 Gallons Saved	**$4.97**	

Meter Testing and Replacement Program

Existing meters are tested periodically for leaks and accuracy and are replaced as necessary. Faulty meters account for apparent losses, or losses due to meter inaccuracies, and real losses also known as physical losses.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Water Production without Savings	1,296,356,498	gallons/yr
Estimated Water Production over Planning Period without Savings	12,963,564,981	gallons
Annual Estimated Savings Rate	1.00%	
Estimated Annual Water Savings	**12,963,565**	gallons/yr
Estimated Savings over Planning Period	**129,635,650**	gallons

Notes:

Current system leakage/loss rate is estimated at 8%.

The estimated production (without savings) equals the projected water usage plus 8%.

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	$150.00	/participant
Number of Participants	775	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$116,250.00**	/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	
Program set up	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Anticipate that by 2018 there will be approximately 7,751 tap customers will need meter testing within the next ten year period. The City estimates that 1/10 of the average tap customer's taps will be tested and/or replaced in one year.

The $150 unit cost includes meter testing, replacement costs, and labor.

Estimated Annual Cost	**$116,250.00**	/year
Estimated Total Cost over Planning Period Including Set-up	**$1,162,500.00**	
Cost per 1000 Gallons Saved	**$8.97**	

Watering Restrictions - Existing Measure

The City, through Municipal Code, restricts the outdoor watering hours, between 12 noon and 5 pm, from mid-April through Mid-October. Municipal Code Section 13.04.200.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate 5.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Potable - Residential	229,150,923	11,457,546
Potable - Multi-Family	88,838,367	4,441,918
Potable - Commercial	77,435,608	3,871,780
Potable Irrigation	38,443,833	1,922,192
Non-Pot Commercial	14,110,131	705,507
Non-Potable - Residential	49,657,520	2,482,876
Non-Potable - Multi-Family	3,855,061	192,753

Estimated Annual Water Savings **25,074,572** gallons/yr

Estimated Savings over Planning Period **250,745,722** gallons

Notes:

Estimate that approximately 39% of total customer use is outdoor use.

Assume a conservative estimate of 5% savings of projected outdoor 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	$50.00	/year
Annual Labor	**$850.00**	/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 public notification costs (web, newspaper, bill stuffers, etc.).

Watering Restrictions - Existing Measure

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$96,265.50** /year

Estimated Annual Cost	**$97,115.50**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$8,500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$971,154.96**	
Cost per 1000 Gallons Saved	**$3.87**	

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. This is currently part of the City's general water conservation ordinance. The City may expand on the current ordinance and perhaps make soil amendment a requirement in order to obtain a new lawn watering variance.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	10.00%

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	68,429	226	1,547,027
Potable - Multi-Family	68,429	69	470,955
Potable - Irrigation	2,681,754	0	65,817
Non-Potable - Residential	68,429	16	108,663
Non-Potable - Multi-Family	863,505	0.1	9,386

Estimated Annual Water Savings	**2,201,849**	gallons/yr
Estimated Savings over Planning Period	**22,018,486**	gallons

Notes:

Outdoor usage for Potable Residential and Multi-family categories is estimated at 0.21 af/tap, which is the rate for Residential non-potable customer category.

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	311	/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	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all new development standards (8 total). Total annual labor for all development standards totals $6,000.

Soil Amendment Ordinance for New Landscapes

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$9,547.38** /year

Estimated Annual Cost	**$9,547.38**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$96,223.81**	
Cost per 1000 Gallons Saved	**$4.37**	

Water Waste Ordinance

While the City of Evans can expand on the current City ordinance restricting water waste.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate*	0.50%

Customer Category	Average Annual Water Use	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	587,566,468	2,937,832
Potable - Multi-Family	227,790,684	1,138,953
Potable - Commercial	198,552,842	992,764
Non-Potable - Residential	49,657,520	248,288

Estimated Annual Water Savings	**5,317,838**	gallons/yr
Estimated Savings over Planning Period	**53,178,376**	gallons

Notes:

Estimated savings is 1/2 %. This measure will only affect Residential, Multi-Family, and Potable Commercial water users.

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 Labor Costs	$750.00	
One Time Material Costs	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all new development standards (8 total). Total annual labor for all development standards totals $6,000.

Water Waste Ordinance

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$21,988.79** /year

Estimated Annual Cost	**$21,988.79**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$220,637.94**	
Cost per 1000 Gallons Saved	**$4.15**	

General Evaluation of Policies that Encourage Water Savings

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	1

Estimated Water Savings

Annual Estimated Savings Rate	0.10%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	587,566,468	587,566
Potable - Multi-Family	227,790,684	227,791
Potable - Commercial	198,552,842	198,553
Potable Irrigation	38,443,833	38,444
Potable - City	44,189,923	44,190
Non-Pot Commercial	14,110,131	14,110
Non-Potable - Residential	49,657,520	49,658
Non-Potable - City	15,517,950	15,518

Estimated Annual Water Savings	**1,175,829**	gallons/yr
Estimated Savings over Planning Period	**11,758,294**	gallons

Notes:

This measure can affect all customer categories. Assume a conservative reduction of 0.10% of projected total billed water each 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	
Number of Participants	0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time City Staff Labor	$6,000.00	
One Time Material Costs	$0.00	
One Time Labor/Material Cost	**$6,000.00**	

Notes:

Labor costs include estimated staff time for researching and evaluation of current policy. Also time for updating and expanding on current policy.

General Evaluation of Policies that Encourage Water Savings

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$4,544.09** /year

Estimated Annual Cost	**$4,544.09**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$6,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$10,544.09**	
Cost per 1000 Gallons Saved	**$0.90**	

Restrict High Water-Use Turf on Medians and in Parking Lot Plantings

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	5.00%

Customer Category	Outdoor Water Use Per Tap gallons	*Estimated Annual Water Savings gallons/yr*
Irrigation	38,443,833	1,922,192

Estimated Annual Water Savings	**1,922,192**	gallons/yr
Estimated Savings over Planning Period	**19,221,917**	gallons

Notes:

Median water uses are found predominately in the Irrigation water use category.

Estimate that approximately 5% of the total Irrigation category is used to water medians and parking lot plantings.

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	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all new development standards (8 total). Total annual labor for all development standards totals $6,000.

Restrict High Water-Use Turf on Medians and in Parking Lot Plantings

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$5,997.24** /year

Estimated Annual Cost	**$5,997.24**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$60,722.38**	
Cost per 1000 Gallons Saved	**$3.16**	

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

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	2.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Potable - Commercial	77,435,608	1,548,712
Potable Irrigation	38,443,833	768,877
Non-Pot Commercial	14,110,131	282,203

Estimated Annual Water Savings	**2,599,791**	gallons/yr
Estimated Savings over Planning Period	**25,997,915**	gallons

Notes:

Estimate that approximately 39% of total customer use is outdoor use.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	34	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$1,700.00	
Estimated Inspection Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$1,700.00**	/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	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all new development standards (8 total). Total annual labor for all development standards totals $6,000.

Annual cost includes a cost for inspection. Inspections may be performed by a third party.

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

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings	**$7,758.60**	/year

Estimated Annual Cost	**$9,458.60**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$17,750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$95,335.96**	
Cost per 1000 Gallons Saved	**$3.67**	

Restrictive Covenants Ordinance

A Restrictive Covenants Ordinance prohibits homeowner association's covenants from banning the use of Xeriscape or requiring a percentage of landscape area to be planted with turf.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate*	2.50%

Customer Category	Average Annual Water Use	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	229,150,923	5,728,773
Potable - Multi-Family	88,838,367	2,220,959
Non-Potable - Residential	49,657,520	1,241,438

Estimated Annual Water Savings	**9,191,170**	gallons/yr
Estimated Savings over Planning Period	**91,911,702**	gallons

Notes:

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

Estimate that approximately 39% of potable use is used outdoors.

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	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all new development standards (8 total). Total annual labor for all development standards totals $6,000.

Restrictive Covenants Ordinance

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$38,254.28** /year

Estimated Annual Cost	**$38,254.28**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$383,292.79**	
Cost per 1000 Gallons Saved	**$4.17**	

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	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	2.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	229,150,923	4,583,018
Potable - Multi-Family	88,838,367	1,776,767
Potable - Commercial	77,435,608	1,548,712
Potable Irrigation	38,443,833	768,877
Non-Pot Commercial	14,110,131	282,203
Non-Potable - Residential	49,657,520	993,150

Estimated Annual Water Savings	**9,952,728**	gallons/yr
Estimated Savings over Planning Period	**99,527,276**	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	$30,000.00	
One Time Labor/Material Cost	**$40,000.00**	

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 Rate Structure Changes

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$38,362.02** /year

Estimated Annual Cost	**$38,362.02**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$40,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$423,620.19**	
Cost per 1000 Gallons Saved	**$4.26**	

New Car Wash Standards (New Construction)

The amount of water used by car wash facilities depends primarily on the type of cleaning system used and whether its design includes reclamation. Car washes with reclaimed water systems can reduce water use by more than half.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Self Service Carwash Water Use*	15	gallons/vehicle
Stationary Automatic Carwash Water Use*	60	gallons/vehicle
Conveyor Carwash Water Use*	65	gallons/vehicle
Average Vehicles Washed per Year	9,125	/carwash/yr
Estimated Average Annual Carwash Facility Usage	310,250	gal/carwash
Carwash Reclamation/Recycle System Savings Rate*	50%	gallons/yr
Estimated Number of Future Carwash operations	3.5	
Estimated Annual Water Savings	**542,938**	gallons/yr
Estimated Savings over Planning Period	**5,429,375**	gallons

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

Notes:

The Carwash water use per vehicle does not include any water recycling systems.

Assumed that on average approximately 25 vehicles are cleaned at a single carwash each day.

Assume the 60% of vehicles use the self service, 20% use the Automatic Carwash, and 20% use the Conveyor washes.

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 (Labor/Consultant)	$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 City Staff Labor	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all development standards (8 total). Total annual labor for all development standards totals $6,000.

Annual cost include costs for inspection. Inspections may be performed by a third party.

New Car Wash Standards (New Construction)

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$1,693.97** /year

Estimated Annual Cost	**$2,693.97**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$10,750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$27,689.65**	
Cost per 1000 Gallons Saved	**$5.10**	

Irrigation System Standards for New Development

Boulder and Weld Counties encourage or require irrigation system standards within their building permit review process.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	2.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Potable - Residential	229,150,923	4,583,018
Potable - Multi-Family	88,838,367	1,776,767
Potable - Commercial	77,435,608	1,548,712
Potable Irrigation	38,443,833	768,877
Non-Pot Commercial	14,110,131	282,203
Non-Potable - Residential	49,657,520	993,150
Non-Potable - Multi-Family	3,855,061	77,101

Estimated Annual Water Savings	**10,029,829**	gallons/yr
Estimated Savings over Planning Period	**100,298,289**	gallons

Notes:

Estimate that approximately 39% of total customer use is outdoor use.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	330	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$16,500.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$16,500.00**	/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 City Staff Labor	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all development standards (8 total). Total annual labor for all development standards totals $6,000.

Annual cost include costs for inspection. Inspections may be performed by a third party.

Irrigation System Standards for New Development

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$38,506.20** /year

Estimated Annual Cost	**$55,006.20**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$165,750.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$550,811.98**	
Cost per 1000 Gallons Saved	**$5.49**	

10% of Lot Irrigation Restriction

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate: 10.00%

Customer Category	Outdoor Water Use Per Tap gallons/tap	New Taps added Annually	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	68,429	226	1,547,027
Potable - Multi-Family	68,429	69	470,955
Potable - Irrigation	2,681,754	0.25	65,817
Non-Potable - Residential	68,429	16	108,663

Estimated Annual Water Savings **2,192,462** gallons/yr

Estimated Savings over Planning Period **21,924,623** gallons

Notes:

This measure will only affect new residential, multi-family and potable irrigation categories. Outdoor usage for Potable Residential and Multi-family categories is estimated at 0.21 af/tap, which is the rate for Residential non-potable customer category.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	311	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$15,551.40	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$15,551.40**	/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	$750.00	
Rate Study performed by Consultants	$0.00	
One Time Labor/Material Cost	**$750.00**	

Notes:

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

Cost for one time program development are split between all development standards (8 total). Total annual labor for all development standards totals $6,000.

Annual cost include costs for inspection. Inspections may be performed by a third party.

10% of Lot Irrigation Restriction

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$9,529.83** /year

Estimated Annual Cost	**$25,081.23**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$156,264.03**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$251,562.31**	
Cost per 1000 Gallons Saved	**$11.47**	

Billing Statements that Encourage Water Savings

The City of Evans currently provides a billing statement that shows the past 12 months of water usage in graphical form.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	2.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Potable - Residential	587,566,468	11,751,329
Potable - Multi-Family	227,790,684	4,555,814
Potable - Commercial	198,552,842	3,971,057
Potable Irrigation	38,443,833	768,877
Non-Pot Commercial	14,110,131	282,203
Non-Potable - Residential	49,657,520	993,150

Estimated Annual Water Savings	**22,322,430**	gallons/yr
Estimated Savings over Planning Period	**223,224,296**	gallons

Notes:

Estimated savings equals 2%.

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 (Website updates, etc.)	$0.00	/year
Annual Labor	**$100.00**	/year
Materials Costs		
Unit Cost (cost of Bill Stuffers)	$0.00	/participant
Number of Participants	5,586	/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	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Staff hours are estimated to be minimal. The City may be able to expand on this program in the future.

Billing Statements that Encourage Water Savings

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$90,881.79** /year

Estimated Annual Cost	**$90,981.79**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$1,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$909,817.89**	
Cost per 1000 Gallons Saved	**$4.08**	

Designated Water Conservation Officer

The City of Evans currently hires a summer intern to assist with the summer water conservation activities.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	2.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Potable - Residential	587,566,468	11,751,329
Potable - Multi-Family	227,790,684	4,555,814
Potable - Commercial	198,552,842	3,971,057
Potable Irrigation	38,443,833	768,877
Potable - City	44,189,923	883,798
Non-Pot Commercial	14,110,131	282,203
Non-Potable - Residential	49,657,520	993,150
Non-Potable - Multi-Family	3,855,061	77,101
Non-Potable - City	15,517,950	310,359

Estimated Annual Water Savings	**23,593,688**	gallons/yr
Estimated Savings over Planning Period	**235,936,883**	gallons

Notes:

This measure is estimated to affect projected water usage for all customer categories.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	450	/year
Hourly Cost	$15.00	/hour
Annual Staff Costs	$6,750.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Website updates, etc.)	$0.00	/year
Annual Labor	**$6,750.00**	/year
Materials Costs		
Unit Cost (cost of Bill Stuffers)	$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	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Staff hours are estimated for a summer internship position. Intern will work approximately 15 weeks at about 30 hours per week.

Designated Water Conservation Officer

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$91,025.97** /year

Estimated Annual Cost	**$97,775.97**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$67,500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$977,759.69**	
Cost per 1000 Gallons Saved	**$4.14**	

Children's Water Festival

The City of Evans currently partners with the City of Greeley and NCWCD on Children's Water Festivals.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate*	0.50%

Customer Category	Average Annual Water Use	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	587,566,468	2,937,832
Potable - Multi-Family	227,790,684	1,138,953
Non-Potable - Residential	49,657,520	248,288

Estimated Annual Water Savings	**4,325,073**	gallons/yr
Estimated Savings over Planning Period	**43,250,734**	gallons

Notes:

This measure only affects Projected Residential water usage.

Assume 0.5% savings of projected Residential 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		
One time material cost	$0.00	
ion Program Set Up (May be completed by 3rd party)	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Staff hours include time participating in Water Festivals.

Material costs may include an annual budget for education materials costs.

Children's Water Festival

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$18,891.37** /year

Estimated Annual Cost	**$20,191.37**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$13,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$201,913.69**	
Cost per 1000 Gallons Saved	**$4.67**	

Post or Distribute ET Irrigation Scheduling

ET irrigation schedules using historical averages of weather data can be prepared by the City 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	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate: 2.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Potable - Residential	229,150,923	4,583,018
Potable - Multi-Family	88,838,367	1,776,767
Potable - Commercial	77,435,608	1,548,712
Potable Irrigation	38,443,833	768,877
Non-Pot Commercial	14,110,131	282,203
Non-Potable - Residential	49,657,520	993,150
Non-Potable - Multi-Family	3,855,061	77,101

Estimated Annual Water Savings **10,029,829** gallons/yr

Estimated Savings over Planning Period **100,298,289** gallons

Notes:

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

Estimate that approximately 39% 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	9,000	/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	$600.00	
One Time Labor/Material Cost	**$600.00**	

Notes:

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

Over the planning period, there are projected to be an average of 9,000 affected tap accounts each year.

Website setup costs are split between this measure, the website water use calculator measure, and post business, industrial, and public BMPs on website or as bill stuffer measure.

Post or Distribute ET Irrigation Scheduling

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$38,506.20** /year

Estimated Annual Cost	**$39,006.20**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$5,600.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$390,661.98**	
Cost per 1000 Gallons Saved	**$3.90**	

Water Conservation Website Upgrades

This measure includes general website upgrades that include customer surveys, EPA Water Sense Program Promotion, Car Wash BMPs, Hospitality Industry BMPs, Restaurant BMPs, and putting a residential water use calculator on a website.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	0.50%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings*
Potable - Residential	587,566,468	2,937,832
Potable - Multi-Family	227,790,684	1,138,953
Potable - Commercial	198,552,842	992,764
Non-Pot Commercial	14,110,131	70,551
Non-Potable - Residential	49,657,520	248,288

Estimated Annual Water Savings	**5,388,388**	gallons/yr
Estimated Savings over Planning Period	**53,883,882**	gallons

Notes:

This measure affects projected water usage for the residential, multi-family, and commercial customer categories.

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.)	$0.00	/year
Annual Labor	**$400.00**	/year
Materials Costs		
Unit Cost (cost of Bill Stuffers)	$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	$2,500.00	
One Time Labor/Material Cost	**$2,500.00**	

Notes:

Annual staff hours include website promotion and annual maintenance.

For one time labor costs, we estimate that it will take approximately 40 water staff hours to determine website content/information and approximately 40 hours for web staff to complete upgrades, etc.

Water Conservation Website Upgrades

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$22,120.72** /year

Estimated Annual Cost	**$22,520.72**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$6,500.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$227,707.24**	
Cost per 1000 Gallons Saved	**$4.23**	

School Education Program

This measure includes partnering with the City of Greeley for School Education and other educational activities.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate* 0.50%

Customer Category	Average Annual Water Use	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	587,566,468	2,937,832
Potable - Multi-Family	227,790,684	1,138,953
Non-Potable - Residential	49,657,520	248,288

Estimated Annual Water Savings **4,325,073** gallons/yr

Estimated Savings over Planning Period **43,250,734** gallons

Notes:

This measure only affects Projected Residential and Multi-Family water usage.

Estimate that approximately 39% of potable use is used outdoors.

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 (Website updates, etc.)	$0.00	/year
Annual Labor	**$1,000.00**	/year
Materials Costs		
Annual Materials Budget	$1,000	/year
Annual Materials	**$1,000.00**	/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	$0.00	
on Program Set Up (May be completed by 3rd party)	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Staff hours include time spent coordinating education opportunities with the City of Greeley and ordering and preparing educational materials.

Material costs include an annual budget for education materials costs.

School Education Program

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$18,891.37** /year

Estimated Annual Cost	**$20,891.37**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$20,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$208,913.69**	
Cost per 1000 Gallons Saved	**$4.83**	

Public Education - bill stuffers and website

Water providers may periodically provide customers with water conservation tips in water bills, on their website, and at the front desk of their office.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate*	1.00%

Customer Category	Average Annual Water Use	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	587,566,468	5,875,665
Potable - Multi-Family	227,790,684	2,277,907
Non-Potable - Residential	49,657,520	496,575

Estimated Annual Water Savings	**8,650,147**	gallons/yr
Estimated Savings over Planning Period	**86,501,467**	gallons

Notes:

This measure only affects Projected Residential water usage.

Estimated saving for bill stuffers and website education is 1%.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	40	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$2,000.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Website updates, etc.)	$100.00	/year
Annual Labor	**$2,100.00**	/year
Materials Costs		
Unit Cost (cost of Bill Stuffers)	$0.75	/participant
Number of Participants	8,771	/year
Gallons Saved per Unit per Year	0	gallons
Annual Materials	**$6,578.25**	/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	
Water Conservation Website Set Up	$2,000.00	
One Time Labor/Material Cost	**$2,000.00**	

Notes:

Staff hours include time spent preparing and updating website, and preparing bill stuffers.

Over the planning period, there are projected to be an average of 8,771 Residential tap accounts each year.

The AWWA has bill stuffers available for purchase. Average cost per bill stuffer ranged from $0.50 to $0.75 per item.

The City may also purchase bi-lingual bill stuffers and offer bi-lingual information on their website.

Public Education - bill stuffers and website

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings **$37,782.74** /year

Estimated Annual Cost	**$46,460.99**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$88,782.50**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$466,609.89**	
Cost per 1000 Gallons Saved	**$5.39**	

Xeriscape Programs - Partner with City of Greeley

This measure includes expanding the City's existing Xeriscape program and possibly partnering with the City of Greeley for Xeriscape classes and other educational activities.

Planning Period	2009 to 2018
	10
Program Length	10

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*
Potable - Residential	68,429	50	68,429
Potable - Multi-Family	68,429	25	34,214
Potable Irrigation	2,681,754	5	268,175
Non-Pot Commercial	3,509,415	5	350,942
Non-Potable - Residential	68,429	15	20,529

Estimated Annual Water Savings **742,289** gallons/yr

Estimated Savings over Planning Period **7,422,886** gallons

Notes:

This measure will impact the outdoor usage for Potable Residential and Multi-Family categories is estimated at 0.21 af/tap, which is the rate for Residential non-potable customer category.

Estimated Water Use is based on the following 2003-2008 average:
Potable Residential = 0.21 af/tap
Potable Multi-Family = 0.21af/tap
Potable Irrigation = 8.23 af/tap
Non-Pot Commercial = 10.77 af/tap
Non-Pot. Residential = 0.21 af/tap
Non-Pot. Multi-Family = 2.65 af/tap

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	40	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$2,000.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$2,000.00**	/year
Materials Costs		
Number of Participants	100	/year
Material Cost per Participant	$25.00	/ participant
Annual Materials Budget	$2,500	/year
Annual Plant Material Costs	$1,000	
Annual Materials	**$3,500.00**	/year
Rebates		
Rebate Cost	$0.00	
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$2,000.00	
Third Party Costs	$0.00	
One Time Labor/Material Cost	**$2,000.00**	

Notes:

Cost includes any costs associated with partnering on classes with the City of Greeley and community outreach. Additionally, costs would include obtaining plant material and educational brochures ($2,000).

20 hours of staff time could be dedicated to City demonstration garden maintenance and expansion.

Xeriscape Programs - Partner with City of Greeley

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings	**$1,995.30**	/year

Estimated Annual Cost	**$7,495.30**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$57,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$76,953.03**	
Cost per 1000 Gallons Saved	**$10.37**	

Property Manager/HOA Education and Training

This measure includes a seminar style training provided to large property managers and HOAs.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	1.00%

Customer Category	Average Outdoor Water Use gallons	*Estimated Annual Water Savings gallons/yr*
Potable - Commercial	77,435,608	774,356
Potable Irrigation	38,443,833	384,438
Non-Pot Commercial	14,110,131	141,101

Estimated Annual Water Savings	**1,299,896**	gallons/yr
Estimated Savings over Planning Period	**12,998,957**	gallons

Notes:

This measure affects projected Commercial and Irrigation customer categories.

Estimate that approximately 39% of potable use is used outdoors.

Costs

Total Cost to Water Provider

Labor Costs		
Staff Hours	40	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$2,000.00	
Third Party Costs	$0.00	/year
Evaluation and Follow-up Costs (Labor/Consultant)	$0.00	/year
Annual Labor	**$2,000.00**	/year
Materials Costs		
Number of Participants	25	/year
Material Cost per Participant	$25.00	/ participant
Annual Materials Budget	$625	/year
Annual Materials	**$625.00**	/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 seminar preparation and instruction.

Material budget is approximately $25 per class participant. With an estimated seminar attendance size of 25 participants.

There may be an opportunity to team with the City of Greeley.

Property Manager/HOA Education and Training

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Annual Revenue Loss Related to Water Savings	**$3,879.30**	/year

Estimated Annual Cost	**$6,504.30**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$26,250.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$65,042.98**	
Cost per 1000 Gallons Saved	**$5.00**	

Distribute Pre-Rinse Spray Heads to Restaurants & Institutions

Pre-rinse spray heads can be found in most restaurants and institutions. Old pre-rinse spray heads use up to 3 gpm. New spray-head technology is available that only uses 1.4 gpm.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Commercial Water Use Per Tap without Savings

Potable Commercial	967,777	gallons/tap
Gallons Saved per Business Tap per Year	967,777	gallons/yr
Operating Hours per Day	5	hours/day
Operating Days per Year	260	days/yr
Non-water saving pre-rinse spray head water flow rate	3	gpm
Low-Flow pre-rinse spray valves water flow rate*	1.6	gpm
Non-Water saving pre-rinse spray head water flow rate	234,000	gallons/yr
Low-Flow pre-rinse spray valves water flow rate	124,800	gallons/yr
Gallons Saved per spray head per year	109,200	gallons/yr
Annual Program Participants	12	/year
Maximum No. of Participants over Planning Period	120	
Estimated Annual Water Savings	**1,310,400**	gallons/yr
Estimated Savings over Planning Period	**72,072,000**	gallons

**Based on Western Regional Power Administration's Pre-Rinse Valve Fact Sheet, November 2005. http://www.wapa.gov/ES/pubs/fctsheet/PreRinseValves.pdf*

Notes:

Estimated Water Use is based on a 2.97 AF/tap use. This is the average tap use for 2003 through 2008.

Average savings per low-flow spray head is 1.4 gpm.*

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	32	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$1,600.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$1,600.00**	/year
Materials Costs		
Unit Cost	$100.00	/participant
Number of Participants	12	/year
Gallons Saved per Unit per Year	109,200	gallons
Annual Materials	**$1,200.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	12	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Labor Cost	$200.00	
One Time Labor/Material Cost	**$200.00**	

Notes:

Cost includes 2 hours of spray head installation for each participant and time for ordering spray heads and measure development.

New sprayheads costs about $100.00 per unit.

This is not a rebate program.

Distribute Pre-Rinse Spray Heads to Restaurants & Institutions

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$83,035.31	/year
Estimated Average Annual Revenue with Water Savings	$73,665.95	/year
Annual Revenue Loss Related to Water Savings	**$9,369.36**	/year

Estimated Annual Cost	**$12,169.36**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$28,200.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$121,893.60**	
Cost per 1000 Gallons Saved	**$1.69**	

Irrigation System Efficiency Device Rebates

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

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate 5.00%

Customer Category	Outdoor Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Potable - Residential	68,429	50.0	171,072
Potable - Multi-Family	68,429	25.0	85,536
Potable - Irrigation	2,681,754	2.0	268,175
Non-Potable - Residential	68,429	50.0	171,072

Estimated Annual Water Savings **695,855** gallons/yr

Estimated Savings over Planning Period **38,272,015** gallons

Notes:

Outdoor usage for Potable Residential and Multi-family categories is estimated at 0.21 af/tap, which is the rate for Residential non-potable customer category.

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 audit participants for each given year.

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

Labor Costs		
Staff Hours	12.5	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$625.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$625.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	127	/year
Gallons Saved per Unit per Year	Varies	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$25.00	
Number of Participants	127	/year
Annual Rebate Cost	**$3,175.00**	/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:

Costs include annual staff time to work with residents on rebate program. The one time labor costs include time to develop this program.

The City may offer residents $25.00 per irrigation system device, limit 1 device per household.

Annual program participants will total approximately 127 people per year (see table above for specific participants per customer category.

Irrigation System Efficiency Device Rebates

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$254,812.58	/year
Estimated Average Annual Revenue with Water Savings	$242,071.95	/year
Annual Revenue Loss Related to Water Savings	**$12,740.63**	/year

Estimated Annual Cost	**$16,540.63**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$38,400.00**	
Revenue	**$165,806.29**	
Cost per 1000 Gallons Saved	**$4.33**	

Commercial Customer Category Toilet Rebate

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Commercial Water Use Per Tap without Savings

Potable - Commercial	967,777	gallons/tap
Gallons Used per Commercial Tap per Year	967,777	gallons/yr
Saving Per day with a commercial low flow toilet*	25	gpd
Gallons Saved per toilet per Year	9,125	gallons/yr
Annual Number of Commercial Toilets Replaced	30	/year
Maximum No. of Toilets over Planning Period	300	
Estimated Annual Water Savings	**273,750**	gallons/yr
Estimated Savings over Planning Period	**15,056,250**	gallons

**Based on "Handbook of Water Use and Conservation" by Amy Vickers - analysis of water billing records for non-residential sites in the Metropolitan Water District of Southern California*

Notes:

Estimated Water Use is based on a 2.97 AF/tap use. This is the average tap use for 2003 through 2008.

Average savings per toilet for commercial accounts is 25 gpd.*

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	12.5	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$625.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$625.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	30	/year
Gallons Saved per Unit per Year	9,125	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$50.00	
Number of Participants	30	/year
Annual Rebate Cost	**$1,500.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Labor Cost	$200.00	
One Time Labor/Material Cost	**$200.00**	

Notes:

Staff hours include time for program set up (1x cost) and annual staff hours for program implementation.

The City may offer $50.00 for each high flow toilet replaced with a low-flow toilet. Old toilets cannot be resold.

Commercial Customer Category Toilet Rebate

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$415,176.53	/year
Estimated Average Annual Revenue with Water Savings	$411,261.91	/year
Annual Revenue Loss Related to Water Savings	**$3,914.63**	/year

Estimated Annual Cost	**$6,039.63**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$21,450.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$60,596.25**	
Cost per 1000 Gallons Saved	**$4.02**	

Residential Low-Flow Toilet Rebate

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Residential Water Use Per Tap without Savings

Potable - Residential	104,272	gallons/tap
Potable - Multi-Family	110,789	
Total	215,062	gallons/tap
People per Household	2.76	
Average Flushes per Household*	5.1	flushes
Saving Per Flush with a low flow toilet (1.6 gal/flush)	2.4	gallons/flush
Gallons Saved per Household per Year	12,331	gallons/yr
Annual Program Participants	25	/year
Maximum No. of Participants over Planning Period	250	
Estimated Annual Water Savings	**308,264**	gallons/yr
Estimated Savings over Planning Period	**16,954,542**	gallons

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

Notes:

Estimated Water Use is based on the following 2003-2008 average: Potable Residential = 0.32 af/tap Potable Multi-Family = 0.34 af/tap

*Savings based on 5.1 flushes per person per day *. Saving 2.4 gal per flush (4.0 gal ave flush rate - 1.6 gal conservation flush rate1) and 2.7 people per household.*

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	12.5	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$625.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$625.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	25	/year
Gallons Saved per Unit per Year	12,331	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$50.00	
Number of Participants	25	/year
Annual Rebate Cost	**$1,250.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Labor Cost	$200.00	
One Time Labor/Material Cost	**$200.00**	

Notes:

Staff hours include time for program set up (1x cost) and annual staff hours for program implementation.

Residential Low-Flow Toilet Rebate

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$133,660.82	/year
Estimated Average Annual Revenue with Water Savings	$125,997.37	/year
Annual Revenue Loss Related to Water Savings	**$7,663.45**	/year

Estimated Annual Cost	**$9,538.45**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$18,950.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$95,584.53**	
Cost per 1000 Gallons Saved	**$5.64**	

High Efficiency Clothes Washer Rebate

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Residential Water Use Per Tap without Savings

Potable - Residential	104,272	gallons/tap
Potable - Multi-Family	110,789	gallons/tap
Total	215,062	gallons/tap
People per Household	2.76	
Laundry loads per person per day*	0.37	
Saving Per Load with a high efficiency washer	16	gallons/load
Gallons Saved per Household per Year	5,964	gallons/yr
Annual Program Participants	25	/year
Maximum No. of Participants over Planning Period	250	
Estimated Annual Water Savings	**149,095**	gallons/yr
Estimated Savings over Planning Period	**8,200,236**	gallons

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

Notes:

Estimated Water Use is based on the following 2003-2008 average: Potable Residential = 0.32 af/tap Potable Multi-Family = 0.34 af/tap

*Savings based on 0.37 loads per person per day *. Saving 16 gal per load (43 gal/load avg. rate - 27 gal/load conservation rate*) and 2.7 people per household.*

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	12.5	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$625.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$625.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	25	/year
Gallons Saved per Unit per Year	5,964	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$100.00	
Number of Participants	25	/year
Annual Rebate Cost	**$2,500.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost	$0.00	
One Time Labor Cost	$200.00	
One Time Labor/Material Cost	**$200.00**	

Notes:

Staff hours include time for program set up (1x cost) and annual staff hours for program implementation.

High Efficiency Clothes Washer Rebate

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$133,660.82	/year
Estimated Average Annual Revenue with Water Savings	$129,954.32	/year
Annual Revenue Loss Related to Water Savings	**$3,706.51**	/year

Estimated Annual Cost	**$6,831.51**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$31,450.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$68,515.07**	
Cost per 1000 Gallons Saved	**$8.36**	

Residential Audit Kit

Self-guided residential audit kits can be designed to include items such as leak detection tablets, surveys, and sprinkler testing cones. 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	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Residential Water Use Per Tap without Savings

Potable Residential	104,272	gallons/tap
Potable Multi-Family	110,789	gallons/tap
Non-Potable Residential	68,429	gallons/tap
Total	283,490	gallons/tap

Annual Estimated Savings Rate	3.00%	
Annual Program Participants	250	/year
Maximum No. of Participants over Planning Period	2500	

Annual Estimated Residential Water Use Per Tap with Savings

Estimated Annual Water Savings	**2,126,178**	gallons/yr
Estimated Savings over Planning Period	**116,939,778**	gallons

Notes:

Estimated Water Use is based on the following 2003-2008 average:
Potable Residential = 0.32 af/tap Potable Multi-Family = 0.34 af/tap
Non-Pot. Residential = 0.21 af/tap
Non-Pot. Multi-Family = 2.65 af/tap

Estimate that by 2018, 20% of residential accounts will have participated (approx. 2,500). Assume annual participation of 250 and 3% savings of average household use.

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.)	16	/year
Hourly Cost	$50.00	/hour
Annual Staff Costs	$800.00	
Evaluation and Follow up Costs	$0.00	/year
Annual Labor	**$800.00**	/year
Materials Costs		
Unit Cost	$0.00	/participant
Number of Participants	250	/year
Gallons Saved per Unit per Year	8,505	gallons
Annual Materials	**$0.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	250	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Materials Cost (Bulk Purchase of 2500 Audit Kits)	$14,975.00	
Water Audit Website Set Up	$400.00	
One Time Labor/Material Cost	**$15,375.00**	

Notes:

Online instruction can be set up on City Website.

Residential audit kits are available at wholesalers like AM Conservation Group, Inc. for $5.99 per unit for a bulk purchase of 1800 to 3000 units. Kits can be customized to include the City of Evan's logo.

Residential Audit Kit

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	$1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$378,138.88	/year
Estimated Average Annual Revenue with Water Savings	$366,794.72	/year
Annual Revenue Loss Related to Water Savings	**$11,344.17**	/year

Estimated Annual Cost	**$12,144.17**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$23,375.00**	
Revenue	**$136,816.67**	
Cost per 1000 Gallons Saved	**$1.17**	

Commercial Water Audits

Commercial and Industrial customers are often the highest water users and have been an area of increasing focus for water conservation. Commercial and Industrial customers who participate in a water audit could identify ways to reduce their operating costs over the long term. Water audits can be performed by a third party consultant and is an effective way to educate businesses on how they can save water.

Planning Period	2009 to 2018
Years in Planning Period	10
Program Length	10

Estimated Water Savings

Annual Estimated Savings Rate	10.00%

Customer Category	Water Use Per Tap gallons/tap	Annual Program Participants	*Estimated Annual Water Savings gallons/yr*
Potable - Commercial	967,777	10.0	967,777
Non-potable - Commercial	3,509,415	2.0	701,883

Estimated Annual Water Savings	**1,669,661**	gallons/yr
Estimated Savings over Planning Period	**91,831,329**	gallons

Notes:

Estimated Water Use is based on a 2.97 AF/tap use for Potable Commercial taps and 10.77 AF/tap for Non-Potable Commercial taps. This is the average tap use for 2003 through 2008.

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. For example, in the first year of the program, there are 20 participants. In the second year of the program, there are water savings from the 20 participants from last year's program, and new participants thereby compounding the savings.

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	$100.00	/year
Annual Labor	**$500.00**	/year
Materials Costs		
Unit Cost	$300.00	/participant
Number of Participants	12	/year
Gallons Saved per Unit per Year	139,138	gallons
Annual Materials	**$3,600.00**	/year
Rebates		
Rebate Cost	$0.00	
Number of Participants	12.0	/year
Annual Rebate Cost	**$0.00**	/year
One Time Labor and Material Costs		
One Time Program Training	$0.00	
One Time Labor Cost (program setup assistance through 3rd party)	$0.00	
One Time Labor/Material Cost	**$0.00**	

Notes:

Staff hours include time for coordination with third party consultants.

Consultants may be hired to perform audits at an average cost of approximately $300.00 per audit.

Commercial Water Audits

Water Rates (2008)

Rate Category	Current Rates (per 1000 gallons)
Average Residential and Multi-Family Rate - *Potable*	$4.52
Average Residential and Multi-Family Rate - *Non-Potable*	$1.87
Commercial - *Potable*	$3.12
Commercial - *Non-Potable*	1.87

Notes:

Average rates are shown for planning purposes only.

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

For revenue loss calculations. The number of taps participating from each group will be split evenly. For Example, if 250 total participate each year; each customer category will have 62.5 participants.

Estimated Average Annual Revenue without Water Savings	$238,259.29	/year
Estimated Average Annual Revenue with Water Savings	$214,433.36	/year
Annual Revenue Loss Related to Water Savings	**$23,825.93**	/year

Estimated Annual Cost	**$27,925.93**	/year
Estimated Cost over Planning Period not including Lost Revenue	**$41,000.00**	
Estimated Total Cost over Planning Period Including Set-up and Lost Revenue	**$279,259.29**	
Cost per 1000 Gallons Saved	**$3.04**	

APPENDIX B

Public-Review Process

Public Review Process

The City of Evans held its public-review period from February 8, 2009 through April 4, 2009. Notification was posted in the Greeley Tribune on February 8, 2009, announcing the review period and that a draft plan would be available for the public to review at the City's office. An announcement asking for public comments and draft plan was also posted on the City of Evans' website on February 8, 2009.

Affidavit of Publication

STATE OF COLORADO

ss.

County of Weld,

I, Jennifer Usher

of said County of Weld, being duly sworn, say that I am an advertising clerk of

THE TRIBUNE

that the same is a daily newspaper of general circulation and printed and published in the City of Greeley, in said county and state; that the notice or advertisement, of which the annexed is a true copy, (days): that the notice was published in the regular and entire issue of every number of said newspaper during the period and time of publication of said notice, and in the newspaper proper and not in a supplement thereof; that the first publication of said notice was contained in the, issue of the said newspaper - bearing date the Eighth day of February AD. 2009, and the last publication thereof: in the issue of said newspaper bearing date the Eighth day of February AD. 2009; that said The Tribune has been published continuously and uninterruptedly during the period of at least six months next prior to the first issue there of contained said notice or advertisement above referred to; that said newspaper has been admitted to the United States mails as second-class matter under the provisions of the Act of March 3, 1879, or any amendments thereof; and that said newspaper is a daily newspaper duly qualified for publishing legal notices and advertisements within the meaning of the laws of the State of Colorado.

February 8, 2009

Total Charges: $30.36

Jennifer Usher
Advertising Clerk

8th day of February 2009

My Commission Expires 06/14/2009

Notary Public

Barbera 970-310-0324

Water Conservation Plan Available for Input

The City of Evans has completed a draft Water Conservation Plan. The goal of the plan is to develop programs for efficient and sustainable water use. Evans has implemented a variety of water conservation measures over the last ten years including:

* Water Reuse System at the Wastewater Treatment Plant
* Bills that show water customers' water usage for the past 12 months, in graphical form.
* ET/rain sensors and a centralized computer to control the irrigation systems in City parks.
* A xeriscape program which includes demonstration gardens and public education.
* Participation in area Children's Water Festivals.
* Water savings ordinances
* A requirement for non-potable water systems in new development

Before finalizing the Water Conservation Plan, Evans welcomes input from its customers and will conduct a 60-day public review period beginning the date of this notice through Saturday, April 4, 2009. A complete draft copy will be kept at the Evans Community Complex located at 1100 37th Street for public review, Monday through Friday, between 8:00 am and 5:00 pm, and will also be posted on the web at www.cityofevans.org.

All written comments are due prior to 5:00 pm, Thursday, April 2, 2009 and can be dropped off or mailed to 1100 37th Street, Evans, CO 80620 Attn: Earl Smith, or emailed to esmith@ci.evans.co.us.

The Tribune
February 8, 2009

APPENDIX C

Evans City Council Adoption

CITY OF EVANS, COLORADO

RESOLUTION NO. 14-2009

APPROVING A WATER CONSERVATION PLAN AND AUTHORIZING STAFF TO SUBMIT SAID WATER CONSERVATION PLAN TO THE COLORADO WATER CONSERVATION BOARD FOR APPROVAL

WHEREAS, the City Council of the City of Evans is committed to water resource sustainability and water conservation; and

WHEREAS, the City is committed to do its part to preserve water for future generations; and

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

WHEREAS, the City Council of the City of Evans desires to approve a Water Conservation Plan and submit said Plan to the Colorado Water Conservation Board for approval; and

WHEREAS, the Colorado Water Conservation Board requires the City Council approval of the Water Conservation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF EVANS, COLORADO:

Section 1. That the City Council hereby approves the Water Conservation Plan prepared by Clearwater Solutions effective May 5, 2009.

Section 2. Evans Staff is hereby authorized and directed to submit said Water Conservation Plan to the Colorado Water Conservation Board for consideration of approval.

PASSED, APPROVED, AND ADOPTED at a regular meeting of the City Council of the City of Evans on this 5th day of May, 2009.

CITY OF EVANS, COLORADO

By: _____
Mayor

ATTEST:

_____
City Clerk

APPENDIX D

Public Comments and Response

The City of Evans has completed its 60-day public-review period for the Water Conservation Plan beginning on February 8, 2009 and ending on April 4, 2009. A public notice was posted in the Greeley Tribune and on the City of Evans website. No public comments were received on the Water Conservation Plan during the public comment period.