

EAST LARIMER COUNTY WATER DISTRICT

WATER CONSERVATION PLAN June 2007



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EXECUTIVE SUMMARY

East Larimer County Water District (ELCO) is a water provider in the Northern Colorado Front Range that faces the challenges of high growth and limited water supplies while striving to effectively meet its customer water demands. ELCO understands the importance of water conservation in sound water management and is committed to optimizing its water supplies and system through practical water conservation practices. The purpose of this Water Conservation Plan (WCP) is to guide ELCO in the water conservation planning process. It outlines water savings goals and develops a detailed strategy to achieve those goals over a ten-year planning period.

In 2006, ELCO delivered 3,729 acre feet of water to a population of 16,300. ELCO is experiencing a higher than average annual growth rate and projects a build-out population by 2030 of 47,000. Under the Colorado Revised Statute 37-60-126 prompted by the Water Conservation Act of 2004, water providers delivering over 2,000 acre feet are required to have a State-approved WCP on file with the Colorado Water Conservation Board (CWCB), Office of Water Conservation and Drought Planning. Any entity that seeks funding from CWCB or the Colorado Water Resources and Power Development Authority must have a State-approved WCP.

ELCO's water supplies consist of Colorado Big Thompson (C-BT) water and native Poudre River water. The native water requires changing its use through Water Court before it is available for ELCO's use. Some of the District's native water shares are currently in the Water Court process and will be available for use in approximately two years.

Current Conservation Measures and Programs

ELCO has had a conservation program in place since 1996. This program includes a conservation rate within its rate and annual allotment structure, education, distribution of indoor water conservation kits, leak detection and repair, and irrigation system audits. Newer measures implemented within the Fort Collins city limits and ELCO's water service area include a soil amendment ordinance, landscape and irrigation system standards and a designated water conservation officer. ELCO has measured water-use reductions from most of these measures and has collected valuable data for estimating and measuring future water savings.

Water Conservation Goals

Three customer categories were identified as high water use areas and were targeted for water conservation. The categories are Single Family, Non-Residential and Mobile Home Parks. Unaccounted-for Losses was an additional

area that we identified for potential water savings. Goals for each of these categories were established through the planning process with ELCO's Board and staff. These water savings goals are shown in the following table along with the current and projected water use. The savings shown is from the projected 2016 water use.

Table ES.1 – Water Conservation Goals

Categories:	2006 Taps	2006 Water Use	Use per Tap	2016 Taps	2016 Projected Water Use	Use per Tap	% Reduction	Reduction from 2016 Water Use	Area of focus
		ac-ft	ac-ft/tap		ac-ft	ac-ft/tap		ac-ft	
Single Family	4864	2,314	0.48	8,567	3,993	0.47	5%	200	Outdoor irrigation, rebates and increased effort of existing measures
Non-residential	484	643	1.33	784	2,232	2.85	5%	112	Irrigation taps, motels, other commercial
Mobile Homes	963	226	0.23	1,093	245	0.22	5%	12	Leak detection & sub-metering
Multi-family	144	108	0.75		485		0%	0	
Totals:		3,291			6,955			324	
Unaccounted for losses - reduce from 10% of production to 5%		497					50%	249	Leak detection program, WTP filter backwash reuse
								572	Total demand reduction:

A water savings goal was not established for the Multi-Family category at this time because ELCO's limited resources for water conservation are better spent in the other areas. The goals established focused on the areas that could be successfully impacted considering factors such as water savings potential, costs, control, and public acceptance.

Evaluation and Selection of Conservation Measures and Programs

A universal list of conservation measures and programs were compiled for consideration to achieve the water savings goals. This universal list was screened to determine which measures/programs would undergo a benefit-cost analysis. Screening criteria were established based on discussions with the Board and staff. Each measure and program was evaluated using the following criteria.

1. Staff and Board approval
2. Public acceptance
3. System limitations
4. Financial implications

Both supply-side and demand-side measures and programs were screened. The measures and programs were grouped into four major categories: Utility Maintenance, Regulatory Controls, Educational Programs, and Rebates and Incentives. The groupings helped to define the nature of each measure/program and which District staff

will be responsible for implementation. A final list of 33 measures/programs was evaluated. Table ES.2 shows the selected measures/programs with the existing measures and programs highlighted in green.

Table ES.2 – Selected List of Conservation Measures and Programs

Conservation Measure or Program	
Utility Maintenance Programs	
Supply side measures & programs	Leak Detection & Repair - 20% of system per year, whole system every 5 years
	Recycling filter backwash
	Meter testing and replacement
	Leak detection program in mobile home parks
	Water reuse system
Regulatory Controls	
Demand side measures & programs	Soil amendment and Landscape & Sprinkler system review ordinances for new residential in Ft.Collins GMA
	Soil amendment and Landscape & Sprinkler system review ordinances for new commercial in Ft.Collins GMA
	Temporary Irrigation taps for native landscaping
	Drought restrictions resolution
	Adding additional conservation charge tiers to rate structure and including allotment status on monthly water bill
	Xeriscape program for commercial
	Xeriscape program for open space (HOAs)
	Requiring wind and rain sensors for commercial and HOA open space irrigation
	Irrigation system audits for open space (HOAs)
	Sub-meter new mobile home parks or additions
Educational Programs	
	Public Education - New customer package, newsletter, bill stuffers
	Designated water conservation officer (through Fort Collins)
	Children's water festivals - given by NCWCD for Fort Collins elementary schools
	Send ET irrigation scheduling in May water bill
	Xeriscape demonstration site at pump station
	Voluntary lawn watering restrictions
Rebates and Incentives	
	Indoor Conservation kits
	Sprinkler system audit kits and instructions
	Rebate program for low-flow toilets
	Rebate program for high efficiency clothes washers
	Rebate program for wind and rain sensors for residential
	Rebate program for ET irrigation controllers
	Commercial water audits
	Residential water audits
	Distribute pre-rinse spray heads to restaurants & institutions
	Commercial toilet and urinal incentives
	Xeriscape program for residential
	Rebates for sub-meters in existing mobile home parks

Each of these measures/programs was analyzed to determine the benefit-cost for ELCO. As a result of the analysis, it was decided that all of the measures/programs will be implemented at some point during the ten-year planning period. ELCO's customer base has vastly varying needs and reasons for conserving water. Hence, ELCO wants its list of conservation measures and programs to be as far-reaching as practical, reaching the largest pool of its customers.

Based on our benefit-cost analysis, the implementation of the selected measures/programs within the WCP will result in the following reductions in water usage over the ten-year planning period. These results match well with the established water savings goals; however, the resulting Single Family category savings is higher than the established goal of 5% and will provide a factor of safety against the difficulty in predicting the participation in this category.

- Single Family: 8.0% or 318 acre feet.
- Non-residential: 5.5% or 123 acre feet.
- Mobile Home Parks: 5% or 12 acre feet.
- Unaccounted-for Losses: 48.4% reduction or 240 acre feet.

The estimated cost for water acquisition, considering plant investment fees, is \$56 per 1,000 gallons using native water supplies and \$68 per 1,000 gallons using C-BT. By 2016, the water savings is anticipated to be 1,000 acre feet from the current projected demands. The cost to acquire this water is approximately \$18.3 million. The anticipated revenue effects for water conservation, from cost of implementation and loss of revenue, for the ten-year planning period are \$3 million. This comparison clearly demonstrates the value of water conservation.

Implementation Plan

All of the proposed water conservation measures and programs will require staff resources for planning and coordination before implementation. This will require some strategy in implementing the most beneficial measures first. To create an implementation schedule, the selected measures/programs were grouped in the following categories:

- Existing
- High ranking
- Audit Program
- Xeriscape Program
- Rebate and Incentive Program
- Mobile Home Park Program

Implementation of the measures and programs were phased to account for budget and time constraints. Another consideration in the implementation schedule was CWCB approval of this plan. This WCP is scheduled for final submission to CWCB, after the 60-day public-review period, at the end of June 2007. CWCB by statute has up to 90

days to review the plan, which likely means approval in September 2007. It is only after final CWCB approval that ELCO will be eligible for a water-efficiency grant through CWCB for plan implementation.

Once grant monies are obtained, the Board will approve incremental parts of the plan based on available resources. The proposed schedule for implementation is shown in the following Table ES.3.

An effective monitoring and evaluation program will be necessary to determine the success of this WCP. Each of these measures/programs will be evaluated annually to monitor impacts related to projected revenue losses and water savings. CWCB requires this WCP be updated at least once every seven years. ELCO will update this plan prior to seven years if implementation and actual water savings deviate too much from this WCP.

Table ES.3 – Water Conservation Plan Implementation Schedule

Conservation Measure or Program	Action Required for Implementation	Factors that Could Cause Delay	Anticipated Implementation Date
Existing			
Leak Detection & Repair - 20% of system per year, whole system every 5 years	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Recycling filter backwash	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Meter testing and replacement	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Soil amendment and Landscape & Sprinkler system review ordinances for new residential in Ft. Collins GMA	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Soil amendment and Landscape & Sprinkler system review ordinances for new commercial in Ft.Collins GMA	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Temporary Irrigation taps for native landscaping	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Drought restrictions ordinance	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Public Education - New customer package, newsletter, bill stuffers	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Designated water conservation officer (through Fort Collins)	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
High Ranking			
Water reuse system (Rigden storage)	Incremental acquisition already approved	Construction delays and water court decision	6/1/2009

Adding additional conservation charge tiers to rate structure and including allotment status on monthly water bill	Board approval by 12/1/2007	Lack of funding available and limitations of software	5/1/2007
Send ET irrigation scheduling in May water bill	Board approval before 4/1/2008	Lack of staff time	5/1/2007
Voluntary lawn watering restrictions	Board approval by 12/1/2007	Lack of staff time	5/1/2007
Audit Program			
Irrigation system audits for open space (HOAs)	Already approved	Lack of funding available	5/1/2007
Commercial water audits	Board approval by 12/1/2007	Lack of funding available	4/1/2008
Residential irrigation water audits	Already approved	Lack of funding available	5/1/2007
Xeriscape Program			
Xeriscape demonstration site at pump station	Already approved	Lack of funding available	6/1/2007
Xeriscape program for commercial	Board approval by 2/1/2008	Lack of funding available	3/1/2008
Xeriscape program for open space (HOAs)	Board approval by 2/1/2008	Lack of funding available	3/1/2008
Xeriscape rebate/design program for residential	Board approval by 2/1/2008	Lack of funding available	3/1/2008
Rebate and Incentive Program			
Requiring wind and rain sensors for commercial and HOA open space irrigation	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Rebate program for wind and rain sensors for residential	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Rebate program for ET irrigation controllers	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Rebate program for low-flow toilets	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Rebate program for high efficiency clothes washers	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Distribute pre-rinse spray heads to restaurants & institutions	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Commercial toilet and urinal incentives	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Mobile Home Park Program			
Leak detection program in mobile home parks	Board approval by 1/1/2009	Lack of funding available	11/1/2009
Sub-meter new mobile home parks or additions	Board approval by 1/1/2009	Lack of funding available	11/1/2009
Rebates for sub-meters in existing mobile home parks	Board approval by 1/1/2009	Lack of funding available	11/1/2009

CHAPTER 1 - INTRODUCTION

Water conservation in the northern Front Range of Colorado is becoming an increasingly important part of sound water management and should be included as part of the water supply planning process. A meaningful and effective water conservation plan is a key component to accomplishing efficient water delivery obligations while minimizing system costs and protecting a valuable and limited resource. East Larimer County Water District (ELCO) understands this importance and is committed to optimizing its water supplies and system through practical water conservation practices. The purpose of this Water Conservation Plan is to guide ELCO in the process of water conservation planning and implementation.

ELCO was traditionally a rural water provider serving customers located north and east of the City of Fort Collins. In the past, the District served low-density rural subdivisions, dairies, farmsteads, mobile home parks, motels, rural residential acreages, industrial parks and two small wholesale water suppliers. Its proximity to the City of Fort Collins and growth in the area has changed the nature of ELCO. It is now more of an urban water provider serving low and medium-density subdivisions as well as more retail and service oriented commercial accounts. ELCO serves the Northern Colorado Water Association (NCWA) and the Sunset Water District through master meter taps. These wholesale accounts are responsible for acquiring their own raw water supplies, which they transfer to ELCO on an annual basis for treatment and delivery.

ELCO's 53 square mile service area and its vicinity to the City of Fort Collins is shown in Figure 3.1 Forty percent of ELCO's service area is in the Fort Collins Growth Management Area (GMA), which Fort Collins will develop according to its land use planning standards. ELCO will still provide water service in this portion of the GMA. The GMA is shown in Figure 3.2 along with the other water districts the vicinity. This dynamic and close proximity between the District and the City requires good communication and coordination for successful water conservation. This Water Conservation Plan considers joint measures and addresses coordination requirements as needed.

In 2006, ELCO delivered 3,729 acre feet of water to 16,300 people. ELCO is experiencing a higher than average annual growth rate of 3.8% and projects a build-out population in 2030 of 47,000 people. The projected water demand is over 12,000 acre feet. ELCO is one of three water districts that share ownership of the Soldier Canyon Filter Plant (SCFP), a regional water treatment facility. ELCO is in a position to participate in other cooperative water system projects, which lowers the incremental cost for all participants through economies of scale. By participating in joint projects, however, ELCO often finds itself in a position of accommodating system upgrade schedules of others. Project schedules are opportunity based and many times are driven by the needs of other participants.

That said, the participation and joint ownership of these projects has allowed ELCO to develop and maintain its system in a way it might not otherwise have been able to on its own.

As the population grows in the entire region, water supplies are becoming more valuable and difficult to attain. This alone provides a convincing impetus for water providers to implement water conservation planning. Additionally, under the Colorado Revised Statute 37-60-126 prompted by the Water Conservation Act of 2004, water providers delivering over 2,000 acre feet 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. Any entity that seeks funding from CWCB or the Colorado Water Resources and Power Development Authority must have a State-approved Water Conservation Plan.

CHAPTER 2 - DEFINITION OF TERMS

<i>Acre-foot:</i>	The amount of water it would take to cover one acre of land to a depth of one foot; approximately 325,851 gallons.
<i>BLI:</i>	Buildable Lands Inventory and Capacity Analysis completed by the City of Fort Collins, which is an inventory of vacant, partially vacant and re-developable land within its growth area.
<i>C-BT:</i>	Colorado Big Thompson Project
<i>C-BT Quota:</i>	The percentage set by the NCWCD Board of Directors each water year which determines the amount of acre feet per unit of C-BT, i.e. 70% quota equals 0.7 acre feet per C-BT unit.
<i>ET:</i>	Evapotranspiration is the rate at which water is removed from the soil by evaporation and from plant surfaces by transpiration.
<i>ET Controller:</i>	“Smart” technology that automatically controls the water application rate in a sprinkler system based on ET calculations using weather-collecting instrumentation.
<i>FCLWD:</i>	Fort Collins-Loveland Water District
<i>GPCD:</i>	Gallons per capita per day
<i>Maximum Day:</i>	The largest amount of water used in a single day.
<i>NCWA:</i>	Northern Colorado Water Association, an ELCO wholesale account.
<i>NCWCD:</i>	Northern Colorado Water Conservancy District
<i>Non-Potable Use:</i>	Water that is not treated and used for irrigation or other uses than potable.
<i>NPIC:</i>	North Poudre Irrigation Company

<i>NWCWD:</i>	North Weld County Water District
<i>Peak Hour:</i>	The largest amount of water used in a single hour – typically occurs on the Maximum Day.
<i>PIF:</i>	Plant Investment Fee, fee charged to developers for on-going maintenance cost of infrastructure replacement and repair.
<i>Potable Use:</i>	Water that is treated to drinking water standards for municipal use, including residential and commercial use.
<i>SCFP:</i>	Soldier Canyon Filter Plant
<i>Wind and Rain Sensor:</i>	A device that is connected to the irrigation system controller that will temporarily shut off irrigation application when a pre-determined amount rain or wind is detected.

CHAPTER 3 - PROFILE EXISTING WATER SYSTEM

Characteristics of ELCO Water Supply System

Background

ELCO provides drinking water to homes and businesses within a 53 square mile service area located north and east of Fort Collins, Colorado. The District was created by court decree in 1962 after voters in Larimer and Weld Counties approved formation of the District. ELCO Water District is a political subdivision of the State of Colorado. It is governed and operated in accordance with the Colorado Special Districts Act by a directly elected five-member Board. Figure 3.1 shows lands included within the District and its treatment plant, pump stations and treated water storage reservoirs.

The Anheuser-Busch brewery is located within the service area of the District, but it does not receive water from ELCO. The City of Fort Collins provides water service to the brewery.

At the end of 2006, ELCO was providing water service to a population of approximately 16,300. In 2006, the District delivered 3,729 acre feet to 5,500 customer accounts.

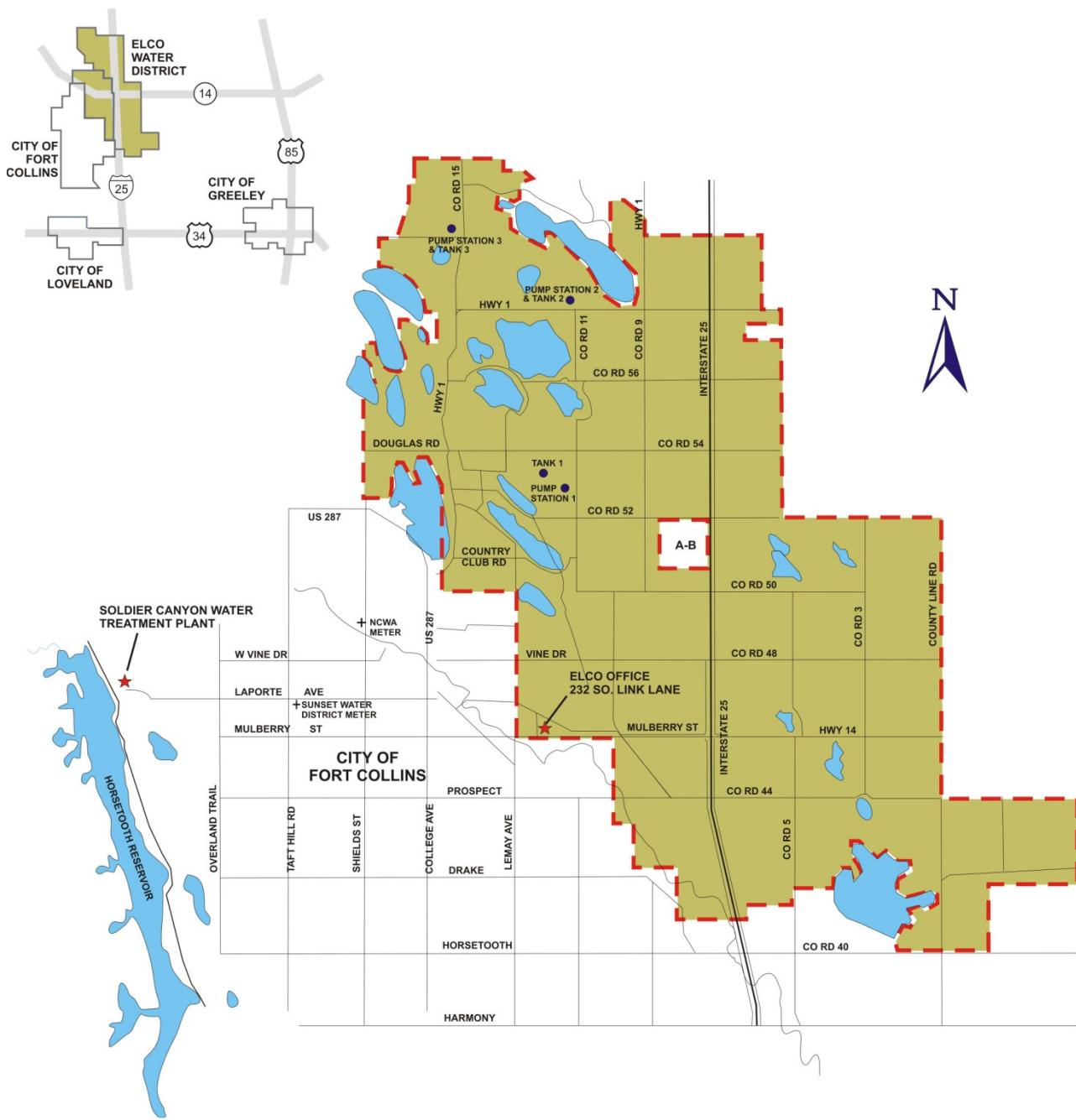
Transition from Rural to Urban Water Supplier

Until the mid 1990's, ELCO served primarily low-density rural subdivisions, dairies, farmsteads, mobile home parks, motels, rural residential acreages, industrial parks, and two small wholesale water suppliers. Originally, ELCO customers were in subdivisions approved by Larimer County and located primarily along the Colorado Highway 14 corridor between I-25 and the Fort Collins city limits. More recently, most of ELCO's new customers have been located in developments approved by the City rather than Larimer County.

Standards adopted by the City of Fort Collins create very different types of developments from those traditionally served by ELCO. In recent years, ELCO has issued water taps to Home Depot, Wal-Mart, and new homes in several large City-approved high-density residential developments. The minimum density currently allowed in new residential developments within the City of Fort Collins is an average of five dwelling units per acre.

At this time, approximately 40% of the 53 square miles served by the District are within the corporate boundaries of Fort Collins or within the City's GMA. The GMA was established by agreement between Larimer County and the City

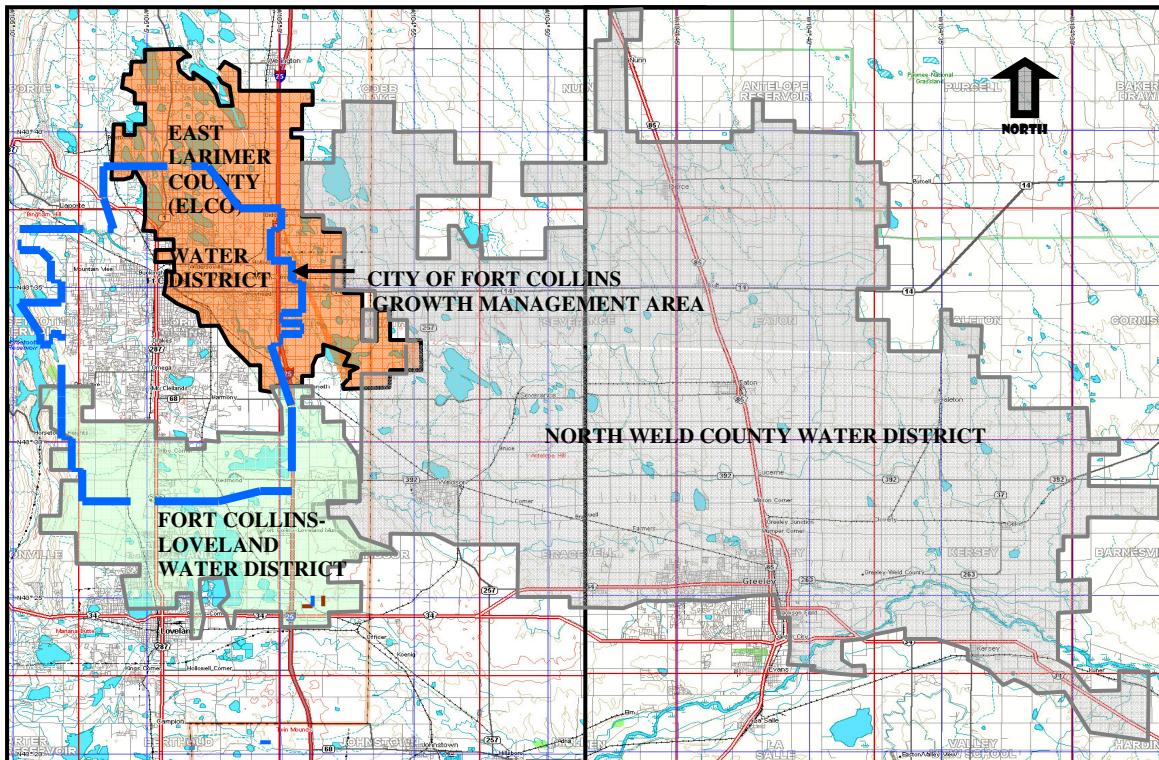
Figure 3.1 - ELCO Water District Included Lands



of Fort Collins in 1980. The two entities entered into an intergovernmental agreement that required all land within the GMA to be annexed into the City before development or, if not eligible for annexation, developed under the City's density and service level standards and annexed as soon as it became eligible. Larimer County has also entered into intergovernmental agreements with the towns of Wellington and Timnath, both of which plan to eventually annex lands which are within the service area of ELCO. Figure 3.2 shows ELCO's service area in relation to the Fort Collins GMA and the service areas of surrounding water districts.

It is projected that by the time the City is completely developed, 90% of the water provided by ELCO will be delivered to homes and businesses within the City of Fort Collins. For that reason, the City of Fort Collins has worked closely with ELCO and other water districts in the area to insure that new developments in annexed areas receive water service as efficiently and economically as possible.

Figure 3.2 - Service Areas of Special Districts Receiving Water from SCFP



Regional Cooperation

ELCO and other water suppliers in the region have worked cooperatively to provide high quality water service to residents of northern Colorado. Water providers in the Fort Collins area have created partnerships to jointly construct and operate a number of critical water facilities. The Pleasant Valley Pipeline, an eight mile long, 67" diameter raw water supply line is shared by ELCO, Fort Collins, Greeley and other water suppliers. ELCO is a partner with Fort Collins and other water suppliers in the purchase and development of gravel pits for raw water storage. The proposed enlargement of Halligan Reservoir is being sponsored by Fort Collins, but includes ELCO and several other project beneficiaries. Water is exchanged year round between the City's water treatment facility and the water treatment facility that supplies ELCO.

Partnerships between Fort Collins and ELCO insure the delivery of reliable and affordable water service to area residents. As the cost and complexity of developing

water systems in northern Colorado continues to increase, more cooperation between Fort Collins area water suppliers can be anticipated.

ELCO is one of three water districts that share ownership of the SCFP, a regional water treatment facility. SCFP provides treated water to ELCO, North Weld County (NWCWD) and Fort Collins-Loveland Water Districts (FCLWD). Figure 3.2 shows the service area boundaries of the three Districts that own SCFP.

SCFP operates under an Amended Intergovernmental Agreement between the three Districts that own the plant. Executed in December, 1995, the Agreement establishes SCFP as a separate governmental entity created under the provisions of C.R.S. §29-1-203. The Agreement confirms an undivided one-third ownership in the facility by each District and establishes the method of payment for capital improvements and treated water. A Steering Committee consisting of two members from each District governs operations at the SCFP.

Through connections with the three Districts that own SCFP, water is also supplied through wholesale agreements to the Towns of Windsor, Timnath, Severance, Eaton, Ault, and Nunn. Through wholesale connections with ELCO, NCWA and Sunset Water District also receive water from SCFP.

Non-potable Irrigation

ELCO encourages installation of non-potable irrigation systems through its development fees and raw water dedication requirements. New developments that install a non-potable irrigation system designed by a registered professional engineer receive significant reductions in the raw water dedication requirements and plant investment fees (PIFs).

A number of homeowner's associations (HOAs) and individuals in ELCO's service area currently utilize a raw water source for landscape irrigation. A customer survey performed during the fall of 2004 asked customers what type of water they use to irrigate their landscaping. Of the 900 surveys mailed to customers, 582 were completed and returned (a response rate of 65%). Of the customers returning the survey, 12.9% indicated they obtained irrigation water from a well. Another 7.4% indicated they obtained irrigation water from a ditch, canal or lake.

The relatively high percentage of customers (20.3%) currently using raw water for irrigation is a reflection of the rural nature of development within ELCO's service area. Many individual lot owners in areas of high ground water have drilled their own wells. Large estate lots served by ELCO were usually created by subdividing farms that were irrigated with shares in the North Poudre Irrigation Company (NPIC) or high-capacity irrigation wells. It was standard practice in the past to transfer those water rights to individuals or an HOA to provide raw water for turf irrigation.

Customer Characteristics and Water Use

ELCO has five customer category accounts: 1) Single Family, 2) Multi-Family, 3) Mobile Home Parks, 4) Non-Residential, and 5) Wholesale. The Non-Residential customer category includes commercial users as well as irrigation-only taps for parks and open space areas. The two Wholesale accounts are NCWA and Sunset Water District.

Approximately 80,000 residents of northern Colorado currently receive drinking water from the SCFP. Table 3.1 shows that approximately 20% of those residents live within the boundaries of ELCO Water District.

Table 3.1 - Summary of ELCO Water District Customer Accounts, Population and Water Use in 2006

Customer Classification	# Accounts	# Dwelling Units	Estimated Population ¹	Metered Water Use (Acre Feet)	% of Total
Single Family	4,864	4,864	12,541	2,314	62%
Multi-Family	145	511	1,310	108	3%
Mobile Home Parks	14	963	2,485	226	6%
Non-Residential	484	N/A		643	17%
Wholesale ²	2	N/A		438	12%
Total	5,508	6,335	16,336	3,729	100%

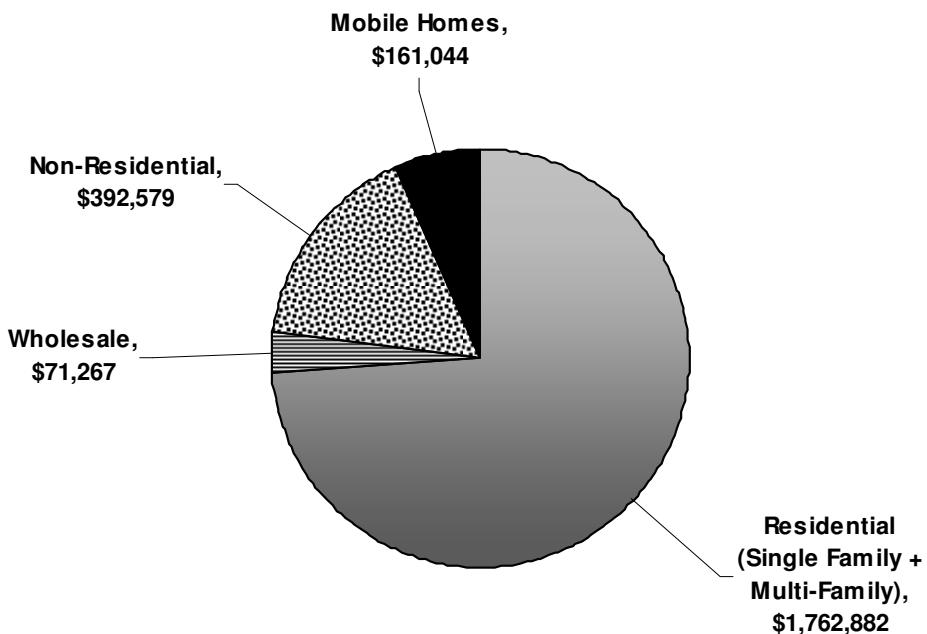
¹ From 2000 Census data: Household size within ELCO's service area is 2.58/housing unit.

² NCWA (385 acre feet) and Sunset Water District (54 acre feet)

Revenue from Metered Water Sales

In 2006, metered water sales for ELCO Water District totaled \$2,387,722. The amount of revenue collected from the four major customer categories served by ELCO is shown in Figure 3.3.

Figure 3.3 - Metered Water Sales by Customer Category in 2006

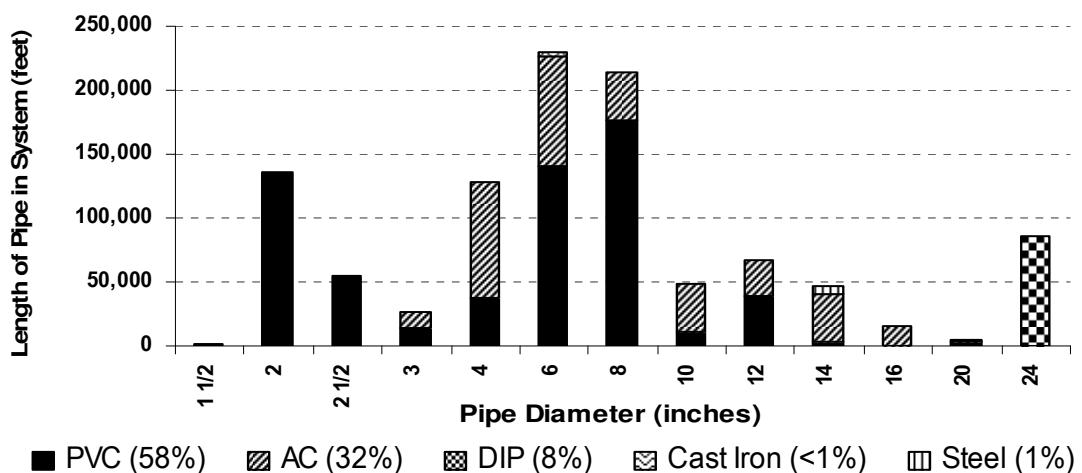


Transmission and Distribution System

The first water lines in the District were installed by a single contractor during 1962 and 1963. Most of the water lines installed at that time are still in use. At the end of 2006, ELCO was maintaining approximately 200 miles of water lines ranging from 1½" to 24" in diameter. The largest transmission line in the District was installed in 1979. It is a 16 mile long, 24" diameter ductile iron transmission line. Forty-two percent of the water lines within the District are either 6" or 8", most of which are located in residential developments.

Asbestos cement (AC) pipe was the most common type of pipe initially installed by the District. PVC became the material of choice in the mid 1980's and remains the preferred pipe material. Currently, ninety percent of the pipe maintained by ELCO is either AC (58%) or PVC (32%). The length and material of the different size pipes within the District is shown in Figure 3.4.

Figure 3.4 - Pipe Diameter, Length and Material within ELCO Transmission & Distribution System



District records indicate the average daily demand during 2006 was 3.8 million gallons per day (mgd). The peak daily demand in 2006 was 7.4 mgd and occurred on July 16th.

Sources of Water Supply

Colorado-Big Thompson (C-BT) Water

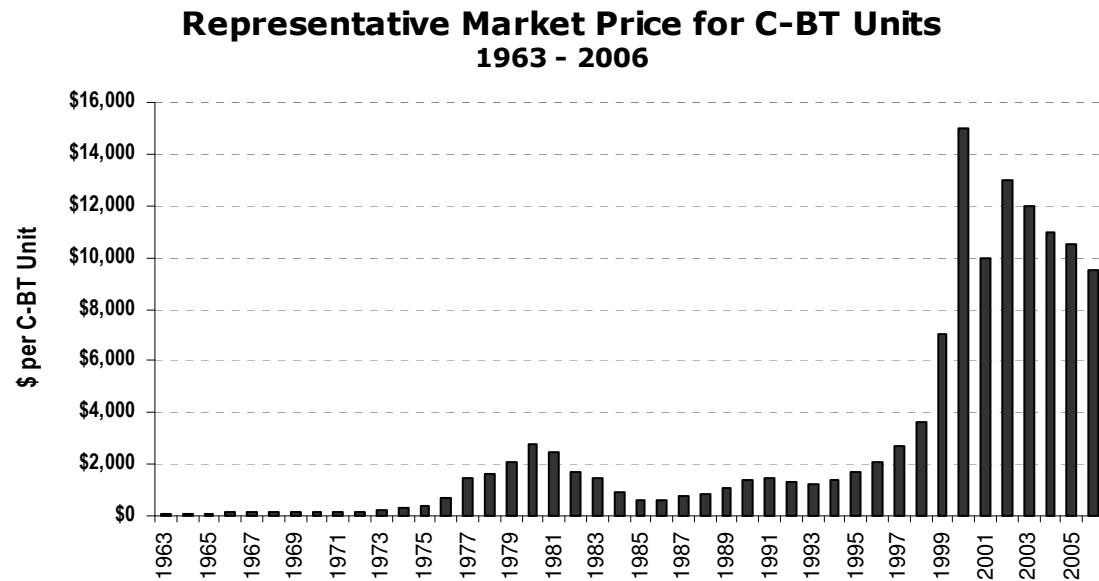
In 1962, when ELCO and other water districts in northern Colorado were created, most of water rights in the region's rivers and reservoirs had already been claimed. That water had been claimed in the 1860's and 1870's by irrigators and mutual ditch companies.

The only reliable and affordable source of water available to ELCO when it was created was from the Colorado-Big Thompson (C-BT) Project. C-BT facilities divert water from the western slope of Colorado to the Front Range to supplement the region's native water supply. It is the largest transmountain water diversion project in Colorado. It was constructed by the Bureau of Reclamation between 1938 and 1957 and imports an average of 213,000 acre feet of water each year to northeastern Colorado for agricultural, municipal and industrial uses.

C-BT Project facilities that serve multiple beneficiaries are still owned by the Bureau of Reclamation. Operation and management is performed under contract by the Northern Colorado Water Conservancy District (NCWCD).

In 1963, C-BT water could be purchased for \$100 per unit from farmers that felt they had more water than they could use. The current market price is approximately \$9,000 per unit. Figure 3.5 shows how the price of C-BT units has varied from 1963 to 2006.

Figure 3.5 – Price of C-BT Units



C-BT water can still be purchased from farmers and ditch companies, but it rarely represents a farmer's surplus water supply. It is usually sold to support continued agricultural operations, settle an estate or accommodate development of farmland.

The amount of water delivered to owners of C-BT allotment contracts appears to be counterintuitive since C-BT allottees receive less water in wet years than in dry years.

The yield of C-BT units is established each year by the Board of the NCWCD through what is known as the quota setting process. The guiding principle behind the quota setting process was established in legislation that created the NCWCD in 1937. That legislation is summarized as follows:

The Board shall make an allotment of water (...) to petitioning owners of lands, municipality or public corporations in the District, (...) and in such amount as will, in the judgment of the Board, together with the present supply of water for irrigation purposes on such lands or of such municipality or such public corporation (...), or when added to the present supply of capacity of all other works make an adequate supply for the irrigation of those lands or for such municipality or public corporation.

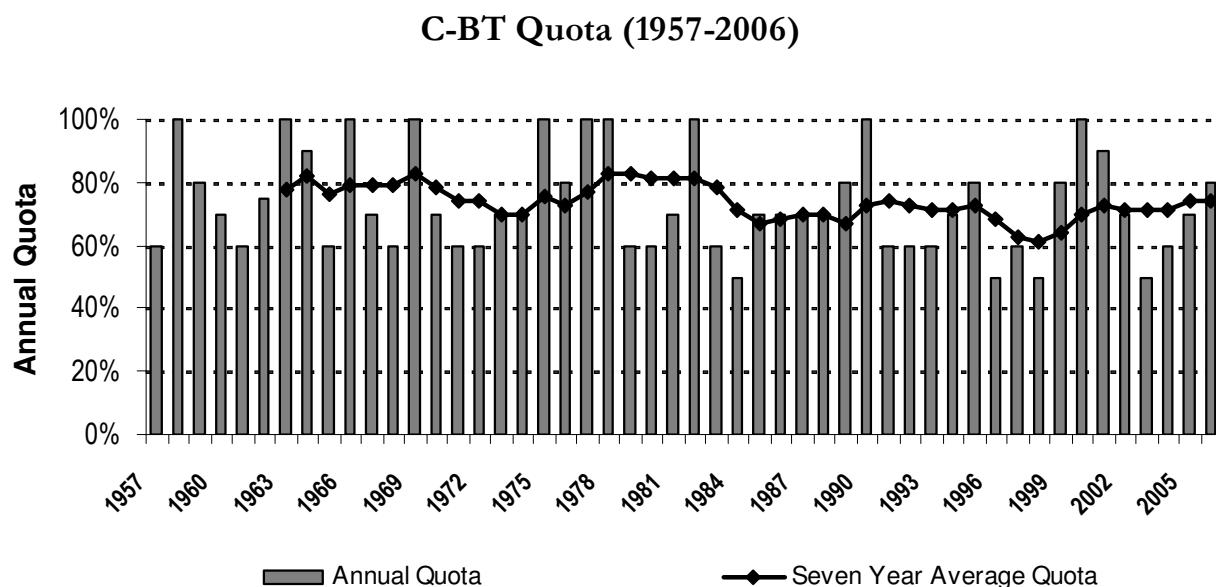
The preceding language permits the NCWCD Board a great deal of latitude in setting the quota. It also reiterates the supplemental nature of the C-BT Project and illustrates how current policies and practices are rooted in the Project's agricultural origin.

Since its inception, the C-BT Project has been operated in an attempt to make every year look like an average year. The NCWCD Board examines the region's native supply and local storage before declaring a quota that meets the supplemental need of

the region as a whole. That means the quota is lower in wet years because native supplies are plentiful and local reservoirs are full, so less C-BT water is required to satisfy the water demands of the entire region. It is the wet-year quota that presents the greatest challenge to potable water suppliers like ELCO that are dependent on the C-BT Project for their water supply.

In the fifty years the C-BT Project has operated (1957 – 2006), the average yield has been 0.74 acre feet per unit. The yield has never been less than 0.50 acre feet per unit (50% quota) or more than 1.0 acre feet per unit (100% quota). The annual quota established by the NCWCD Board over the years is shown in Figure 3.6.

Figure 3.6 – C-BT Quota Graph

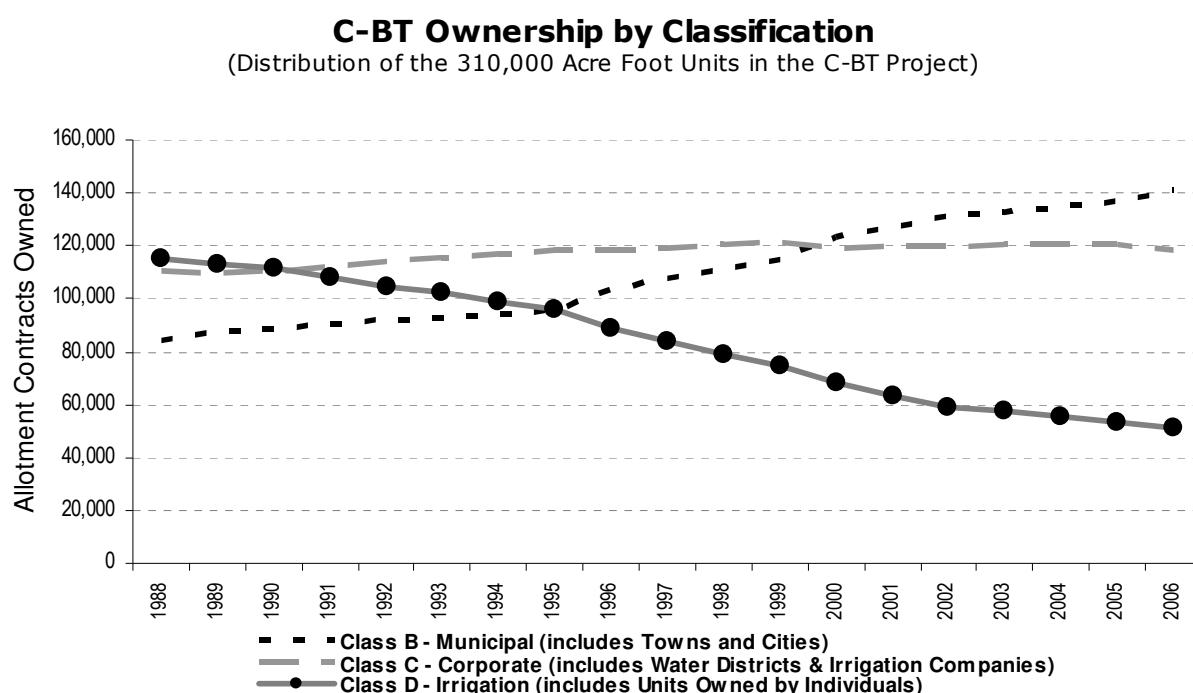


In general, a 50% quota is declared in a wet year. However, in 2003, a 50% quota was the highest quota that could be declared because the amount of water stored in the C-BT system was at an all time low. In fact, at the end of 2002, a 30% quota was anticipated by NCWCD and would have been declared had it not been for an epic snowstorm in March 2003. That snowstorm left three feet of heavy, wet snow across northern Colorado with higher amounts in the western foothills. Some parts of the foothills saw between five and seven feet of snow.

The C-BT Project was initiated and supported by agricultural interests. In the 1930's, when the project was first proposed, there was little else in the way of commerce in northern Colorado. In 1957, 85% of the C-BT units were owned by individual farmers and mutual ditch companies. By the end of 2005, only 35% of the C-BT units were owned by individuals and mutual ditch companies.

Figure 3.7 shows the number of C-BT units that have been transferred from agricultural to municipal ownership since 1988. Class C owners include both water districts and mutual irrigation companies. Ownership in that category has remained fairly steady since water districts have been purchasing C-BT units while mutual ditch companies have been selling their units.

Figure 3.7 – Ownership Classification of C-BT Units



At the current rate of acquisition by cities and water districts, it is projected that few if any C-BT units will be available for purchase by the year 2015. However, the construction of other regional projects such as the Windy Gap Firming Project and the Northern Integrated Supply Project may take some pressure off of the C-BT system. If so, C-BT supplies could be available through 2025 or 2030.

Native Water Supplies

In anticipation of the gradual disappearance of C-BT water, ELCO committed funds in 1997 to study the feasibility of a pipeline that would deliver Poudre River water to the SCFP. The project became known as the Pleasant Valley Pipeline and eventually grew into a partnership between the Cities of Greeley and Fort Collins and all three Soldier Canyon Districts. Construction on the pipeline began in April 2003 and was completed in the spring 2004.

Completion of the Pleasant Valley Pipeline allowed ELCO, for the first time since its creation in 1962, to obtain water from the Poudre River. Since completion of the Pleasant Valley Pipeline, ELCO has acquired very little water from the C-BT system.

Instead, it has secured senior agricultural water rights that will be the subject of a change-of-use application in Water Court. The various water rights currently owned by ELCO and the approximate yield of those water rights are listed in Table 3.2.

Table 3.2 lists only the water rights owned or available by contract to the District. ELCO's two wholesale customers have their own water rights and are required by contract to transfer a portion of the water they own each year to satisfy their annual treated water demand.

Table 3.2 - Summary of Water Supplies Owned or Available to ELCO Water District (12/31/2006)

	Shares or Units Owned	Average Yield (AF)	Dry Year Yield (AF) (1 in 50 Drought)
C-BT Water			
From Units Owned	3,426	2,398	1,713
From North Poudre Irrigation Company (NPIC) Shares ⁽¹⁾	546.5	1,529	1,092
Poudre River Water			
Water Supply & Storage Company (WSSC) Shares ⁽²⁾	18.54	1,208	1,086
Divide Canal & Reservoir Co. (Class A Shares) ⁽³⁾	22	22	9
Divide Canal & Reservoir Co. (Class B Shares) ⁽³⁾	25	97	97
Cache La Poudre Reservoir Company Shares ⁽³⁾	24	72	72
Lake Canal Reservoir Company Shares ⁽³⁾	3	11	3
NPIC Native Water ⁽³⁾	546.5	628	125
Jackson Ditch Company Shares ⁽³⁾	0.6498	67	67
John R. Brown Ditch (6.4% of Original Decree for 8 cfs) ⁽⁴⁾		36	36
Contractual Rights (Agreement with City of Fort Collins)			
Total Annual Supply (AF)		6,304	4,536

(1) NPIC owns 40,000 C-BT units. The Company's C-BT water is delivered annually to its 10,000 shareholders
(2) Conversion from agricultural to municipal use pending in Water Court Case Number 2003-CW-422
(3) Water rights owned for exchange, replacement of depletions and / or future conversion
(4) Conversion from agricultural to municipal use pending in Water Court Case Number 2005-CW-264

Most of the Water Supply and Storage Company (WSSC) shares owned by the District are the subject of an Application for Change of Water Rights, Alternate Points of Diversion, Alternate Places of Storage and Exchange submitted to District Court, Water Division No. 1 and assigned Case Number 2003-CW-422.

The decree sought by ELCO will allow diversion of water derived from its WSSC shares at the Poudre River headgate for the Munroe Canal for delivery to the SCFP through the Pleasant Valley Pipeline. By contract, ELCO's use of the Pleasant Valley Pipeline is limited to seven months (April through October). When converted WSSC water is available but not needed to meet District demands, it will be diverted for storage or exchanged for water deliverable at a different location or time.

The City of Thornton has converted 283 of the 600 WSSC shares for municipal use. Conditions of ELCO's final decree are expected to resemble those established for the City of Thornton.

ELCO owns agricultural water rights represented by shares in the following companies: North Poudre Irrigation Company, Divide Canal and Reservoir Company, Lake Canal and Reservoir Company, Jackson Ditch Company and Cache La Poudre Reservoir Company. When possible, these water rights are exchanged on an annual basis for C-BT water. When no C-BT water is available for exchange, the water rights are rented for agricultural use. Some of the District's agricultural water rights will be used to satisfy return flow obligations and depletions required in its change-of-use decrees. Remaining agricultural water rights will be exchanged as long as possible and eventually converted for municipal use.

At this time, ELCO does not own or control any raw water storage facilities. Seasonal storage and carryover storage is currently available through ownership of allotment contracts in the C-BT system. However, carryover storage in the C-BT system is not guaranteed. The NCWCD's Annual Carryover Program Procedures state:

“.....the Board and District staff will review the advantages and consequences of the Annual Carryover Program on a continuing basis. And while the Board recognizes the Program’s benefit to many C-BT allottees, it may modify or discontinue the Annual Carryover Program at any time.”

System Limitations and Challenges

Growth

In February 2004, the Fort Collins Advance Planning Department released the 2003 Buildable Lands Inventory and Capacity Analysis (BLI). That study states: “*The Growth Management Area is anticipated to reach capacity in approximately 2025 for housing and 2025 for employment.*” With most new development served by ELCO occurring inside the Fort Collins GMA, the District will essentially reach build-out soon after the City of Fort Collins. City planning documents indicate the population served by ELCO will increase from 16,336 at the end of 2006 to 47,000 by the year 2025, a growth rate of approximately 5½% per year. ELCO is considering build-out in 2030.

The Towns of Wellington and Timnath have also adopted Growth Management Areas that include portions of the District's service area. The type of development the towns will allow within ELCO's service area has not yet been determined but it will likely result in land uses that are more intense or dense than what is currently allowed by Larimer County. In response to studies performed by the City of Fort Collins and inclusion of District served areas in the Timnath and Wellington Growth Management Areas, ELCO has implemented policies and programs necessary to accommodate the significant rate of growth projected within its service area.

Future Water Supply

The Pleasant Valley Pipeline which delivers Poudre River water to the SCFP was constructed solely for the purpose of providing future customers an alternative to C-BT water. With the Pleasant Valley Pipeline installed and operational, ELCO now needs to focus its resources on the acquisition, storage and conversion of water rights originating in the Poudre River.

Most of the District's future water supply will be obtained through developer dedications. ELCO does not currently collect cash from developers or new customers to purchase water rights on the open market. Instead, ELCO requires developers to dedicate water rights sufficient to supply the anticipated demands within their development. New developments are required to supply enough water to meet demands during droughts that are expected to occur once every fifty years.

Many new developments within ELCO's service area are occurring on farms that have historically used Poudre River water for irrigation. ELCO anticipates accepting those native water rights in partial satisfaction of its development requirements.

Since ELCO accepts native supplies to satisfy its raw water dedication requirements, very little C-BT water will be dedicated to the District in the future. If C-BT water exists on farms that are developed within ELCO's service area, it will likely be sold or exchanged for less expensive native supplies that the District will accept.

Raw Water Storage

Variability in the yield of Poudre basin water rights, both year to year and month to month, will require ELCO to develop raw water storage for the following purposes: 1) to store water during peak flow months (May, June and July) for use in months when the District's water rights yield little or no water, 2) to store water in years of surplus for use in years when a water supply deficit occurs, and 3) to store the historic return flow component of agricultural water rights converted to municipal use for year-round releases required to meet court-imposed return flow obligations.

Change of Use

Conversion of ELCO's Poudre River water rights from agricultural to municipal use will require detailed engineering analyses and applications to Water Court. The easiest change cases take three to five years before a decree is issued. The more complicated change cases can take as much as 10 years and cost millions 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. ELCO currently has two change

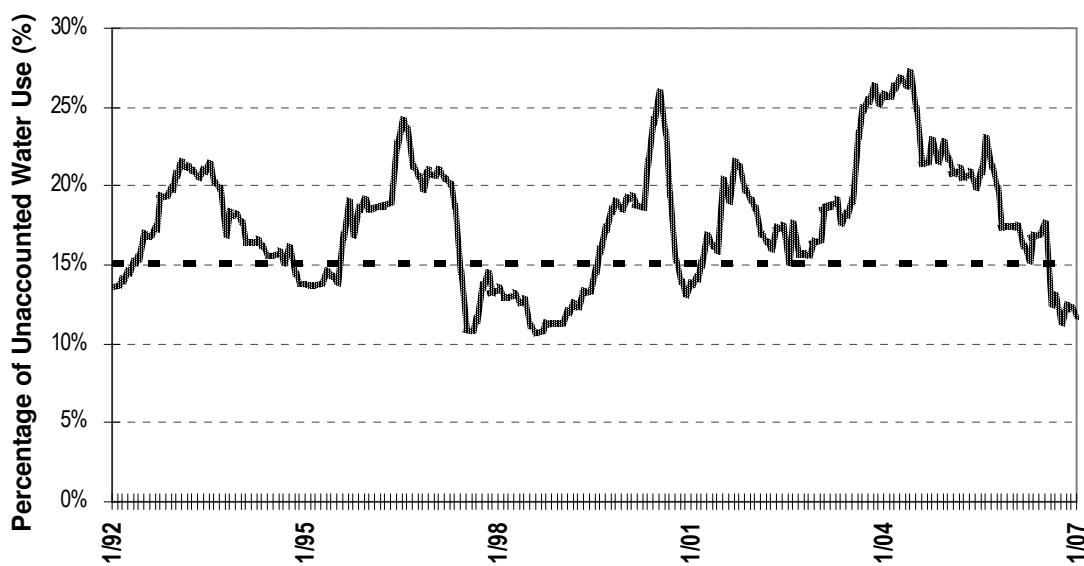
cases before Water Court. Within the next few years, additional applications will be submitted to change the use of water rights owned by the District.

Unaccounted Water Use

The average amount of unaccounted water use since January 1992 is shown in Figure 3.8. The graph shows that the percentage of unaccounted water use varies dramatically over time. ELCO crews repair leaks as soon as they are located, but in some cases, leaks can go undetected for several months.

Data plotted on the graph reflects a moving 12-month average instead of actual use in any one month. Since meter readings start on the 1st of the month and end on the 15th, the metered water use of District customers will never match water produced from SCFP in any one month. Average water use over the prior 12 months is more representative of the actual amount of unaccounted water use.

Figure 3.8 - Unaccounted Water Use in ELCO Water District (1992 - 2007)



Water pressure in the older parts of the District's distribution system can reach 130 p.s.i. Areas with high water pressure are in or near the Poudre River corridor, which has a relatively shallow water table and extremely porous soils. The combination of older, AC pipe and high water pressure increases the possibility of leaks. The porous soils surrounding much of the District's water lines makes it difficult to pinpoint the location of leaks.

In recent years, locating and repairing leaks within its transmission and distribution system has been a priority for the District. Leak detection has historically been

performed by technicians working for Hughes Utility Services Group. In 2004, 25% of the District's water system was surveyed; in 2005 another 30% of the water system was surveyed. During 2006, Hughes Utility Services technicians spent thirteen days surveying 73 miles of ELCO's transmission and distribution system (approximately 35% of the total). Based upon estimates prepared by Hughes technicians during the three years they surveyed ELCO's water system for leaks, a total of 334 acre feet per year has been saved. In the past three years, the percentage of unaccounted water use has declined from approximately 25% to 10% as a result of repairs initiated after leak surveys performed by Hughes Utility Services.

During 2006, the District purchased leak detection equipment similar to that used by Hughes Utility Services. In August 2006, Field Operations staff received training on the equipment. The District plans to use its equipment to perform leak surveys in advance of Hughes Utility Services. Performance of preliminary surveys by District personnel should help improve the efficiency and effectiveness of the leak detection contractors hired by the District.

Water Costs, Billing Practices and Pricing

Billing Practices

ELCO mails monthly statements to each customer around the 20th of each month. Current charges shown on the bill are due 30 days from the billing date. Any balance due from prior months is shown as a previous balance. Previous balances are overdue and are subject to additional fees if they are not paid by the date shown on the bill.

ELCO makes a second attempt to notify customers of an overdue balance by sending a reminder notice. Landlords that provide contact information will receive notification of an overdue balance owed by their tenants.

If payment is not submitted by the dates shown on the reminder notice, a delinquent charge of \$6.00 is applied and a door tag is delivered to the property. The door tag is the third and final attempt to collect outstanding charges before water service is terminated.

Customers receiving a door tag must submit payment by noon the day after the door tag is delivered. If payment is not received, water service is terminated and a service fee is applied. Customers who have their water shut off are subject to a \$20 fee if water service is restored during regular hours or \$40 if service is restored after hours. During 2006, ELCO shut off water service to approximately 20 customers each month.

Charges for Water Service

ELCO has historically levied a fixed charge that allows customers to use up to 4,000 gallons of water during the billing period. Once water use exceeds 4,000 gallons in the billing period, a uniform charge per 1,000 gallons is assessed.

Current charges for water service provided to ELCO customers are summarized in Table 3.3.

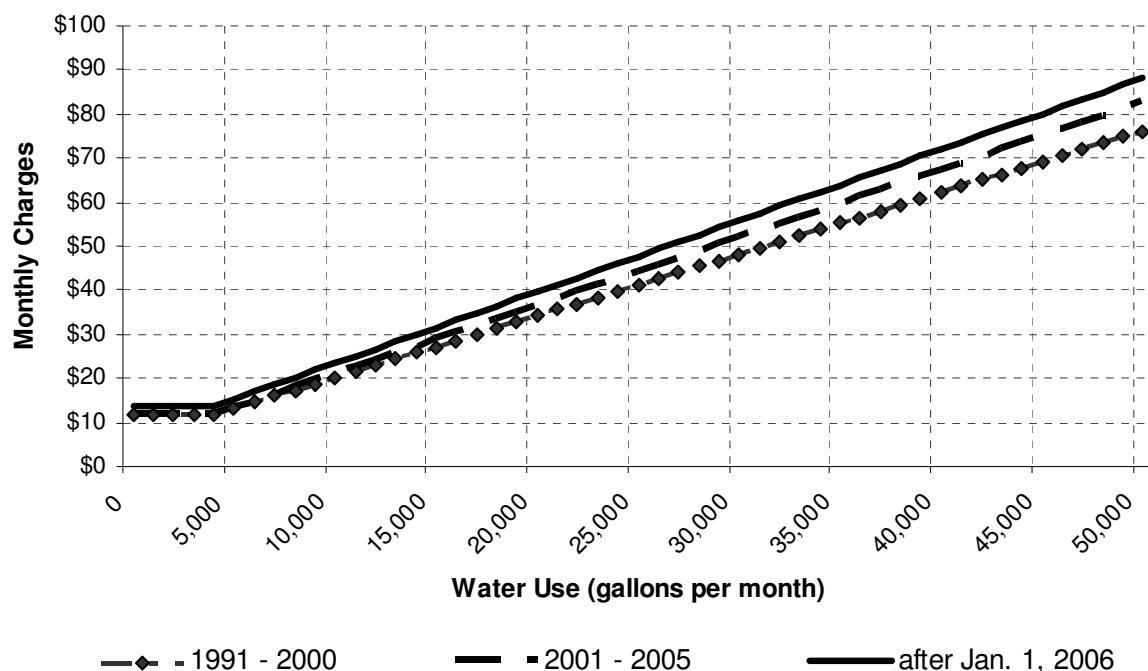
Table 3.3 - ELCO Water District Monthly Charges for Service (Effective January 1, 2006)

Size of Water Meter	Minimum Charge Per Month	Monthly Minimum
3/4"	\$13.72	4,000 gallons
1"	\$14.49	4,000 gallons
1-1/2"	\$15.27	4,000 gallons
2"	\$17.39	4,000 gallons
3"	\$33.07	4,000 gallons
Mobile Home Park and Multi-family (Master Metered)	\$6.86 per living unit (occupied or vacant)	2,000 gallons per living unit
All water use over the Monthly Minimum is billed at:		
\$1.62 per thousand gallons		

Other Charges	
Raw Water Conservation Charge	The amount of raw water provided to ELCO at the time of construction determines each customer's "Annual Allotment." When a customer's year-to-date water use exceeds their annual allotment, an additional conservation charge of \$1.50 per 1,000 gallons is applied to their bill until the end of the year.

Figure 3.9 shows the amount paid per month by customers with 3/4" meters using between 0 and 50,000 gallons per month. ELCO has adjusted water rates three times since 1991. Figure 3.8 shows the amount ELCO billed customers during the following periods of time: 1) 1991 through 2000, 2) 2001 through 2005 and 3) after January 1, 2006.

Figure 3.9 - Monthly Charges for ELCO Customers with ¾" Meters (1991 - 2007)



Conservation Charge

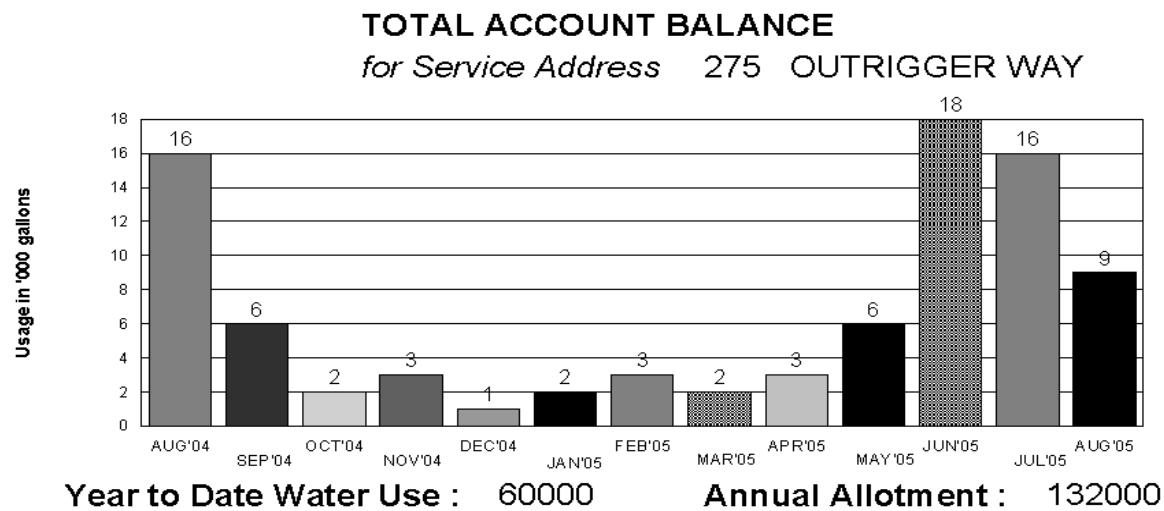
In addition to the monthly charge for water service, ELCO imposes a conservation charge when customers use more water than the amount provided at the time their water service was purchased and the District's raw water requirements satisfied. The amount of raw water dedicated at the time of development establishes the "annual allotment" for each customer account. Each customer's annual allotment is permanent and non-transferable.

If a customer's annual allotment is exceeded during the calendar year, a conservation charge is assessed. Currently, the conservation charge is an additional \$1.50 per 1,000 gallons for every 1,000 gallons in excess of the annual allotment. All ELCO customers are subject to the conservation charge.

Each customer's year-to-date water use and annual allotment are shown on their monthly bill. Comparing each customer's cumulative water use to their annual allotment encourages them to monitor water use and reduce consumption when possible. Customers who keep their cumulative water use below their annual allotment are not subject to the conservation charge. Figure 3.10 is an example of the chart included on each customer's monthly bill showing their monthly water use, year-to-date water use and annual allotment.

The graph included on ELCO bills shows each customer their water use for the past 13 months. That allows each customer to compare their current monthly water use with the amount they used in the same month in the prior year.

Figure 3.10 - Sample Chart Included on Monthly Bills of ELCO Customers Showing Water Use History



In 2006, approximately 28% of ELCO's residential customers exceeded their annual allotment. Approximately 27% of ELCO's non-residential customers exceeded their annual allotment in 2006. The average amount of the conservation charge paid in 2006 by residential and non-residential customers was \$129, and \$825 respectively. Figure 3.11 shows the number of residential customers that paid a conservation charge in 2006 and the annual amount they were assessed for exceeding their allotment. Figure 3.12 shows the same data for non-residential customers.

ELCO's revenue from metered water sales totaled \$2,387,722 in 2006. Another \$291,700 was collected from customers that exceeded their annual allotment and paid the conservation charge assessed by the District.

Figure 3.11 - Residential Customers Subject to Conservation Charge in 2006 and Amount Assessed

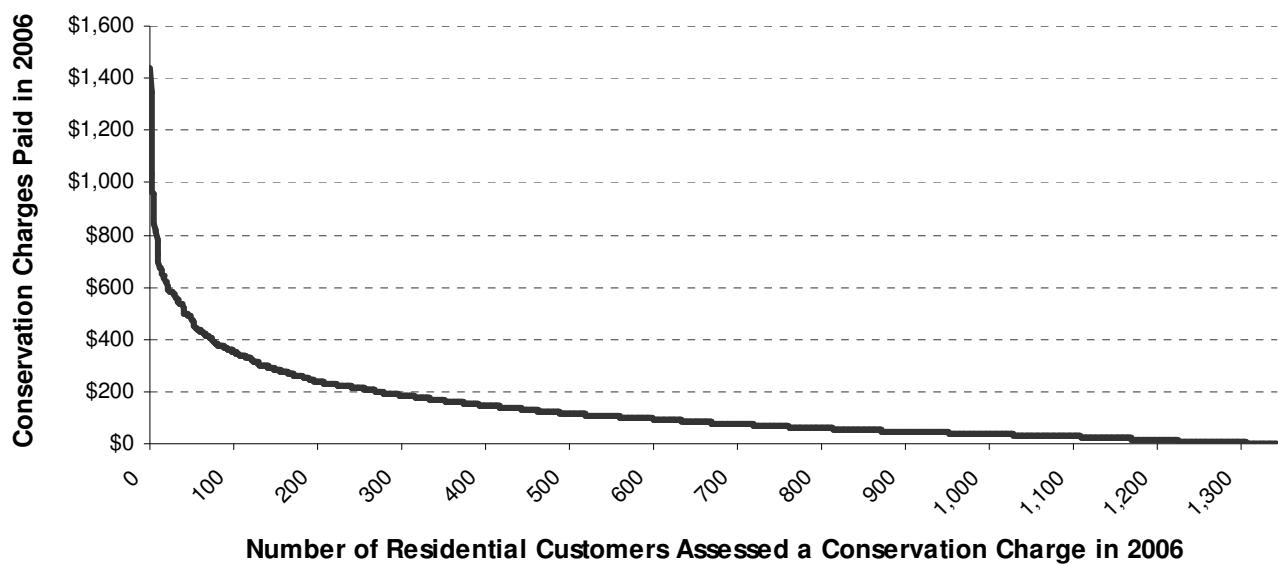
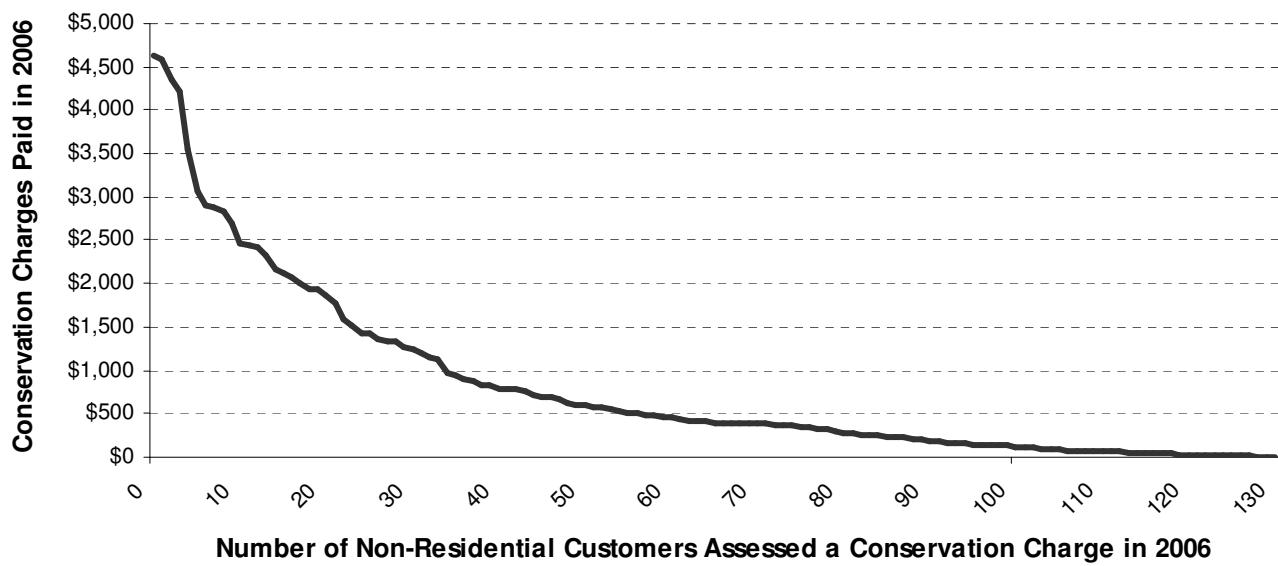
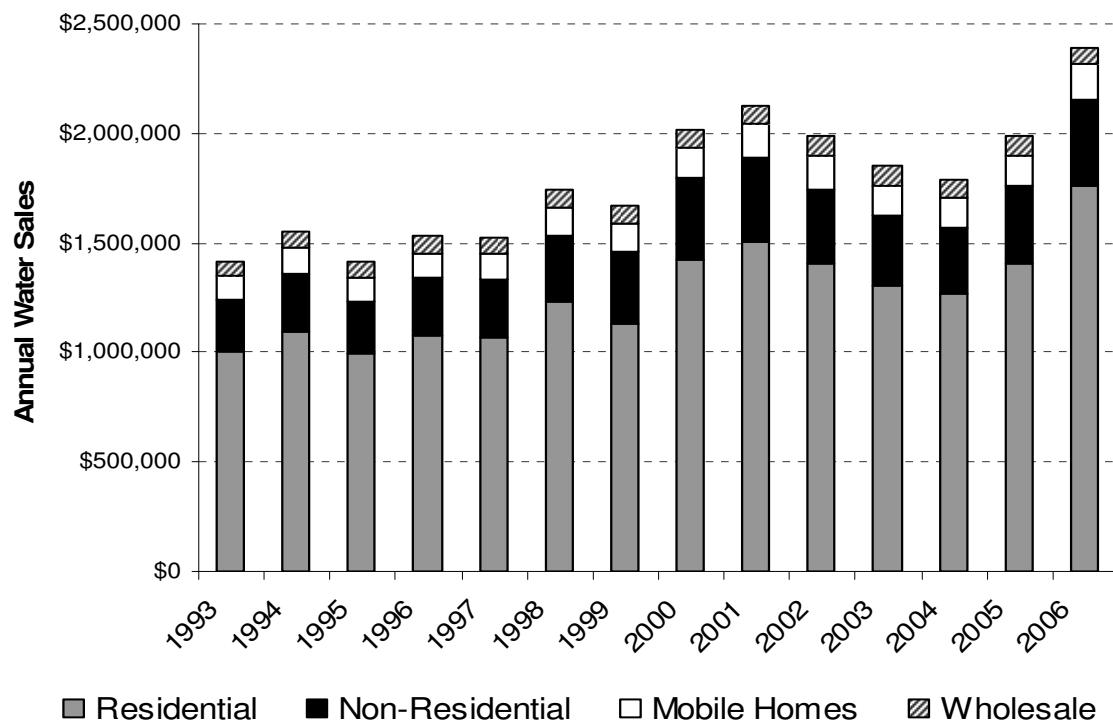


Figure 3.12 - Non-Residential Customers Subject to Conservation Charge in 2006 and Amount Assessed



Water sales revenue has steadily increased since ELCO lifted water use restrictions imposed during the drought years of 2002 and 2003. The rate increase implemented on January 1, 2006 has also improved water sales revenue. Figure 3.12 shows the amount of revenue collected from different customer categories since 1993.

Figure 3.13 - Annual Water Sales by Customer Category (1993 – 2006)



Current Policies Affecting Water Use

Rules and Regulations

In October 2005, the ELCO Board of Directors adopted revised Rules and Regulations governing the District. The District's authority to impose water use restrictions during a declared drought is established in Article 6 of the revised Rules and Regulations. There were a number of reason the District revised its Rules and Regulations in 2005. One primary reason was the perceived lack of authority to impose outdoor watering restrictions during the drought years of 2002 and 2003. Table 3.4 lists the provisions of Article 6.

**Table 3.4 - Article 6, Water Use Restrictions, from Rules and Regulations
Adopted October 18, 2005**

<p>6.1 DROUGHT CONDITIONS Drought conditions are not uncommon in the Service Area of the District. The Board, in its sole discretion, may make a determination that drought conditions exist.</p>
<p>6.2 LIMITATIONS IMPOSED DURING DROUGHT In the event the Board shall determine that drought conditions exist, the District may take such action as it deems necessary or advisable to insure the efficient use and conservation of limited water supplies. The District may adopt supplemental regulations relative to water rationing, time of use schedules, limitation of use, and such other measures as it deems necessary or appropriate for the conservation of limited water supplies, insuring continued water availability, and appropriate utilization of limited water resources.</p>
<p>6.3 RESPONSIBILITIES OF USERS DURING DROUGHT It shall be the responsibility of all Users to carefully observe all rules, regulations, and prohibitions established by the District in the event the Board shall determine that drought conditions exist. The unavailability of water or limitation of water use at certain times shall not relieve the Customer from the payment of all fees and charges established by the District pursuant to the Fee Schedule.</p>

Irrigation Service

ELCO's PIF and raw water requirement for new landscape irrigation taps are based on the amount of area irrigated and the type of landscaping (turf or mulched areas). ELCO does not assess fees for irrigation services based on meter size.

The cost of installing a dedicated irrigation service is significant for large irrigated areas. The current cost of C-BT water and the PIF for a new water service to irrigate one acre of turf is approximately \$84,500. The amount ELCO charges for dedicated irrigation service encourages developers to install native landscaping or use non-potable water for irrigation.

Historically, when development fees for irrigation services were based on meter size, some developers purchased the smallest size possible. Undersized irrigation meters required longer run-times for complete coverage. Some systems had to run during the heat of the day to cover the entire irrigated area. Run-time and efficiency problems have been eliminated with the imposition of development fees based upon irrigated area.

Temporary Water Taps for Native Landscaping

ELCO waives dedication of water rights and payment of plant investment fees for temporary irrigation taps installed to establish native landscaping. Temporary irrigation taps may only be used to establish native landscaping and must be removed within five years of installation. The District has to review and approve the landscape plan for any area to be irrigated by a temporary tap. At its meeting held on July 20, 2004, the Board

adopted the following water rate for temporary irrigation taps: \$33.40 per month plus \$3.67 per 1,000 gallons of water use.

Planning Initiatives

ELCO has dedicated a significant amount of its planning efforts on securing a reliable and sustainable source of raw water. TZA Water Engineers completed a report in October 2004 titled, "Raw Water Acquisition Plan." The same engineering firm prepared a report titled, "Evaluation of Raw Water Storage Needs," in August 2005. Both of these reports are currently being updated by TZA Water Engineers.

Alternatives for securing additional water treatment capacity were studied by The Engineering Company (TEC) in a report titled, "Buckeye Water Treatment Plant Feasibility Analysis." That report was completed by TEC in August 2002. It projects the amount of treatment capacity ELCO will need in the future and predicts when plant expansions will be required.

Over the years, TEC has also prepared the "Water Distribution System Analysis and Master Plan" for ELCO. The last master plan was completed by TEC in July 1996. It recommended transmission and distribution system improvements, upgrades to pump stations, revisions to pressure zones, and construction of treated water storage tanks. At its meeting in July 2006, the Board authorized TEC to update the District's Master Plan. Engineers with TEC anticipate having a draft of the Master Plan available for review by the end of April 2007.

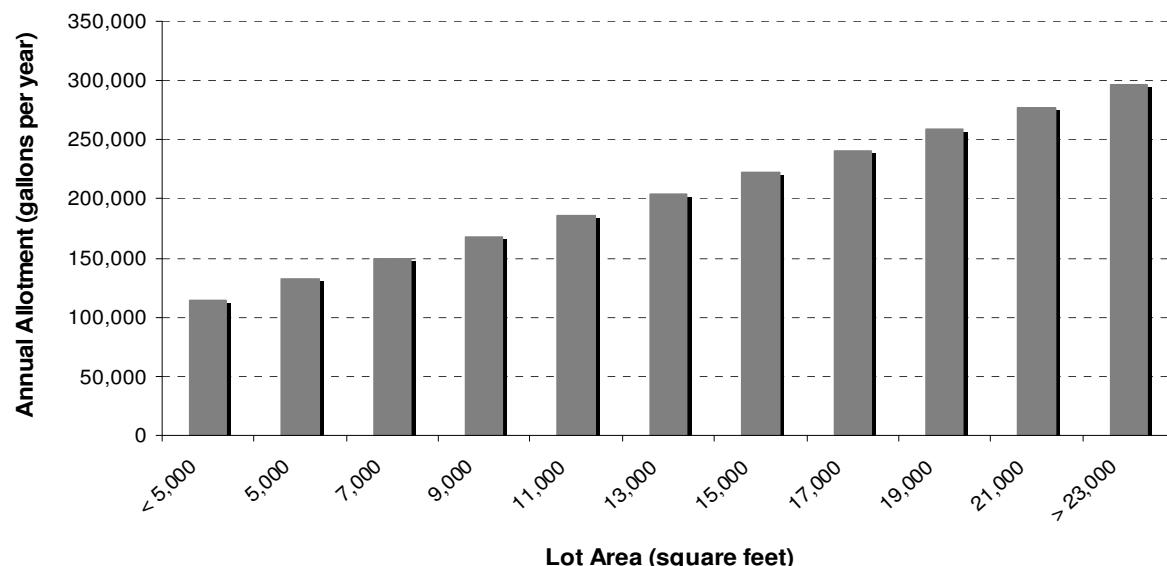
Current Water Conservation Activities

ELCO Water District has historically encouraged water conservation through its rates and development policies. Since the drought of 2001-2002, the District has taken a more aggressive approach toward water conservation. Conservation programs currently promoted by ELCO are summarized below:

Conservation Rates

As previously discussed, the amount of raw water dedicated at the time of development establishes an annual allotment for each customer account. Each customer's annual allotment is analogous to an annual water budget. For residential customers, the size of their lot determines their annual allotment. Figure 3.13 shows the annual allotment for new residential customers with different size lots. All residential lots over 23,000 square feet have the same annual allotment of 296,000 gallons.

Figure 3.14 - Annual Allotment for New ELCO Residential Customers with Different Size Lots



The eleven different residential allotment categories established by the District accommodate any size lot. ELCO assigns the same allotment to all lots within a 2,000 square foot range. For example, lots between 5,000 and 6,999 square feet are assigned an allotment of 132,000 gallons, lots between 7,000 and 8,999 square feet are assigned an allotment of 150,000 gallons, etc.

New non-residential customers with 5/8", 1" and 1½" meters are assigned an annual allotment based on the average water use of existing non-residential customers with the same size meter. Annual allotments for new non-residential customers are fixed in the following amounts:

5/8"	240,000 gallons per year
1"	672,000 gallons per year
1½"	1,440,000 gallons per year

New non-residential customers with meters 2" and larger are initially assigned an allotment based on their estimated water use. After one year of operation, the annual allotment is recalculated based on actual water use. The actual water use becomes the permanent annual allotment.

For new irrigation services, the amount of the annual allotment is based on the amount and type of irrigated area and is calculated as follows:

$$\begin{aligned}
 \text{Irrigation annual allotment} = & 20,000 \text{ gallons per 1,000 sq. ft. of irrigated turf} \\
 & \text{plus} \\
 & 10,000 \text{ gallons per 1,000 sq. ft of mulched area}
 \end{aligned}$$

If a customer's cumulative water use from January through December exceeds their annual allotment, a conservation charge is assessed on all water use in excess of their annual allotment. The annual allotment is set back to zero each year after the January meter reading. The conservation charge raises the water rate from \$1.62 per 1,000 gallons to \$3.12 per 1,000 gallons, an increase of over 90%.

ELCO's conservation rates eliminate the need to impose and enforce strict lawn watering schedules or monthly water use budgets. In addition to encouraging water conservation, annual allotments establish an equitable method of determining PIFs and raw water dedication requirements.

Distribution of Indoor Conservation Kit

Indoor water conservation kits are provided to customers upon request. To date, approximately 400 conservation kits have been distributed free of charge. The kits were purchased and promoted in conjunction with the City of Fort Collins. The kits currently provided to customers contain a low-flow showerhead massager, faucet aerator, kitchen swivel aerator and leak detection dye tablets.

Free indoor water conservation kits were first made available to ELCO customers in 2003. The kits were installed by 157 single family customers in 2003. During the winter months (December 2003 - March 2004), the average monthly water demand of the 157 customers that installed conservation kits was 4,538 gallons. During the same winter months the prior four years, the average monthly water demand in the same 157 homes was 5,330 gallons per month, a reduction of 14.9%.

Soil Amendment

The majority of new customers served by ELCO are within the City of Fort Collins. The City requires all homes and businesses to incorporate three (3) cubic yards of soil amendment per 1,000 square feet of area to be planted.

Irrigation System Audit

ELCO offers free residential sprinkler system audits to its customers. Audits are performed by ELCO personnel or a trained contractor. Homeowners who volunteer for an audit receive recommendations to improve their irrigation efficiency and an irrigation schedule designed to accommodate their irrigation system and lawn water needs. Instructions and catch cans are also available for customers who prefer to conduct their own audit.

Public Education

ELCO shares some of the cost of public education programs with other Fort Collins area water suppliers. Components of the program include: newsletters, newspaper advertisements, bus benches, bill inserts, and youth education programs.

Leak Detection

Since 2003, ELCO has hired private contractors to perform leak surveys. Budget constraints and the lack of trained District personnel to assist the contractor limited the amount of the water distribution system that could be surveyed during the annual contract period. ELCO purchased a state-of-art leak detection system in 2006. System Operators have received training from the manufacturer and are planning to survey as much of the distribution system as possible in 2007. A contractor will assist District personnel perform a thorough survey during the upcoming summer months.

Billing and Meter Reading Practices

ELCO reads meters and sends bills each month. Meter readings are obtained by passing a wand across a transmitter mounted in the meter pit lid. Meter readers receive an alarm when water usage is higher or lower than expected. Readers can investigate the cause of the problem immediately and notify customers if they have a leak. Monthly consumption is compared to historic averages automatically by ELCO's billing software and flagged for investigation if it falls outside the expected range.

Meter Replacement

All ELCO meters 1" and smaller were replaced between 1996 and 2001. The meter replacement program improved accuracy and eliminated manual meter readings. Meter readings are now obtained electronically by passing a wand over a transmitter mounted in the meter pit lid.

Recycled Filter Backwash

The Solider Canyon Filter Plant recycles all filter backwash water. It is diverted to settling ponds and returned for treatment after settling. Approximately 5% of the total water production is recycled for treatment.

CHAPTER 4 - WATER USE AND DEMAND FORECAST

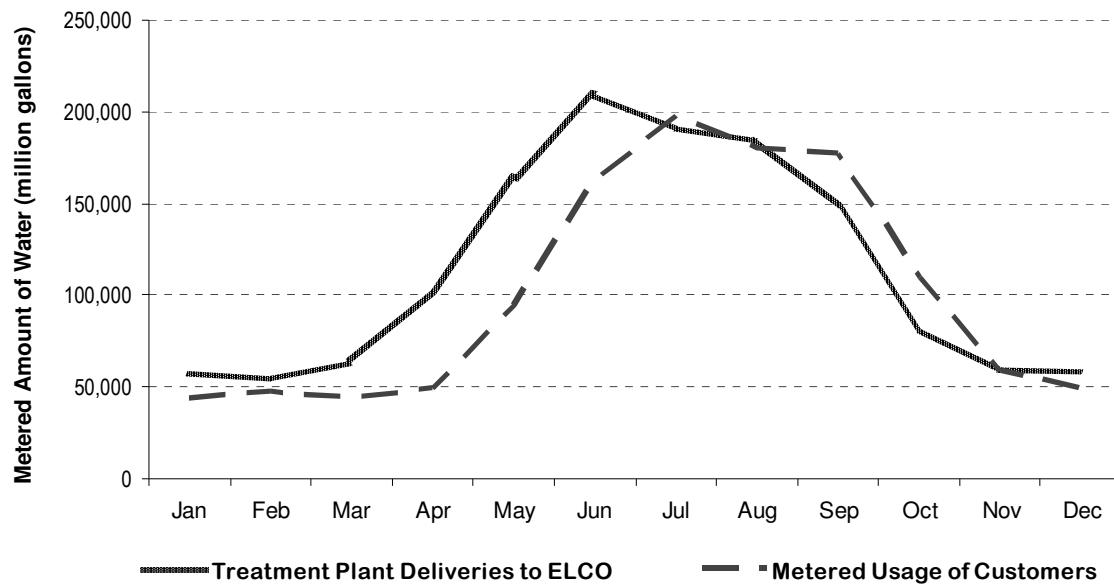
Current Water Use

Like most water suppliers in the west, ELCO's water demands are influenced primarily by customers' need to irrigate their landscape. Peak water use varies significantly depending on rainfall and always occurs during June, July or August. Water use during the winter is relatively low and varies little from November through March.

In 2006, indoor use as measured by winter water use averaged approximately 45 million gallons per month. The highest monthly use ever recorded by ELCO occurred in July 2006; the metered water use of ELCO's customers that month totaled 198 million gallons.

Figure 4.1 shows the amount of water delivered each month to ELCO by the SCFP and the total metered water use of ELCO customers during each month. Metered water use shown in Figure 4.1 lags plant production due to differences in meter reading schedules. Plant meters are read daily. ELCO reads meters and calculates customer consumption over the first two weeks of each month

Figure 4.1 - Comparison of Monthly Plant Production and Metered Water Use of ELCO Customers in 2006



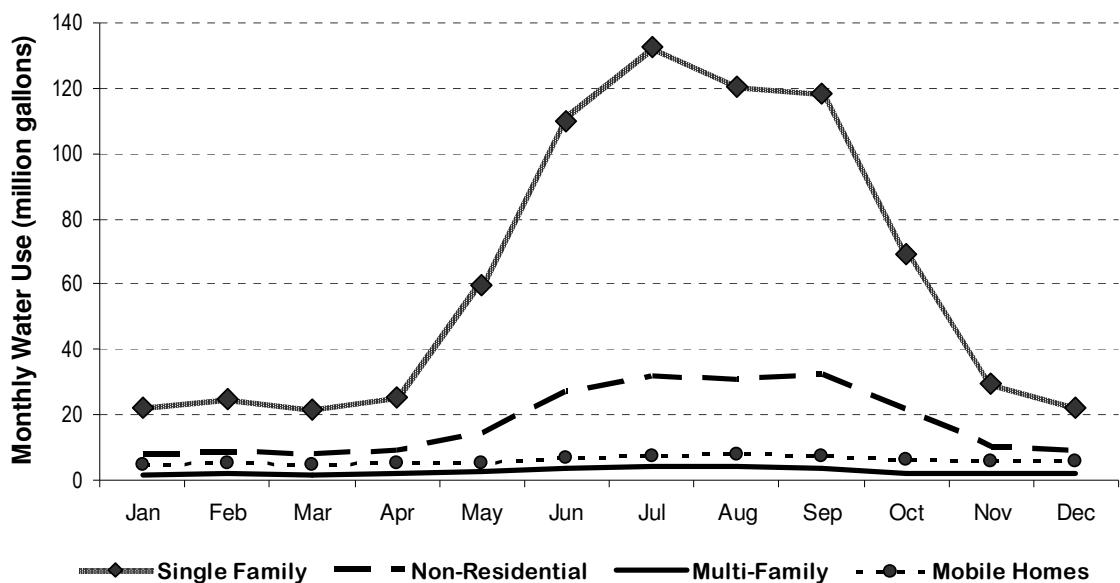
Total plant production in 2006 for ELCO was 1.377 billion gallons while the total metered water use of all active ELCO accounts in 2006 was 1.215 billion gallons, a difference of 162 million gallons (11.7%). That number represents the amount of water that was delivered to the District from the SCFP but not measured in some manner. ELCO personnel thoroughly flush the transmission and

distribution system each spring. Water is also used in cleaning and testing all new water lines installed within the District. The amount of water used for flushing has not been measured, but is estimated to be around 1% to 2% of total water production. Based on that estimate, the percentage of unaccounted water use in 2006 is approximately 10% of annual water production.

Figure 4.2 shows the monthly water use by different customer categories served by ELCO. The water demand of ELCO's two wholesale customers is not included in Figure 4.2. The contracts ELCO has with its wholesale customers limits the District's ability to impose conservation measures and relieves the District of the responsibility for obtaining water rights for those customers. ELCO's wholesale customers have their own water rights, which they transfer annually to the District. Without authority to enforce conservation measures within the service areas of its wholesale customers and no obligation to secure water rights for them, the water use of ELCO's wholesale customers will be excluded from further analysis in this report.

Figure 4.2 illustrates the significant demands resulting from lawn irrigation by both single family and non-residential customers. In 2006, approximately 61% of the water used by single family customers was for lawn irrigation; approximately 49% of the water used by non-residential customers in 2006 was for that purpose. The water demands of multi-family and mobile home customers remain relatively steady month to month. There are two reasons for that: 1) the largest mobile home parks served by ELCO provide well water to each mobile home pad for landscape irrigation, and 2) the few multi-family developments served by ELCO have non-potable irrigation systems or they have installed dedicated irrigation taps for landscape irrigation. Long established rate codes in the District's billing system currently require that the water use of irrigation taps is included in the non-residential category.

Figure 4.2 - Monthly Water Use by Customer Category in 2006



Approximately 12% of ELCO's non-residential accounts are irrigation-only water taps in residential developments. Those taps are used only during summer months to irrigate parks, common areas and greenbelts controlled by HOAs. The total water use by month of those customers is shown in Figure 4.3

Figure 4.3 - Total Monthly Water Use by Non-Residential Irrigation-Only Customer Accounts in 2006

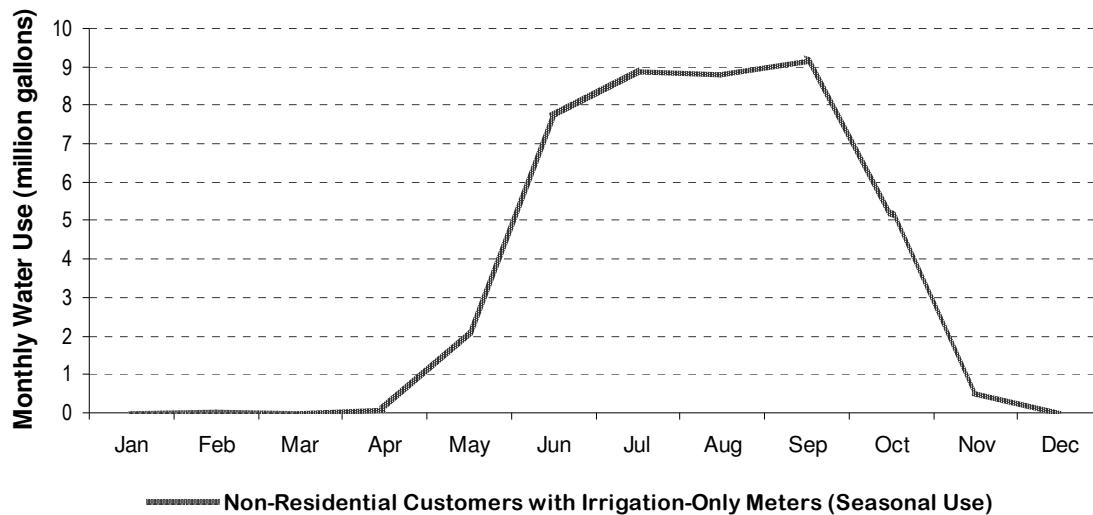
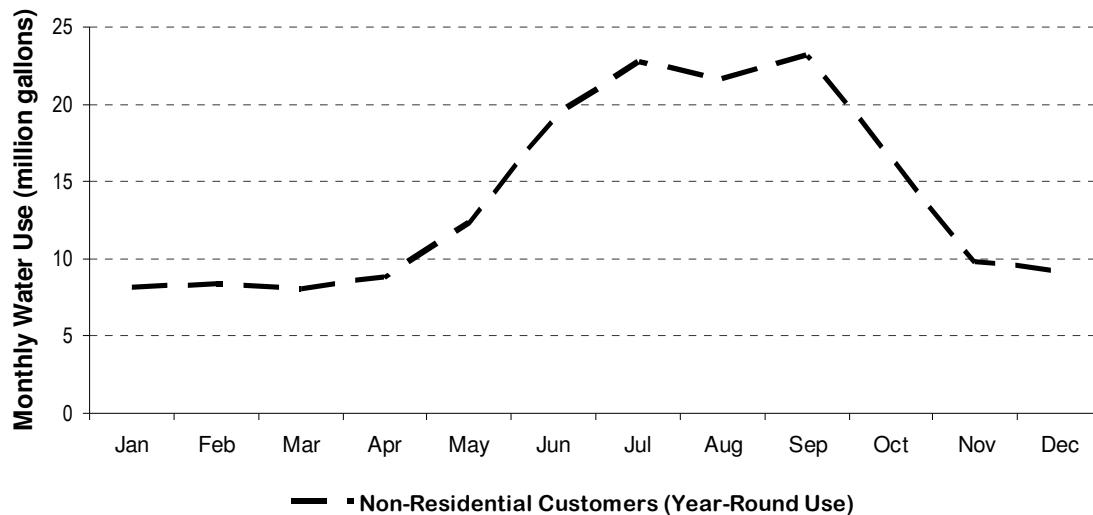


Figure 4.4 shows the total water use by month of non-residential customers that use water year-round. In 2006, approximately 38% of the water use in that customer category was for turf irrigation, far less on a per tap basis than single family accounts.

Figure 4.4 - Total Monthly Water Use by Non-Residential Customer Accounts in 2006



The outdoor water use of non-residential customers has far less impact on facilities sized to meet peak demands. It is primarily the outdoor water use of single family customers that determines the size of ELCO's pipes, pumps, treatment plant and storage tanks.

Water Use Trends

Table 4.1 shows the annual water use by customers in the four primary retail categories served by ELCO: 1) single family, 2) non-residential, 3) multi-family, and 4) mobile homes. Table 4.1 shows that per-capita water use decreased significantly during the drought years of 2002 and 2003. Water use reductions during drought years resulted from imposition of outdoor water use restrictions and extensive media coverage of drought conditions. Customers continued to conserve water in 2004 despite the removal of outdoor water use restrictions by the District. Per-capita water use has rebounded slightly since 2004, but remains below what it was before 2002.

Table 4.1 - Metered Water Use by Customer Category 1999 – 2006

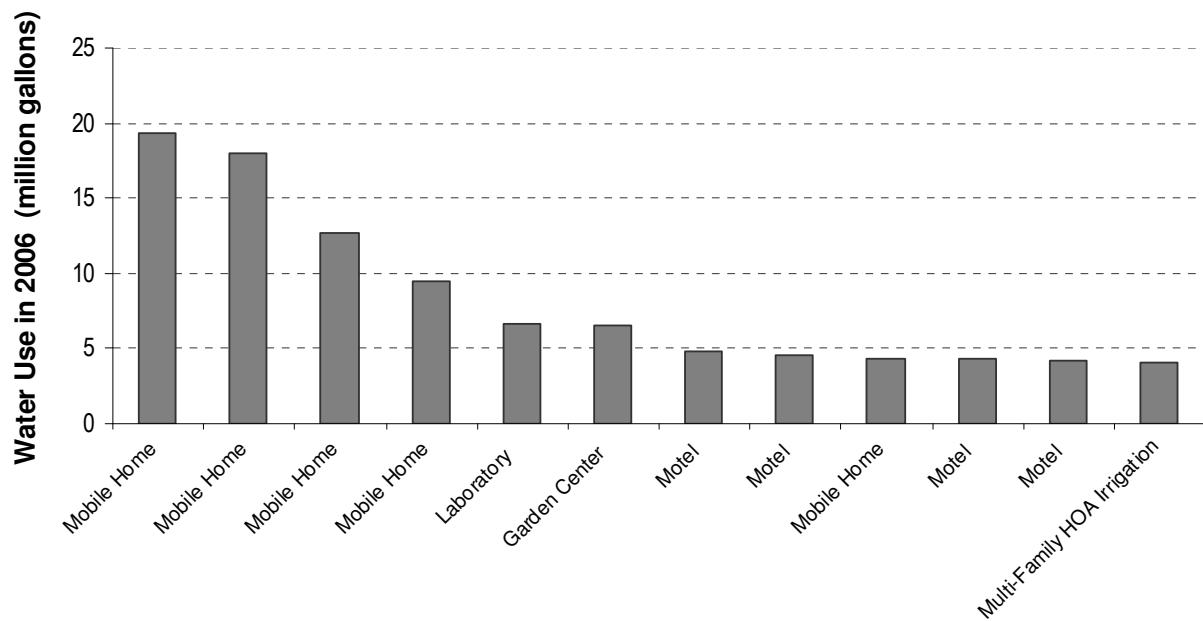
	SINGLE FAMILY		NON-RESIDENTIAL		MOBILE HOMES			MULTI-FAMILY							
YEAR END	ACCOUNTS	ACRE FEET	ACCOUNTS	ACRE FEET	ACCOUNTS	# PADS	ACRE FEET	ACCOUNTS	# UNITS	ACRE FEET	TOTAL ACCOUNTS	% Increase	TOTAL ACRE FEET	ESTIMATED POPULATION ⁽¹⁾	GPCD ⁽¹⁾
2006	4,864	2,314	484	643	14	963	226	145	511	108	5,506	2.0%	3,291	16,344	180
2005	4,765	1,925	475	582	14	963	206	144	508	90	5,398	4.1%	2,803	16,089	156
2004	4,564	1,662	468	512	14	963	212	141	500	81	5,187	3.3%	2,467	15,550	142
2003 ⁽²⁾	4,414	1,758	465	512	14	963	225	128	468	81	5,021	6.6%	2,576	15,080	152
2002 ⁽³⁾	4,132	1,883	448	547	14	963	255	114	406	90	4,708	9.8%	2,775	14,193	175
2001	3,727	1,991	439	561	13	799	274	108	384	79	4,287	6.0%	2,905	12,668	205
2000	3,496	2,068	429	560	13	799	219	107	298	71	4,045	4.4%	2,918	11,850	220
1999	3,360	1,687	417	486	13	799	193	85	210	61	3,875		2,427	11,272	192
Avg												5.2%			177

⁽¹⁾ Excludes Wholesale demands. Based on 2000 Census data indicating average household size in census tracts within ELCO service area = 2.58
⁽²⁾ Lawn watering restrictions in effect all summer.
⁽³⁾ Lawn watering restrictions effective July 16, 2002.

Large Water Users

Retail customers that use the greatest amount of water are mobile home parks and motels. The twelve largest customers served by ELCO used 9.2% of the total metered water deliveries in 2006. Figure 4.5 shows the largest retail customers served by ELCO, and the amount of water they used in 2006.

Figure 4.5 - Customers Using the Greatest Amount of Water in 2006



The four largest customers served by ELCO are mobile home parks. The number of mobile home pads in those four parks totals 791. Based upon 2006 water use, the average water use per mobile home pad in the four largest parks served by ELCO is 75,350 gallons per year.

Figure 4.6 provides a comparison of the water use per mobile home in each of the twelve mobile home parks that receive water service from ELCO. There is quite a bit of variability in the amount of water used per mobile home pad. The availability of well water for irrigation in some mobile home parks and not others accounts for some of the variability. The poor condition of the private water systems serving mobile home parks and lack of individual water meters in most parks might also contribute to higher water use.

Figure 4.6 - Average Annual Water Use per Mobile Home Pad (2003 – 2006)

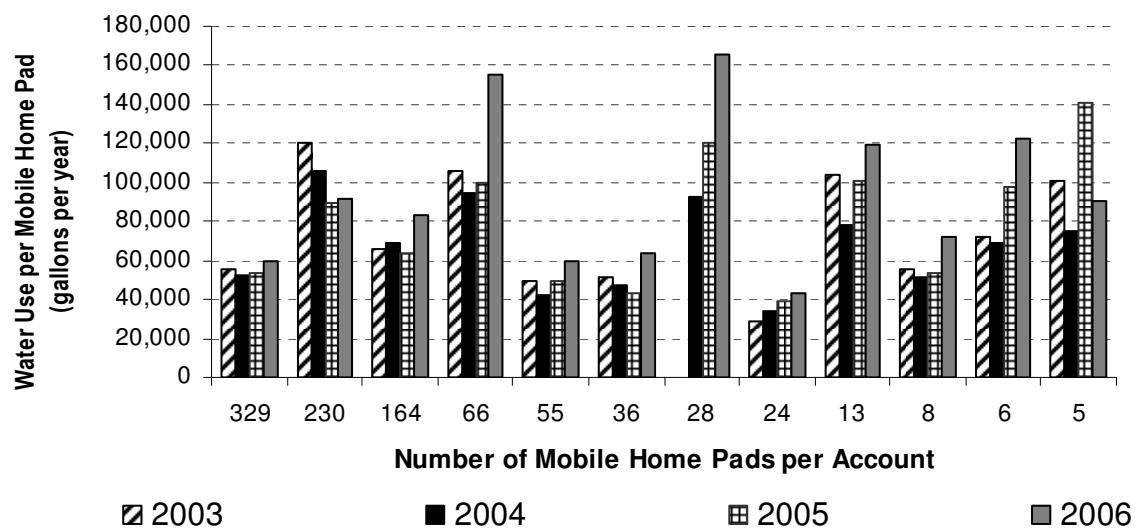


Figure 4.6 shows an opportunity, particularly in the smaller mobile home parks, to save water through water conservation.

Water Demand Forecast

Based on studies prepared by the City of Fort Collins Advanced Planning Department, ELCO projects build out of its service area to include approximately 47,000 people and over 18,700 customer accounts. These figures are based on information from the 2003 City of Fort Collins BLI, existing Fort Collins development and land use plans (including the I-25 Sub-Area Plan, the Mulberry Corridor Plan and the Mountain Vista Sub-Area Plan) and current Larimer County zoning regulations.

In part, the BLI is an inventory of vacant, partially vacant and re-developable land within the Fort Collins GMA. It indicates areas with potential for future development and provides information on the extent of that development based on zoning regulations. District population and tap increases will be attributable to growth both inside and outside of the Fort Collins GMA.

The BLI identified each undeveloped acre within ELCO's service area as Commercial, Employment, Industrial, Low Density Mixed Use Neighborhoods (LMN), or Medium Density Mixed Use Neighborhoods (MMN). Acres designated as LMN (single family) are required by the City to have a minimum of five housing units per acre. Acres designated as MMN (multi-family) are required to have a minimum of 12 housing units per acre. Account projections for single family and multi-family acres are based on these density requirements.

Population projections are based on the most current Census data, which indicates a population of 2.58 people per housing unit for areas within the District. Based on the existing population and the density requirements for future development, ELCO

anticipates a build-out population of about 47,000 people by the year 2030. The growth projected by the City of Fort Collins within ELCO's service area is equivalent to an average annual increase of about 570 accounts.

The rate of growth projected by the City of Fort Collins seems high, but is not unprecedented. FCLWD, another special district that serves Fort Collins residents in the southern part of the City, saw the number of accounts it served increase from 3,984 to 12,960 between 1991 and 2005. That increase equates to an average annual growth rate of 8.8% or an additional 630 accounts per year.

Projections of future water use are based on the amount of undeveloped land within ELCO's service area and water-use factors assigned to future accounts or the number of acres zoned for specific uses. Single family and mobile home water use was based on ELCO's annual water allotment established in its "Raw Water Requirements and PIF Schedule." Allotments for single family homes are based on lot size.

ELCO lacked a sufficient number of customer accounts to establish the water use of commercial, employment, industrial, and multi-family areas developed under urban criteria. The few customers ELCO currently serves in those categories are in older, established county subdivisions. The City of Fort Collins has much different development standards than Larimer County. City standards require extensive landscaping and building facades that attract higher end retailers and employers. Without data of its own to project future water demands in non-residential City developments, ELCO relied on water use studies performed by the City of Greeley in its 2003 Water Master Plan. Water use data developed by Greeley and used by ELCO to project future water demands for different types of developments are summarized in Table 4.2.

Table 4.2 - Water Demands in Different Land Use Categories

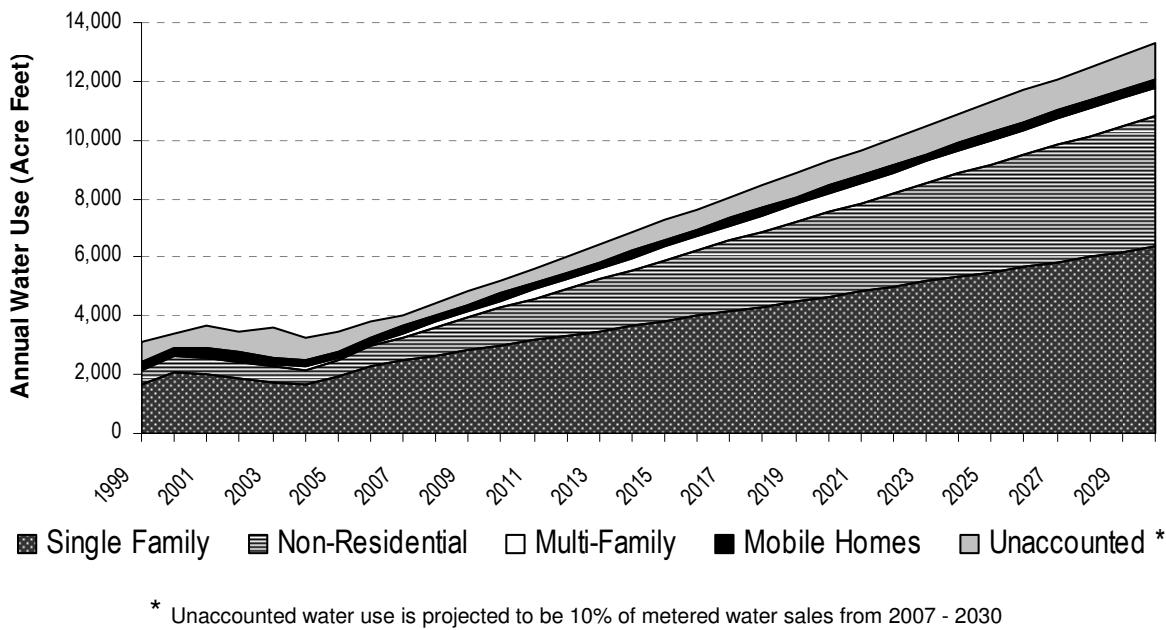
Land Use	Projected Water Demand ⁽¹⁾
Commercial	2.3 acre feet per acre
Employment	2.3 acre feet per acre
Industrial	1.6 acre feet per acre
Multi-Family	4.0 acre feet per acre

(1) Source: City of Greeley Water Master Plan (2003)

With future land use within the majority of ELCO's service area established in the City of Fort Collins BLI, the future water demand of District customers was relatively easy to estimate. Figure 4.7 shows the District's actual water demand between 1999 and 2006,

and the projected water demand between 2007 and 2030. The graph does not reflect any reduction in water demand resulting from conservation measures that have yet to be implemented.

Figure 4.7 - Projected Water Use by Customer Category



It is important to recognize the limitations of water demand projections. Projections are intended to be approximate forecasts that demonstrate general trends and not to be interpreted as exact targets or absolute predictions of what will occur. Projections are based on certain assumptions that can be significantly impacted by external factors.

Projections prepared by the City of Fort Collins provide the best data currently available to estimate future water demand and have been used to develop water demand projections shown in Figure 4.7. Projections of the rate and location of growth will likely change over time, and City staff are the most qualified to project growth within the City's boundaries.

CHAPTER 5 - PROPOSED FACILITIES

Identification of Future Needs

Participation in Regional Projects

ELCO and other water providers in the Fort Collins area have historically planned and constructed projects cooperatively. The schedule for those projects is driven by the collective needs of all participants rather than the needs of any one entity. The advantages of combining resources and constructing single projects at one time rather than several projects over an extended period of time far outweigh the cost of funding improvements sooner than they would otherwise be required.

Because ELCO has historically grown at a slower pace than other water suppliers in the area, it usually funds projects several years before they might be required to meet the needs of the District. Funding improvements sooner than required is sometimes challenging for the District, but the ELCO Board recognizes the many benefits including lower unit costs through economies of scale, limiting disruption and environmental impacts within the community, improving redundancy and efficiencies, integrating operations with other suppliers, and fostering cooperation among participants.

All the facility needs discussed in this section are being planned in conjunction with one or more water supplier. In most cases, ELCO could wait to construct planned improvements if the construction schedule was based only on its needs. For ELCO, however, the cost advantage alone justifies participating in proposed projects sooner than necessary rather than waiting to construct its own improvements on its own schedule.

Water Rights

Since committing to the Poudre River for its future water supply, ELCO has obtained native water rights that will supply a firm yield of approximately 1,500 acre feet per year once those water rights are converted for municipal use. That represents approximately 24% of the average firm annual yield of water rights currently owned by ELCO.

ELCO purchased very little of the native water supplies it currently owns. The majority of ELCO's native supplies were turned into the ELCO Water Bank by developers and speculators. ELCO created a Water Bank similar to the one operated by the City of Loveland to facilitate water transfers between sellers and buyers. Depositors of water rights into the ELCO Water Bank receive credit that can be used to satisfy ELCO's raw water dedication requirements. That credit can be used by the depositor or sold to another developer or individual that may not own water rights.

Most of the water rights deposited in ELCO's Water Bank originated on farms converted to large-lot rural developments, so the developer had far more water than he needed. Many new developments served by ELCO are occurring on what was once irrigated farmland. The water rights historically delivered to those farms are now being turned in to ELCO.

ELCO has never accepted cash-in-lieu of water rights. Developers have always been required to turn in water rights. That policy relieves the District and its customers from the risk and responsibility associated with competing on the open market for water rights needed to serve future developments.

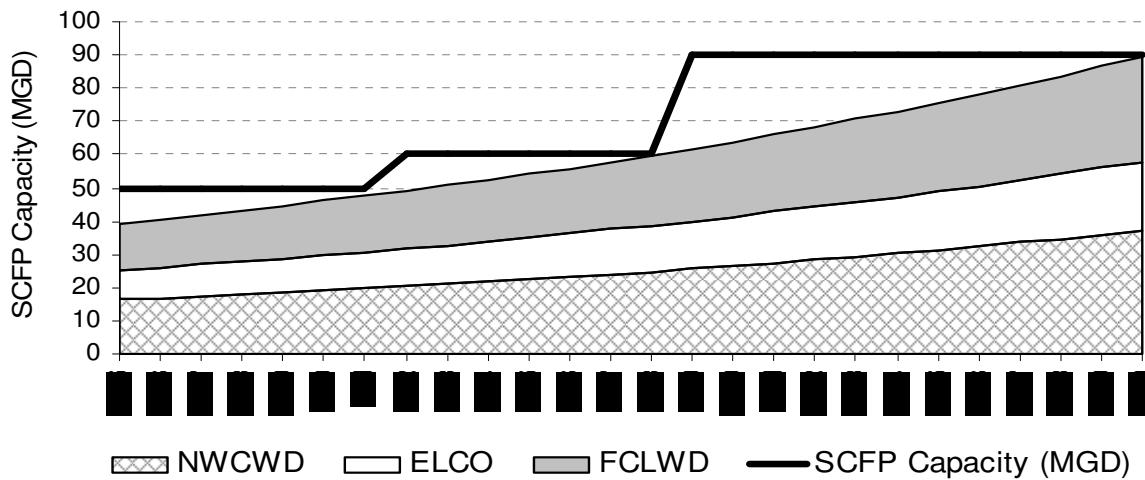
Without the obligation to secure water rights for future customers, ELCO is able to focus its resources on improving the reliability and quality of water service to existing customers while simultaneously planning for the treatment, transmission and raw water storage needs of new customers.

Water Treatment Capacity

Water delivered to ELCO is treated at the SCFP. SCFP is jointly owned by ELCO, FCLWD and NWCWD. Each District owns an equal share of the SCFP, but funds expansion and improvement based on its respective water use.

The treatment capacity needs of the three Districts that own the SCFP were projected in a report prepared in August, 2002 by TEC. In that report, TEC indicated the SCFP would need to be expanded from 50 mgd to 60 mgd by the year 2012 and from 60 mgd to 90 mgd by the year 2018. In 2006, the peak-day demand at the SCFP was 38 mgd. Figure 5.1 compares projected water demands of the three Districts that own the SCFP to the existing and future treatment plant capacity.

Figure 5.1 - SCFP Treatment Capacity and Projected District Demands



The 10 mgd treatment plant expansion planned for 2012 will replace tube settlers in existing basins with dissolved air flotation equipment. Four new filter basins will also be constructed. Utilization of existing basins inside the treatment facility will make the next 10 mgd plant expansion relatively inexpensive.

Table 5.1 shows preliminary cost estimates for the planned expansion. Costs and capacities shown in Table 5.1 are for the total project. The cost of the plant expansion will be shared among the three Districts that own the SCFP. ELCO would pay its proportionate share of project costs based on its relative water use at the time of construction.

Table 5.1 - Estimated Cost of SCFP Expansion Planned for the Year 2012

	Estimated Cost	Capacity	Unit Cost of Capacity
Permitting	N/A		
Land Acquisition	N/A		
Construction	\$3,600,000		
Subtotal	\$3,600,000		
Design & Construction Contingency (20%)	\$720,000		
Subtotal	\$4,320,000		
Engineering (12%)	\$518,400		
Total	\$4,838,400	10 mgd	\$4.84 per gallon
Present Value of Unit Cost of Capacity @ 5%			\$3.80 per gallon

Water Transmission Capacity

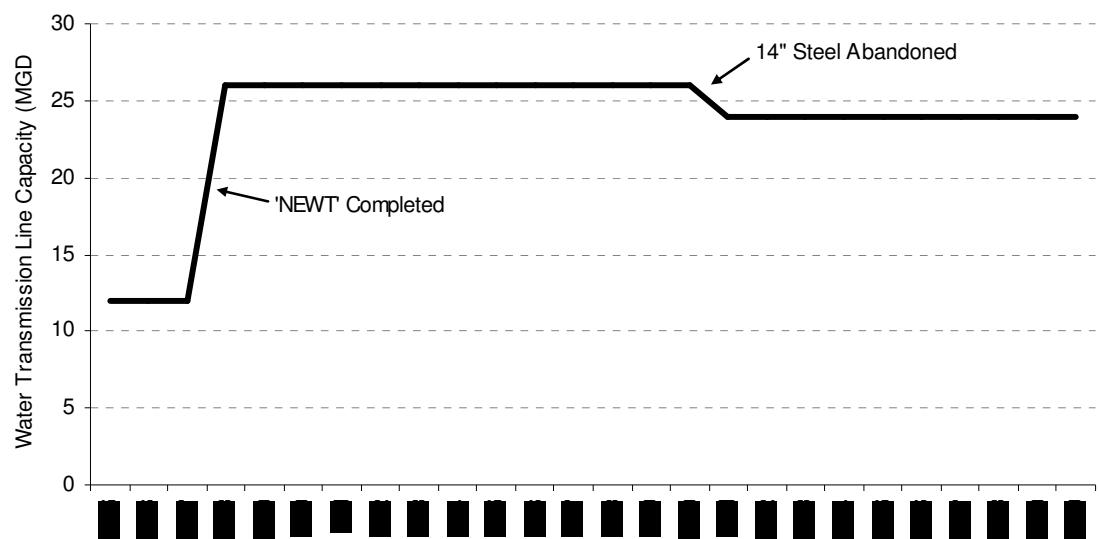
ELCO currently delivers treated water to District customers through two transmission lines: 1) a 24-inch ductile iron pipe installed in 1978, and 2) the original 14-inch steel pipe installed in 1963. The combined capacity of the two existing transmission lines is 12 mgd. Existing transmission lines will satisfy the District's needs through the year 2013.

NWCWD, one of the co-owners of the SCFP, plans to construct a large transmission line through north Fort Collins within the next two years. NWCWD needs additional transmission capacity at this time and is planning to coordinate construction and land acquisition for its project with a similar large water transmission line being installed by the City of Greeley.

Even though ELCO does not need additional transmission capacity at this time, the District is committed to participate in the transmission line planned by NWCWD. Coordinating construction of two large transmission lines, one for Greeley and the second for ELCO and NWCWD, will reduce costs for construction and land acquisition and limit disruptions related to installation of the pipelines.

Preliminary engineering indicates the transmission line shared by ELCO and NWCWD, dubbed the Northeast Water Transmission Line (NEWT), will be a 54-inch diameter water line with a total capacity of 55 mgd. By build out, ELCO will need approximately 24 mgd of transmission capacity. The existing 24-inch ductile iron line with a capacity of 10 mgd will still be in use at build out. Because of its age and the type of material it is made of, the 14-inch steel line will likely be abandoned by 2020. Figure 5.2 shows the existing and future water transmission capacity of the District.

Figure 5.2 - ELCO Water Transmission Line Capacity



Preliminary engineering and permitting for NEWT is underway. To date, ELCO has spent \$82,620 on NEWT. Land acquisition is planned for 2007 with construction beginning in 2008. Table 5.2 summarizes costs associated with the NEWT project.

Table 5.2 - Total Estimated Cost of the NEWT

	Estimated Cost	Capacity	Unit Cost of Capacity
Permitting and Planning	\$315,240		
Land Acquisition	\$1,192,000		
Construction	\$9,656,000		
Subtotal	\$11,163,240		
Design & Construction Contingency (20%)	\$2,232,650		
Subtotal	\$13,395,890		
Engineering (12%)	\$1,600,000		
Total	\$14,995,890	55 mgd	\$0.27 per gallon

Raw Water Storage

To better utilize its Poudre River water rights and increase the yield of those water rights, ELCO plans to obtain storage capacity at several locations along the Poudre River. ELCO plans to secure storage at the following locations: 1) available for diversion at the Pleasant Valley Pipeline, 2) as close to possible to the SCFP and 3) downstream of the wastewater treatment facilities that will discharge reusable effluent that ELCO can claim and capture.

Securing storage high in the Poudre will increase the average yield of the District's native supplies by allowing surplus water captured in wet years to be carried over for use in dry years. Storage near the SCFP will provide operational flexibility and the ability to regulate the timing of supplies to more closely match the timing of customer demands. Gravel pits located downstream of the discharges of the wastewater treatment facilities that serve ELCO's customers will allow the District to claim and capture as much of its reusable effluent as possible.

Halligan Reservoir

ELCO and other northern Colorado water suppliers (NWCWD, FCLWD, Fort Collins, and NPIC) have applied for a federal permit to enlarge Halligan Reservoir from 6,400 acre feet to approximately 40,000 acre feet. ELCO plans to obtain 3,795 acre feet of capacity in the enlarged reservoir.

Halligan Reservoir was constructed in 1909 by the NPIC on the North Fork of the Poudre River near Livermore. Halligan Reservoir historically supplemented irrigation deliveries of NPIC. In 2003, the City of Fort Collins purchased the reservoir from the NPIC. The following year, ELCO and its partners in the SCFP agreed to participate with

the City of Fort Collins in exploring the feasibility of enlarging the reservoir to store water for municipal uses. Since the enlargement of Halligan will inundate existing wetlands, the project must complete public scoping, alternative analysis and environmental assessments required under the National Environmental Policy Act.

Third party consultants have been hired to analyze the expansion of Halligan Reservoir along with a number of other alternatives. Consultants plan to complete the environmental impact study for the proposed project late in 2008. If applicants receive the necessary permits from the Corp of Engineers, construction of a new dam at Halligan Reservoir could begin in 2010.

Overland Trail Ponds

In 2005, Lafarge West Inc. agreed to sell property it had been mining for a number of years to ELCO and several other water suppliers (Fort Collins, Greeley, FCLWD, and NWCWD). The Lafarge property is located near the Town of LaPorte on the south side of the Poudre River immediately west of Taft Hill Road. Even though Lafarge no longer owns the property, it continues to mine gravel from the site. The purchasers plan to develop the Lafarge site and several nearby properties into a series of water storage reservoirs. When completed, the Overland Trail Ponds project will permit the purchasers to store approximately 4,700 acre feet.

Existing and future gravel pits on land owned by the water suppliers will be sealed and configured to divert water from the Poudre River when it is available. Water stored in the Overland Trail Ponds will be released back to the Poudre to meet return flow obligations, exchanged for water diverted at the Pleasant Valley Pipeline or pumped to the SCFP for treatment.

Work on lining the existing gravel pits and installing the necessary pipes, pumps and structures will begin in 2008. It will take approximately 20 years before all the property is mined and gravel pits are sealed. Once the project is completed, ELCO will own approximately 460 acre feet of storage in the Overland Trail Ponds.

Rigden Storage Project

The Rigden property is located adjacent to the Poudre River near the intersection of Harmony Road and Interstate 25. The site is approximately ¼ mile below the outlet of the Boxelder Sanitation District wastewater treatment plant and ½ mile below the outlet of the City of Fort Collins Drake Water Reclamation Facility.

The Rigden property is currently owned by Flatiron Companies, which has offered to sell a portion of the property to ELCO. The site has been mined for sand and gravel for approximately 20 years. Most of the marketable material has been removed from the site and reclamation has begun.

Flatiron Companies plans to develop a portion of the site for residential use. The remainder of the property will be developed for raw water storage. The reservoir planned for the site has an estimated capacity of 600 acre feet.

A reservoir on the Rigden property could easily divert and store reusable water that ELCO plans to claim from both the Boxelder and Drake wastewater treatment plants. The change-of-use decrees for the native water supplies owned by ELCO will allow the District to “use to extinction” all the reusable water it can account for. All the reusable water owned by the District will be treated just upstream of the Rigden property. The ability to divert reusable water almost immediately after it is discharged from the wastewater treatment facilities makes the Rigden property an ideal site for a storage reservoir.

Figure 5.3 shows the amount of storage ELCO plans to develop and the date each storage project will be available for use by the District.

Figure 5.3 - ELCO Water District Water Raw Water Storage Capacity

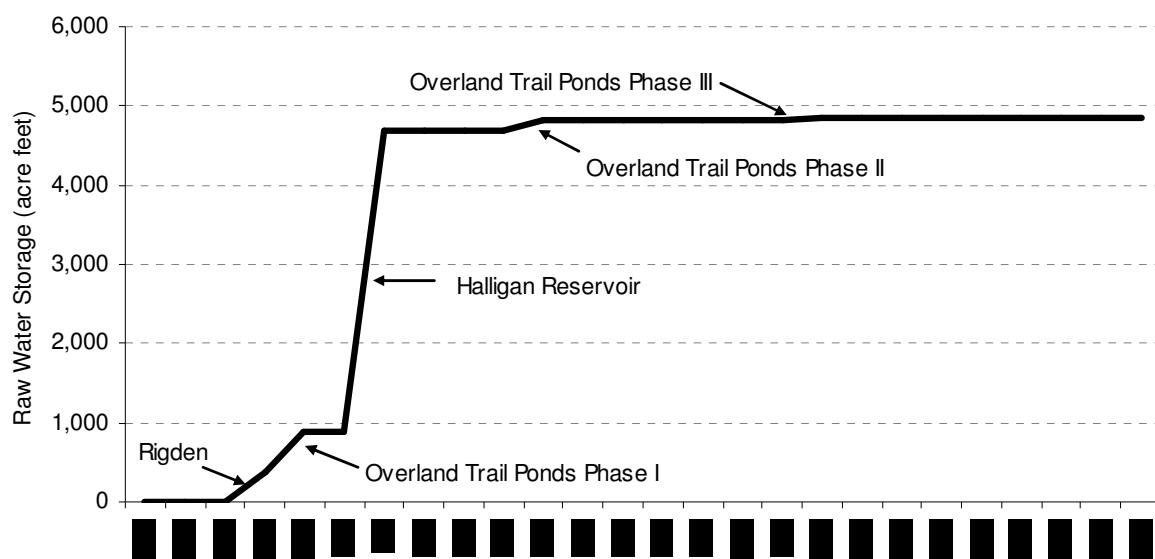


Table 5.3 shows the estimated cost, capacity and unit cost associated with each of the reservoir projects that ELCO is currently participating in. The 4,855 acre feet obtained from the three projects falls short of what the District will require by 2030, so other storage projects are being considered.

Table 5.3 - Estimated Cost of Raw Water Storage

	Estimated Cost	Capacity	Unit Cost of Capacity
Halligan Reservoir Enlargement			
Permitting and Design	\$1,126,138		
Land Acquisition	\$648,767		
Construction	\$2,832,500		
Subtotal	\$4,607,405	3,795 af	\$1,214 / af
Overland Trail Ponds			
Land Acquisition	\$356,280		
Engineering, Legal and Planning	\$116,250		
Phase I	\$442,938		
Phase II	\$587,875		
Phase III	\$368,375		
Subtotal	\$1,871,718	460 af	\$4,069 / af
Rigden Storage Project			
Cost of Acquisition	\$1,640,000	600 af	\$2,733 / af
Total	\$8,119,123	4,855 af	\$1,672 / af

CHAPTER 6 - WATER CONSERVATION GOALS

Water Conservation Goals

Establishing water conservation goals is an iterative process that begins with quantifying the future demand for water based on current water-use habits and identifying areas water use can feasibly and effectively be reduced. Reduction of future water demand through water conservation will potentially delay planned water supply acquisition and the need for infrastructure improvements. Although logical in concept, ELCO's position is unique in that it shares existing facilities with other entities. In addition, many of ELCO's planned facilities will be cooperative efforts with other entities. This limits the flexibility for ELCO to delay facility upgrades through water conservation because the infrastructure projects are driven by opportunity and the joint needs of the participants.

ELCO recognizes the value of water conservation, not only from a supply standpoint, but also from an environmental perspective. Because of the limited supply in the northern Colorado Front Range and the cost and time to change the use of native water rights, the cost of attaining new water supplies is extremely high. After the drought of 2001-2002, ELCO took an aggressive approach to water conservation through the existing measures and programs summarized in Chapter 3. The gallons per capita consumption went down from 192 gpcd in 1999 to 180 gpcd in 2006, an overall reduction of 7%. This reduction occurred after a three-year stabilization period following drought restrictions in 2002 and 2003.

The goals established for this Water Conservation Plan are based on discussions with staff and quantification of ELCO's historic and future water demands. The highest water use customer categories for the District are Single Family, Non-Residential (which includes irrigation-only taps) and Mobile Home Parks. Most of the water conservation efforts completed to date have been in the Single Family residential category. These measures will continue to be implemented while new goals will be established for the other categories.

Another area of high water use is unaccounted-for water losses. In 2006, this amounted to 162 million gallons. This level of water use warranted an additional area of focus for water savings. A water savings goal was not established for the Multi-Family category at this time because ELCO's limited resources for water conservation are better spent in the other areas.

The following table shows the 2006 water use for each customer category, the projected 2016 water use, the target reduction goals over the ten-year planning horizon of this plan and the associated amount of water savings.

Table 6.1 – Water Conservation Goals

Categories:	2006 Taps	2006 Water Use	Use per Tap	2016 Taps	2016 Projected Water Use	Use per Tap	% Reduction	Reduction from 2016 Water Use	Area of focus
		ac-ft	ac-ft/tap		ac-ft	ac-ft/tap		ac-ft	
Single Family	4864	2,314	0.48	8,567	3,993	0.47	5%	200	Outdoor irrigation, rebates and increased effort of existing measures
Non-residential	484	643	1.33	784	2,232	2.85	5%	112	Irrigation taps, motels, other commercial
Mobile Homes	963	226	0.23	1,093	245	0.22	5%	12	Leak detection & sub-metering
Multi-family	144	108	0.75		485		0%	0	
Totals:		3,291			6,955			324	
Unaccounted for losses - reduce from 10% of production to 5%			497				50%	249	Leak detection program, WTP filter backwash reuse
									Total demand reduction: 572

Single Family

The per-capita water usage for residential taps in 2006 was 166 gpcd. The reduction goal for this category is 5%, which will reduce the usage to 158 gpcd. Most of this reduction is anticipated to come from increased communication and promotion of the existing measures. The 2016 goal is to reduce the projected water use by 200 acre feet. This water savings can be measured in the future by dividing the measured water use by the total population.

Non-Residential

The Non-Residential category includes commercial businesses, motels, restaurants, and irrigation-only taps that are typically located in HOA open space areas. The use is projected to increase substantially in this area because of the increasing development within the Fort Collins GMA. This creates a larger area for potential water savings than there has been in the past, which will be targeted with numerous new measures and programs. The 2006 per-tap use for non-residential was 1.3 acre feet. Because the growth in this area may bring higher water-use industries than there have been in the past, we elected to not target a reduction in the per-tap water use. Instead, the goal will be to reduce the 2016 projected use by 112 acre feet.

Mobile Home Parks

Most of the mobile home parks in ELCO's district boundaries are older and hardly any growth is expected in this category. The savings associated with mobile home parks will be from leak detection and repair in the aging distribution systems and possible sub-metering of the individual mobile home pads. The water use in this category was at 81 gpcd in 2006 and is anticipated to be reduced 5% to 77 gpcd by 2016. This water

savings can be measured in the future by dividing the measured water use by the total population within these parks.

Unaccounted-for Water

As described in Chapter 3, unaccounted-for water is the difference between the water produced at the SCFP and the water metered at ELCO's customers. It is estimated that this loss amounts to 10% of the water produced. ELCO targets a 50% reduction in its unaccounted-for water loss, reducing the total loss from 10% to 5%. This water savings can be monitored by comparing the metered water production at SCFP to the metered billing records at the customer accounts.

Goal Development Process

The development of water-savings goals for ELCO was a collaborative process involving Clear Water Solutions, the Water Consulting Group, and the District staff and Board. Information was gathered from billing records and existing planning documents to properly characterize the system, resources and water use for ELCO. Development of this data showed ELCO's highest water use customers and customer categories, seasonal usage, system limitations and losses, and outlined the District's existing conservation measures/programs and their measured effectiveness.

Once the largest areas of water use were identified, the consulting team 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.

CHAPTER 7 – CONSERVATION MEASURES AND PROGRAMS

Water Conservation Measures and Programs

ELCO staff and the consulting team reviewed numerous resources to develop its list of conservation measures and programs including the CWCB Guidance Document, City of Fort Collins conservation measures/programs, water conservation practices for other Front Range communities, and many water conservation reference materials. Through this research, a universal list of measures and programs was created that was appropriate for ELCO. Both *supply-side* and *demand-side* measures were considered. The measures and programs were grouped further into four major categories: Utility Maintenance, Regulatory Controls, Educational Programs, and Rebates and Incentives. The groupings helped to define the nature of each program/measure and which District staff will be responsible for implementation.

Through the conservation measures and programs development process, some key concepts became apparent:

- ELCO had a very good existing conservation program that included a history of education that could be built upon.
- Due to lack of resources, the District was not in a position to police conservation activities, and thus preferred to offer incentives to conserve water.
- There was a great opportunity to partner with the City of Fort Collins on certain efforts.

Table 7.1 summarizes the results of this effort. The existing measures and programs are highlighted in green.

Table 7.1 – Universal List of Conservation Measures and Programs

	Conservation Measure or Program	Existing
Supply side measures & programs	Utility Maintenance Programs	
	Leak detection & repair - 20% of system per year, whole system every 5 years	yes
	Recycling filter backwash	yes
	Meter testing and replacement	yes
	Sub-meter mobile home parks	no
	Leak detection program in mobile home parks	no
	Installing meters in the distribution system to pinpoint leak areas	no
	Water reuse system	no
	Regulatory Controls	
	Soil amendment for new residential and commercial	yes
Demand side measures & programs	Temporary irrigation taps for native landscaping	yes
	Drought restrictions resolution	yes
	Landscape & irrigation system standards for new development	yes
	Restrictive covenants ordinance	yes
	Adding additional conservation charge tiers to rate structure	no
	Adding an additional monthly tier to the rate structure	no
	Lawn watering restrictions	no
	Removal of phreatophytes e.g. cottonwoods	no
	Xeriscape program for commercial	no
	Xeriscape program for open space (HOAs)	no
	Xeriscape program for residential	no
	Requiring wind and rain sensors for commercial and HOA open space irrigation	no
	Wetting agent for open space (HOAs)	no
	Irrigation system improvements at open spaces	no
	Educational Programs	
	Public education - new customer package, newsletter, bill stuffers	yes
	Designated water conservation officer (through Fort Collins)	yes
	Children's water festivals - given by NCWCD for Fort Collins elementary schools	yes
	Send ET irrigation scheduling in May water bill	no
	Xeriscape demonstration site at pump station	no
	Rebates and Incentives	
	Indoor conservation kits	yes
	Sprinkler system audit kits and instructions	yes
	Rebate programs for toilets, clothes washers and dishwashers (faucets and showerheads included in conservation kits)	no
	Commercial water audits	no
	Wind and rain sensor rebates for residential (rebate or outdoor conservation kit)	no
	Distribute pre-rinse sprayheads to restaurants & institutions	no
	Zero-interest loans for commercial water efficiency projects	no
	Commercial toilet and urinal incentives	no

Screening Criteria

We established the following screening criteria based on discussions with the Board and staff. Each measure and program in Table 7.1 was screened using the following criteria.

1. Staff and Board approval
2. Public acceptance
3. System limitations
4. Financial implications

Screening of Conservation Measures and Programs

The purpose of the initial screening was to create a final list of measures and programs that *would be evaluated further in the planning process* via a benefit-cost analysis. We met with ELCO's Board and staff to discuss each measure/program on the universal list and eliminate ones that were not feasible for ELCO. Each measure/program is described below with the resulting decision from the screening process.

Utility Maintenance

EXISTING MEASURES AND PROGRAMS

Leak Detection and Repair

This is an existing program that the District has been diligently conducting for the previous three years through a private contracting company. It has resulted in lowering the distribution system loss from 25% to approximately 10%. The on-going program will consist of surveying 20% of the system each year to provide a survey of the complete system every five years. The survey and repair of leaks will be accomplished through a combination of District staff and equipment and contract work. ELCO is dedicated to lowering losses in its system and will continue this program.

Recycling Filter Backwash

The SCFP is equipped to recycle filter backwash water – equal to approximately 5% of the total water production. The water produced at SCFP is delivered to the three owners of the filter plant: ELCO, FCLWD and NWCWD. ELCO uses 23% of the water produced at the filter plant and can therefore claim 23% of the 5% backwash recovery. This measure is effective and will continue indefinitely.

Meter Testing and Replacement

ELCO has replaced a large percentage of the meters in its service area over the years and has an on-going program to evaluate and replace, as appropriate, meters that may

have been undersized. ELCO's meter replacement program schedules meter replacements every 15 years. This is an on-going program that will continue.

NEW MEASURES AND PROGRAMS

Sub-Meter Mobile Home Parks

Currently the mobile home parks are served by 14 master meters. There are 963 individual mobile home pads and only 164 of the pads are individually metered. This eliminates the responsibility or incentive of most of the home owner to conserve water. Sub-metering would be completed by the privately-owned mobile home parks and subsidized by ELCO.

Through discussions, the Board decided that a rebate program would be offered for existing mobile home parks and a regulation would be adopted to require new parks to install sub-meters. These programs will be moved into the Rebates and Incentives category and the Regulatory Controls category, respectively, and will be evaluated further.

Leak Detection and Repair Program in Mobile Home Parks

The mobile home parks are relatively old, and to the District's best knowledge, have never had a formal leak detection program. Leak detection surveys could be performed within the parks by ELCO staff using the newly purchased leak detection equipment or this could be subcontracted to a third party. Once leaks are pinpointed, the mobile home parks would be responsible for the repair and would benefit by reductions in their water bills. This program is consistent with ELCO's desire to reduce system losses and will be evaluated further.

Installing Meters in the Distribution System to Pinpoint Leak Areas

This measure would involve installing meters at strategic locations within the District's transmission system to aid in identifying smaller areas in which leaks may be occurring. This would make the leak detection program more effective by identifying specific areas within the distribution system to focus on.

This is a costly program to implement and will not be evaluated further at this time. As other maintenance projects occur, these large meters may be installed coincidentally.

Water Reuse System

A portion of the water rights that the District accepts and converts from agricultural use to domestic use through Water Court is either foreign (out of basin) or is decreed for reuse. This water will be available for reuse once it has been approved by Water Court. A water reuse system would collect the effluent after first use and store, exchange, lease, or provide for replacement of return flow obligations to the river. Building a reuse

system is an expensive and time-consuming process and is best completed in increments. The Water Court proceeding to decree the change of use should be complete in approximately two years, and in the mean time, ELCO is preparing to construct the storage component of this system. Water collected in this system will extend the life of ELCO's current supplies. This measure will be considered further.

Regulatory Controls

EXISTING MEASURES AND PROGRAMS

Soil Amendment for New Residential and Commercial

Forty percent of ELCO's service area lies within the City of Fort Collins GMA and approximately 90% of ELCO's future water use will be within this GMA. Developments within this area receive water service from ELCO although they are annexed into the City of Fort Collins and subject to the City's codes and ordinances. Fort Collins has an ordinance for new construction that requires eight inches of soil to be loosened and three cubic yards per 1,000 square feet of an appropriate soil amendment to be added to the top six inches of top soil in the landscaped area. This is an adopted, on-going ordinance that will result in water savings to ELCO for new taps within the Fort Collins GMA. This program will be evaluated further in the planning process.

Temporary Irrigation Taps for Native Landscaping

This is an existing program that encourages installation of native landscaping that will not require irrigation after it is established. The tap is available for five years at a monthly base and water rate charge. No water dedication or PIF is necessary with this temporary tap. This program will continue to be offered and the savings evaluated.

Drought Restrictions Resolution

The Drought Restrictions Resolution establishes the District's authority to declare a drought and mandate watering restrictions according to the severity of the drought and limitation of water supply. This measure will be continued and evaluated for savings. Due to the uncertainty of how often this program will be implemented over the ten-year planning horizon, the water savings will not be counted toward the overall water-savings goals. Any associated water savings will be a "bonus" in addition to those received from the other measures/programs.

Landscape and Irrigation System Standards for New Development

These standards are enforced in the Land Use Codes for the City of Fort Collins and include the use of Xeriscaping principles like incorporation of low water-use plants, efficient irrigation systems and grouping of similar water-use plants in irrigation zones. Certificates of occupancy for new construction are given only after review of the landscape and irrigation system design shows compliance with the standards. This

program will affect new ELCO customers within the City of Fort Collins GMA, which will be 90% of ELCO's future water use. This program will be evaluated as part of this plan.

Restrictive Covenants Ordinance

This is a City of Fort Collins ordinance and affects new ELCO customers within the City of Fort Collins GMA. This ordinance "overrides" neighborhood covenants that restrict the use of real property for resource conserving activities including Xeriscaping and mandated minimum amounts of turf grass. This is an existing measure that will be continued. However, due to the difficulty in predicting participation and quantifying water savings, this measure will not be evaluated further. Any associated water savings with this measure will be a "bonus" to the other measures/programs.

NEW MEASURES AND PROGRAMS

Adding Additional Conservation Charge Tiers to the Rate Structure

The current conservation charge for water use over the annual water allotment for a given property or tap size is \$1.50 per 1,000 gallons in addition to the regular water rate. ELCO customers that exceed their annual allotment pay \$3.12 for every 1,000 gallons used in excess of their allotment. In the future, the District may choose higher rates or additional rate blocks for those accounts that exceed their allotment. For example, the District could implement a policy that retains the first conservation charge of \$1.50 per 1,000 gallons of overuse, but doubles that rate per 1,000 gallons for 200% of overuse and triples it for 300% of overuse. ELCO's water rate philosophy emphasizes its customers' responsibility to budget their annual allocation according to their individual needs. This program follows that philosophy while providing some regulation for extreme overuse. This measure will be evaluated further.

Adding an Additional Monthly Tier to the Rate Structure

This measure would focus on minimizing use during peak demand periods experienced during the summer. It would be independent of the annual allotment and add a higher rate for water use within one month. For example, the first rate block could be from the existing monthly minimum use of 4,000 gallons to say, 25,000 gallons. The additional monthly rate would then apply to use over this 25,000-gallon maximum monthly allotment. The 25,000 gallons is the highest average monthly per-tap use and typically occurs in June or July. While not exceedingly punitive, this second tier would send an additional water conservation message throughout the year.

This program is inconsistent with ELCO's rate strategy at this time and will not be evaluated further. The current downside to ELCO's rate structure is that the majority of its customers do not exceed their annual allotment, and thus do not get assessed the water conservation charge. ELCO's staff and Board were open to suggestions on how to notify its customers to conserve water throughout the year. The discussion about this program resulted in a decision to add more information on the water bills to inform

customers on their level of water use throughout the year. This effort will be added to the Educational Programs category.

Lawn Watering Restrictions

This measure would be in addition to the Drought Restrictions Resolution and would have its own levels of voluntary and mandatory watering restrictions that could be implemented as needed. Voluntary watering restrictions will be evaluated further and can be advertised in the water bills when water-short conditions occur, but are not at the level of a drought situation.

Removal of Phreatophytes

Phreatophytes such as large cottonwood trees grow roots into the water table, and if located near a water supply, can consume large amounts of the water supply. Although the removal of phreatophytes would benefit in water savings, there can be significant public resistance to the implementation of this program. ELCO does not have jurisdiction over areas near its water supplies. Therefore, this conservation program will not be considered further.

Xeriscape for Commercial

The District can work with developers to design and install low or no water use vegetation as part of commercial landscapes. This conservation measure is viable for ELCO since it is still developing commercial properties. This program would work best as a requirement that new commercial customers install a minimum percent of the landscape as Xeriscape. ELCO can partner with Fort Collins for a design workshop and personal appointment with a landscape designer for design assistance. This program will be evaluated further.

Xeriscape for Open Space (HOAs)

The District can work with developers to design and install low or no water use vegetation as part of open space landscaping. Since the annual allotment for an irrigation tap is based on irrigated acreage, this could result in a lower water dedication requirement and annual allotment. ELCO can partner with Fort Collins for a design workshop and personal appointment with a landscape designer for design assistance. This program would also work best as a minimum Xeriscape requirement with new development and will be evaluated further.

Xeriscape for Residential

This conservation program is difficult to implement for residential use due to individual HOA regulations. In addition, Xeriscaping for residential homes can cause issues with water dedication because there is no guarantee the subsequent homeowners will leave the low-water-use landscaping in place. However, ELCO's allotment system would in

essence police this program as subsequent homeowners that change the landscape would pay higher usage rates. This measure could be offered as a rebate program for personal water savings benefits if HOA regulations allow it. ELCO can partner with Fort Collins for a design workshop and personal appointment with a landscape designer for design assistance. This program will be evaluated further.

Requiring Rain and Wind Sensors for Commercial and Open Space Irrigation

Wind and rain sensors temporarily shut off irrigation systems based on pre-established weather conditions, i.e. excessive wind or rain. ELCO will consider requiring commercial business and HOA open space areas to install rain and wind sensors. This program will be evaluated further.

Using Wetting Agents on Open Space (HOAs)

Wetting agents increase the penetration and infiltration of irrigation or rainfall in problem areas or during times of stress (i.e. excessive heat). This measure requires applying a wetting agent onto the ground before and during times of stress, which can reduce the amount of water needed by the turf. Some examples are *Jetwet*, *Aquaplex*, *Revolution*, *Aqueduct* and *Revive*. Wetting agents are chemical surfactants that have been proven to help in watering practices. The cost could prohibit use of the product throughout the whole landscaped area. An incentive could be given to HOAs to use wetting agents or the District could administer this measure. The Board did not want to evaluate this measure further.

Irrigation System Improvements at Open Spaces (HOAs)

As the existing irrigation systems in use at open space areas wear out over time, the equipment becomes less and less efficient. As a result, it requires more water to irrigate the same amount of ground. The HOAs could be given some incentive to make improvements to aging systems through rebates or upgrade kits.

It was decided that ELCO would be interested in subsidizing this measure through an audit program. Irrigation system audits would be provided to HOAs to determine repairs necessary for improved water use. This program will be evaluated further.

Educational Programs

EXISTING MEASURES AND PROGRAMS

Public Education Program – New Customer Packets, Newsletters and Bill Stuffers

The District currently provides new customers and renters packets with water conservation tips with their first utility bill. In addition, newsletters and bill stuffers are sent out with water bills when there is “newsworthy” information to convey. The frequency of newsletters could be increased to quarterly to encourage conservation and

provide feedback. This program will be retained and evaluated further with the suggested improvement.

Designated Water Conservation Officer

A water conservation expert can provide valuable information to customers that are interested in conserving water. The City of Fort Collins has a designated Water Conservation Officer that is available to customers in ELCO's service area. This program will be evaluated as part of the educational program for ELCO.

Children's Water Festivals

NCWCD puts on an annual water festival for fourth and fifth graders in the Poudre R-1 School District. All Fort Collins schools attend this and the children take fun water-saving facts back home to their families. This program will also be evaluated as part of this plan.

NEW MEASURES AND PROGRAMS

Send ET Irrigation Scheduling in the May Water Bill

ET irrigation schedules have been prepared by the District for use in conjunction with the take home sprinkler system audit kits. These schedules could also be sent out in the May water bill for a minimal additional cost to all users within the District, including commercial and open space HOA customers. This program will be evaluated further.

Xeriscape Demonstration Site at Pump Station #1

This pump station is located in a neighborhood setting and, if Xeriscaped, could provide a convenient example of how cost effective and aesthetically pleasing Xeric landscaping can be. The site would contain adequate signage to show through the fence surrounding the property. This is a planned measure and will be evaluated further.

Sending Water Allocation Status in the Monthly Water Bill

This program resulted from the discussion about adding a monthly conservation rate tier to the water rates. To address the fact that ELCO's water allocation system and water bill do not provide sufficient information to trigger water conservation earlier in the year, this measure will be considered. Currently the year to date use is shown along side the allocation amount and the water use for the previous 12 months. Most customers do not notice water conservation is necessary until late in the year when their use approaches their annual allotment. ELCO will modify the water bill to show a warning of the percentage of water left in the customers account in addition to the information already shown. This will allow customers to better monitor their water use and guide water use decisions earlier in the year. This measure will be evaluated further.

Rebates and Incentives

EXISTING MEASURES AND PROGRAMS

Indoor Conservation Kits

The District has indoor conservation kits available for the public to reduce their indoor water use. The kit includes a low-flow showerhead massager, a low-flow faucet aerator, a low-flow kitchen swivel aerator and leak detection dye tablets for the toilet tank. ELCO could increase exposure and the awareness of the kits to District customers through newsletters, a press release or by making them available at the District's offices. The target water users for this measure will include both single and multi-family, commercial, mobile homes, and motels. This measure will continue and be evaluated further.

Sprinkler System Audit Kit and Instructions

Sprinkler system audit kits include all the necessary supplies, instructions and worksheets for monthly ET irrigation scheduling and sprinkler head evaluation. This measure has been in practice for a few years and ELCO will work to increase the exposure of this program. This measure will be evaluated further.

NEW MEASURES AND PROGRAMS

Rebate Program for Toilets, Clothes Washers and Dishwashers

This program would provide rebates to residential users who purchase low-flow fixtures to replace higher water-use models of toilets, clothes washers and dishwashers. Rebates for these fixtures would be in the range of those provided by surrounding water providers. The program would be administered by ELCO staff.

As far as participation and water savings, nearby entities have found the most success with toilet and clothes washer rebate programs. Water savings associated with low-flow dishwashers have not been well documented and are not as commonly available. Dishwashers may be evaluated further at some time in the future, but for now, ELCO will evaluate a rebate program for low-flow toilets and clothes washers.

Commercial Water Audits

Since commercial accounts (Non-Residential) are approximately 17% of ELCO's water use, this area has some untapped potential for water savings. The highest individual water users in the District, besides the mobile home parks, are commercial water users. Water audits are a feasible way to educate businesses on how they can save water and money over the long term. Audits by qualified experts can be facilitated through the District. This program will be evaluated further.

Wind and Rain Sensor Rebates for Residential

Like wind and rain sensors for parks and open spaces, residential sensors shut off irrigation systems based on pre-established weather conditions. Rebates can be offered for these sensors to encourage home owners to install them. A rebate program for wind and rain sensors will be evaluated further.

Distribute Pre-Rinse Spray Heads to Restaurants and Institutions

This is a measure that the City of Fort Collins is considering and could be conducted jointly to reduce the costs for both entities. It involves a pre-rinse step that reduces the amount of total wash water needed. Restaurant and other institutional development are still growing within the ELCO service boundary and is an area that could provide some water savings. This measure will be evaluated further.

Zero-Interest Loans for Commercial Water Efficiency Projects

This is another measure that the City of Fort Collins is considering and could be implemented jointly. The water efficient projects may come as a result of the commercial water audits. The loans would be funded and coordinated by Fort Collins. This measure does not fit with ELCO's system and will not be considered further.

Commercial Toilet and Urinal Incentives

This is also a measure that would be implemented jointly with Fort Collins. This measure entails providing rebates to commercial users to replace toilets and urinals with low-flow models. It would be a good way to target motels and other higher water-use commercial accounts in the area. Details about this measure would be coordinated with Fort Collins. This measure will be evaluated further.

CHAPTER 8 – EVALUATION AND SELECTION

The initial screening of the measures and programs with ELCO's Board and staff resulted in the elimination of five measures and the addition of three new measures. Other measures and programs were grouped for better cost and savings analysis. The benefits and costs of thirty-three measures and programs were evaluated.

The measures added were residential irrigation audits, sending out allotment status water use on the monthly bill and offering rebates for ET controllers.

Costs and Water Savings of Conservation Options

Prior to evaluating the potential cost effectiveness of the programs and measures, it is important to develop an understanding of the magnitude of typical indoor and outdoor uses and the contribution of each to total demand. There is a wide range of use for each indoor or outdoor fixture or appliance that can affect the potential water savings and cost effectiveness accordingly.

To determine water savings for the selected water conservation measures and programs, numerous websites and the Handbook of Water Use and Conservation by Amy Vickers were used. Interviews with conservation program directors from surrounding public water service entities filled in missing water savings information and added a local perspective.

Table 8.1 provides an annual benefit-cost 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 in the next chapter. While some of the measures and programs may be on-going, others will be completed according to the implementation schedule (Chapter 10) and available budget.

The first five columns (Columns A-E) of Table 8.1 identify the conservation measure/program and quantify the costs to ELCO. These costs may be per unit costs of material, staff time or a one-time start up cost. Column F is the number of units expected to participate each year. This is an estimate based on the success of other programs and discussions with staff. Some of the measures/programs are not based on a per-unit savings, but rather a total savings, as with the leak detection program. Column G shows the total annual cost of implementation, which is either the unit cost multiplied by the number of units per year and/or the one-time costs. Column H and I calculate the gallons of water saved per unit and each year, respectively. Column J quantifies expected lost revenue from water conservation, and Column K shows the cost per 1,000 gallons saved. Each conservation measure or program is ranked by the cost per 1,000 gallons saved and shown in Column L.

Table 8.1 – Cost/Savings Analysis of Conservation Measures and Programs

Conservation Measure or Program	Total Cost to ELCO				# of Units per Year	Total Annual Cost of Implementation	Gallons Saved per Unit per Year	Estimated Gallons of Water Saved per Year	Annual Revenue Loss Related to Water Savings (\$1.62/1,000 gallons ²)	Cost per 1000 Gallons Saved	Rank	Comments
	Rebate (B)	Set up Labor (C)	On-going Labor (D)	Materials (E)								
Utility Maintenance Programs												
Leak Detection & Repair - 20% of system per year, whole system every 5 years	\$0	\$15,000				\$15,000		6,656,882	\$0	\$2.25	10	Savings of 0.5% of annual production for 10 years for 5% total reduction in unaccounted-for losses. Savings is based on average projected production for planning period (2007-2016). Savings is shared with meter replacement program, 70% and 30% respectively.
Meter testing and replacement	\$0	\$18,000				\$18,000		2,852,950	\$0	\$6.31	22	Savings of 0.5% of annual production for 10 years for 5% total reduction in unaccounted-for losses. Savings is based on average projected production for planning period (2007-2016). Savings is shared with meter replacement program, 70% and 30% respectively.
Recycling filter backwash	\$0	\$15,000				\$15,000		68,850,000	\$0	\$0.22	1	Assume annual savings is 5% of 2006 production for ELCO.
Leak detection program in mobile home parks	\$0	\$6,000				\$6,000		1,889,936	\$3,062	\$4.79	20	Assume annual 2.5% savings of Mobile Home Park use at 2009 implementation date (232 af).
Water reuse system (Rigden storage)						\$164,000		97,755,300	\$0	\$1.68	6	Reuse storage construction scheduled for 2007-2009; total cost of \$1.64M over 10 yr planning period. Reuse water available starting in 2010 and fully available in 2014. Annual savings shown are 50% of storage in reuse storage reservoir (600 ac-ft)
Regulatory Controls												
Soil amendment and Landscape & Sprinkler system review ordinances for new residential in Ft.Collins GMA	\$0				333	\$0	3,000	999,000	\$1,618	\$1.62	2	Assume 90% of 370 new residential ELCO taps per year and 2% savings per tap. Ave. residential household use is 150,000 gal. Review by Fort Collins.
Soil amendment and Landscape & Sprinkler system review ordinances for new commercial in Ft.Collins GMA	\$0				27	\$0	4,800	129,600	\$210	\$1.62		Assume 90% of 30 new commercial ELCO taps per year and 2% savings per tap. Minimum commercial tap use is 240,000 gal. Review by Fort Collins.
Temporary Irrigation taps for native landscaping	\$0	\$400			1	\$400	40,000	40,000	\$65	\$11.62	24	Assume average area of 2000 sf @ 20,000 gal/1000 sf. 1-2 participants per year.

Conservation Measure or Program	Total Cost to ELCO				# of Units per Year (F)	Total Annual Cost of Implementation (G)	Gallons Saved per Unit per Year (H)	Estimated Gallons of Water Saved per Year (I)	Annual Revenue Loss Related to Water Savings (\$1.62/1,000 gallons ²) (J)	Cost per 1000 Gallons Saved (K)	Rank (L)	Comments
	Rebate (B)	Set up Labor (C)	On-going Labor (D)	Materials (E)								
Drought restrictions resolution	\$0	\$100			8,360	\$100	2,066	17,290,604	\$28,011	\$1.63	3	Assume 1% reduction of the average total water use for the planning period. Application is unpredictable, savings won't be counted. Cost is staff time to implement.
Adding additional conservation charge tiers to rate structure	\$200	\$0				\$200		7,778,667	\$12,601	\$1.65	4	Conservation tiers are \$1.50 for 100-200% of over allocation use, \$3.00 for 200-300%, and \$6.00 for over 300%. Assume overuse for residential and non-residential is reduced by 4% with new conservation tiers. Cost is for staff time to implement.
Sending more detailed allotment status on monthly water bill	\$100					\$100		1,944,667	\$3,150	\$1.67	5	Assume a 1% reduction in overuse for residential and non-residential. New tiers and sending water allocation status in bills combine to increase expected reduction in overuse by 5% for residential and non-residential accounts.
Xeriscape program for commercial	\$100	\$20	\$75	67	\$5,145	33,600	2,251,200	\$3,647	\$3.91	16	Participation is 25 new taps per year plus 10% of existing taps. Proven water savings are 20-50% of outdoor use ¹ . 40% of Commercial use is outdoor (40% of min. 240,000 gal/tap/yr). Assume 35% savings of outdoor use. Cost is for design incentive and staff time and is split between commercial, open space and residential.	
Xeriscape program for open space (HOAs)	\$100	\$20	\$75	11	\$945	84,000	924,000	\$1,497	\$2.64	12	Participation is 5 new taps per year plus 10% of existing taps. Proven water savings are 20-50% of outdoor use ¹ . 100% outdoor use (100% of 240,000 gal/tap/yr min.), assume 35% savings per tap. Cost is for design incentive and staff time and is split between commercial, open space and residential.	
Requiring wind and rain sensors for commercial and HOA open space irrigation	\$200	\$0	\$35	80	\$3,000		11,664,415	\$18,896	\$1.88	7	Assume 5% savings of average planning period (2007-2016) use for non-residential water use category ¹ . 100% of HOA irrigation taps and 40% (outdoor) of commercial taps. Participation = 30 new taps per year and 50 (of 484) existing until all implemented. Cost is for sensor and staff time to set up program.	

Conservation Measure or Program	Total Cost to ELCO				# of Units per Year (F)	Total Annual Cost of Implementation (G)	Gallons Saved per Unit per Year (H)	Estimated Gallons of Water Saved per Year (I)	Annual Revenue Loss Related to Water Savings (\$1.62/1,000 gallons ²) (J)	Cost per 1000 Gallons Saved (K)	Rank (L)	Comments
	Rebate (B)	Set up Labor (C)	On-going Labor (D)	Materials (E)								
Irrigation system audits for open space (HOAs)	\$250	\$35			5	\$425	25,000	125,000	\$203	\$5.02	21	Assume 5 HOAs participate per year for a 5% savings ¹ and 500,000 gal per tap. Auditor training cost split between Irrigation and residential audit programs.
Sub-meter new mobile home parks or additions	\$400	\$0				\$400		198,900	\$322	\$3.63	14	130 new pads projected in 2013. Assume 2% savings of average use per pad (76,500 gal) for annual savings. Cost is for program set up.
Educational Programs												
Public Education - New customer package, newsletter, bill stuffers	\$0	\$200	\$5,638			\$5,638		3,516,521	\$5,697	\$3.22	13	Assume 1% savings of total average residential use in planning period (2007-2016) for existing (3) educational measures; count 1/3 of savings for each. Cost is for printing and staff time.
Designated water conservation officer (through Fort Collins)	\$0	\$0				\$0		3,516,521	\$5,697	\$1.62	2	Assume 1% savings of total average residential use in planning period (2007-2016) for existing (3) educational measures; count 1/3 of savings for each. Cost is for printing and staff time.
Children's water festivals - given by NCWCD for Fort Collins elementary schools	\$0	\$0				\$0		3,516,521	\$5,697	\$1.62	2	Assume 1% savings of total average residential use in planning period (2007-2016) for existing (3) educational measures; count 1/3 of savings for each. Cost is for printing and staff time.
Send ET irrigation scheduling in May water bill	\$0	\$50				\$50		2,180,243	\$3,532	\$1.64	4	Assume 1% savings in average outdoor residential use for planning period from 3 new measures; count 1/3 of savings for each. Outdoor use is 62%. Cost is for staff time.
Xeriscape demonstration site at pump station	\$2,500	\$200	\$2,500			\$5,200		2,180,243	\$3,532	\$4.01	18	Assume 1% savings in average outdoor residential use for planning period from 3 new measures; count 1/3 of savings for each. Outdoor use is 62%. Cost is for design, installation, plants and on-going maintenance.
Voluntary lawn watering restrictions	\$100					\$100		2,180,243	\$3,532	\$1.67	5	Assume 1% savings in average outdoor residential use for planning period from 3 new measures; count 1/3 of savings for each. Outdoor use is 62%. Cost is for staff time .

Conservation Measure or Program	Total Cost to ELCO				# of Units per Year (F)	Total Annual Cost of Implementation (G)	Gallons Saved per Unit per Year (H)	Estimated Gallons of Water Saved per Year (I)	Annual Revenue Loss Related to Water Savings (\$1.62/1,000 gallons ²) (J)	Cost per 1000 Gallons Saved (K)	Rank (L)	Comments
	Rebate (B)	Set up Labor (C)	On-going Labor (D)	Materials (E)								
Rebates and Incentives												
Indoor Conservation kits	\$0	\$50	\$5	395	\$1,828		6,249,496	\$10,124	\$1.91	8	15% (measured historically) savings for residential, motels and mobile homes at 0.47, .0024 and 0.23 ac-ft per unit respectively. Assume 5% participation rate of existing accounts for 50% total participation in 10-yr planning period.	
Sprinkler system audit kits and instructions	\$0	\$50		25	\$50	4,650	116,250	\$188	\$2.05	9	Historic measured savings is 5% of outdoor use. Outdoor residential use is 62% (62% of ave. 150,000 gal/tap). Expected participation based on past.	
Rebate program for low-flow toilets	\$25	\$100		32	\$900	11,526	368,845	\$598	\$4.06	19	Assume 1% annual participation of 3,206 pre-1994 homes. Savings based on 5.1 flushes per person per day ¹ . Saving 2.4 gal per flush (4.0 gal ave flush rate - 1.6 gal conservation flush rate ¹) and 2.58 people per household. Cost for program development split between 4 rebate programs. Old toilets cannot be resold.	
Rebate program for high efficiency clothes washers	\$100	\$100		48	\$4,900	9,408	451,564	\$732	\$12.47	25	Assume 1% annual participation of 2006 residential accounts. Savings based on 0.37 loads per person per day ¹ . Saving 16 gal per load (43 gal/load ave. rate - 27 gal/load conservation rate ¹) and 2.58 people per household. Cost for program development split between 4 rebate programs.	
Rebate program for wind and rain sensors for residential	\$25	\$100		48	\$1,300	2,325	111,600	\$181	\$13.27	26	Assume 1% of existing 2006 taps participation at 5% savings of outdoor use (62% of ave 150,000 gal/tap) split between rain sensor and ET controller measures. Cost for program development split between 4 rebate programs.	
Rebate program for ET irrigation controllers	\$50	\$100		48	\$2,500	2,325	111,600	\$181	\$24.02	27	Assume 1% of existing 2006 taps participation at 5% savings of outdoor use (62% of ave 150,000 gal/tap) split between rain sensor and ET controller measures. Cost for program development split between 4 rebate programs.	

2007 Water Conservation Plan

Conservation Measure or Program	Total Cost to ELCO				# of Units per Year (F)	Total Annual Cost of Implementation (G)	Gallons Saved per Unit per Year (H)	Estimated Gallons of Water Saved per Year (I)	Annual Revenue Loss Related to Water Savings (\$1.62/1,000 gallons ²) (J)	Cost per 1000 Gallons Saved (K)	Rank (L)	Comments
	Rebate (B)	Set up Labor (C)	On-going Labor (D)	Materials (E)								
Commercial water audits	\$100	\$100			5	\$600	12,000	60,000	\$97	\$11.62	24	Assume 5% savings of total use. (min. use of 240,000 gal per tap). Expected participation based on staff knowledge. Audit will be performed by third party contractor.
Residential irrigation water audits	\$250	\$35			75	\$2,875	4,650	348,750	\$565	\$9.86	23	Historic measured savings is 5% of outdoor use. Outdoor residential use is 62% (62% of ave. 150,000 gal/tap). Auditor training cost split between Irrigation and residential audit programs.
Distribute pre-rinse spray heads to restaurants & institutions	\$100	\$50	\$30		2	\$260	149,760	299,520	\$485	\$2.49	11	Assume 4hrs use per day, 6 days/week at savings of 2.0 gpm (4.5gpm ave auto spray - 2.5 gpm cons. spray nozzle ¹). Material cost includes nozzle and installation. Labor is for program set up.
Commercial toilet and urinal incentives	\$50	\$100			40	\$2,100	26,000	1,040,000	\$1,685	\$3.64	15	Assume 260 workdays; Uses per day = 1 for males and 3 for females ¹ ; 2.0 gal savings (4.0 ave. gal/flush - 2.0 low-flow gal/flush ¹); Assume 5% of 2006 commercial taps participation, 2 toilets per participant and 10 female and 20 male employees. Set up cost shared with Ft. Collins.
Xeriscape program for residential	\$100	\$20	\$75		48	\$3,720	32,550	1,562,400	\$2,531	\$4.00	17	Proven water savings are 20-50% of outdoor use ¹ . Assume 35% savings of outdoor use. 62% of residential use is outdoor (62% of ave. 150,000 gal/yr). 1% annual participation. Cost is for design incentive and staff time and is split between commercial, open space and residential.
Rebates for sub-meters in existing mobile home parks	\$50	\$100			48	\$2,500	1,530	73,440	\$119	\$35.66	28	Assume 5% participation rate of 963 existing pads for 50% total in planning period. Assume 2% savings of 76,500 gal per pad.
ANNUAL TOTALS		\$5,100	\$55,330	\$8,433		\$263,236		249,234,876	\$118,454	\$1.53		
= Existing								765	AF			

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

2 Basic water rate for ELCO

Comparison of Benefits and Costs

The top water saving measure is recycling the filter backwash. This saves 5% of the total water production and is already in place. The number two rank is shared by three measures/programs: 1) soil amendment and landscape and sprinkler system review ordinances, 2) having a designated water conservation officer, and 3) children's water festival. All of these programs are very low cost to ELCO except the water reuse system, which has a high water savings benefit. The third ranked measure is the drought restrictions resolution. The fourth rank is shared by two measures, 1) Sending ET irrigation scheduling in the May water bill and 2) adding conservation charge tiers to rate structure and sending out allotment status in the water bill. The drought restrictions resolution will only be activated when weather conditions are severe, which is difficult to predict during the ten-year planning period and will not be counted toward the water savings goal.

The cost of the “top-four” ranked measures/programs is under \$2.00 per 1,000 gallons. The cost of the remaining measures/programs range from \$1.67 to the highest at \$35.66 per 1,000 gallons. While this ranking only considers financial impacts, it is a good way to compare the conservation measures/programs on an equal basis and create a plan for implementation according to budget constraints. For a relative comparison, the cost of water acquisition and PIFs can be reduced to a cost per 1,000 gallon basis. PIFs typically cover the cost of system upgrades including water treatment and distribution. The cost of water conservation can easily be justified when compared to the cost of equivalent new water supplies.

An incremental cost for water supply has been calculated according to the market price for C-BT and native Poudre River water rights, which are the supplies ELCO can use in its system. The incremental cost used here includes required raw water dedication and PIF for a lot size of 7,000 square feet and an assigned annual water allotment of 150,000 gallons. Both the C-BT and native water cost is a price per acre foot that is converted to the cost for 150,000 gallons. We used \$9,000 per C-BT unit at an average 70% quota or \$12,850 per acre foot and \$9,000 per acre foot for native Poudre River water supplies. The following table shows the estimated cost per 1,000 gallons for each of the water supplies.

Table 8.2 – Incremental Water Supply Costs

Costs for Average Single Family Customer with 150,000 gal. Allotment		
CBT water cost		\$5,915
Average native water cost	\$4,143	
PIF	\$4,300	\$4,300
Cost per 150,000 gal	\$8,443.00	\$10,215.28
Cost per 1000 gal	\$56.29	\$68.10
Cost per ac-ft	\$18,341.06	\$22,191.06

This illustrates that the cost of new water supplies, \$56 and \$68 per 1,000 gallons, is higher than even the most expensive conservation measure at \$35.66 per 1,000 gallons.

Evaluation Criteria

After each of the conservation measures and programs were ranked by *cost per 1,000 gallons saved*, as shown in Tables 8.1, we selected conservation measures/programs for implementation. Similar criteria, as was used for the selection of conservation measures/programs to undergo further evaluation, were used here. The criteria used for selection are as follows:

1. Staff and Board approval
2. Public acceptance
3. System limitations
4. Financial implications

Although all of the criteria provide important screening input, the financial considerations will dictate the order in which to implement the selected measures and programs according to available resources. Most of the measures and programs have low start-up costs with the majority of cost in lost water revenue. All of the measures/programs will be implemented at some point during the ten-year planning period and measured for success to determine whether they should be continued.

Selected Conservation Measures and Programs

In Chapter 6, conservation goals were established for the three highest use customer categories: Single Family, Non-Residential and Mobile Home Parks and also for Unaccounted-for Losses. Goals of 5%, 5%, 5%, and 50% reduction were established for each of these categories, respectively. The public is ever changing in the high growth environment of the northern Front Range and has varying ideas of what water conservation means. Some customers are driven by financial savings, some for the good of the environment and some will only conserve water by regulatory mandates. Hence, ELCO wants its list of conservation measures and programs to be as far-reaching as practical, thus reaching the largest pool of its customers. ELCO will implement all of the measures and programs that were further analyzed and monitor their success over the next few years.

The water savings from the conservation measures and programs in Table 8.1 were combined into the appropriate water use categories. Table 8.3 compares the estimated savings from the selected measures and programs to the established water-savings goals.

We can see the measures and programs associated with Single Family more than meet the goal for that customer category. Due to the uncertainty in the participation within the

Single Family category for some of the measures, this is a good safety factor to ensure reaching the established goal of 5%.

The Non-Residential goal is right on target and is an area that may have more potential than expected due to the uncertainty of the type of development that will occur within the Fort Collins GMA.

The water savings for the Mobile Homes category is on target as well. The leak detection program may show more savings than predicted and will be monitored for effectiveness for the following few years after implementation.

The Unaccounted-for Losses water savings is close to the established goal. The 50% reduction goal equates to a target savings of 249 acre feet. The projected water savings is 240 acre feet.

Table 8.3 – Water Conservation Plan Savings vs. Established Water Savings Goals

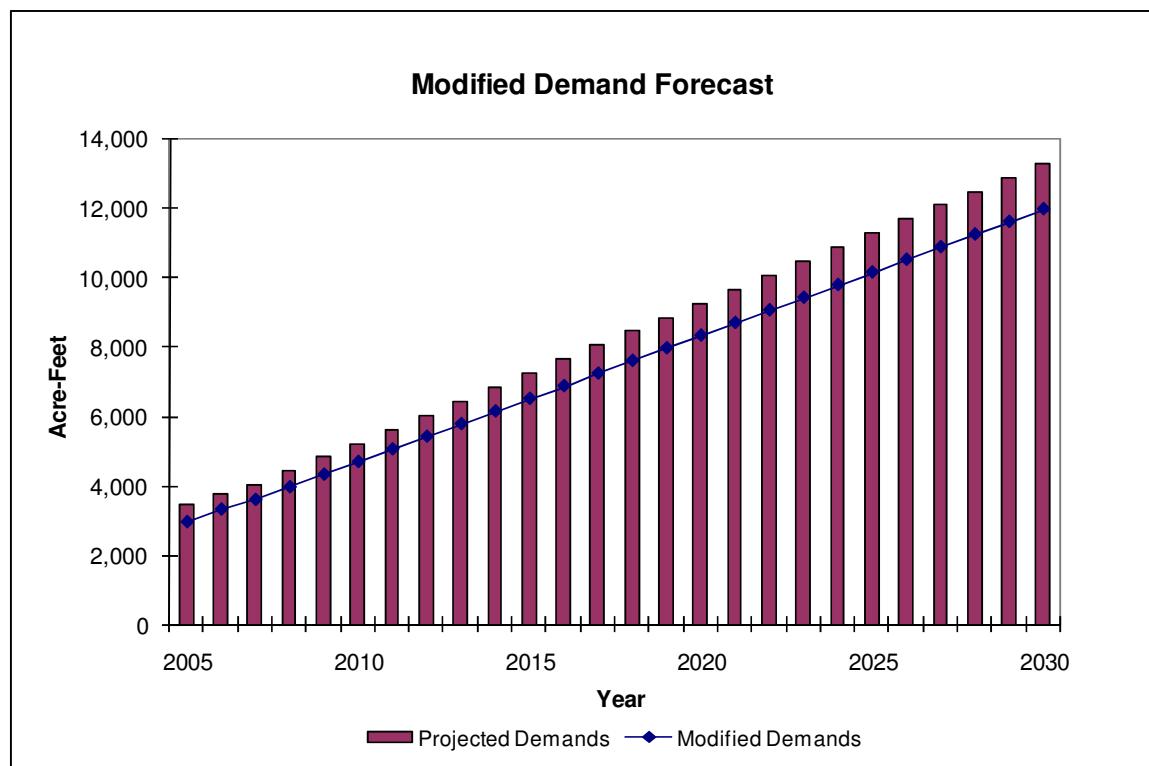
Categories:	Current Water Use ac-ft	2016 Projected Water Use ac-ft	% Reduction	Reduction from 2016 Water Use ac-ft	Area of focus	Conservation Plan Savings 1000 gallons	Conservation Plan Savings ac-ft	% Savings
Single Family	2,314	3,993	5%	200	Outdoor irrigation, rebates and increased effort of existing measures	103,593	318	8.0%
Non-residential	643	2,232	5%	112	Irrigation taps, motels, other commercial	40,151	123	5.5%
Mobile Homes	226	245	5%	12	Leak detection & sub-metering	3,837	12	4.8%
Totals:	3,183 6,470 324					453		
Unaccounted for losses - reduce from 10% of production to 5%	497		50%	249	Leak detection program, WTP filter backwash reuse	78,360	240	48.4%
	Total demand reduction:			572		693		

CHAPTER 9 – FORECAST MODIFICATION AND RESOURCE INTEGRATION

Modified Demand Forecast

The total demands for ELCO are shown in the following graph with and without water conservation. The modified demand reduces the Single Family, Non-Residential, and Mobile Home Parks categories and Unaccounted-for Losses by the resulting percentages of 8%, 5.5%, 5% and 48%, respectively. The incremental savings of 1,000 acre feet can be seen at 2016 for the ten-year planning period associated with this Water Conservation Plan.

Figure 9.1 – Comparison of Demand Forecast with and without Conservation



Modified Supply Forecast and Revenue Effects

Revenue effects, both cost of implementation and lost revenue, are included in the total cost to implement the Water Conservation Plan. This cost can be compared to the cost of supply acquisition and PIFs to show the relevance of the plan. The cost to implement the entire plan according to the implementation schedule shown in Chapter 10 is \$3 million. When compared to the cost for the 1,000 acre feet saved at \$18,341 per acre feet, or \$18.3 million, the Water Conservation Plan implementation cost is reasonable.

Due to the cooperative efforts for the regional joint infrastructure projects described in Chapter 5, lowering the average, peak and forecasted demand through water conservation will not change the schedule of these projects. It will however, extend the life of ELCO's existing water supplies and hopefully provide ELCO with some flexibility in the future depending on the actual growth and demand patterns.

The projects planned by the District cannot easily be constructed in several small increments. The raw water storage reservoirs and transmission lines ELCO will be participating in have to be built as large as possible. They cannot be staged.

Designers of NEWT struggled to find a route for a large transmission line through north Fort Collins. As development continues, it may be impossible for ELCO and NWCWD to find a route across north Fort Collins for a 54" transmission line. NEWT needs to be constructed soon before development eliminates all feasible routes.

Storage reservoirs planned by ELCO will be constructed to their maximum capacity. The District has to take full advantage of its opportunities since there are so few sites available to develop raw water storage. Any storage capacity developed before it is needed by the District will be rented to other water suppliers or reserved for drought protection.

Water conservation will increase the reliability of ELCO's water supplies. Water dedicated with new development will go further, giving ELCO a safety factor as it moves into the future. After enough time has passed and the success of this Water Conservation Plan is measured, ELCO could, if it chooses, adjust water allocation and acquisition requirements that would be attractive to new customers and development.

CHAPTER 10 – PLAN OF IMPLEMENTATION AND MONITORING

Implementation Schedule

All of the proposed water conservation measures and programs will require staff resources for planning and coordination before implementation. This will require some strategy in implementing the most beneficial measures first. To create an implementation schedule, the selected measures/programs were grouped in the following categories:

- Existing
- High ranking
- Audit Program
- Xeriscape Program
- Rebate and Incentive Program
- Mobile Home Park Program

Implementation of the measures and programs were phased to account for budget and time constraints. Another consideration in the implementation schedule was CWCB approval of this plan. This Water Conservation Plan is scheduled for final submission to CWCB, after the 60-day public-review period, at the end of June 2007. CWCB by statute has up to 90 days to review the plan, which likely means approval in September 2007. It is only after final CWCB approval that ELCO will be eligible for a water-efficiency grant through CWCB for plan implementation.

Once grant monies are obtained, the Board will approve incremental parts of the plan based on available resources. The proposed schedule for implementation is shown in the following Table 10.1. The measures that were scheduled and budgeted for 2007 will go ahead as planned and will not be included in the implementation grant request, but may be counted as matching funds to the grant request for implementation of the overall plan.

To get an idea of the cost to ELCO for implementing the whole plan, a table was constructed to show the present value cost each year of the planning period. This table reflects costs that are one time set up costs and on-going yearly costs. It also includes lost revenue from water sales to show full impact of implementing the plan. Lost revenue is approximately a third of the total 10-year cost of \$3 million.

Table 10.1 – Water Conservation Plan Implementation Schedule

Conservation Measure or Program	Action Required for Implementation	Factors that Could Cause Delay	Anticipated Implementation Date
Existing			
Leak Detection & Repair - 20% of system per year, whole system every 5 years	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Recycling filter backwash	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Meter testing and replacement	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Soil amendment and Landscape & Sprinkler system review ordinances for new residential in Ft. Collins GMA	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Soil amendment and Landscape & Sprinkler system review ordinances for new commercial in Ft.Collins GMA	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Temporary Irrigation taps for native landscaping	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Drought restrictions ordinance	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Public Education - New customer package, newsletter, bill stuffers	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
Designated water conservation officer (through Fort Collins)	Plan adoption following CWCB approval	Plan not approved	September 2007 Board Meeting
High Ranking			
Water reuse system (Rigden storage)	Incremental acquisition already approved	Construction delays and water court decision	6/1/2009
Adding additional conservation charge tiers to rate structure and including allotment status on monthly water bill	Board approval by 12/1/2007	Lack of funding available and limitations of software	5/1/2007
Send ET irrigation scheduling in May water bill	Board approval before 4/1/2008	Lack of staff time	5/1/2007
Voluntary lawn watering restrictions	Board approval by 12/1/2007	Lack of staff time	5/1/2007
Audit Program			
Irrigation system audits for open space (HOAs)	Already approved	Lack of funding available	5/1/2007
Commercial water audits	Board approval by 12/1/2007	Lack of funding available	4/1/2008
Residential irrigation water audits	Already approved	Lack of funding available	5/1/2007

Xeriscape Program			
Xeriscape demonstration site at pump station	Already approved	Lack of funding available	6/1/2007
Xeriscape program for commercial	Board approval by 2/1/2008	Lack of funding available	3/1/2008
Xeriscape program for open space (HOAs)	Board approval by 2/1/2008	Lack of funding available	3/1/2008
Xeriscape rebate/design program for residential	Board approval by 2/1/2008	Lack of funding available	3/1/2008
Rebate and Incentive Program			
Requiring wind and rain sensors for commercial and HOA open space irrigation	Board approval by 5/1/2008	Lack of funding available	6/1/2008
Rebate program for wind and rain sensors for residential	Board approval by 5/1/2008	Lack of funding available	6/1/2008
Rebate program for ET irrigation controllers	Board approval by 5/1/2008	Lack of funding available	6/1/2008
Rebate program for low-flow toilets	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Rebate program for high efficiency clothes washers	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Distribute pre-rinse spray heads to restaurants & institutions	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Commercial toilet and urinal incentives	Board approval by 5/1/2008	Lack of funding available	10/1/2008
Mobile Home Park Program			
Leak detection program in mobile home parks	Board approval by 1/1/2009	Lack of funding available	11/1/2009
Sub-meter new mobile home parks or additions	Board approval by 1/1/2009	Lack of funding available	11/1/2009
Rebates for sub-meters in existing mobile home parks	Board approval by 1/1/2009	Lack of funding available	11/1/2009

Public Participation

Since ELCO has had a conservation program in place since 1996, the public has become familiar with the conservation concept and activities. The public has had access to the designated conservation officer at the City of Fort Collins and ELCO staff and is fairly educated regarding the importance of water conservation. ELCO has measured the success of some of its existing conservation measures/programs and is familiar with how to implement conservation effectively. Through this water conservation planning process, the public is notified of the 60-day comment period from April 20, 2007 to June 20, 2007. The plan will be available on ELCO's website and in its office for review. Written comments and responses to those comments are included in Appendix C.

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. ELCO currently measures water use in its customer categories that have been targeted for water savings and will continue to collect that necessary data to measure success. Per-capita usage can be calculated for the Single Family and Mobile Home categories. Non-Residential water use can be monitored through billed water usage for the individual taps and as a whole to determine water savings. This is especially true for the twelve Non-Residential (commercial and irrigation) users that have been identified as the largest users in the system.

Expenditures for conservation will be documented by District staff and reported to the Board on a regular basis. This will be valuable information in evaluating the benefit-cost ratio and to validate the success of implementing the selected conservation measures and programs. Since the measures/programs will be implemented in phases, there will be ample time to establish the appropriate method to monitor success of each program/measure.

Table 10.2 shows the present value costs for each measure/program according to the implementation schedule. The costs are totaled at the bottom of the table to show the total cost of the Water Conservation Plan for each year in the planning period. If the cost of implementation is significantly different than the cost projected in this plan for a particular measure/program, it will be reevaluated and potentially discontinued until a later date.

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 ELCO. The plan will be updated prior to seven years if implementation and actual water savings deviate too much from this plan. This deviation may be caused by several factors including higher than expected growth, less than anticipated participation and the inability to implement the plan due to lack of funding. ELCO will monitor and revise its Water Conservation Plan as necessary.

Table 10.2 - 10-Year Water Conservation Plan Costs

Conservation Measure or Program	Present Value Costs including Annual Lost Revenue at a 5% interest rate										Total
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Existing											
Leak Detection & Repair - 20% of system per year, whole system every 5 years	\$15,000.00	\$14,992.50	\$14,985.01	\$14,977.52	\$14,970.04	\$14,962.56	\$14,955.08	\$14,947.60	\$14,940.13	\$14,932.67	\$149,663.12
Recycling filter backwash	\$15,000.00	\$14,992.50	\$14,985.01	\$14,977.52	\$14,970.04	\$14,962.56	\$14,955.08	\$14,947.60	\$14,940.13	\$14,932.67	\$149,663.12
Meter testing and replacement	\$18,000.00						\$17,946.09	\$17,937.13	\$17,928.16	\$17,919.20	\$89,730.58
Soil amendment and Landscape & sprinkler system review ordinances for new residential in Ft.Collins GMA	\$1,618.38	\$1,617.57	\$1,616.76	\$1,615.95	\$1,615.15	\$1,614.34	\$1,613.53	\$1,612.73	\$1,611.92	\$1,611.12	\$16,147.45
Soil amendment and Landscape & sprinkler system review ordinances for new commercial in Ft.Collins GMA	\$209.95	\$209.85	\$209.74	\$209.64	\$209.53	\$209.43	\$209.32	\$209.22	\$209.11	\$209.01	\$2,094.80
Temporary Irrigation taps for native landscaping	\$464.80	\$464.57	\$464.34	\$464.10	\$463.87	\$463.64	\$463.41	\$463.18	\$462.94	\$462.71	\$4,637.56
Drought restrictions resolution	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Public education - new customer package, newsletter, bill stuffers	\$11,335.57	\$11,329.90	\$11,324.24	\$11,318.58	\$11,312.93	\$11,307.27	\$11,301.62	\$11,295.97	\$11,290.33	\$11,284.69	\$113,101.11
Designated water conservation officer (through Fort Collins)	\$5,697.57	\$5,694.72	\$5,691.88	\$5,689.03	\$5,686.19	\$5,683.35	\$5,680.51	\$5,677.67	\$5,674.83	\$5,671.99	\$56,847.73
Children's water festivals - given by NCWCD for Fort Collins elementary schools	\$5,697.57	\$5,694.72	\$5,691.88	\$5,689.03	\$5,686.19	\$5,683.35	\$5,680.51	\$5,677.67	\$5,674.83	\$5,671.99	\$56,847.73
Indoor conservation kits	\$12,167.69	\$12,161.61	\$12,155.53	\$12,149.46	\$12,143.39	\$12,137.32	\$12,131.25	\$12,125.19	\$12,119.13	\$12,113.07	\$121,403.66
Sprinkler system audit kits and instructions	\$238.33	\$238.21	\$238.09	\$237.97	\$237.85	\$237.73	\$237.61	\$237.49	\$237.37	\$237.26	\$2,377.90
High Ranking											
Water reuse system (Rigden storage)			\$163,836.12	\$163,754.25	\$163,672.41	\$163,590.61	\$163,508.86	\$163,427.15	\$163,345.47	\$163,263.84	\$1,308,398.71
Adding additional conservation charge tiers to rate structure and including allotment status on monthly water bill	\$12,801.44	\$12,595.14	\$12,588.85	\$12,582.56	\$12,576.27	\$12,569.98	\$12,563.70	\$12,557.42	\$12,551.15	\$12,544.87	\$125,931.39
Sending more detailed allotment status on monthly water bill	\$3,250.36	\$3,148.79	\$3,147.21	\$3,145.64	\$3,144.07	\$3,142.50	\$3,140.93	\$3,139.36	\$3,137.79	\$3,136.22	\$31,532.85
Send ET irrigation scheduling in May water bill	\$3,581.99	\$3,580.70	\$3,578.91	\$3,577.12	\$3,575.34	\$3,573.55	\$3,571.76	\$3,569.98	\$3,568.19	\$3,566.41	\$35,743.97

2007 Water Conservation Plan

Voluntary lawn watering restrictions	\$3,631.99	\$3,630.73	\$3,528.96	\$3,527.20	\$3,525.44	\$3,523.67	\$3,521.91	\$3,520.15	\$3,518.39	\$3,516.64	\$35,445.09	
Audit Program												
Irrigation system audits for open space (HOAs)	\$627.50	\$377.31	\$377.12	\$376.93	\$376.75	\$376.56	\$376.37	\$376.18	\$375.99	\$375.81	\$4,016.52	
Commercial water audits		\$538.61	\$538.34	\$538.07	\$537.80	\$537.53	\$537.27	\$537.00	\$536.73	\$536.46	\$4,837.82	
Residential water audits	\$3,439.98	\$3,188.38	\$3,186.79	\$3,185.19	\$3,183.60	\$3,182.01	\$3,180.42	\$3,178.83	\$3,177.24	\$3,175.66	\$32,078.11	
Xeriscape Program												
Xeriscape demonstration site at pump station	\$8,731.99	\$3,530.23	\$3,728.76	\$3,726.90	\$3,725.04	\$3,723.18	\$3,721.31	\$3,719.45	\$3,717.60	\$3,715.74	\$42,040.20	
Xeriscape program for commercial		\$8,528.82	\$8,424.65	\$8,420.44	\$8,416.23	\$8,412.03	\$8,407.82	\$8,403.62	\$8,399.42	\$8,395.23	\$75,808.27	
Xeriscape program for open space (HOAs)		\$2,862.61	\$2,761.28	\$2,759.90	\$2,758.52	\$2,757.14	\$2,755.76	\$2,754.39	\$2,753.01	\$2,751.63	\$24,914.23	
Xeriscape rebate/design program for residential		\$4,779.03	\$4,676.75	\$4,674.41	\$4,672.07	\$4,669.74	\$4,667.40	\$4,665.07	\$4,662.74	\$4,660.41	\$42,127.63	
Rebate and Incentive Program												
Requiring wind and rain sensors for commercial and HOA open space irrigation		\$40,907.63	\$40,687.38	\$40,667.05	\$40,646.72	\$40,626.41	\$40,606.11	\$40,585.82	\$40,565.53	\$40,545.26	\$365,837.91	
Rebate program for wind and rain sensors for residential		\$1,480.05	\$1,379.41	\$1,378.72	\$1,378.03	\$1,377.35	\$1,376.66	\$1,375.97	\$1,375.28	\$1,374.59	\$12,496.07	
Rebate program for ET irrigation controllers		\$2,679.45	\$2,578.21	\$2,576.92	\$2,575.64	\$2,574.35	\$2,573.06	\$2,571.78	\$2,570.49	\$2,569.21	\$23,269.12	
Rebate program for low-flow toilets		\$1,496.78	\$1,396.13	\$1,395.43	\$1,394.74	\$1,394.04	\$1,393.34	\$1,392.65	\$1,391.95	\$1,391.26	\$12,646.32	
Rebate program for high efficiency clothes washers		\$5,628.72	\$5,526.01	\$5,523.24	\$5,520.48	\$5,517.73	\$5,514.97	\$5,512.21	\$5,509.46	\$5,506.70	\$49,759.52	
Distribute pre-rinse spray heads to restaurants & institutions		\$744.85	\$644.58	\$644.26	\$643.93	\$643.61	\$643.29	\$642.97	\$642.65	\$642.33	\$5,892.46	
Commercial toilet and urinal incentives		\$3,782.91	\$3,681.12	\$3,679.28	\$3,677.44	\$3,675.60	\$3,673.76	\$3,671.93	\$3,670.09	\$3,668.26	\$33,180.39	
Mobile Home Park Program												
Leak detection program in mobile home parks			\$9,105.38	\$9,100.83	\$9,096.28						\$27,302.48	
Sub-meter new mobile home parks or additions								\$527.30	\$128.44	\$128.37	\$128.31	\$912.42
Rebates for sub-meters in existing mobile home parks							\$2,612.44	\$2,511.43	\$2,510.17	\$2,508.92	\$2,507.67	\$12,650.62
	\$121,495	\$170,877	\$342,734	\$342,563	\$342,392	\$335,742	\$353,947	\$353,372	\$353,195	\$353,019	\$3,069,337	



APPENDIX A

Public-Review Process

FROM :ELCO Water District

FAX NO. :970-493-1801

Jun. 08 2007 03:04PM P2

**RECEIVED**

APR 30 2007

ELCO WATER DISTRICT

STATE OF COLORADO)
) ss: AFFIDAVIT OF PUBLICATION
COUNTY OF LARIMER)

Nicole Cumming, being duly sworn, deposes and says that said is the legal clerk of the Fort Collins Coloradoan; that the same is a daily newspaper of general circulation and printed and published in the City of Fort Collins, in said county and state; that the notice or advertisement, of which the annexed is a true copy, has been published in said daily newspaper for

1 consecutive days;

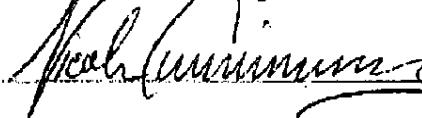
that the notice was published in the regular and entire issue of every number of said newspaper during the period and time of publication of said notice, and in the newspaper proper and not in a supplement thereto; that the first publication of said notice was contained in the issue of said newspaper on

April 21, 2007 , A.D.;

that the last publication thereof was contained in the issue of said newspaper on

April 21, 2007 , A.D.;

that said Fort Collins Coloradoan has been published continuously and uninterruptedly during the period of at least six months next prior to the first publication of 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 thereto; 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.

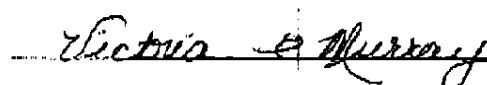


Legal Clerk

Subscribed and sworn to before me, within the County of Larimer, State of Colorado this

April 21, 2007 , A.D.

My Commission expires MY COMMISSION EXPIRES 05/24/2008



Notary Public

Legal No. 32914793

Delivered to:

ELCO/ EAST LARIMER COUNTY WATER DIST
PO BOX 2044
Ft Collins, CO 80522



JUN 11 2007 10:18AM

HP LASERJET FAX

p.21

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FROM : ELCO Water District

JUN 18 2007 03:04PM

FAX NO. : 970-493-1801

P3

<p>Official Notice</p> <p>Fair Larimer County Water District (ELCO) has completed a draft water conservation plan. The goal of the plan is for ELCO to develop strategies and programs for efficient and sustainable water use. ELCO implemented mandatory water rationing restriction in 2003 and since has developed numerous water conservation efforts including:</p> <ul style="list-style-type: none">• Leak Detection & Repair - 20% off system per year, whole system every 5 years• Recycling filter - tank wash• Meter testing and replacement• Soil amendment and Landscape & Sprinkler system review ordinances for new residential in Pt. Collins CMA• Soil amendment and Landscape & Sprinkler system review ordinances for new commercial in Pt. Collins CMA• Temporary Irrigation tape	<p>for native landscaping • drought restrictions resolution • Public education - new customer package, newsletter, bill inserts • Designated water conservation officer (through Pt. Collins) • Children's water festival • Given by NCWCD for Fort Collins Sustainability activities: - irrigation conservation kits - Sprinkler system audit kits and instructions</p> <p>Before finalizing the water conservation plan, ELCO welcomes input from its customers. ELCO shall have a 60-day public review period beginning the date of this notice through June 21, 2007. A complete draft copy will be kept at ELCO's office located at 232 South Link Lane for you to review. ELCO will also post the plan on its website at http://elcowater.org.</p> <p>All written comments are due to Kathy Phibbs, Administrative Manager and CFO, prior to June 21, 2007 at P.O. Box 2044, Fort Collins, CO 80522 or may be dropped off at the office located at 232 South Link Lane.</p> <p>S2012026 Fort Collins Colorado April 21, 2007</p>
--	---

FROM :ELCO Water District

FAX NO. :970-493-1801

Jun. 08 2007 03:04PM P4

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 GREELEY DAILY TRIBUNE, and
The Greeley Republican**

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 Twentieth day of April AD. 2006, and the last publication thereof in the issue of said newspaper bearing date the Twentieth day of April AD. 2006; that said The Greeley Daily Tribune and the Greeley Republican, has been published continuously and uninterruptedly during the period of at least six months next prior to the first issue thereof 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.

April 20, 2007Total Charges: \$39.60Jennifer Usher
Advertising Clerk20th day of April, 2007

My Commission Expires 7/28/2008

Jasmine Mc Leland
Notary Public

FROM :ELCO Water District

FAX NO. :970-493-1801

Jun. 08 2007 03:05PM P5

**East Larimer County Water District**

P.O. Box 2044 • Fort Collins, Colorado 80522

Account Number	000010-000
Current Charges due by	05/20/2007
Current Charges	\$18.58
Total Account Balance	\$18.58



*****AUTO**5-DIGIT 80524

CHAD WANGELINE
AMI WANGELINE
802 GLENLOCH DR
FORT COLLINS CO 80524-6400

802 GLENLOCH DR

Service Address 802 GLENLOCH DR

Please Return this Portion with Your Payment

28

**East Larimer County Water District**
SERVICE

From 03/08/2007 To 04/09/2007

READINGS

Previous 275000

Current 282000

WATER USE

7000 gallons

\$18.58

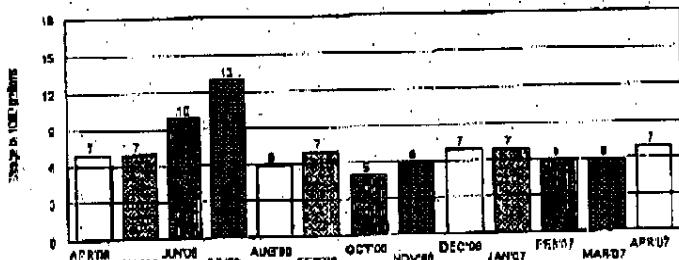
RESIDENTIAL 3/4

Office Address: 232 S. Link Lane Ft. Collins, CO 80524
 Mailing Address: P.O. Box 2044 Ft. Collins, CO 80522
 Billing / Inquiries / Emergency Phone: (970)-493-2044
 Office Hours: 8:00 a.m. - 4:30 p.m. M-F
 After-hours drop box located at southwest corner of office building
 Facsimile Transmissions: (970)-493-1801
 Internet Address: [www.elcowater.org](http://elcowater.org)

TOTAL ACCOUNT BALANCE

\$18.58

for 802 GLENLOCH DR



Year to Date Water Use 19,000 Annual Allotment 120,000

ELCO has completed a draft water conservation plan that will be available for review through June 20, 2007 as part of a public review process at ELCO's office or on our website at <http://elcowater.org>. Written comments are due at the office or by mail by June 20, 2007.

Account Number: 000010-000

Customer name: CHAD WANGELINE

Billing Date: 04/20/2007

Current Charge: \$18.58
 Current Charge Due By: 05/20/2007
TOTAL ACCOUNT BALANCE=> \$18.58

Retain this Portion for Your Records

FROM :ELCO Water District

FAX NO. :970-493-1801

Jun. 08 2007 03:05PM P6

06/08/2007 15:18 9702214884

PAGE 01/01

ELCO_2x5_May07.cdr - Page 1 - Composite

Official Notice

East Larimer County Water District (ELCO) has completed a draft water conservation plan. The goal of the plan is for ELCO to develop strategies and programs for efficient and sustainable water use. ELCO implemented mandatory watering restrictions in 2003 and since has developed numerous water conservation efforts. The existing conservation efforts include:

- Leak detection & repair – 20% of system per year, whole system every 5 years
- Recycling filter backwash
- Meter testing and replacement
- Soil amendment and landscape & sprinkler system review ordinances for new residential in Fort Collins GMA
- Soil amendment and landscape & sprinkler system review ordinances for new commercial in Fort Collins GMA*
- Temporary irrigation tape for native landscaping
- Drought restrictions resolution
- Public education – new customer package, newsletter, bill stuffers
- Designated water conservation officer (through Fort Collins)
- Children's water festivals – given by NCWCD for Fort Collins elementary schools
- Indoor conservation kits
- Sprinkler system audit kits and instructions

Before finalizing the water conservation plan, ELCO welcomes input from its customers. ELCO shall have a 60-day public review period beginning the date of this notice through June 20, 2007. A complete draft copy will be kept at ELCO's office located at 232 South Link Lane for you to review. ELCO will also post the plan on its website at <http://elcowater.org>.

All written comments are due to Kaitly Phipps, Administrative Manager and CFO, prior to June 20, 2007 or P.O. Box 2044, Fort Collins, CO 80522 or may be dropped off at the office located at 232 South Link Lane.

North Forty News or Fossil Creek Current Ad Proof

4/13/07

ELCO

**Please check carefully: Phone number, address, important dates.
This is how your ad will appear in the newspaper.
Your prompt attention is needed!**

Please check one:

- Approved as is
- Approved with noted changes
- Please fax new proof for approval

**Sign Here ➔ _____
Date _____**

**Please fax back to 221-4884. Thank you!
Ad production 221-0213.**



APPENDIX B
ELCO Board Plan Adoption

**RESOLUTION OF THE EAST LARIMER COUNTY WATER DISTRICT
REGARDING ADOPTION OF A WATER CONSERVATION PLAN**

Resolution #07-07-01

Whereas, the Board of Directors of East Larimer County Water District ("District") recognizes the importance of conserving water and improving water use efficiency; and

Whereas, under the Colorado Revised Statute 37-60-126 prompted by the Water Conservation Act of 2004, requiring water providers delivering over 2,000 acre feet or more per calendar year are required to develop, adopt, and make publicly available and implement a water use efficiency plan; and

Whereas, a Draft Water Conservation Plan ("Plan") that describes the role of water use efficiency plans in the District's water supply planning was presented for review and comment at the Board meeting held on April 10, 2007; and

Whereas, a public notice announcing the availability of the Plan for review and comment was published and the Plan was publicly available for a period of not less than sixty (60) days; now, therefore,

BE IT RESOLVED, that the Board of Directors of the East Larimer County Water District hereby adopts the Water Conservation Plan attached hereto as Exhibit "A" and incorporated herein by reference.

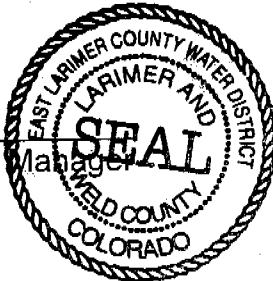
Passed and adopted at a regular meeting of the Board of Directors of the East Larimer County Water District held this 17 day of July, 2007.

By: Linell Chaffey

ATTEST:

Mike Scheid

Mike Scheid, Secretary-General Manager





APPENDIX C

Public Comments and Response

ELCO held its public-review period from April 20, 2007 through June 21, 2007. We provided notice in the Greeley Tribune, North Forty News, and the water bill on April 20, 2007 and the Fort Collins Coloradoan on April 21, 2007 that a draft plan would be available for the public to review at the ELCO office. We also posted the entire draft plan on our District website. The 60-day review period is completed, and we received comments from one individual.

COMMENT:

The comment was in regards to ELCO's minimum charge for cost of service plus 4,000 gallons of water. Since there are some residents that use less than 4,000 gallons per month, this policy does not encourage water conservation.

RESPONSE:

The minimum charge in ELCO's structure represents the cost of service for the District to serve its residents. These costs include reading meters, meter maintenance and monthly billing plus 4,000 gallons of water. ELCO will evaluate the possibility of eliminating this minimum 4,000 gallons in its charges for services in its upcoming rate study. ELCO has contracted with a consultant to perform a rate study this year.

If the results of the rate study show that this can be implemented without negatively impacting the District's current charges for service, this will be considered in ELCO's next water conservation plan update.