TOWN OF WINDSOR

2011 WATER RATE STUDY

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

BACKGROUND

In January 2010, Clear Water Solutions was retained by the Town of Windsor to conduct a comprehensive water rate study. Clear Water Solutions teamed with Water Consulting Group to complete this study. The rate study was authorized to determine the adequacy of the Town's water rates to fund anticipated capital improvements, cover the cost of securing future water supplies and pay for ongoing operation and maintenance (O&M) costs. The last time Windsor's water rates were adjusted was 2009 (Ordinance No. 2009-19).

The need to review water rates was identified in Windsor's Water Conservation Plan completed by Clear Water Solutions in 2008. Water rates are generally an effective way to encourage water conservation, particularly for residential outdoor use. The Town's Water Conservation Plan identified the need to meet 16% of build-out water needs through water conservation. Implementation of rates that encourage conservation will help meet this objective.

Water conservation is only one consideration in setting water rates. The primary purpose of water rates is the recovery of expenditures funded with rates through a rate structure which is not unduly discriminatory to any class of customers.

KEY RESULTS OF WATER RATE STUDY

Based on the cost-of-service analysis and other technical investigations performed during the water rate study, it was determined that:

- Water rate adjustments are needed to more equitably recover costs from customers. Customers in the residential, commercial/school and industrial category need to pay more for water service. Existing water rates for residential customers with dual systems and multi-family customers are adequate to pay the cost of providing them water service.

- Revenue from water sales needs to increase by 3.6% in 2011. An increase in Windsor's water rates is necessary to fund increases in the cost of purchasing treated water from the Town's wholesale suppliers. Windsor's wholesale water suppliers and the percentage of water they supplied in 2010 are as follows: City of Greeley – 30%, Fort Collins-Loveland Water District – 17% and North Weld County Water District – 53%. In 2011, Greeley increased the water rate charged to Windsor from $2.22/1000 gallons to $2.63/1000 gallons, or 18.5%.

- To fund anticipated capital improvements and raw water acquisition, the Town will need to adopt a new Water Resource Fee, increase plant investment fees (PIFs), and obtain supplemental funding from revenue bonds or loans.

- During the five-year planning period analyzed in this study, cash reserves in the Water Fund will be utilized to fund capital improvements and water acquisition.

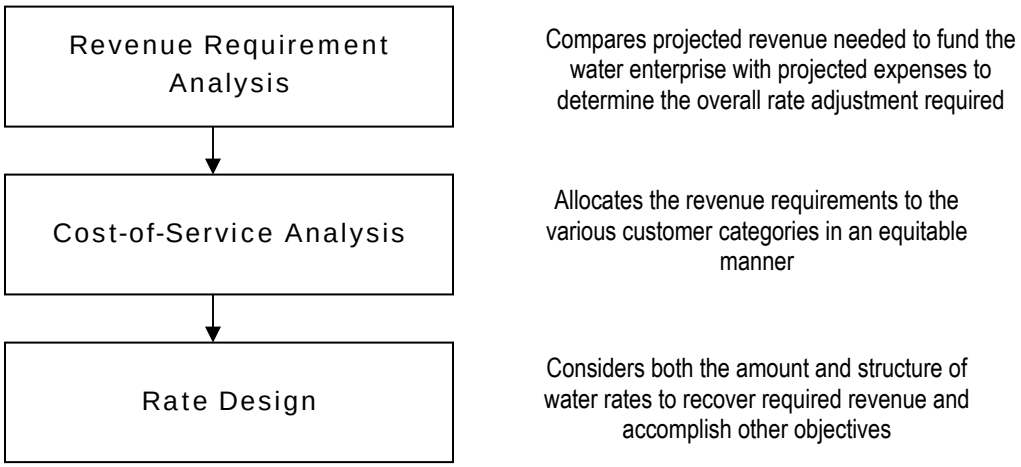
- Beginning in 2013, the Town will need to purchase additional treatment capacity from its wholesale water suppliers.

- It is anticipated that the number of customers receiving water service will increase by 2.0% per year.

OVERVIEW OF THE WATER RATE STUDY PROCESS

A comprehensive water rate study consists of three interrelated analyses. **Figure ES-1** illustrates the three major tasks undertaken during the Windsor rate study.

Figure ES-1 - Analyses Performed in a Comprehensive Water Rate Study



PROJECTED RATE ADJUSTMENTS TO FUND REVENUE REQUIREMENTS

To determine the water revenue requirements over the study period, a cash flow projection was prepared in collaboration with Town staff. Considerable effort was made to complete the cash flow projection, which resulted in a better overall understanding and definition of the Town's funds and allocation of those funds. The cash flow projection used in this analysis was presented to both the Town Board and Water and Sewer Board in joint work sessions. The projected rate adjustments and resulting revenue requirements developed in the cash flow projection is shown in **Table ES-1**.

Table ES-1 - Projected Future Adjustments in Rate Revenue

	Estimated 2010	Projected 2011	Projected 2012	Projected 2013	Projected 2014	Projected 2015
Water Sales	$2,954,071	$3,060,418	$3,179,774	$3,307,601	$3,390,291	$3,593,708
% Increase in Water Sales		3.6%	3.9%	4.0%	2.5%	6.0%

WATER RATE DESIGN

The Town's existing rate structure consists of two rate tiers and a fixed monthly fee. More specifically, existing rates include: (1) a base fee which varies with customer type and meter size that is billed to each customer regardless of the amount of water used during the billing period, (2) a 1st tier usage charge of $2.38 per one hundred cubic feet (HCF) of water use when the amount of water used during the billing period is below a premium threshold that varies by customer type and meter size and, (3) a premium usage charge of $3.56 per HCF once water use during the billing period exceeds the premium threshold. The Town's existing rates are summarized in **Table ES-2**.

Table ES-2 - Existing (2011) Water Rates

Customer Category	Monthly Base Fee	1st Tier Usage Charge (per HCF)	Premium Threshold (cubic feet per month)	Premium Usage Charge (per HCF)
3/4" Single family Residential	$14.30	$2.38	2,100	$3.56
3/4" Residential with Operative Dual System	$14.30	$2.38	1,300	$3.56
1" Residential with Operative Dual System	$23.10	$2.38	1,300	$3.56
1.5" Residential with Operative Dual System	$47.30	$2.38	1,300	$3.56
3/4" Multi-family Residential	$9.24	$2.38	2,100	$3.56
3/4" Commercial / Industrial / School	$14.30	$2.38	21,000	$3.56
1" Commercial / Industrial / School	$23.10	$2.38	21,000	$3.56
1.5" Commercial / Industrial / School	$47.30	$2.38	21,000	$3.56
2" Commercial	$74.80	$2.38	65,900	$3.56
2" Industrial	$74.80	$2.38	104,700	$3.56
2" School	$74.80	$2.38	21,000	$3.56
3" School	$140.80	$2.38	41,000	$3.56
4" Industrial	$234.80	$2.38	329,000	$3.56

Results of the revenue requirement analysis performed during the rate study are the basis for establishing cost-of-service based rate alternatives. Several changes to the current rate structures are proposed to improve equity between customer categories and between customers within each customer category. The proposed rate structures have been designed to encourage water conservation. Proposed revisions to the existing water rate structure are summarized below.

PROPOSED COST OF SERVICE RATE ALTERNATIVES

The cost-of-service analysis prepared for this report indicates current water rates for customers within the (1) residential, (2) industrial and, (3) commercial / school customer categories need to be increased to equitably charge those customers for costs that result from their water use characteristics.

The current water rate for residential customers with dual systems does not need to be increased; it equitably recovers costs those customers create. The current water rate for multi-family customers generates more revenue than required to comply with cost-of-service principles. Rather than reduce the multi-family water rate at this time, it is proposed that it remain the same. Reducing the multi-family water rate unnecessarily complicates the Town's system of fees and charges. It also has little affect on water sales revenue since multi-family customers pay lower water bills than other types of customers due to a lower monthly base fee.

RATE ALTERNATIVE #1

The cost-of-service adjustments needed to more equitably charge different customers can be made by simply adjusting the usage charges for residential, industrial and commercial/school customers. The monthly base fee and premium thresholds can remain the same to reduce confusion for existing customers and for easier implementation of new rates. The Alternative #1 rate structure has only two different rates in the two existing tiers. This approach should make it easier to administer Alternative #1 rates if they are adopted by the Town. The proposed rates developed in Alternative #1 are summarized in **Table ES-3**.

Table ES-3 - Proposed Water Rates with Rate Alternative #1

Customer Category	Monthly Base Fee	1st Tier Usage Charge (per HCF)	Premium Threshold (cubic feet / month)	Premium Usage Charge (per HCF)
3/4" Single family Residential	$14.30	$2.60	2,100	$4.00
3/4" Residential with Operative Dual System	$14.30	$2.38	1,300	$3.56
1" Residential with Operative Dual System	$23.10	$2.38	1,300	$3.56
1.5" Residential with Operative Dual System	$47.30	$2.38	1,300	$3.56
3/4" Multi-family Residential	$9.24	$2.38	2,100	$3.56
3/4" Commercial / Industrial / School	$14.30	$2.60	21,000	$4.00
1" Commercial / Industrial / School	$23.10	$2.60	21,000	$4.00
1.5" Commercial / Industrial / School	$47.30	$2.60	21,000	$4.00
2" Commercial	$74.80	$2.60	65,900	$4.00
2" Industrial	$74.80	$2.60	104,700	$4.00
2" School	$74.80	$2.60	21,000	$4.00
3" School	$140.80	$2.60	41,000	$4.00
4" Industrial	$234.80	$2.60	329,000	$4.00

→ Fees, charges and thresholds that are the same under the Town's current water rate structure

RATE ALTERNATIVE #2

Both the existing rate structure and Rate Alternative #1 do not send an effective water conservation message to residential customers. Most residential customers do not pay the premium charge because their water usage does not exceed the premium threshold. Lowering the premium threshold for the first tier will increase the percentage of customers that pay a higher usage charge. Customers subject to higher charges have a greater incentive to reduce their water use. Effective conservation rates typically have a second tier rate that is slightly higher than in the first tier but not punitive in nature. A third tier with a more punitive charge is intended to offer a greater incentive for customers to conserve water.

Rate Alternative #2 is designed to encourage residential customers that do not have access to dual systems to reduce the amount of water they use to irrigate turf. Residential customers without dual systems represent the 62% of the accounts served by the Town. It is projected that they will use 51% of the total water delivered in 2011. Lowering the outdoor water use of residential customers presents the best opportunity to reduce overall water use.

Rates proposed in Alternative #2 provide some conservation incentive to customers with dual systems through a lower premium threshold for the first tier but again, the primary purpose of Alternative #2 rates is encouraging residential customers without dual systems to reduce their outdoor water use. The proposed rates developed in Alternative #2 are summarized in **Table ES-4**.

Table ES-4 - Proposed Water Rates with Rate Alternative #2

Customer Category	Monthly Base Fee	Usage Charge (per HCF)			Premium Threshold (cubic feet per month)		
		Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
3/4" Single family Residential	$14.30	$2.38	$4.00	$7.60	1,600	4,000	> 4,000
3/4" Residential with Operative Dual System	$14.30	$2.38	$3.00	$4.00	1,000	1,300	> 1,300
1" Residential with Operative Dual System	$23.10	$2.38	$3.00	$4.00	1,000	1,300	> 1,300
1.5" Residential with Operative Dual System	$47.30	$2.38	$3.00	$4.00	1,000	1,300	> 1,300
3/4" Multi-family Residential	$9.24	$2.38	$3.56	N/A	2,100	> 2,100	N/A
3/4" Commercial / Industrial / School	$14.30	$2.60	$4.00	N/A	21,000	> 21,000	N/A
1" Commercial / Industrial / School	$23.10	$2.60	$4.00	N/A	21,000	> 21,000	N/A
1.5" Commercial / Industrial / School	$47.30	$2.60	$4.00	N/A	21,000	> 21,000	N/A
2" Commercial	$74.80	$2.60	$4.00	N/A	65,900	> 65,900	N/A
2" Industrial	$74.80	$2.60	$4.00	N/A	104,700	> 104,700	N/A
2" School	$74.80	$2.60	$4.00	N/A	21,000	> 21,000	N/A
3" School	$140.80	$2.60	$4.00	N/A	41,000	> 41,000	N/A
4" Industrial	$234.80	$2.60	$4.00	N/A	329,000	> 329,000	N/A

→ Fees, charges and thresholds that are the same under the Town's current water rate structure

RATE ALTERNATIVE #3

To limit the impact of any rate increase on customers that currently pay less than their cost-of-service, the Town may want to retain the current premium thresholds and implement a uniform increase in both the monthly base fee and usage charge. Such a rate structure would not send as strong a conservation message as Rate Alternative #2 and would retain some of the subsidies that currently exist between customer categories. However, a uniform rate increase would be relatively easy to implement and familiar to existing customers.

To recover the amount of revenue required to support the Town's Water Fund in 2011, an increase of 3.6% would be applied across-the-board to all monthly base fees and usage charges. The rates developed under such an alternative are summarized in **Table ES-5.**

Table ES-5 - Proposed Water Rates with Rate Alternative #3

Customer Category	Monthly Base Fee	1st Tier Usage Charge (per HCF)	Premium Threshold (cubic feet / month)	Premium Usage Charge (per HCF)
3/4" Single family Residential	$14.81	$2.47	2,100	$3.69
3/4" Residential with Operative Dual System	$14.81	$2.47	1,300	$3.69
1" Residential with Operative Dual System	$23.93	$2.47	1,300	$3.69
1.5" Residential with Operative Dual System	$49.00	$2.47	1,300	$3.69
3/4" Multi-family Residential	$9.57	$2.47	2,100	$3.69
3/4" Commercial / Industrial / School	$14.81	$2.47	21,000	$3.69
1" Commercial / Industrial / School	$23.93	$2.47	21,000	$3.69
1.5" Commercial / Industrial / School	$49.00	$2.47	21,000	$3.69
2" Commercial	$77.49	$2.47	65,900	$3.69
2" Industrial	$77.49	$2.47	104,700	$3.69
2" School	$77.49	$2.47	21,000	$3.69
3" School	$145.87	$2.47	41,000	$3.69
4" Industrial	$243.25	$2.47	329,000	$3.69

→ Thresholds that are the same under the Town's current water rate structure

IMPACT OF PROPOSED RESIDENTIAL RATE ALTERNATIVES

Table ES-6 shows the impact of the three proposed rate alternatives on residential customers without dual water systems that use different amounts of water.

Rate Alternative #2 proposes three tiers for residential customers with and without dual water systems. The majority of water use by those customers would be within the first tier (less than a premium threshold of 1,600 cubic feet per month). Analysis of water use data from 2010 shows that the annual median water use by residential customers is 12,200 cubic feet. Only 773 cubic feet of the annual water use of the median residential customer falls within Tier 2; none of it falls within Tier 3 of Rate Alternative #2.

Table ES-6 - Impact of Proposed Rate Alternatives on Residential Customers without Dual Water Systems (W-300)

Rate Alternative #1 (two tiers)

Residential (W-300) Customer Classification	Existing Annual Charges	Proposed Annual Charges	$ Difference	% Change	Annual Use in 2010 (cubic feet)	Annual Use in 2010 (acre feet)
99th percentile	$1,242	$1,359	$117	9.4%	37,030	0.85
90th percentile	$ 751	$ 810	$59	7.9%	21,920	0.50
Median	$ 463	$ 490	$27	5.8%	12,200	0.28
10th percentile	$ 270	$ 279	$9	3.3%	4,140	0.10

Rate Alternative #2 (three tiers)

Residential (W-300) Customer Classification	Existing Annual Charges	Proposed Annual Charges	$ Difference	% Change	Annual Use in 2010 (cubic feet)	Annual Use in 2010 (acre feet)
99th percentile	$1,242	$1,561	$319	25.7%	37,030	0.85
90th percentile	$ 751	$ 822	$71	9.5%	21,920	0.50
Median	$ 463	$ 475	$12	2.6%	12,200	0.28
10th percentile	$ 270	$ 270	$0	0%	4,140	0.10

Rate Alternative #3 (uniform increase in all charges – maintain two tiers)

Residential (W-300) Customer Classification	Existing Annual Charges	Proposed Annual Charges	$ Difference	% Change	Annual Use in 2010 (cubic feet)	Annual Use in 2010 (acre feet)
99th percentile	$1,242	$1,287	$45	3.6%	37,030	0.85
90th percentile	$ 751	$ 778	$27	3.6%	21,920	0.50
Median	$ 463	$ 480	$17	3.6%	12,200	0.28
10th percentile	$ 270	$ 280	$10	3.6%	4,140	0.10

SUMMARY

The previous discussion provides an overview of results from the rate study undertaken on behalf of Windsor. A more detailed description of the analyses and data utilized during the rate study is included within the remainder of this report.

CHAPTER 1 – INTRODUCTION

INTRODUCTION

In January 2010, Clear Water Solutions was retained by the Town of Windsor to conduct a comprehensive water rate study. Clear Water Solutions teamed with Water Consulting Group to complete this study. The rate study was authorized to determine the adequacy of the Town's water rates to fund anticipated capital improvements, cover the cost of securing future water supplies and pay for ongoing operation and maintenance (O&M) costs. The last time Windsor's water rates were adjusted was 2009 (Ordinance No. 2009-19).

The need to review water rates was identified in Windsor's Water Conservation Plan completed by Clear Water Solutions in 2008. Water rates are generally an effective way to encourage water conservation, particularly for residential outdoor use. The Town's Water Conservation Plan identified the need to meet 16% of build-out water needs through water conservation. Implementation of rates that encourage conservation will help meet this objective.

OBJECTIVES

The rate study performed on behalf of Windsor addresses a number of objectives. Most of these objectives are common in all rate studies, but some are unique to Windsor. The objectives of this study are as follows:

- Insure rates are adequate to meet the Town's anticipated O&M expenses, cost of capital improvements, financial obligations associated with acquiring additional sources of raw water and cost of purchasing treated water from the Town's three wholesale suppliers (City of Greeley, Fort Collins-Loveland Water District and North Weld County Water District).

- Establish rates that prevent any class of customer from subsidizing another class of customer.

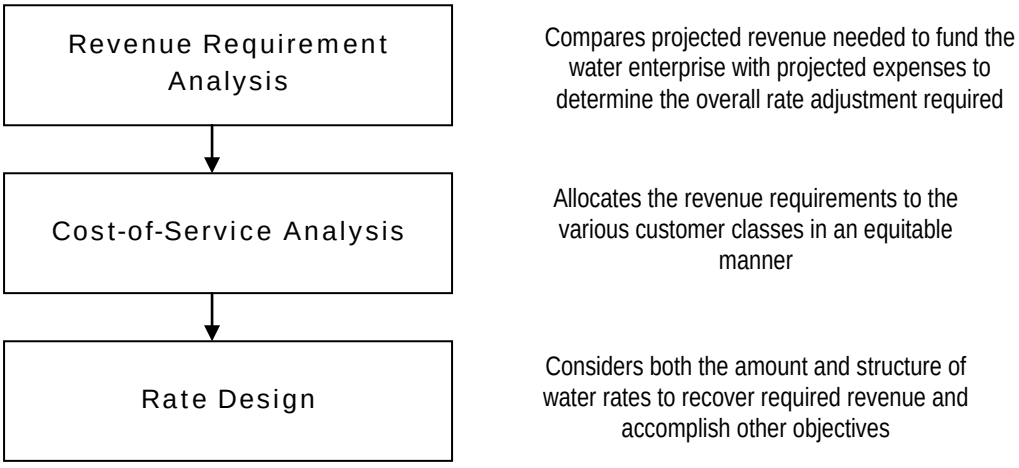
- Develop rates that are relatively easy to administer, can be understood by customers, insure revenue stability, and consider customers' ability to pay.

- Encourage water conservation through rates that provide financial incentives for customers to reduce their water use.

OVERVIEW

This study develops cost-based water rates through a comprehensive analysis of: 1) revenue requirements, 2) cost-of-service, and 3) rate design. **Figure 1.1** provides a representation and description of the three steps required to complete a rate study.

Figure 1.1 - Analyses Performed in a Comprehensive Water Rate Study



The analyses performed in this rate study follow the steps summarized above. In this study, we followed generally accepted rate making methodology as outlined in American Water Works Association (AWWA) Manuals of Practice M1, "Principles of Water Rates, Fees, and Charges," and M54, "Developing Rates for Small Systems."

CHAPTER 2 – WATER SYSTEM

SOURCES OF WATER SUPPLY

The water supplies owned by Windsor are shown in **Table 2.1** with a brief description of each source following the table.

Table 2.1 – Town of Windsor Water Rights

Source	Shares or Units	Average Yield per Share (AF)	Firm Yield per Share (AF)	Total Average Supply (AF)	Total Firm Supply (AF)
Colorado-Big Thompson Project Fixed Quota	2,101.0	0.7	0.5	1,470.7	1,050.5
Colorado-Big Thompson Project Variable Quota	1,377.0	0.7	0.6	963.9	826.2
North Poudre Irrigation Company	357.5	2.4	2.0	858.0	715.0
Total Available for Treated Use				**3,296.2**	**2,591.7**

POTABLE SUPPLY

Colorado-Big Thompson Project Water

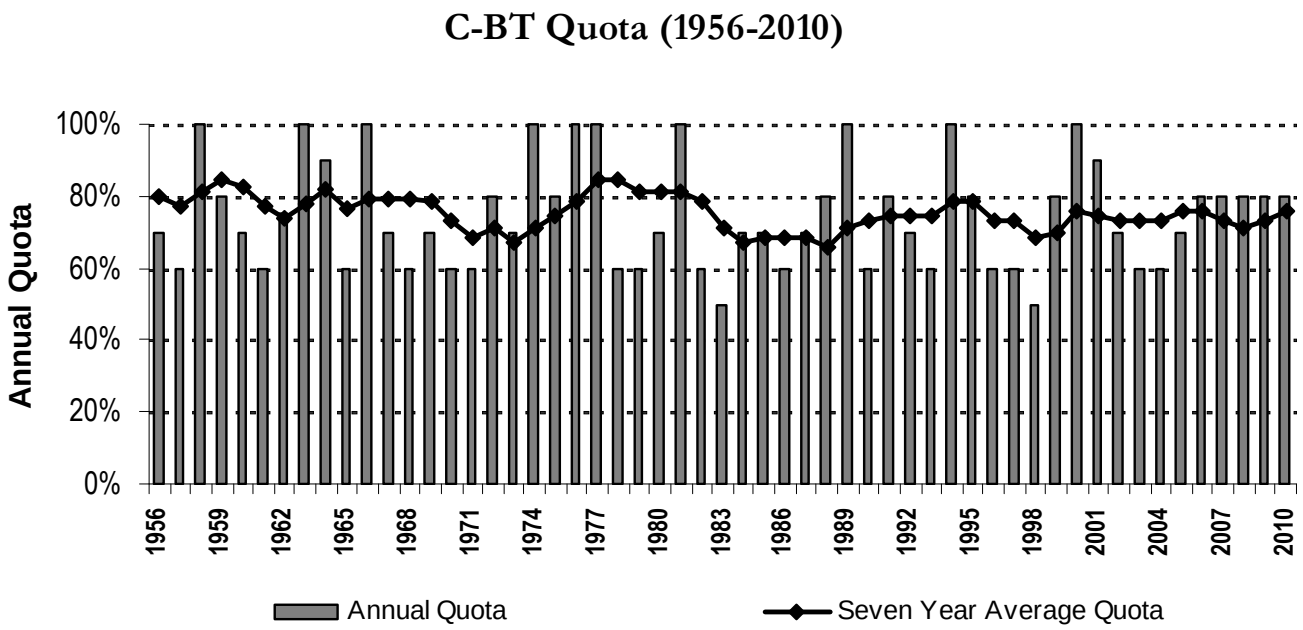
Colorado-Big Thompson (CBT) Project facilities divert water from the western slope of Colorado to the Front Range to supplement the region's native water supplies. It is the largest trans-mountain water diversion project in Colorado. It was constructed by the Bureau of Reclamation between 1938 and 1957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

The yield of CBT units is established each year by the Northern Water Board through what is known as the quota-setting process. The basis for setting the quota is to attempt to make every year look like an average year. The Northern Water Board examines the region's native supplies and local storage before declaring a quota that meets the supplemental need of the region as a whole. As a result, the quota is typically lower in wet years because native supplies are plentiful and local reservoirs are full, so less CBT water is required to satisfy

water demands. As CBT continues to transfer from agricultural to municipal use, the landscape of using the Project as a supplemental supply is changing.

In over fifty years of operation, the average yield has been 0.73 AF per unit and the commonly used average quota is 70 percent. The yield has never been less than 0.50 AF per unit (50 percent quota) or more than 1.0 AF per unit (100 percent quota). The annual quota established by the Northern Water Board over the years is shown in **Figure 2.1**.

Figure 2.1 – Annual CBT Quota History



North Poudre Irrigation Company

North Poudre Irrigation Company (NPIC) owns 40,000 CBT units, so its shares include a CBT portion and a native agricultural portion. The CBT water is delivered equally among the 10,000 shares within the NPIC system for agricultural, municipal and industrial use. Delivery of the CBT portion can be taken anywhere that CBT units can be delivered, so an entity outside of the NPIC service area can actually own NPIC shares and typically lease the native portion back to shareholders in the service area.

CUSTOMER CATEGORIES

For billing and accounting purposes, Windsor currently maintains the following customer categories: Single Family Residential, Residential User with Operative Dual System, Multi-Family Residential, Commercial and School, and Industrial. A breakdown of the number of customers in each category as of November, 2010 is shown in **Table 2.2**.

Table 2.2 - Summary of Customers by Category (November, 2010)

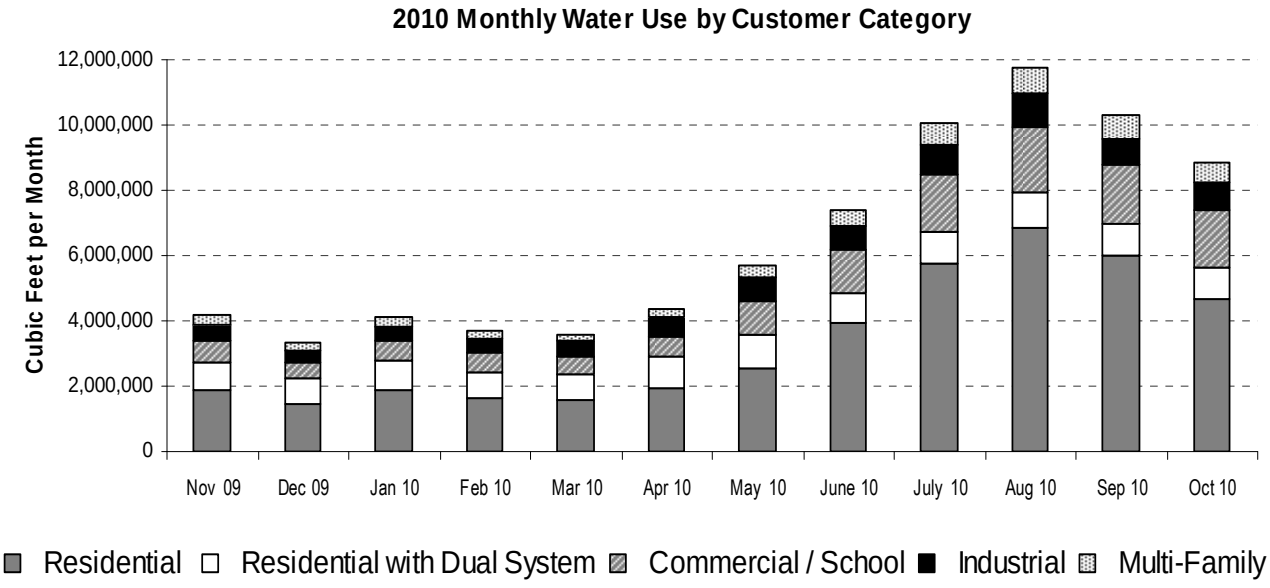
Customer Categories	Number of Accounts	Percentage of Accounts
Residential	3,090	62.1%
Residential with Dual System	1,478	29.7%
Commercial / School	298	6.0%
Industrial	15	0.3%
Multi-Family	97	1.9%
Total	4,978	100.0%

WATER USE

Water use data from November 2009 through October 2010 was used to estimate future water demands, calculate existing water rate revenue and develop future water rates. For purposes of this analysis, water use data from those twelve months will be called 2010 water use.

Water use data was obtained from Town staff that accessed files generated by the Town's current utility billing system. Data generated by the Town's billing system was especially useful and extremely accurate. **Figure 2.2** shows the amount of water used each month in each customer category during 2010.

Figure 2.2 – 2010 Monthly Water Use by Customer Category



Data from 2010 fairly represents water use expected during a typical year. Weather during the spring of 2010 was cooler and wetter than average but the summer was fairly hot and dry. Water use data for rate making purposes needs to reflect water use characteristics that are not unusually high because of hot, dry weather or unusually low because of cool, wet weather. Water use by Windsor's customers in 2010 fairly represents the amount of water use that can be expected in a typical year.

For comparative purposes, total water use by Windsor customers in 2010 was 8.5% greater than during the same period in 2009 without a significant increase in customer accounts. Based upon that comparison, data from 2010 is better suited for rate making than water use data from 2009.

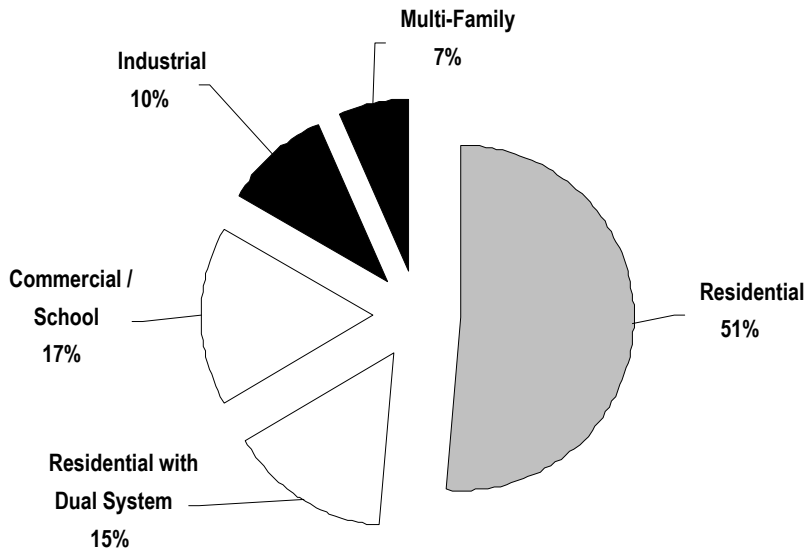
TEST YEAR

This analysis projects water rate revenue for the years 2011 through 2015. Since 2011 is the first year in which rates may need to be adjusted, it will be used as the test year.

Projected 2011 water demands were calculated by determining the average water use per account by meter size based on 2010 usage records, then multiplying by the projected number of accounts with that size meter to be served in 2011.

For purposes of this analysis, an increase of 95 residential customers with dual water system is projected for 2011. No increase in the number of customers in any other customer category is anticipated. The percentage of projected 2011 water use in each customer category is shown in **Figure 2.3**.

Figure 2.3 – Projected Percentage of Water Use in 2011



CHAPTER 3 – REVENUE REQUIREMENTS

STUDY PERIOD

The initial step in calculating the revenue requirement was to establish a study period or time frame in which to perform the analysis. A five-year study period (2011 – 2015) was selected as the time frame for this rate study.

A multi-year study period is generally recommended to identify any major expenses that may be on the horizon. Anticipating major financial commitments in the near future allows the Town to begin planning for necessary rate adjustment sooner rather than later. Proactively planning for and phasing in future rate adjustments decreases the burden to customers that may result from significant rate increases in any one year.

METHODOLOGY

A review of the Town's water revenue requirements is the first step in the rate study process. Analysis of revenue requirements determines the overall funding needs of the water enterprise. From this analysis, a determination can be made as to the water rate adjustments needed to adequately fund capital improvements, O&M, treated water purchase and transfers to other funds.

To determine the water revenue requirements over the study period, a cash flow projection was prepared in collaboration with Town staff. Considerable effort was made to complete the cash flow projection, which resulted in a better overall understanding and definition of the Town's funds and allocation of those funds. The cash flow projection used in this analysis was presented to both the Town Board and Water and Sewer Board in joint work sessions. The final cash flow projection used to develop revenue requirements over the study period is included in Appendix A.

The cash flow projection developed as part of this analysis anticipates implementation of annual water rate increases to recover anticipated increases in the cost of purchasing treated water from Windsor's wholesale suppliers. The Town's philosophy is to "pass through" rate increases from the wholesale supplies, so this philosophy was maintained. The cash flow projection also anticipates annual increases in plant investment fees (PIFs), a new water resource fee, an annual growth rate of 2% per year and the issuance of revenue bonds in future years. We worked closely with Town staff to develop these and other assumptions for the cash flow analysis, which are summarized on page 1 of Appendix A.

The amount of revenue recovered through water sales during the study period is shown on line 2, page 2 in the cash flow projection. Projected water sales revenue required to fund the water enterprise and percentage increases over the study period are summarized in **Table 3.1**.

Table 3.1 - Projected Water Sales Revenue

	Estimated 2010	Projected 2011	Projected 2012	Projected 2013	Projected 2014	Projected 2015
Water Sales	$2,954,071	$3,060,418	$3,179,774	$3,307,601	$3,390,291	$3,593,708
% Increase in Water Sales		3.6%	3.9%	4.0%	2.5%	6.0%

WATER REVENUE

The revenue requirement calculation is based on projections of revenue derived through water rates paid by all customer categories. This requires developing projected monthly bills for each customer category based on historical water use and an estimate of the growth in the number and type of customers served. This method of independently calculating water rate revenue insures consistency in data used throughout the rate study.

The amount of revenue requirements recovered through rates is reduced by the availability of funds generated from other sources. Windsor levies late fees on accounts that fail to pay by the due date and charges fees to reconnect service. Revenue is also derived from renting surplus CBT water that exceeds the amount the Town is required to provide to its wholesale providers. The Town also credits interest earnings on water enterprise reserves. Projected revenues from water rates and other sources of non-operating income over the study period are presented in **Table 3.2**.

Table 3.2 - Summary of Water Revenue

	Estimated 2010	Projected 2011	Projected 2012	Projected 2013	Projected 2014	Projected 2015
INCOME						
Grants	$30,570	$0	$0	$0	$0	$0
Water Sales	$2,954,071	$3,060,418	$3,179,774	$3,307,601	$3,390,291	$3,593,708
Meter Yokes / Materials	$30,586	$30,000	$30,000	$30,000	$30,000	$30,000
Hydrant Meter Rental	$12,681	$30,000	$30,000	$30,000	$30,000	$30,000
Water Rental	$35,820	$35,000	$35,000	$35,000	$35,000	$35,000
Tank Water	$1,196	$1,563	$1,563	$1,563	$1,563	$1,563
Interest Income	$48,213	$70,956	$227,858	$179,929	$164,823	$105,013
Service Reconnect Fees	$34,019	$16,613	$16,613	$16,613	$16,613	$16,613
Delinquent Charge	$33,823	$40,813	$40,813	$40,813	$40,813	$40,813
Construction Water	$2,783	$3,006	$3,006	$3,006	$3,006	$3,006
Water Fund O&M Revenues Total	$3,183,762	$3,288,369	$3,564,626	$3,644,525	$3,712,109	$3,855,716
Other Sources of Funds						
Loans	$0	$0	$0	$0	$0	$0
Bond Proceeds	$0	$0	$0	$0	$0	$8,000,000
PIF	$382,117	$670,862	$684,642	$715,794	$748,362	$782,413
Water Resource Fee	$0	$0	$0	$0	$1,080,553	$1,124,207
Cash-in-Lieu of Water Rights	$1,050	$60,536	$80,800	$82,416	$84,064	$85,746
Transfers from Other Funds	$250,748	$67,500	$67,500	$67,500	$67,500	$67,500
Total	$633,915	$798,898	$832,942	$865,710	$1,980,479	$10,059,866
Grand Total	$3,817,677	$4,087,267	$4,397,569	$4,510,235	$5,692,588	$13,915,582

O&M EXPENSES

O&M expenditures include the cost of purchasing treated water from wholesale suppliers, transfers to other funds that support the water enterprise plus the cost of operating and maintaining the Town's storage tanks, transmission and distribution system, meters, service lines, and related facilities. O&M expenses also include the cost of performing water quality tests, meter reading, billing, and administrative support. These and other related costs are necessary to support the water enterprise and are met with operating revenues as costs are incurred.

With input from Town staff, escalation factors were applied to the various O&M expenses. The escalation factors range from 2% to 5% per year based upon past experience and the best estimates of staff and the consultants. Projected expenditures for transmission / distribution decrease by approximately $250,000 from 2010 to 2011 due to the completion of a multiyear meter exchange program. All projected O&M expenses over the study period are summarized in **Table 3.3**.

Table 3.3 - Summary of Expenditures for O&M

	Estimated 2010	Projected 2011	Projected 2012	Projected 2013	Projected 2014	Projected 2015
OPERATION & MAINTENANCE						
Assessments	$143,000	$150,000	$154,500	$159,135	$163,909	$168,826
Potable Water Purchase	$1,063,184	$1,276,195	$1,731,412	$1,859,512	$1,938,253	$2,058,440
Pumping	$0	$11,750	$12,103	$12,466	$12,840	$13,225
Transmission / Distribution	$566,067	$315,734	$322,273	$329,048	$336,068	$343,346
Customer Services / Administration	$363,605	$360,626	$378,657	$397,590	$417,470	$438,343
Total Operating Expenses	$2,135,856	$2,114,305	$2,598,945	$2,757,750	$2,868,540	$3,022,180

WATER CAPITAL IMPROVEMENTS

Windsor has developed a comprehensive water Capital Improvement Plan (CIP) to address current and future water system capital needs. The estimated costs of capital improvements over the study period are shown in **Table 3.4**.

The cost of the Northern Integrated Supply Project (NISP) represents the single largest expenditure in Windsor's CIP. The debt service expenditure of $716,654 in 2015 is based upon the estimated annual debt service and cost of issuance associated with an $8,000,000 loan or bond obtained to fund the Town's allotment in NISP. The projected repayment period for the loan or bond is 20 years.

The Town anticipates purchasing additional treated water capacity from its wholesale water suppliers beginning in 2013. At that time, it is anticipated that the Town's water use will exceed the amount allowed by contract. Once the contractual limit is reached, additional capacity will have to be purchased. The cost of purchasing additional treated water capacity is estimated to total $606,695 in 2013 and increase proportionately with the addition of new customers in future years.

Table 3.4 - Summary of the Water Capital Improvement Plan

	Estimated 2010	Projected 2011	Projected 2012	Projected 2013	Projected 2014	Projected 2015
Capital Outlay - Water						
Water Shares	$258,343	$902,194	$722,498	$736,948	$751,687	$766,721
Construction / Oversizing / Mains	$123,750	$50,000	$80,000	$120,000	$300,000	$0
NISP	$230,000	$124,000	$312,000	$975,000	$7,452,000	$7,452,000
CR 15 Water Line	$0	$0	$0	$0	$0	$2,300,000
Water Master Plan	$35,000	$0	$0	$0	$0	$0
Easements	$0	$50,000	$0	$0	$0	$0
Water Conservation Plan Projects	$9,000	$0	$5,500	$27,500	$0	$0
3 Million Gallon Water Tank	$0	$300,000	$3,000,000	$0	$0	$0
Purchased Treatment Capacity from Providers	$0	$0	$0	$606,695	$634,300	$663,160
Transfer for Town Hall Construction	$210,000	$0	$0	$0	$0	$0
Transfer to Town Capital Construction Fund	$0	$1,250,000	$0	$0	$0	$0
Transfer to Non-Potable Fund	$0	$151,986	$0	$0	$0	$0
Subtotal	$866,093	$2,828,180	$4,119,998	$2,466,143	$9,137,986	$11,181,881
DEBT SERVICE						
Debt Service						
Principal and Interest	$0	$0	$0	$0	$0	$588,654
Issuance & Financing Cost	$0	$0	$0	$0	$0	$128,000
Subtotal	$0	$0	$0	$0	$0	$716,654
TOTAL	$866,093	$2,828,180	$4,119,998	$2,466,143	$9,137,986	$11,898,535

REVENUE REQUIREMENTS

Having determined (1) the amount of rate revenue required to fund both O&M and capital improvements, and (2) the amount of revenue from other sources available to offset expenditures for both O&M and capital improvements, the total system revenue requirements can be calculated. This amount is shown in **Table 3.5** and becomes the basis for allocating costs to customer categories and designing water rates.

Town staff made the decision to utilize some of its reserves in an effort to reduce the need to generate additional revenue through rates, fees or other charges. **Table 3.5** shows that the water enterprise will utilize some of its reserves over the study period. The projected 2010 ending fund balance for the water enterprise is $12.4 million. This amount has been collected from new and existing water customers in anticipation of the need to fund the projects and improvements included within the Town's 5-Year CIP.

Table 3.5 - Revenue Requirements

	Estimated 2010	Projected 2011	Projected 2012	Projected 2013	Projected 2014	Projected 2015
OPERATING INCOME LESS WATER SALES	$229,691	$227,951	$384,853	$336,924	$321,818	$262,008
NON-OPERATING INCOME	$633,915	$798,898	$832,942	$865,710	$1,980,479	$2,059,866
BOND PROCEEDS	$0	$0	$0	$0	$0	$8,000,000
Total Water Fund Income Less Water Sales	$863,606	$1,026,849	$1,217,795	$1,202,634	$2,302,297	$10,321,874
OPERATION & MAINTENANCE						
Assessments	$143,000	$150,000	$154,500	$159,135	$163,909	$168,826
Potable Water Purchase	$1,063,184	$1,276,195	$1,731,412	$1,859,512	$1,938,253	$2,058,440
Pumping	$0	$11,750	$12,103	$12,466	$12,840	$13,225
Transmission / Distribution	$566,067	$315,734	$322,273	$329,048	$336,068	$343,346
Customer Services / Administration	$363,605	$360,626	$378,657	$397,590	$417,470	$438,343
Total Operating Expenses	$2,135,856	$2,114,305	$2,598,945	$2,757,750	$2,868,540	$3,022,180
NON-OPERATING EXPENSES						
Capital	$678,810	$2,704,180	$3,807,998	$1,491,143	$1,685,986	$3,729,881
NISP	$230,000	$124,000	$312,000	$975,000	$7,452,000	$7,452,000
Debt Service	$0	$0	$0	$0	$0	$716,654
Interfund Transfers	$125,901	$84,254	$84,676	$85,106	$85,545	$85,993
Total Non-Operating Expenses	$1,034,711	$2,912,434	$4,204,674	$2,551,249	$9,223,531	$11,984,527
To or (From) Reserves	$647,110	($939,472)	($2,406,050)	($798,765)	($6,399,483)	($1,091,125)
Total Water Sales Required	$2,954,071	$3,060,418	$3,179,774	$3,307,601	$3,390,291	$3,593,708

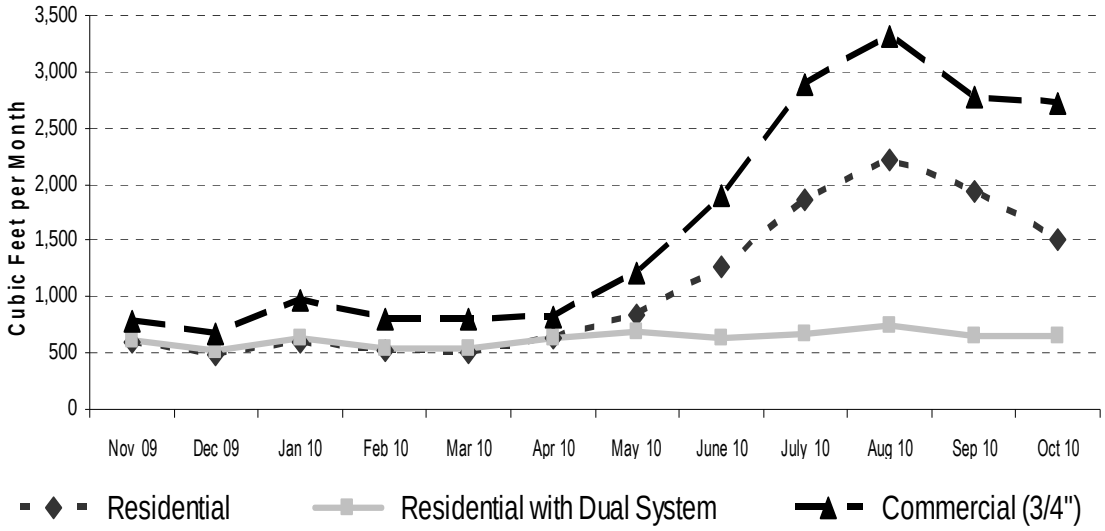
CHAPTER 4 – COST OF SERVICE

The revenue requirements shown in **Table 3.5** show the total cost of providing water service to Windsor's customers during the study period and the amount of water sales revenue needed to fund all operations, improvements and transfers. These figures are used to allocate costs to the various customer categories in proportion to the demands they place on the water system. The concept of proportionate allocation to customer categories implies that the allocation process considers not only the quantity of water used but also the rate of use. In this study, the rates that customers use water are labeled "peak demands."

There are measurable costs associated with facilities required to meet peak demands. These costs need to be allocated appropriately so that customers with higher rates of water use pay proportionately more in recognition of the peak demands they place on the water system.

Figure 4.1 illustrates how customers with the same size meter can generate very different demands on the water system. The difference between the peak period demands of residential and commercial customers versus residential customers served with dual water systems is an indication that the former customers should pay a greater percentage of costs for services and facilities that are a function of peak water demands. In Windsor, 95% of customer accounts are served by ¾" meters. Those customers used 70% of the treated water delivered by Windsor in 2010.

Figure 4.1- Comparison of Average Monthly Water Use by Customers with ¾" Meters



FUNCTIONAL COST COMPONENTS

The water system consists of various facilities designed and operated to fulfill one or more specific functions. To provide adequate service to customers at all times, the water system must be capable of providing the total amount of water used in any given year as well as the amount of water required on any given day or time of day to supply peak rates of use. Identification of costs by functional components provides a means for distributing such costs to the various customer categories on the basis of their respective responsibilities for each particular type of service. In this rate study, costs are assigned to three functional cost components: (1) base costs, (2) extra capacity costs, and (3) customer costs.

Base costs are those O&M and capital costs associated with providing water at a constant rate of use or average-day use. CBT assessments are an example of an O&M expenditure assigned totally to base costs. Assessments paid to Northern Water do not vary with the rate of water use by Windsor customers. The water purchase contracts between Windsor and its wholesale suppliers do not impose a higher rate during peak demand periods. Consequently, the cost of purchasing treated water can be considered a base cost.

Extra capacity costs represent those O&M and capital costs incurred to meet customer peak demands in excess of average day use. The cost of pumping water, operating and maintaining large transmission lines and master meters and certain administrative costs vary with the rate of water use. Extra capacity costs are further segregated into costs associated with supplying peak day and peak hour demands.

Customer costs include customer related expenditures independent of water use. The cost of meter reading, meter maintenance, billing, collections, accounting, software maintenance and IT support are included in customer costs and are the same for each customer regardless of water use. Customer costs also include expenditures for maintaining, testing, repairing and replacing meters and services. These costs are allocated based on meter size or meter capacity and are proportionally greater for customers with larger water meters.

DETERMINATION OF ALLOCATION PERCENTAGES

Allocation percentages are determined by utilizing projected water demands in the test year. Based on an analysis of historical water use and projected growth in the number of customers served, the following measures of water demand were determined for the test year:

Average Day	2,118 hundred cubic feet (HCF) per day
Peak Day	3,873 HCF per day
Peak Hour	5,810 HCF per day

Based on these demands for water service, allocation percentages shown in **Table 4.1** were calculated.

Table 4.1 - Calculation of Allocation Percentages

Functional Cost Component	Base	Extra Capacity	
		Peak Day	Peak Hour
Base	100.00% (1)		
Peak Day	45.31% (2)	54.69% (3)	
Peak Hour	36.45% (4)	30.21% (5)	33.34% (6)

(1) 2,118 / 2,118
(2) (3,873-2,118) / 3,873
(3) 2,118 / 3,873
(4) 2,118 / 5,810
(5) (3,873-2,118) / 5,810
(6) (5,810-3,873) / 5,810

These percentages are used to allocate O&M and capital costs to base and extra capacity functions. Assigning functional costs to the different customer categories is necessary to perform the cost-of-service calculations.

ALLOCATION OF COSTS

The revenue requirements for the test year represent the total costs of service to be derived from water rates and may be considered in the two broad categories of O&M expenses and capital costs. The allocation of water enterprise costs are allocated, or

assigned in two steps: first to the appropriate functional cost component (base, peak day or peak hour), then to customer categories. The first step in the allocation process is summarized in **Table 4.2**.

Table 4.2 - Allocation of 2011 Water Enterprise Costs to Functional Cost Components

	Total	Base Cost	Extra Capacity		Customer Costs
			Max Day	Peak Hour	
O & M Expense					
Assessments	$150,000	$150,000			
Purchased Water	$1,276,195	$1,276,195			
Pumping	$11,750		$11,750		
Transmission / Distribution	$315,734	$91,783	$76,039	$83,911	$64,000
Administrative Transfer / General Fund	$360,626				$360,626
Information Tech Transfer	$21,091				$21,091
Fleet Transfer	$63,163	$44,900	$2,597	$2,482	$13,184
	$2,198,559	$1,562,879	$90,386	$86,393	$458,901
Operating Income Available to Offset O&M					
Grants	$0	$0	$0	$0	$0
Meter Yokes / Materials	$30,000	$21,326	$1,233	$1,179	$6,262
Hydrant Meter Rental	$30,000	$21,326	$1,233	$1,179	$6,262
Water Rental	$35,000	$24,880	$1,439	$1,375	$7,305
Tank Water	$1,563	$1,111	$64	$61	$326
Interest Income	$70,956	$50,440	$2,917	$2,788	$14,811
Service Reconnect Fees	$16,613	$11,810	$683	$653	$3,468
Delinquent Charge	$40,813	$29,013	$1,678	$1,604	$8,519
Construction Water	$3,006	$2,137	$124	$118	$627
Subtotal	$227,951	$162,042	$9,371	$8,957	$47,580
Total O&M Costs Recovered from Rates	$1,970,608	$1,400,836	$81,015	$77,436	$411,321
Capital Costs					
Total Capital Costs Recovered from Rates	$1,089,810	$774,708	$44,804	$42,825	$227,474
REQUIRED REVENUE FROM RATES	$3,060,418	$2,175,544	$125,818	$120,260	$638,795

UNIT COSTS OF CAPACITY

To equitably allocate costs of service to the different customer categories, unit costs of service need to be developed for each functional cost component. Unit costs are calculated by dividing the total annual cost allocated to each component by the units of service associated with that particular cost component.

Different units are used for the different cost components. O&M and capital expenditures allocated to base costs are divided by total annual water use to determine the base unit cost of service. Peak-day and peak-hour capacity costs are divided by the

maximum daily use and maximum hourly use to determine those respective unit costs. Customer costs are based on the number of accounts and relative capacity of water meters within the system. **Table 4.3** shows the unit costs of service for each functional cost component.

Table 4.3 - Calculation of Unit Costs of Capacity

	Total	Base Cost	Extra Capacity		Customer Costs
			Max Day	Peak Hour	
O & M Expenses	$1,970,608	$1.81	$20.92	$13.33	$82.63
Capital	$1,089,810	$1.00	$11.57	$7.37	$45.70
Totals	$3,060,418	$2.81	$32.48	$20.70	$128.32

COST OF SERVICE

The unit cost for each of the functional cost components shown in **Table 4.3** is multiplied by the projected water use (base, peak day and peak hour) and number of accounts or equivalent meters in each customer category to determine cost responsibility. **Table 4.4** shows the number of customers in the different categories and their water usage characteristics. **Table 4.5** shows the amount each customer category needs to pay in 2011 toward their respective cost-of-service.

Table 4.4 – Units of Service for Customer Categories

	Base	Maximum Day		Peak Hour		Customer
	Annual Use (HCF)	Capacity Factor	Extra Cap. (HCF)	Capacity Factor	Extra Cap. (HCF)	(# Services)
(W-300) Residential w/o Dual System						
3/4"	401,148	2.06	2,260	3.08	3,390	3,090
Subtotals	401,148	2.06	2,260	3.08	3,390	3,090
(W-320) Residential with Dual System						
3/4"	104,674	1.18	339	1.77	508	1,458
1 1/2"	6,604	1.08	20	1.62	29	20
Subtotals	111,278	1.18	358	1.76	538	1,478
Industrial						
1"	2,114	1.98	11	2.97	17	10
2"	13,753	1.40	53	2.09	79	3
4"	62,098	1.55	264	2.33	396	2
Subtotals	77,965	1.54	328	2.31	492	15
Commercial / School						
3/4"	32,046	2.02	177	3.03	266	164
1"	34,866	1.87	179	2.81	268	91
1 1/2"	41,189	1.75	198	2.63	297	31
2"	12,994	2.00	71	3.01	107	9
3"	9,686	1.05	28	1.58	42	3
Subtotals	130,781	1.82	653	2.74	980	298
Multi Family						
3/4"	3,086	1.41	12	2.12	18	20
1"	30,108	2.20	181	3.30	272	62
1 1/2"	7,684	1.67	35	2.51	53	12
2"	989	1.06	3	1.58	4	1
3"	1,784	1.83	9	2.74	13	1
4"	8,334	1.44	33	2.16	49	1
Subtotals	51,985	1.92	273	2.88	410	97
Totals	773,157	1.83	3,873	2.74	5,810	4,978

Table 4.5 - Cost-of-Service by Customer Category

	Meter Size	Base Cost	Extra Capacity		Customer Costs	Totals
			Max Day	Peak Hour		
(W-300) Residential w/o Dual System						
	3/4"	$1,128,768	$73,413	$70,170	$396,520	$1,668,872
Subtotals		$1,128,768	$73,413	$70,170	$396,520	$1,668,872
(W-320) Residential with Dual System						
	3/4"	$294,538	$11,007	$10,520	$187,096	$503,161
	1 1/2"	$18,582	$635	$607	$2,566	$22,390
Subtotals		$313,119	$11,642	$11,127	$189,662	$525,551
Industrial						
	1"	$5,948	$373	$356	$1,283	$7,961
	2"	$38,699	$1,708	$1,632	$385	$42,424
	4"	$174,734	$8,584	$8,204	$257	$191,779
Subtotals		$219,381	$10,664	$10,193	$1,925	$242,163
Commercial / School						
	3/4"	$90,172	$5,763	$5,508	$21,045	$122,489
	1"	$98,108	$5,807	$5,550	$11,677	$121,142
	1 1/2"	$115,899	$6,428	$6,144	$3,978	$132,450
	2"	$36,563	$2,319	$2,216	$1,155	$42,253
	3"	$27,255	$908	$868	$385	$29,415
Subtotals		$367,997	$21,224	$20,287	$38,240	$447,749
Multi Family						
	3/4"	$8,684	$388	$371	$2,566	$12,008
	1"	$84,719	$5,892	$5,632	$7,956	$104,199
	1 1/2"	$21,622	$1,145	$1,094	$1,540	$25,401
	2"	$2,783	$93	$89	$128	$3,093
	3"	$5,020	$290	$278	$128	$5,716
	4"	$23,451	$1,067	$1,020	$128	$25,666
Subtotals		$146,278	$8,875	$8,483	$12,447	$176,083
Totals		$2,175,544	$125,818	$120,260	$638,795	$3,060,418

Table 4.6 shows the results of consolidating the cost-of-service for all customer categories and comparing those amounts with actual water sales revenue in 2010. The percentage increase required to reflect cost-of-service indicates there is no need to adjust rates for residential customers with dual water systems. For multi-family customers, current rates generate revenue that exceeds cost-of-service. Rates for residential, commercial / school and, industrial customers need to be increased to more accurately reflect the cost of serving those customer categories.

Customer categories that need to pay a larger proportion of costs generally place greater demands on the water system during peak periods. As shown in **Figure 4.1**, residential and commercial customers have higher water use during summer months when they typically irrigate their lawns.

The irrigation demand for residential customers with dual systems is met by the non-potable systems that serve their developments. Since those customers have little effect on peak period demands, their contribution for peak period costs are less.

Table 4.6 - Projected Revenue from Customer Categories

Customer Categories	Projected Cost-of-Service Revenue	2010 Revenue with Current Rates	% Increase Required for Cost-of-Service
Residential	$1,668,872	$1,603,832	4.1%
Residential with Dual System	$525,551	$522,948	0.5%
Commercial / School	$447,749	$417,771	7.2%
Industrial	$242,163	$206,850	17.1%
Multi-Family	$176,083	$202,669	-13.1%
Total	$3,060,418	$2,954,071	3.6%

CHAPTER 5 – RATE DESIGN

Water rates can be designed to address a number of issues, but the most critical considerations in the development of rates proposed in this study are:

- Rates must derive revenue requirements which include O&M expenses and capital costs.
- Revenue requirements derived from water rates must be equitably allocated to the various customer categories commensurate with the cost-of-service.
- Rates should be designed to discourage the wasteful use of water.
- Rates must be relatively easy to administer, understood by customers, non-punitive and insure revenue stability.

EXISTING WATER RATES

The Town's existing rate structure consists of two rate tiers and a fixed monthly fee. More specifically, existing rates include: (1) a base fee which varies with customer type and meter size that is billed to each customer regardless of the amount of water used during the billing period, (2) a 1st tier usage charge of $2.38 per HCF of water use when the amount of water used during the billing period is below a premium threshold that varies by customer type and meter size and, (3) a premium usage charge of $3.56 per HCF once water use during the billing period exceeds the premium threshold.

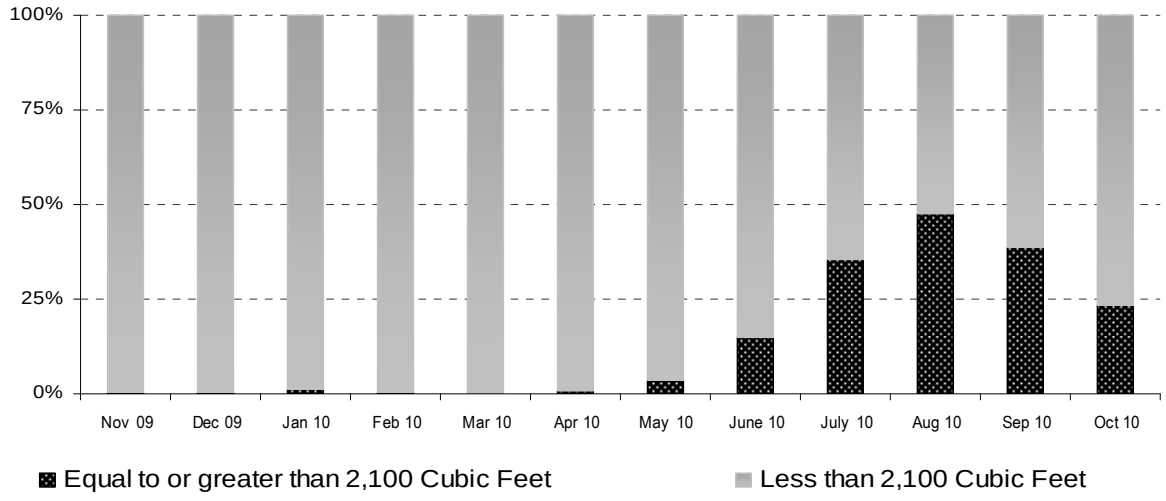
The Town's existing water rates for different types of customers and meter sizes are summarized in **Table 5.1**.

Table 5.1 - Existing (2011) Water Rates

Customer Category	Monthly Base Fee	1st Tier Usage Charge (per HCF)	Premium Threshold (cubic feet / month)	Premium Usage Charge (per HCF)
3/4" Single family Residential	$14.30	$2.38	2,100	$3.56
3/4" Residential with Operative Dual System	$14.30	$2.38	1,300	$3.56
1" Residential with Operative Dual System	$23.10	$2.38	1,300	$3.56
1.5" Residential with Operative Dual System	$47.30	$2.38	1,300	$3.56
3/4" Multi-family Residential	$9.24	$2.38	2,100	$3.56
3/4" Commercial / Industrial / School	$14.30	$2.38	21,000	$3.56
1" Commercial / Industrial / School	$23.10	$2.38	21,000	$3.56
1.5" Commercial / Industrial / School	$47.30	$2.38	21,000	$3.56
2" Commercial	$74.80	$2.38	65,900	$3.56
2" Industrial	$74.80	$2.38	104,700	$3.56
2" School	$74.80	$2.38	21,000	$3.56
3" School	$140.80	$2.38	41,000	$3.56
4" Industrial	$234.80	$2.38	329,000	$3.56

In August, 2010, the water use of approximately 48% of residential customers without dual systems (rate code W-300) exceeded the premium threshold of 2,100 cubic feet (15,708 gallons). The percentage of residential customers that exceeded the premium threshold in the other months is shown in **Figure 5.1**.

Figure 5.1 – Analysis of Water Use by Residential Customers (W-300) for 2010



The monthly water use of most residential customers with dual systems (rate code W-320) rarely exceeds the premium threshold. **Figure 5.2** shows that in August, 2010, approximately 12% of customers exceeded the premium threshold of 1,300 cubic feet (9,724 gallons).

Figure 5.2 – Analysis of Water Use by Residential Customers with Dual System (W-320) for 2010

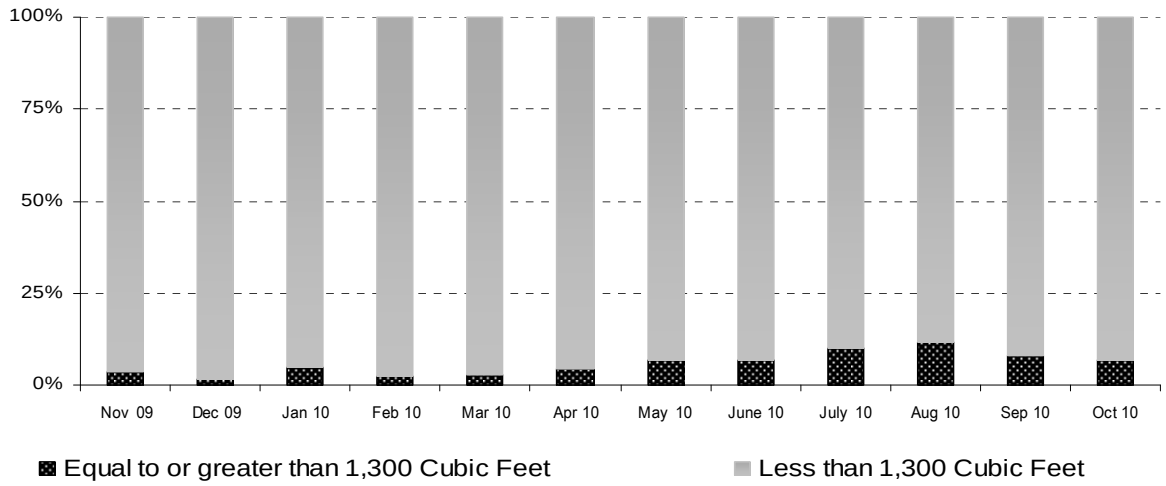
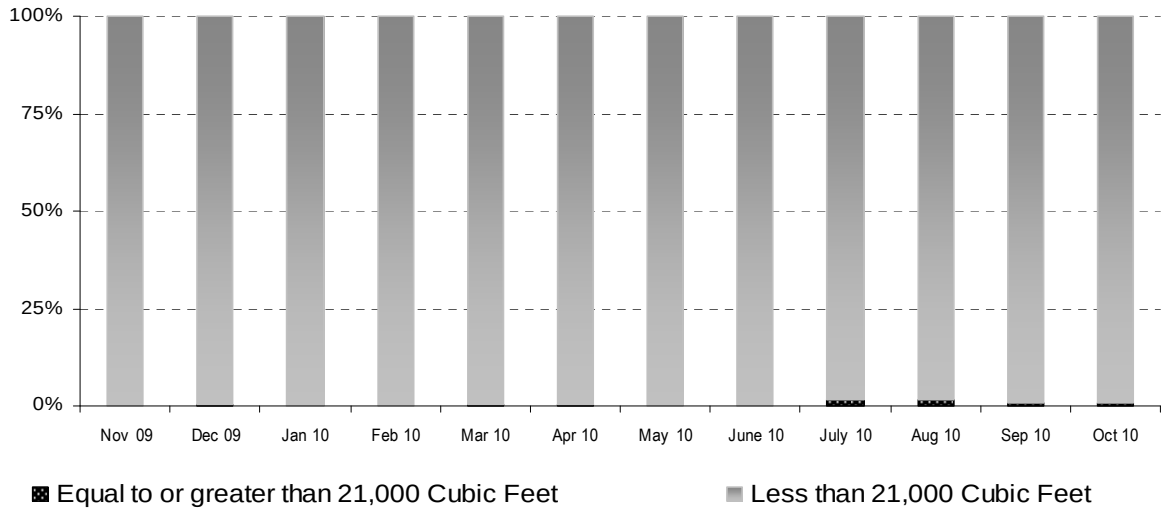


Figure 5.3 shows that in August, 2010, less than 2% of the commercial and industrial customers with ¾" water meters exceeded the premium threshold of 21,000 cubic feet (157,080 gallons) allowed under the current rate structure.

Figure 5.3 – Water Use by Commercial/Industrial Customers with ¾" Meters for 2010



PROPOSED COST-OF-SERVICE RATE ALTERNATIVES

The cost-of-service analysis prepared for this report indicates current water rates for customers within the (1) residential, (2) industrial and, (3) commercial / school customer categories need to be increased to equitably charge those customers for costs that result from their water use characteristics.

The current water rate for residential customers with dual systems does not need to be increased; it equitably recovers costs those customers create. The current water rate for multi-family customers generates more revenue than required to comply with cost-of-service principles. Rather than reduce the multi-family water rate at this time, it is proposed that it remain the same. Reducing the multi-family water rate unnecessarily complicates the Town's system of fees and charges. It also has little affect on water sales revenue since multi-family customers pay lower water bills than other types of customers due to a lower monthly base fee.

Proposed rates are intended to increase overall water sales revenue by 3.6% to recover the increased cost of purchasing treated water from the Town's wholesale suppliers. To achieve an overall increase in water sales of 3.6% while leaving rates unchanged for multi-family and residential customers with dual systems, an increase greater than 3.6% is needed in rates for the remaining customer categories.

Once cost-of-service rate adjustments are adopted, future rate increases can be applied uniformly to all customer categories.

RATE ALTERNATIVE #1

The cost-of-service adjustments needed to more equitably charge different customers can be made by simply adjusting the usage charges for residential, industrial and commercial/school customers. The monthly base fee and premium thresholds can remain the same to reduce confusion for existing customers and ease implementation of new rates. The Alternative #1 rate structure has only two different rates in the two existing tiers. This approach should make it easier to administer Alternative #1 rates if they are adopted by the Town. The proposed rates developed in Alternative #1 are summarized in **Table 5.2**.

Table 5.2 - Proposed Water Rates with Rate Alternative #1

Customer Category	Monthly Base Fee	1st Tier Usage Charge (per HCF)	Premium Threshold (cubic feet / month)	Premium Usage Charge (per HCF)
3/4" Single family Residential	$14.30	$2.60	2,100	$4.00
3/4" Residential with Operative Dual System	$14.30	$2.38	1,300	$3.56
1" Residential with Operative Dual System	$23.10	$2.38	1,300	$3.56
1.5" Residential with Operative Dual System	$47.30	$2.38	1,300	$3.56
3/4" Multi-family Residential	$9.24	$2.38	2,100	$3.56
3/4" Commercial / Industrial / School	$14.30	$2.60	21,000	$4.00
1" Commercial / Industrial / School	$23.10	$2.60	21,000	$4.00
1.5" Commercial / Industrial / School	$47.30	$2.60	21,000	$4.00
2" Commercial	$74.80	$2.60	65,900	$4.00
2" Industrial	$74.80	$2.60	104,700	$4.00
2" School	$74.80	$2.60	21,000	$4.00
3" School	$140.80	$2.60	41,000	$4.00
4" Industrial	$234.80	$2.60	329,000	$4.00

→ Fees, charges and thresholds that are the same under the Town's current water rate structure

The existing rate structure utilized in Alternative #1 does not send a particularly strong conservation signal to customers that exceed the premium threshold. Only about half of residential customers without dual systems paid the higher premium usage charge in August, 2010. There were even fewer customers in other categories that were charged the premium usage in 2010. Rate Alternative #2 is designed to address water conservation more strongly.

As shown in **Table 5.3**, applying proposed Alternative #1 rates to 2010 water use figures generates water sales revenue that closely approximate cost-of-service requirements developed in this study.

Table 5.3 - Comparison of Cost-of-Service with Rate Alternative #1

Customer Categories	Projected Cost-of-Service Revenue	Revenue with Rate Alternative #1	Ratio of Revenue to Cost-of-Service
Residential	$1,668,872	$1,663,012	99.6%
Residential with Dual System	$525,551	$522,948	99.5%
Commercial / School	$447,749	$459,247	102.6%
Industrial	$242,163	$226,752	93.6%
Multi-Family	$176,083	$202,669	115.1%
Total	$3,060,418	$3,074,628	100.5%

RATE ALTERNATIVE #2

Both the existing rate structure and Rate Alternative #1 do not send an effective water conservation message to residential customers. Most residential customers do not pay the premium charge imposed when water usage exceeds the premium threshold. Lowering the premium threshold for the first tier will increase the percentage of customers that pay a higher usage charge. Customers subject to higher charges have a greater incentive to reduce their water use. Effective conservation rates typically have a second tier rate that is slightly higher than in the first tier but not punitive in nature. A third tier with a more punitive charge is intended to offer a greater incentive for customers to conserve water.

Rate Alternative #2 is designed to encourage residential customers that do not have access to dual systems to reduce the amount of water they use to irrigate turf. Residential customers without dual systems represent the 62% of the accounts served by the Town. It is projected that they will use 51% of the total water delivered in 2011. Lowering the outdoor water use of residential customers presents the best opportunity to reduce overall water use.

There is less opportunity for residential customers with dual systems to reduce their water use. In 2010, the average residential customers with a dual system used 57% of the annual amount of water used by a comparable residential customer without a dual system. Water used by residential customers with a dual system is primarily for indoor purposes. Reducing indoor water use is more difficult than reducing outdoor water use. This is particularly true with newer homes that are equipped with modern, low-flow plumbing fixtures. This is the type of home occupied by most customers with dual systems.

Rates proposed in Alternative #2 provide some conservation incentive to customers with dual systems through a lower premium threshold for the first tier but again, the primary purpose of Alternative #2 rates is encouraging residential customers without dual systems to reduce their outdoor water use. The proposed rates developed in Alternative #2 are summarized in **Table 5.4**.

Table 5.4 - Proposed Water Rates with Rate Alternative #2

Customer Category	Monthly Base Fee	Usage Charge (per HCF)			Premium Threshold (cubic feet per month)		
		Tier 1	Tier 2	Tier 3	Tier 1	Tier 2	Tier 3
3/4" Single family Residential	$14.30	$2.38	$4.00	$7.60	1,600	4,000	> 4,000
3/4" Residential with Operative Dual System	$14.30	$2.38	$3.00	$4.00	1,000	1,300	> 1,300
1" Residential with Operative Dual System	$23.10	$2.38	$3.00	$4.00	1,000	1,300	> 1,300
1.5" Residential with Operative Dual System	$47.30	$2.38	$3.00	$4.00	1,000	1,300	> 1,300
3/4" Multi-family Residential	$9.24	$2.38	$3.56	N/A	2,100	> 2,100	N/A
3/4" Commercial / Industrial / School	$14.30	$2.60	$4.00	N/A	21,000	> 21,000	N/A
1" Commercial / Industrial / School	$23.10	$2.60	$4.00	N/A	21,000	> 21,000	N/A
1.5" Commercial / Industrial / School	$47.30	$2.60	$4.00	N/A	21,000	> 21,000	N/A
2" Commercial	$74.80	$2.60	$4.00	N/A	65,900	> 65,900	N/A
2" Industrial	$74.80	$2.60	$4.00	N/A	104,700	> 104,700	N/A
2" School	$74.80	$2.60	$4.00	N/A	21,000	> 21,000	N/A
3" School	$140.80	$2.60	$4.00	N/A	41,000	> 41,000	N/A
4" Industrial	$234.80	$2.60	$4.00	N/A	329,000	> 329,000	N/A

→ Fees, charges and thresholds that are the same under the Town's current water rate structure

As shown in **Table 5.5**, applying proposed Alternative #2 rates to 2010 water use figures generates water sales revenue that closely approximate cost-of-service requirements developed in this study.

Table 5.5 - Comparison of Cost-of-Service with Rate Alternative #2

Customer Categories	Projected Cost-of-Service Revenue	Revenue with Rate Alternative #2	Ratio of Revenue to Cost-of-Service
Residential	$1,668,872	$1,667,073	99.9%
Residential with Dual System	$525,551	$536,349	102.0%
Commercial / School	$447,749	$459,247	102.6%
Industrial	$242,163	$226,752	93.6%
Multi-Family	$176,083	$202,669	115.1%
Total	$3,060,418	$3,092,090	101.0%

RATE ALTERNATIVE #3

To limit the impact of any rate increase on customers that currently pay less than their cost-of-service, the Town may want to retain the current premium thresholds and implement a uniform increase in both the monthly base fee and usage charge. Such a rate structure would not send as strong a conservation message as Rate Alternative #2

and would retain some of the subsidies that currently exist between customer categories. However, a uniform rate increase would be relatively easy to implement and familiar to existing customers.

To recover the amount of revenue required to support the Town's water fund in 2011, an increase of 3.6% would be applied across-the-board to monthly base fees and usage charges. The rates developed under such an alternative are summarized in **Table 5.6**.

Table 5.6 - Proposed Water Rates with Rate Alternative #3

Customer Category	Monthly Base Fee	1st Tier Usage Charge (per HCF)	Premium Threshold (cubic feet / month)	Premium Usage Charge (per HCF)
3/4" Single family Residential	$14.81	$2.47	2,100	$3.69
3/4" Residential with Operative Dual System	$14.81	$2.47	1,300	$3.69
1" Residential with Operative Dual System	$23.93	$2.47	1,300	$3.69
1.5" Residential with Operative Dual System	$49.00	$2.47	1,300	$3.69
3/4" Multi-family Residential	$9.57	$2.47	2,100	$3.69
3/4" Commercial / Industrial / School	$14.81	$2.47	21,000	$3.69
1" Commercial / Industrial / School	$23.93	$2.47	21,000	$3.69
1.5" Commercial / Industrial / School	$49.00	$2.47	21,000	$3.69
2" Commercial	$77.49	$2.47	65,900	$3.69
2" Industrial	$77.49	$2.47	104,700	$3.69
2" School	$77.49	$2.47	21,000	$3.69
3" School	$145.87	$2.47	41,000	$3.69
4" Industrial	$243.25	$2.47	329,000	$3.69

→ **Thresholds that are the same under the Town's current water rate structure**

As shown in **Table 5.7**, applying proposed Alternative #3 rates to 2010 water use figures generates total water sales revenue equal to the total projected cost-of-service requirements developed in this study.

Table 5.7- Comparison of Cost-of-Service with Rate Alternative #3

Customer Categories	Projected Cost-of-Service Revenue	Revenue with Rate Alternative #3	Ratio of Revenue to Cost-of-Service
Residential	$1,668,872	$1,661,570	99.5%
Residential with Dual System	$525,551	$541,775	103.0%
Commercial / School	$447,749	$432,810	96.7%
Industrial	$242,163	$214,298	88.5%
Multi-Family	$176,083	$209,965	119.2%
Total	$3,060,418	$3,060,418	100.0%

PROPOSED RATES FOR COMMERCIAL/SCHOOL/INDUSTRIAL CUSTOMERS

The water use of non-residential customers is generally a function of their operations. It is difficult to equitably provide conservation incentives for non-residential customers through rates. Conservation measures other than rate structures are generally more effective in reducing non-residential water use as they can be performed on a customer-specific basis. Water audits, optimizing operations to lower water use and low-flow fixture installations are better conservation measures for non-residential customers. For those reasons, the thresholds for non-residential customers in the proposed rate alternatives are the same as the thresholds currently in use.

CHAPTER 6 – IMPACT ANALYSIS OF RATE ALTERNATIVES

Residential customers without dual water systems represent 62% of all accounts in Windsor and use approximately 51% of total metered water deliveries. Because residential customers are responsible for such a significant portion of water use and revenue, the impact of proposed rate adjustments on individual residential customers warrants additional examination.

IMPACT OF PROPOSED RATE ALTERNATIVES

Table 6.1 shows the impact of the three proposed rate alternatives on residential customers without dual water systems that use different amounts of water.

Table 6.1 - Impact of Proposed Rate Alternatives on Residential Customers without Dual Water Systems (W-300)

Rate Alternative #1 – Two Tiers

Residential (W-300) Customer Classification	Existing Annual Charges	Proposed Annual Charges	$ Difference	% Change	Annual Use in 2010 (cubic feet)	Annual Use in 2010 (acre feet)
99th percentile	$1,242	$1,359	$117	9.4%	37,030	0.85
90th percentile	$ 751	$ 810	$59	7.9%	21,920	0.50
Median	$ 463	$ 490	$27	5.8%	12,200	0.28
10th percentile	$ 270	$ 279	$9	3.3%	4,140	0.10

Rate Alternative #2 – Three Tiers

Residential (W-300) Customer Classification	Existing Annual Charges	Proposed Annual Charges	$ Difference	% Change	Annual Use in 2010 (cubic feet)	Annual Use in 2010 (acre feet)
99th percentile	$1,242	$1,561	$319	25.7%	37,030	0.85
90th percentile	$ 751	$ 822	$71	9.5%	21,920	0.50
Median	$ 463	$ 475	$12	2.6%	12,200	0.28
10th percentile	$ 270	$ 270	$0	0%	4,140	0.10

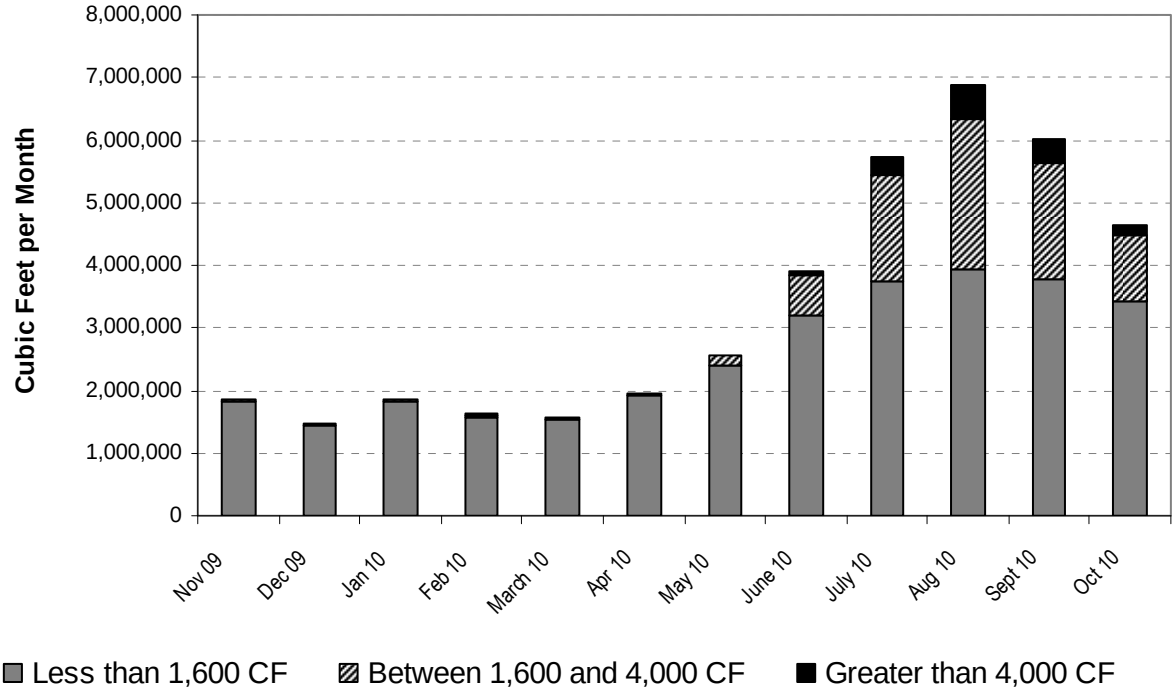
Rate Alternative #3 (uniform increase in all charges – maintain two tiers)

Residential (W-300) Customer Classification	Existing Annual Charges	Proposed Annual Charges	$ Difference	% Change	Annual Use in 2010 (cubic feet)	Annual Use in 2010 (acre feet)
99th percentile	**$1,242**	**$1,287**	**$45**	**3.6%**	**37,030**	**0.85**
90th percentile	**$ 751**	**$ 778**	**$27**	**3.6%**	**21,920**	**0.50**
Median	**$ 463**	**$ 480**	**$17**	**3.6%**	**12,200**	**0.28**
10th percentile	**$ 270**	**$ 280**	**$10**	**3.6%**	**4,140**	**0.10**

Rate Alternative #2 proposes three tiers for residential customers without dual water systems. The majority of water use by those customers would be within the first tier (less than a premium threshold of 1,600 cubic feet per month). Analysis of water use data from 2010 shows that the annual median water use by residential customers is 12,200 cubic feet. Only 773 cubic feet of the annual water use of the median residential customer falls within Tier 2; none of it falls within Tier 3 of Rate Alternative #2.

Figure 6.1 illustrates the amount of residential water use by month during 2010 in each tier of Rate Alternative #2.

Figure 6.1 - Monthly Water Use by Residential Customers (W-300) in Rate Alternative #2 Proposed Tiers



CHAPTER 7 – WATER CONSERVATION

Although conservation oriented water rates are an important step in managing water demand, they are most effective when part of a comprehensive conservation plan that addresses a variety of issues. This rate study was performed as a result of recommendations contained in the Water Conservation Plan prepared by Clear Water Solutions. Staff is in the process of implementing other recommendations included in the Water Conservation Plan. When fully implemented, the proposed water rates and other measures contained in the Water Conservation Plan are expected to reduce build-out water use by at least 16%.

Water rate revisions proposed in this rate study create incentives for customers to use water more efficiently. Proposed changes in rates that encourage water conservation are described below:

- The monthly base fee is not increased. This results in a higher percentage of a customer's bill being dependent on their water use. Approximately 64% of the total annual charge paid by the median residential customer would be based on water use under the proposed Rate Alternative #2.

- When customers pay more for the water they use, they tend to monitor their water use more carefully and make modifications when possible.

- Tiered rates for residential customers have a larger dollar amount between tiers than the existing residential rate. With the proposed residential rate tiers, customers will have a greater financial incentive to reduce their water use.

- Studies have determined that most irrigation systems apply more water than is required to maintain an attractive landscape. Research also shows the greatest reductions in water use are achieved by focusing on outdoor water use. Residential customers that improve the efficiency of their sprinkler systems and landscape with materials that require less water will be rewarded under the proposed water rates.

CHAPTER 8 – CONCLUSIONS AND RECOMMENDATIONS

The discussion presented in this report provides a summary of the rate analyses performed on behalf of Windsor. Water rates developed in this rate study recover the Town's cost-of-service, eliminate inequities between customer categories, fund planned capital improvements and raw water acquisition, promote revenue stability, and encourage water conservation.

RECOMMENDATIONS

The following recommendations are offered as a result of the analyses described in this report:

- The three-tier Residential water rate proposed in Rate Alternative #2 is recommended over the current two-tier system. Lowering the premium thresholds as proposed in Rate Alternative #2 will send a conservation price signal to more residential customers. The rate proposed in Tier 3 is high enough to encourage water use reductions by those customers with the greatest water use.

- Adopt the new water resource fee and PIFs developed in the cash flow projection utilized in preparation of this study. Consider additional adjustments to these fees in the future as the cost, timing and allocation of benefits associated with NISP are better understood.

- Independently audit bills after implementation of rate changes to insure the utility billing system generates the correct charges for all customers.

- Annually update the cash flow projection developed as part of this analysis so that future water rate adjustments are based on current financial data.

- Update the cost-of-service analysis at least every five years or whenever significant changes to the Water Fund budget occur. Changes in the makeup of customers, revisions in the cost and timing of capital projects, and changes in water use patterns may alter the Town's cost-of-service.

- Review the rate study and related cost allocations utilized by the City of Greeley to determine that Windsor's water rate needed to increase by 18.5% on January 1, 2011.

APPENDIX A

Cash Flow Projection

Appendix "A"

Assumptions Included in this Projection:

1. 2% growth in number of customers and annual water use, per decision during Potable Water Master Plan
2. 2.5% annual rate of escalation in O&M
3. Revenue Bonds issued in 2015 and 2019 (20 year repayment schedule)
4. Loan from Water Fund in 2011 ($1,250,000 repaid over 20 years @ $67,500 per year)
5. Additional treatment capacity purchase beginning in 2013 ($5,700 per tap)
6. Water Resource Fee of $10,000 per SFR implemented in 2011
7. Water purchased from FCLWD fixed at current amount, future demands met with water purchased 50% NWCWD and 50% Greeley
8. PIF fund is used to buy extra treatment capacity and system expansion projects, not to fund NISP
9. O&M ending Fund balance kept at 2 months of annual operating costs - rest is swept to fund NISP Project in Development Raw Water Fund
10. CBT water acquisition as per Water Master Plan
11. Rate increases from suppliers are passed along to customers on dollar for dollar basis.
12. Inflate PIF 2.5% per year

TOWN OF WINDSOR

30 Year Cash Flow Projection - with NISP

Assumptions for Cash Flow Projection		2010	2011	2012	2013	2014	2015
2010 Beginning Balances							
O&M Fund		**$4,424,593**					
PIF Fund		**$6,124,072**					
Development Raw Water Fund		**$1,064,172**					
Number of Customers		4,750	4,845	4,942	5,041	5,142	5,244
Growth - Number of Customers			2.0%	2.0%	2.0%	2.0%	2.0%
Number of New Equivalent Residential Customers			95	97	99	101	103
Residential PIF		$6,725	$6,893	$7,065	$7,242	$7,423	$7,609
Increase in Residential PIF		$0	$168	$172	$177	$181	$186
% Increase in PIF		0.0%	2.5%	2.5%	2.5%	2.5%	2.5%
Annual PIF Revenue		$382,117	$654,847	$684,642	$715,794	$748,362	$782,413
Cost of Purchasing Treatment Capacity (per residence)	$5,700	$5,700	$5,843	$5,989	$6,138	$6,292	$6,449
Growth - O&M and Capital & Cost of Purchasing Capacity			2.5%	2.5%	2.5%	2.5%	2.5%
Rate Increase - Treated Water Purchase NWCWD			4.0%	4.0%	4.0%	4.0%	4.0%
Rate Increase - Treated Water Purchase FCLWD			2.0%	2.0%	2.0%	2.0%	2.0%
Rate Increase - Treated Water Purchase Greeley			18.3%	9.0%	8.7%	0.2%	5.3%
Growth - Miscellaneous Income			3.0%	3.0%	3.0%	3.0%	3.0%
Investment Income - Interest Rate			2.0%	2.0%	2.0%	2.0%	2.0%
Cash-in-lieu of dedication fee	$10,000		$10,100	$10,302	$10,508	$10,718	$10,933
Annual Revenue from Water Resource Fee			$0	$0	$0	$1,080,553	$1,124,207
Growth - Raw Water Revenue			1.0%	2.0%	2.0%	2.0%	2.0%
Financing							
20 Year Revenue Bonds @	4.0%						$8,000,000
Issuance Cost (% of Principal) @	1.6%						$128,000

Appendix "A"

TOWN OF WINDSOR

30 Year Cash Flow Projection - with NISP

Row	Description	Projected 2010	Budget 2011	2012	2013	2014	2015
1	**Beginning Balance - O&M**	$3,961,623	$4,848,460	$5,941,270	$1,980,438	$1,902,934	$1,933,373
	Sources of Funds						
	Operating Revenue						
2	Water Sales	$2,954,071	$3,060,418	$3,179,774	$3,307,601	$3,390,291	$3,593,708
3	Increased Water Sales due to growth		$59,081	$61,208	$63,595	$66,152	$67,806
4	% increase in water sales for cost of treated water purchase	0.0%	**3.6%**	**3.9%**	**4.0%**	**2.5%**	**6.0%**
	Non-Operating Revenue						
5	Transfer from Park Fund						
6	Loan / Bond Proceeds						
7	Miscellaneous Income	$150,908	$159,995	$168,091	$176,596	$185,532	$194,920
8	Grants	$30,570	$0				
9	Investment Income	$48,213	$70,956	$118,825	$39,609	$38,059	$38,667
10	Total Sources of Funds	$3,183,762	$3,291,369	$3,466,690	$3,523,806	$3,613,881	$3,827,295
	Use of Funds						
	Operating Expenditures						
11	O&M	$1,233,741	$586,142	$600,795	$615,815	$631,211	$646,991
12	Treated Water Purchase (NWCWD, FCLWD, Greeley)	$1,063,184	$1,612,417	$1,731,412	$1,859,512	$1,938,253	$2,058,440
13	Increase in Cost of Treated Water Purchase		$549,233	$118,995	$128,100	$78,742	$120,187
14	Transfer to Development Raw Water Fund	$0	$0	$5,095,314	$1,125,983	$1,013,979	$1,076,417
15	Total O&M Expenditure and Transfer	$2,296,925	$2,198,559	$7,427,521	$3,601,310	$3,583,443	$3,781,848
16	Net Income	$886,837	$1,092,810	-$3,960,831	-$77,504	$30,439	$45,447
17	**Ending Fund Balance**	$4,848,460	$5,941,270	$1,980,438	$1,902,934	$1,933,373	$1,978,820
			$5,095,314	$1,134,483	$1,056,979	$1,087,417	$1,132,864
	Two Months Operating Expenditures		$366,427	$388,701	$412,555	$428,244	$450,905
18	**Beginning Balance - PIF**	$6,706,301	$6,970,416	$5,782,792	$3,570,590	$3,698,601	$3,619,135
	Sources of Funds						
	PIF Revenue						
19	Annual PIF Revenue	$382,117	$670,862	$684,642	$715,794	$748,362	$782,413
20	Loan / Bond Proceeds	$0	$0	$0	$0	$0	$0
21	Grants	$0	$0	$0	$0	$0	$0
22	Transfer from Town Capital Construction Fund		$67,500	$67,500	$67,500	$67,500	$67,500
23	Transfer from Other Funds	$250,748	$0	$0	$0	$0	$0
24	Investment Income	$0	$0	$115,656	$71,412	$73,972	$72,383
25	Total Sources of Funds	$632,865	$738,362	$867,798	$854,705	$889,834	$922,295
	Use of Funds						
26	Transfer for Town Hall Construction	$210,000					
27	Transfer to Town Capital Construction Fund		$1,250,000				
28	Transfer to Non-Potable Fund		$151,986				
29	Capital Improvement Program						
30	Construction / Oversizing / Mains	$123,750	$50,000	$80,000	$120,000	$300,000	$0
31	Water Master Plan	$35,000				$35,000	
32	3 Million Gallon Treated Water Storage Tank		$300,000	$3,000,000			
33	NISP		$124,000				
34	Easements		$50,000				
35	CR 15 Waterline						$2,300,000
36	Purchased Treatment Capacity from Providers	$0	$0	$0	$606,695	$634,300	$663,160
37	Transfer to Development Raw Water Fund	$0	$0	$0	$0	$0	$0
38	Transfer to O&M Fund	$0	$0	$0	$0	$0	$0
39	Total PIF Expenditure	$368,750	$1,925,986	$3,080,000	$726,695	$969,300	$2,963,160
40	Net Income	$264,115	($1,187,624)	($2,212,202)	$128,010	($79,465)	($2,040,865)
41	**Ending Fund Balance**	$6,970,416	$5,782,792	$3,570,590	$3,698,601	$3,619,135	$1,578,271

Appendix "A"

TOWN OF WINDSOR

30 Year Cash Flow Projection - with NISP

		2010	2011	2012	2013	2014	2015
42	**Beginning Balance - Development Raw Water**	$1,098,951	$841,658	$193,863	$4,258,556	$3,757,762	($2,276,238)
	Sources of Funds						
43	Water Resource Fee	$0	$0	$0	$0	$1,080,553	$1,124,207
44	Cash-in-Lieu of Raw Water	$1,050	$60,536	$0	$0	$0	$0
45	Transfer from O&M Fund	$0	$0	$5,095,314	$1,125,983	$1,013,979	$1,076,417
46	Loan / Bond Proceeds	$0	$0	$0	$0	$0	$8,000,000
47	Investment Income	$0	$0	$3,877	$85,171	$75,155	$0
48	Total Sources of Funds	$1,050	$60,536	$5,099,191	$1,211,154	$2,169,687	$10,200,625
	Use of Funds						
49	Transfer to Other Funds	$0	$0	$0	$0	$0	$0
	Debt Service						
50	Proposed 20 Yr Revenue Bonds for NISP	$0	$0	$0	$0	$0	$588,654
51	Issuance Cost	$0	$0	$0	$0	$0	$128,000
52	Total Debt Service	$0	$0	$0	$0	$0	$716,654
53	Water Rights Acquisition (CBT)	$258,343	$708,331	$722,498	$736,948	$751,687	$766,721
54	NISP			$312,000	$975,000	$7,452,000	$7,452,000
55	Total Development Raw Water Expenditure	$258,343	$708,331	$1,034,498	$1,711,948	$8,203,687	$8,935,375
56	Net Income	($257,293)	($647,795)	$4,064,693	($500,794)	($6,034,000)	$1,265,250
57	**Ending Fund Balance**	$841,658	$193,863	$4,258,556	$3,757,762	($2,276,238)	($1,010,988)
58	**Ending Balance Total Water Fund**	$12,660,534	$11,917,924	$9,809,584	$9,359,297	$3,276,270	$2,546,102