



CITY OF DACONO

2012 Water Rate Study

December 2012



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EXECUTIVE SUMMARY

Background

In April, 2012, Clear Water Solutions was retained by the City of Dacono to conduct a comprehensive water rate study. The rate study was authorized to determine the adequacy of the City's water rates to fund anticipated capital improvements, cover the cost of securing future water supplies and pay for ongoing operation and maintenance costs. The last time Dacono's water rates were adjusted was in 2005 (Ordinance No. 653).

The need to review water rates was identified in Dacono's Water Conservation Plan completed by Clear Water Solutions in 2011. Water rates are generally an effective way to encourage water conservation, particularly for residential outdoor use. The City's Water Conservation Plan established the goal of reducing overall water use by 10% over a ten-year planning period (2012-2021). Implementation of rates that encourage conservation will help meet this objective. Conserving water is an important part of the City's long-term water plan. As outlined in Dacono's Raw Water Master Plan, there is an approximate 1,300 acre-feet shortfall of water supply by 2050. Water conservation is an effective way to reduce the need for water acquisition to meet this deficit.

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 this water rate study, it was determined that:

- The City's water rate revenue needs to increase by 15% in 2013, and 5% each year from 2014 through 2018.
- The 15% overall increase in water sales revenue required in 2013 results from increasing residential water rates by 15.4% and commercial water rates by 12.6%. The difference in percentage increases is a result of the commercial customer category currently paying slightly more than their calculated cost-of-service. After 2013, both residential and commercial customers will be paying rates that reflect their respective cost-of-service.

- To fund the City's share of the proposed Northern Integrated Supply Project (NISP) and other planned capital improvements, two \$4 million bond issues will be required. The first bond issue is projected in 2015; the second bond issue is projected in 2020.
- Even with recommended water rate increases, the water fund will draw upon its existing reserves until 2015 when bond proceeds replenish reserves and fund the first phase of NISP.

Water Rate Design

The City's existing rate structure consists of: (1) a monthly minimum charge entitling each customer to use a certain amount of water each month before incurring additional charges, and (2) a consumption charge levied on each 1,000 gallons of water used over the minimum quantity provided under the monthly minimum. The City currently has a tiered water rate structure for all customers. Tiered rates increase the consumption charge incrementally depending on the amount of water used.

The existing residential and commercial water rate for customers with 5/8" meters has three rate tiers: (1) 0 to 7,000 gallons, (2) 7,001 to 10,000 gallons, and (3) 10,001 or more. The residential water rate currently allows customers to use up to 7,000 gallons with payment of a \$28.00 minimum monthly charge. The City's existing water rates are summarized in **Table ES.1**.

Table ES.1 - City of Dacono Water Rates (Ordinance No. 653 Effective April 1, 2005)

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/ thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter	0 7,001 10,001	7,000 10,000 or more	\$28.00	\$1.50 \$2.00	300,000
3/4" meter	0 17,501 25,001	17,500 25,000 or more	\$61.00	\$1.50 \$2.00	750,000
1" meter	0 40,001 55,001	40,000 55,000 or more	\$134.00	\$1.50 \$2.00	1,500,000
1.5" meter (commercial)	0 73,501 100,001	73,500 100,000 or more	\$265.00	\$1.50 \$2.00	3,250,000
1.5" meter (residential)	0 73,501 100,001	73,500 100,000 or more	\$182.50	\$1.50 \$2.00	3,250,000
2" meter	0 140,001 200,000	140,000 200,000 or more	\$502.00	\$1.50 \$2.00	6,000,000
3" meter	0 280,001 360,001	280,000 360,000 or more	\$1,001.00	\$1.50 \$2.00	12,000,000

Four alternative rate schedules were developed in this study. The four alternatives were discussed with City staff and analyzed for their respective impact on revenue stability, customer understanding, water conservation, equity and ease of implementation. Based on this analysis and discussion, Alternative #2 is recommended for implementation in 2013.

Recommended Water Rate Alternative #2

Alternative #2 reduces the amount of water provided with the monthly minimum charge from 7,000 gallons to 5,000 gallons per month for customers with 5/8" meters. The dollar amount of the monthly minimum charge remains at current levels for all customers. Usage charges are increased to generate the required amount of revenue from the

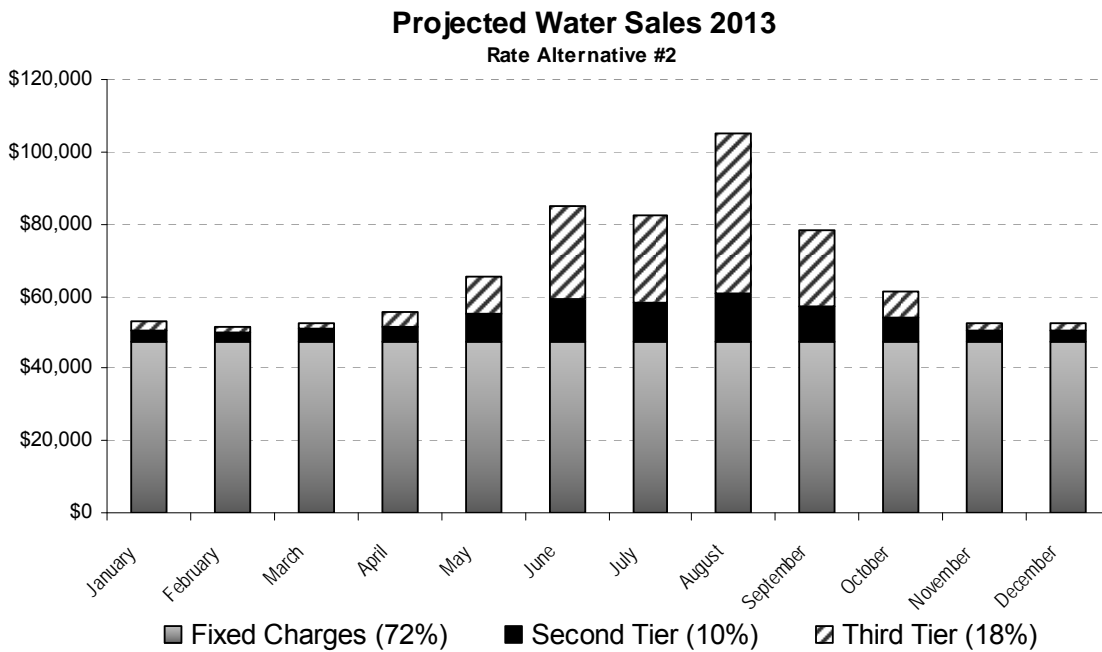
respective customer categories. **Table ES.2** shows rates and charges developed for Alternative #2.

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

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/additional thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter (residential)	0	5,000	\$28.00	\$0.00	300,000
	5,001	10,000		\$2.25	
	10,001	or more		\$3.50	
5/8" meter (commercial)	0	5,000	\$28.00	\$0.00	300,000
	5,001	10,000		\$2.00	
	10,001	or more		\$3.00	
3/4" meter	0	17,500	\$61.00	\$0.00	750,000
	17,501	25,000		\$2.00	
	25,001	or more		\$3.00	
1" meter	0	40,000	\$134.00	\$0.00	1,500,000
	40,001	55,000		\$2.00	
	55,001	or more		\$3.00	
1.5" meter (commercial)	0	73,500	\$265.00	\$0.00	3,250,000
	73,501	100,000		\$2.00	
	100,001	or more		\$3.00	
1.5" meter (residential)	0	73,500	\$182.50	\$0.00	3,250,000
	73,501	100,000		\$2.25	
	100,001	or more		\$3.50	
2" meter	0	140,000	\$502.00	\$0.00	6,000,000
	140,001	200,000		\$2.00	
	200,000	or more		\$3.00	
3" meter	0	280,000	\$1,001.00	\$0.00	12,000,000
	280,001	360,000		\$2.00	
	360,001	or more		\$3.00	
	→ Fees, charges and thresholds that are changed from the City's current water rate structure				

Figure ES.1 shows the amount of fixed revenue generated with Alternative #2 from monthly minimum charges and amounts generated with proposed rates in the second and third tiers.

Figure ES.1 –



Impact of Recommended Water Rate Alternative #2 on Residential Water Bills

Residential customers represent 95% of all accounts in Dacono and use approximately 81% of total metered water deliveries. Because residential customers are responsible for such a significant portion of water use and revenue, the impact of the proposed rate alternative on individual residential customers was analyzed in more detail.

To measure the effect of the recommended rate alternative on residential customers, the water use of customers at the 10th percentile, median and 90th percentile of annual use was analyzed. **Table ES.3** compares current annual charges with amounts paid per year by representative residential customers with Alternative #2.

Table ES.3 - Annual Charges and % Change from Current Rates for Representative Customers

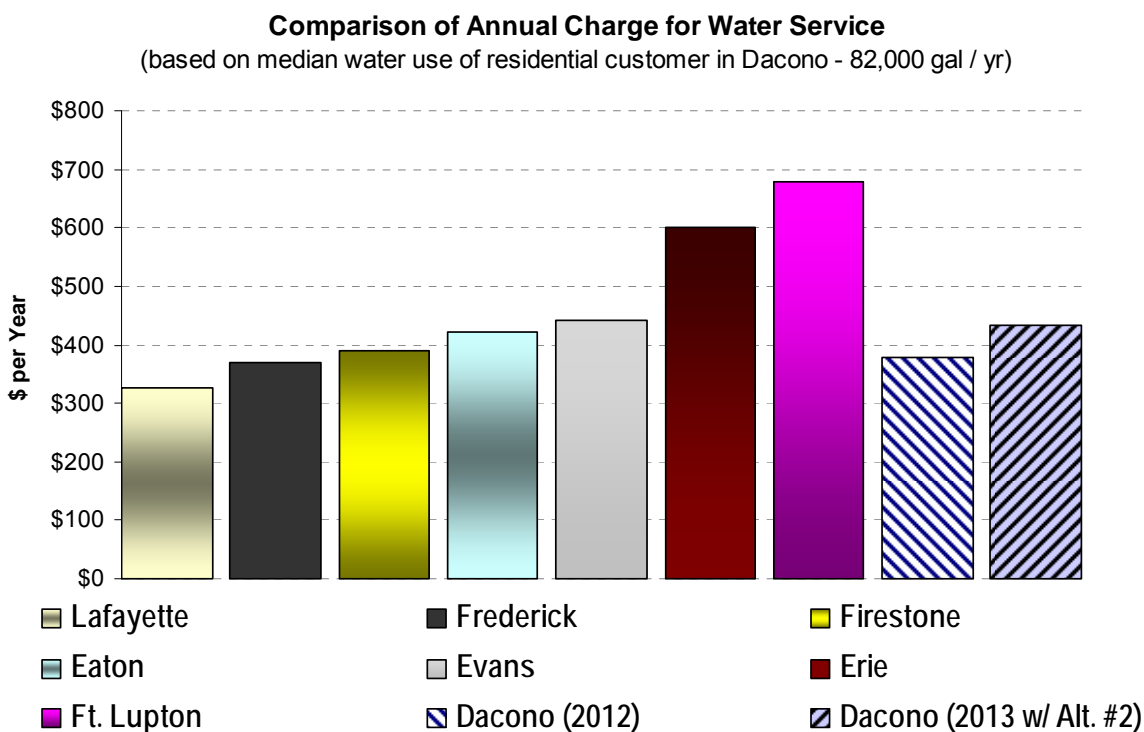
Representative Residential Customers	Current Rates	Alternative #2	
	\$/Year	\$/Year	% Change
10 th Percentile	\$336.00	\$336.00	0%
Median	\$379.50	\$432.00	14%
90 th Percentile	\$507.00	\$657.75	30%

Table ES.3 shows that customers at the tenth percentile of water use will not experience an increase in annual water charges with Alternative #2; customers at the ninetieth percentile of water use will experience a 30% increase in the amount they pay for water.

Comparison of Residential Water Bills

Figure ES.2 compares the annual cost of water for the median Dacono residential customer using 82,000 gallons per year with the amount that customer would pay for the same amount of water in nearby communities based on rates currently charged in those communities. The annual amount paid by the median Dacono single family customer with existing (2012) and proposed (2013) residential water rates is shown.

Figure ES.2 –



Summary

The previous discussion provides an overview of results from the rate study undertaken on behalf of Dacono. 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 April, 2012, Clear Water Solutions was retained by the City of Dacono 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 City's water rates to fund anticipated capital improvements, cover the cost of securing future water supplies and pay for on-going operation and maintenance (O&M) costs. The last time Dacono's water rates were adjusted was in 2005 (Ordinance No. 653).

The need to review water rates was identified in Dacono's Water Conservation Plan completed by Clear Water Solutions in 2011. Water rates are generally an effective way to encourage water conservation, particularly for residential outdoor use. The City's Water Conservation Plan established the goal of reducing overall water use by 10% over a ten-year planning period (2012-2021). Implementation of rates that encourage conservation will help meet this objective. Conserving water is an important part of the City's long-term water plan. As outlined in Dacono's Raw Water Master Plan, there is an approximate 1,300 acre-feet shortfall of water supply by 2050. Water conservation is an effective way to reduce the need for water acquisition to meet this deficit.

Dacono has grown rapidly in recent years. It is anticipated that the City will continue to see its population increase. Securing a water supply to meet the demands of future customers will be challenging and costly. One source of water for future customers is the proposed Northern Integrated Supply Project (NISP). NISP is a regional water supply project coordinated by the Northern Colorado Water Conservancy District on behalf of 15 Front Range water providers. Its goal is to provide participating water providers with approximately 40,000 acre-feet of new, reliable water supply. Dacono is one of the 15 Front Range water providers participating in NISP. Once completed, Dacono anticipates obtaining 1,000 acre-feet per year from the project.

The cost and timing of NISP is yet to be determined, but preliminary projections indicate that Dacono's water rates will need to increase significantly to fund its share of the project. The estimated increase in water rates needed to fund NISP and other capital improvements planned by the City are discussed in later chapters.

Objectives

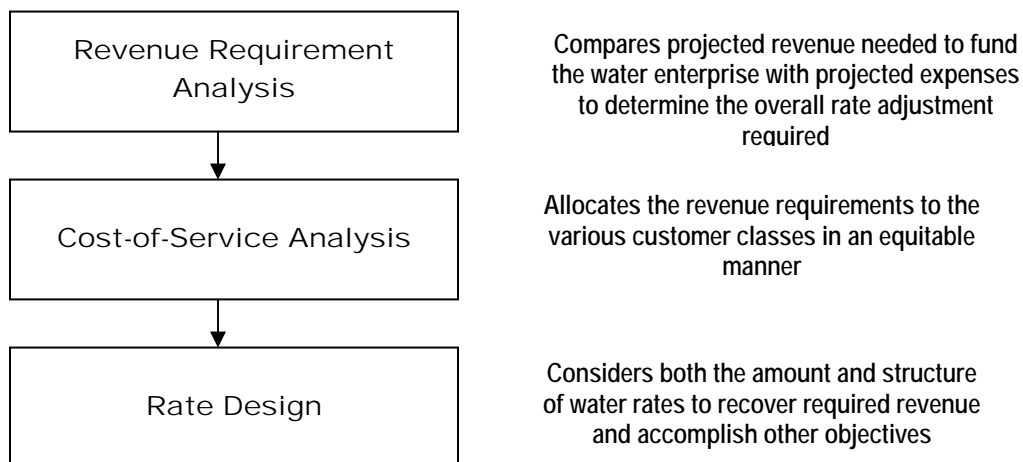
The rate study performed on behalf of Dacono addresses a number of objectives. Most of these objectives are common in all rate studies, but some are unique to Dacono. The objectives of this study are as follows:

- Insure rates are adequate to meet the City's anticipated O&M expenses, cost of capital improvements and financial obligations associated with NISP.
- 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

Source of Supply

Dacono currently depends on the Colorado-Big Thompson (C-BT) project for its potable water supply. 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.

C-BT water originates in the Colorado River Basin and is pumped from Lake Granby into Grand Lake. Water flows from Grand Lake through the Adam's Tunnel to one of several Front Range reservoirs including Carter Lake, which is the source of supply for the facility that treats water for use in Dacono.

Currently, Dacono's C-BT water is treated by Central Weld County Water District (CWCWD). In addition to Dacono, CWCWD treats water for La Salle, Milliken, Frederick, Kersey, Gilcrest and Firestone. Like these other entities, Dacono owns the C-BT water it uses and transfers the amount it needs each year to CWCWD per contract for treatment and delivery.

CWCWD treats Dacono's water and delivers it to seven master meters located at various points surrounding the City. CWCWD is responsible for delivering water to the City's master meters through infrastructure it owns, operates and maintains. Beyond the master meters, the City is responsible for operating and maintaining its own transmission and distribution system to deliver potable water to its customers.

The intergovernmental agreement between CWCWD and Dacono establishes CWCWD as the exclusive supplier of potable water to the City. It also limits the water supply for Dacono to sources that can be delivered to Carter Lake which currently includes C-BT and Windy Gap water and potentially NISP water in the future.

Customer Categories

For billing and accounting purposes, Dacono currently maintains the following customer categories: Residential, Commercial and City. City accounts serve parks, recreation areas and public facilities. Dacono does not currently charge itself for water supplied to properties it owns. The cost of water supplied to City-owned properties is paid from water sales to residential and commercial customers.

A breakdown of the number of customers in each category at the end of 2011 is shown in **Table 2.1**.

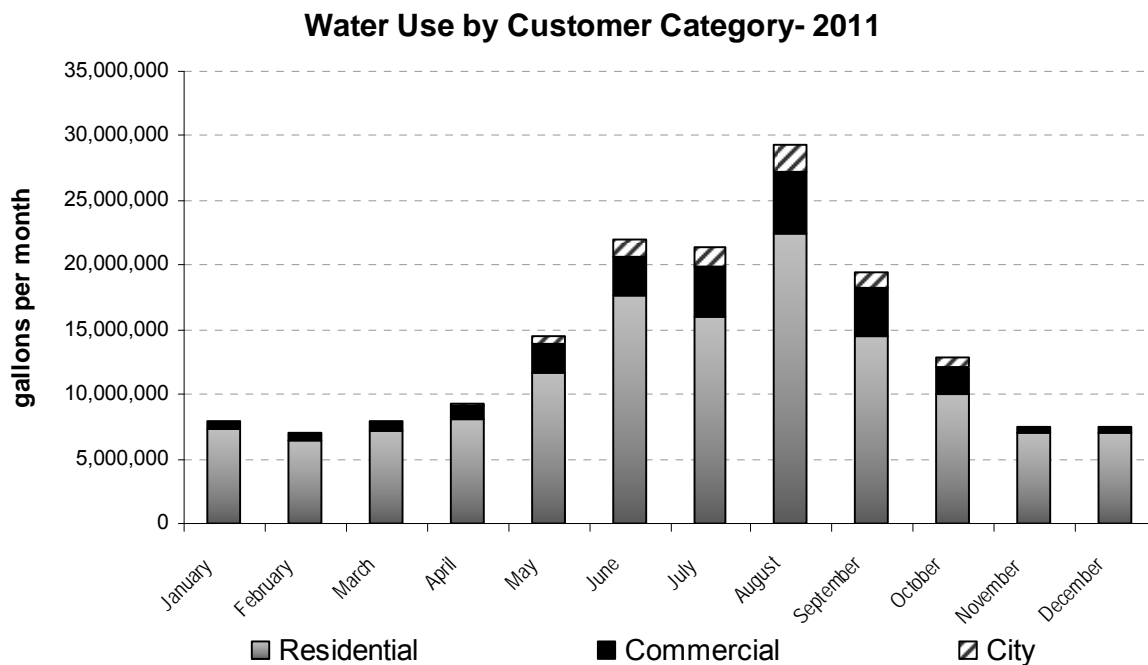
Table 2.1 - Summary of Customers by Category (December, 2011)

Customer Category	Number of Accounts
Residential	1,484
Commercial	64
City	12
Total	1,560

Water Use

Water use data for 2011 was used to estimate future water demands, calculate water rate revenue and develop water rate alternatives. Data from 2011 was compiled by City staff and proved especially useful and extremely accurate. **Figure 2.1** shows the amount of water used monthly in each customer category during 2011.

Figure 2.1 –



Data from 2011 was selected for this analysis because that year had a fairly typical pattern of summer weather. Unlike the summer of 2012, summer 2011 was not unusually hot and there were measurable rains scattered at regular intervals throughout the summer months. Temperature and rainfall during summer months has the greatest influence on Dacono's water use since most customers use City water to irrigate their lawns and landscaping. **Figure 2.1** shows that water use during summer months increases significantly.

By 2011, the City had completed a multi-year meter conversion project that replaced all water meters. The new meters are much more reliable and accurate. Year 2011 was the first full year that data from the new meters were available and is considered much more reliable than data from earlier years.

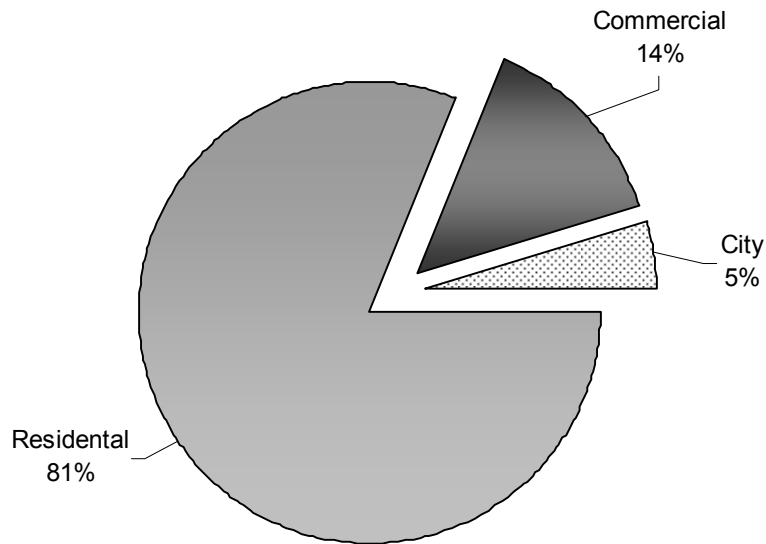
Test Year

Projected 2013 water demands were calculated by determining the average water use per account by meter size based on 2011 usage records, then multiplying by the projected number of accounts with that size meter the City is expected to serve in 2013.

The percentage of projected 2013 water use in each customer category is shown in **Figure 2.2**.

Figure 2.2 –

Projected Water Use by Customer Category- 2013



For purposes of this rate study, 2013 is known as the “test year.” Preliminary estimates of expenditures developed by staff during preparation of the 2012 Budget were used to estimate 2013 revenue requirements which are discussed in more detail in Chapter 3.

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 (2013 – 2017) was selected 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 City to begin planning for necessary rate adjustment sooner rather than later. Proactively planning for and phasing in future rate adjustments decreases the burden to existing customers that may result from significant rate increases in any one year.

Methodology

A review of the City'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 debt service obligations.

To determine the water revenue requirements over the study period, a cash flow projection was prepared in collaboration with City staff. The cash flow projection detailed current and future funding obligations. 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 beginning in 2013. Rate increases are required to fund on-going O&M costs as well as pay for the City's portion of NISP and several water line replacement projects.

Projected water sales revenue developed in the cash flow projection and percentage increases necessary to generate sufficient water sales revenue over the study period are shown in Appendix A and summarized in **Table 3.1**.

Table 3.1 - Projected Water Sales Revenue

	Estimated 2012	Projected 2013	Projected 2014	Projected 2015	Projecte d 2016	Projected 2017
Water Sales	\$687,120	\$790,188	\$831,739	\$876,542	\$924,870	\$977,019
% Increase in Water Sales	0%	15.0%	5.0%	5.0%	5.0%	5.0%

Water Revenue

The revenue requirement calculation is based on projections of water sales revenue derived through water rates paid by all customer categories. This calculation 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. Dacono levies late fees on accounts that fail to pay by the due date and charges fees to reconnect service. Revenue is also generated from a capital improvement fee that funds a portion of the City's bond payments and system improvements. Charges for hydrant water, administrative charges and rental income from a cellular service provider are included as "Other Income." The Town also credits interest earnings on water enterprise reserves. To pay for NISP and other capital projects, a bond issue or other source of outside funding is anticipated in 2015. Projected revenues from water sales and income from all other sources over the study period are presented in **Table 3.2**.

Table 3.2 - Summary of Water Revenue

	Estimated 2012	Projected 2013	Projected 2014	Projected 2015	Projected 2016	Projected 2017
WATER SALES	\$687,120	\$790,188	\$831,739	\$876,542	\$924,870	\$977,019
SPECIAL CHARGES	\$27,600	\$28,290	\$28,997	\$29,722	\$30,465	\$31,227
CAPITAL IMPROVEMENT FEES	\$351,000	\$351,454	\$352,362	\$353,724	\$355,541	\$357,811
TAP CONNECTION FEES	\$22,000	\$44,000	\$66,000	\$88,000	\$110,000	\$132,000
MATERIALS SOLD	\$1,100	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
OTHER INCOME	\$16,000	\$16,000	\$16,000	\$16,000	\$16,000	\$16,000
INTEREST INCOME	\$1,000	\$1,000	\$1,000	\$3,296	\$37,431	\$30,574
STATE GRANTS	\$0	\$0	\$0	\$0	\$0	\$0
PROCEEDS FROM NOTES PAYABLE	\$0	\$0	\$0	\$0	\$0	\$0
PROCEEDS FROM CAPITAL LEASES	\$0	\$0	\$0	\$0	\$0	\$0
BOND ISSUE PROCEEDS	\$0	\$0	\$0	\$3,936,000	\$0	\$0
WATER LEASES	\$0	\$0	\$0	\$0	\$0	\$0
WATER SHARES SOLD	\$0	\$0	\$0	\$0	\$0	\$0
WATER SHARES DEDICATED	\$0	\$0	\$0	\$0	\$0	\$0
Total Water Fund Revenues	\$1,105,820	\$1,232,932	\$1,298,099	\$5,305,285	\$1,476,307	\$1,546,631

O&M Expenses

O&M expenditures include the cost of purchasing treated water from Central Weld County Water District plus the cost of operating and maintaining the City's storage tank, pump stations, transmission and distribution system, meters and service lines. O&M expenses also include the cost of performing water quality tests, C-BT assessments, 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.

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 2012	Projected 2013	Projected 2014	Projected 2015	Projected 2016	Projected 2017
OPERATION & MAINTENANCE						
Assessments	\$46,700	\$47,868	\$49,064	\$50,291	\$51,548	\$52,837
CWCWD Treatment (Base Charges)	\$140,945	\$141,127	\$141,309	\$141,492	\$141,675	\$141,859
CWCWD Treatment (Usage Charges)	\$57,055	\$61,823	\$66,714	\$71,732	\$76,880	\$82,160
Pumping	\$3,000	\$3,075	\$3,152	\$3,231	\$3,311	\$3,394
Treated Water Storage	\$3,000	\$3,075	\$3,152	\$3,231	\$3,311	\$3,394
Distribution	\$242,350	\$248,409	\$254,619	\$248,735	\$254,953	\$261,327
Customer Services	\$14,800	\$15,170	\$15,549	\$15,938	\$16,336	\$16,745
Administration	\$217,055	\$213,206	\$218,487	\$223,899	\$229,446	\$235,132
TOTAL O&M	\$724,905	\$733,753	\$752,046	\$758,548	\$777,462	\$796,848

Water Capital Improvements and Debt Service

Dacono has developed a comprehensive water Capital Improvement Plan (CIP) to address current and future water system capital needs. The cost of the Northern Integrated Supply Project (NISP) represents the single largest expenditure in Dacono's CIP.

The estimated costs of NISP, capital improvements and debt service associated with existing and future bond issues are shown in **Table 3.4**. The debt service expenditure of \$160,000 in 2015 is based upon the estimated annual debt service associated with a \$4,000,000 loan or bond obtained to fund the City's allotment in NISP. The projected repayment period for the loan or bond is 20 years.

Table 3.4 - Summary of the Water Capital Improvement Plan and Debt Service

	Projected 2013	Projected 2014	Projected 2015	Projected 2016	Projected 2017
WATER FUND CAPITAL					
Backhoe	\$10,310				
Badger Metering System and Meters	\$73,280	\$73,280			
Gabriel Ct. Line Replacement	\$50,000				
Glen Ayre St. Line Replacement				\$414,000	
Glen Dale Cir. Line Replacement		\$399,000			
Glen Dale Pl. Line Replacement				\$36,000	
Glen Dale St. Line Replacement			\$214,000		
Glen Heather St. Line Replacement					\$132,000
Mac Donald Ct. Line Replacement	\$149,000				
Mac Lean St. Line Replacement			\$132,000		
NISP Construction	\$25,000	\$13,000	\$234,000	\$245,000	\$2,219,000
Paint Water Tower				\$145,000	
Paving City Hall Parking Lot			\$46,660		
Potable Water Master Plan	\$34,415				
Service Truck				\$15,000	
Sundance Asphalt Patching	\$6,000				
Sundance Water Line	\$6,000				
Water Meter Maintenance		\$27,600	\$27,600	\$27,600	\$27,600
TOTAL CAPITAL	\$354,005	\$512,880	\$654,260	\$882,600	\$2,378,600
DEBT SERVICE					
Debt Service on New Issues to Fund NISP					
002-470-5805 2005B BOND			\$160,000	\$160,000	\$160,000
PRINCIPAL	\$25,000	\$25,000	\$25,000	\$30,000	\$30,000
002-470-5806 2005B BOND					
INTEREST	\$7,004	\$5,903	\$4,785	\$3,528	\$2,130
002-470-5807 2005 BOND					
PRINCIPAL	\$115,000	\$120,000	\$125,000	\$130,000	\$140,000
002-470-5808 2005 BOND					
INTEREST	\$94,889	\$89,716	\$84,235	\$78,416	\$72,120
TOTAL DEBT SERVICE	\$241,893	\$240,619	\$399,020	\$401,944	\$404,250
TOTAL	\$595,898	\$753,499	\$1,053,280	\$1,284,544	\$2,782,850

Revenue Requirements

Having determined the amount of revenue required to fund both O&M, capital improvements and debt service, 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.

Table 3.5 - Revenue Requirements

	Estimated 2012	Projected 2013	Projected 2014	Projected 2015	Projected 2016	Projected 2017
OPERATION & MAINTENANCE						
Assessments	\$46,700	\$47,868	\$49,064	\$50,291	\$51,548	\$52,837
CWCWD Treatment (Base Charges)	\$140,945	\$141,127	\$141,309	\$141,492	\$141,675	\$141,859
CWCWD Treatment (Usage Charges)	\$57,055	\$61,823	\$66,714	\$71,732	\$76,880	\$82,160
Pumping	\$3,000	\$3,075	\$3,152	\$3,231	\$3,311	\$3,394
Treated Water Storage	\$3,000	\$3,075	\$3,152	\$3,231	\$3,311	\$3,394
Distribution	\$242,350	\$248,409	\$254,619	\$248,735	\$254,953	\$261,327
Customer Services	\$14,800	\$15,170	\$15,549	\$15,938	\$16,336	\$16,745
Administration	\$217,055	\$213,206	\$218,487	\$223,899	\$229,446	\$235,132
Total O & M	\$724,905	\$733,753	\$752,046	\$758,548	\$777,462	\$796,848
NON-OPERATING EXPENSES						
Debt Service Requirements	\$406,206	\$241,893	\$240,619	\$399,020	\$401,944	\$404,250
Capital Improvements	\$88,765	\$329,005	\$499,880	\$420,260	\$637,600	\$159,600
NISP	\$25,000	\$25,000	\$13,000	\$234,000	\$245,000	\$2,219,000
CWCD Water Tap Fees	\$20,000	\$40,000	\$60,000	\$80,000	\$100,000	\$120,000
Total Non-Operating Expenses	\$539,971	\$635,898	\$813,499	\$1,133,280	\$1,384,544	\$2,902,850
Total Cash Required	\$1,264,876	\$1,369,651	\$1,565,545	\$1,891,828	\$2,162,006	\$3,699,698
ADEQUACY OF EXISTING SOURCES OF REVENUE						
Total Cash Requirement	\$1,264,876	\$1,369,651	\$1,565,545	\$1,891,828	\$2,162,006	\$3,699,698
Revenue from Water Sales, Bonds, Fees and Charges	\$1,105,820	\$1,232,932	\$1,298,099	\$5,305,285	\$1,476,307	\$1,546,631
(Shortfall) or Surplus	(\$159,056)	(\$136,719)	(\$267,447)	\$3,413,457	(\$685,699)	(\$2,153,067)

Table 3.5 shows that the water enterprise will draw upon its existing reserves over the study period. The only year during the study period that a surplus occurs is in 2015. The surplus results from an anticipated bond issue of \$4,000,000 in that year. Bond proceeds will replenish reserves and help fund the first phase of NISP.

CHAPTER 4 – COST-OF-SERVICE

The revenue requirements shown in Table 3.5 represent the total cost of providing water service to Dacono's customers during the study period. 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 consider 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.

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 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. C-BT assessments are an example of an O&M expenditure assigned totally to base costs. Assessments paid to the Northern Colorado Water Conservancy District do not vary with the rate of water use by Dacono customers.

Extra capacity costs represent those O&M and capital costs incurred to meet customer peak demands in excess of average day use. Usage charges paid to CWCWD for purchased water and O&M costs associated with the water transmission and distribution system are examples of costs that 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 administration, meter reading, 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. Those 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 (million gallons)	400,662
Peak Day (million gallons)	595,496
Peak Hour (million gallons)	893,243

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	32.72% ⁽²⁾	67.28% ⁽³⁾	
Peak Hour	44.85% ⁽⁴⁾	21.81% ⁽⁵⁾	33.33% ⁽⁶⁾

⁽¹⁾ 400,662 / 400,662

⁽²⁾ (595,496-400,662) / 595,496

⁽³⁾ 400,662 / 595,496

⁽⁴⁾ 400,662 / 893,243

⁽⁵⁾ (595,496-400,662) / 893,243

⁽⁶⁾ (893,243-595,496) / 893,243

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

Allocation of Capital Costs and Plant Investment

Capital costs include expenditures for capital improvements financed from water rates, long-term loans and other sources. Capital improvements that serve multiple functions (vehicles, equipment leases, buildings, etc.) and debt service payments are generally allocated to functional costs on the basis of net plant investment. In this rate study, net plant investment is measured by assigning annual depreciation on all fixed assets to specific cost functions, accumulating the annual depreciation for each cost function, then dividing the functional total by the total annual depreciation. Data for this calculation was obtained from the fixed asset inventory and annual depreciation schedule maintained by the City. **Table 4.2** shows the percentages developed for allocation to general plant based upon the City's data.

Table 4.2 - Percentage Allocation of General Plant Based on Depreciation of Fixed Assets

Base	Extra Capacity		Customer
	Peak Day	Peak Hour	
38.22%	46.03%	14.21%	1.55%

The various types of capital improvements planned for 2013 and revenues available to partially fund those improvements are consolidated and allocated to functional cost components in **Table 4.3**.

Table 4.3 - Allocation of Capital Improvements, Debt Service and Sources of Revenue

Classification	Total	Base Cost	Extra Capacity		Customer Costs
			Peak Day	Peak Hour	
Potable Water Master Plan	\$34,415	\$34,415			
Distribution	\$211,000	\$94,643	\$46,023	\$70,333	
Meters & Yokes	\$73,280	\$73,280			\$0
General Plant	\$10,310	\$3,940	\$4,745	\$1,465	\$160
CWCD Water Tap Fees	\$40,000	\$40,000			
NISP	\$25,000	\$25,000			
Debt Service	\$241,893	\$92,441	\$111,333	\$34,374	\$3,745
Subtotal (Capital and Debt Service)	\$635,898	\$363,720	\$162,101	\$106,172	\$3,904
Other Sources of Funds for Capital Improvements					
State/Local Grants	\$0				
Plant Investment Fees	\$44,000	\$44,000			
Capital Improvement Fees	\$351,454	\$134,311	\$161,759	\$49,943	\$5,441
Meter and Yoke	\$2,000	\$2,000			\$0
Transfer from Reserves	\$136,719	\$52,248	\$62,926	\$19,428	\$2,117
Subtotal (Revenue to Offset Capital & Debt)	\$534,173	\$232,559	\$224,685	\$69,371	\$7,558
Total Capital Costs and Debt Service Recovered from Rates	\$101,725	\$131,161	(\$62,583)	\$36,801	(\$3,653)

Allocation of O&M Expenses

O&M expense for the test year are allocated to functional cost components in the same manner as capital improvements and debt service. O&M expenses support specific, identifiable services provided by the water enterprise. Once classified by the type of service provided, O&M expenses are allocated to functional cost components as shown in **Table 4.4**.

Table 4.4 - Allocation of O&M Expenses and Non-Operating Income

Function	Total	Base Cost	Extra Capacity		Customer Costs
			Peak Day	Peak Hour	
O & M Expense					
Assessments	\$47,868	\$47,868			
CWCWD Treatment (Base Charges)	\$141,127	\$141,127			
CWCWD Treatment (Usage Charges)	\$61,823		\$61,823		
Pumping	\$3,075	\$1,379	\$671	\$1,025	
Treated Water Storage	\$3,075	\$1,006	\$2,069		
Distribution	\$248,409	\$111,423	\$54,183	\$82,803	
Customer Services	\$15,170				\$15,170
Administration	\$213,206				\$213,206
Subtotal (O&M Expenses)	\$733,753	\$302,803	\$118,746	\$83,828	\$228,376
Non-Operating Income Available to Offset O&M					
Special Charges	\$28,290	\$11,675	\$4,578	\$3,232	\$8,805
Other Income	\$16,000	\$6,603	\$2,589	\$1,828	\$4,980
Interest Income	\$1,000	\$413	\$162	\$114	\$311
Subtotal (Income Available to Offset Expenses)	\$45,290	\$18,690	\$7,329	\$5,174	\$14,096
Total O&M Costs Recovered from Rates	\$688,463	\$284,113	\$111,416	\$78,654	\$214,280
Capital Costs					
Total Capital Costs Recovered from Rates	\$101,725	\$131,161	-\$62,583	\$36,801	-\$3,653
REQUIRED REVENUE FROM WATER SALES	\$790,188	\$415,273	\$48,833	\$115,455	\$210,627

Table 4.4 shows that annual water sales for 2013 are projected to be \$790,188. This is the amount calculated in the Cash Flow Projection attached in Appendix A and is the amount that needs to be recovered through water rates paid by residential and commercial customers served by the City in 2013.

Unit Costs of Capacity

To equitably allocate costs-of-service to the two customer categories served by the City (residential and commercial), 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 4.5** shows the unit costs of service for each functional cost component.

Table 4.5 - Calculation of Unit Costs of Capacity

Cost Category	Total	Base Cost	Extra Capacity		Customer Costs	
			Peak Day	Peak Hour	\$ / yr per 5/8" meter	\$ / month per 5/8" meter
O & M Expenses	\$688,463	\$1.94	\$187.10	\$88.05	\$138.42	\$11.54
Capital	\$101,725	\$0.90	(\$105.09)	\$41.20	(\$2.36)	(\$0.20)
Totals	\$790,188	\$2.84	\$82.00	\$129.25	\$136.06	\$11.34

Customer Category Costs

The unit cost for each of the functional cost components shown in Table 4.5 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 4.6** shows the amount each customer category needs to pay toward their respective cost-of-service.

Table 4.6 - Cost-of-Service by Customer Category

Customer Class	Meter Size	Base Cost	Extra Capacity		Customer Costs	Total
			Peak Day	Peak Hour		
Residential	5/8"	\$336,594	\$36,895	\$87,230	\$200,966	\$661,685
	3/4"	\$4,782	\$930	\$2,199	\$544	\$8,455
	1 1/2"	\$6,750	\$709	\$1,676	\$408	\$9,543
Subtotals		\$348,126	\$38,534	\$91,106	\$201,919	\$679,684
Commercial	5/8"	\$11,611	\$1,723	\$4,073	\$5,443	\$22,850
	3/4"	\$10,799	\$1,876	\$4,436	\$952	\$18,064
	1"	\$19,779	\$2,793	\$6,604	\$1,361	\$30,536
	1 1/2"	\$13,954	\$2,006	\$4,742	\$544	\$21,246
	2"	\$11,005	\$1,901	\$4,494	\$408	\$17,807
Subtotals		\$67,148	\$10,299	\$24,349	\$8,708	\$110,504
Total Rate Revenue		\$415,273	\$48,833	\$115,455	\$210,627	\$790,188

Table 4.7 expands upon data shown in **Table 4.6** and incorporates monthly minimum charges assessed by Central Weld County Water District, so they are accurately reflected in customer costs. Monthly minimum charges levied by Central Weld County Water District vary by meter size. Annual revenue anticipated in 2013 from monthly minimum charges paid by all customers and amounts charged to customers for water usage are also shown in **Table 4.7**.

Table 4.7 – Average Annual Cost-of-Service per Account and Total Annual Costs for Customer Categories

		Average Annual Charges per Account					Total Annual Charges per Customer Class		
Number and Type of Accounts	Meter Size	Average Annual Charge per Account	Monthly Minimum Charges			Average Annual Charge for Water Use	Annual Charges for Monthly Minimum per Customer Category	Annual Charges for Water Use per Customer Category	Total Annual Charges per Customer Category
			CWCWD ⁽¹⁾ Minimum Charge per Year	Annual Customer Costs	Total Annual Monthly Minimum Charges				
Residential									
1,477	5/8"	\$453	\$79	\$136	\$215	\$238	\$317,945	\$351,532	\$669,477
4	3/4"	\$1,974	\$182	\$204	\$386	\$1,587	\$1,545	\$6,349	\$7,894
3	1 1/2"	\$3,003	\$978	\$680	\$1,658	\$1,345	\$4,974	\$4,036	\$9,010
Commercial									
1,484							\$324,464	\$361,917	\$686,382
40	5/8"	\$543	\$79	\$136	\$215	\$328	\$8,611	\$13,106	\$21,717
7	3/4"	\$2,413	\$182	\$204	\$386	\$2,027	\$2,704	\$14,189	\$16,893
10	1"	\$2,867	\$420	\$340	\$760	\$2,106	\$7,602	\$21,065	\$28,666
4	1 1/2"	\$4,978	\$978	\$680	\$1,658	\$3,320	\$6,632	\$13,280	\$19,912
3	2"	\$5,539	\$1,652	\$1,089	\$2,741	\$2,799	\$8,222	\$8,396	\$16,618
64							\$33,770	\$70,036	\$103,806
Total									
1,548									Total \$790,188

⁽¹⁾ The contract between the City and Central Weld County Water District requires payment of a monthly minimum charger per account regardless of water use.

CHAPTER 5 – RATE DESIGN

Table 5.1 compares the cost-of-service calculated in this analysis for all customer categories in 2013 to water sales revenue projected in 2012 with current rates. That comparison indicates the City's current rates slightly overcharge commercial customers based upon their water use characteristics. To insure that commercial customers do not subsidize residential customers, the rate adjustments for 2013 are projected at 15.4% for residential customers and 12.6% for commercial customers.

The overall increase in water sales revenue for 2013 is 15.0%. This is the percentage increase developed from the Cash Flow Projection included in **Appendix A** and utilized throughout this analysis.

Table 5.1 – Projected Revenue from Customer Categories

Customer Categories	2013 Projected Cost-of- Service Revenue	2012 Projected Revenue with Current Rates	% Increase Required for Cost-of-Service
Residential	\$686,382	\$594,888	15.4%
Commercial	\$103,806	\$92,233	12.6%
Total	\$790,188	\$687,121	15.0%

Water rate alternatives developed in this rate study for residential and commercial customers are based on the need to recover the amount of revenue shown in **Table 5.1** in 2013.

Considerations in Water 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, debt service obligations and all capital costs including NISP.
- Revenue requirements derived from water rates must be equitably allocated to residential and commercial customer categories commensurate with 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 City's existing rate structure consists of: (1) a monthly minimum charge entitling each customer to use a certain amount of water each month before incurring additional charges, and (2) a consumption charge levied on each 1,000 gallons of water used over the minimum quantity provided under the monthly minimum. The City currently has a tiered water rate structure for all customers. Tiered rates increase the consumption charge incrementally depending on the amount of water used.

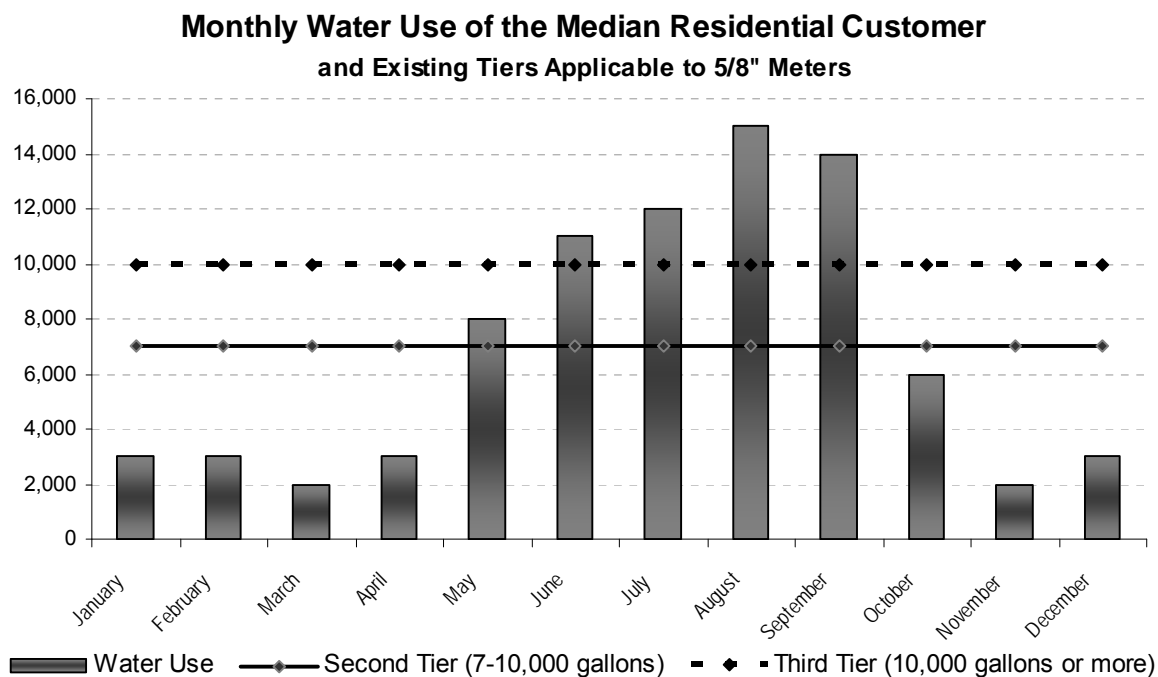
The existing residential and commercial water rate for customers with 5/8" meters has three rate tiers: (1) 0 to 7,000 gallons, (2) 7,001 to 10,000 gallons, and (3) 10,001 or more. The residential water rate currently allows customers to use up to 7,000 gallons with payment of a \$28.00 minimum monthly charge. The City's existing water rates are summarized in **Table 5.2**.

Table 5.2 - City of Dacono Water Rates (Ordinance No. 653 Effective April 1, 2005)

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/ thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter	0	7,000	\$28.00		300,000
	7,001	10,000		\$1.50	
	10,001	or more		\$2.00	
3/4" meter	0	17,500	\$61.00		750,000
	17,501	25,000		\$1.50	
	25,001	or more		\$2.00	
1" meter	0	40,000	\$134.00		1,500,000
	40,001	55,000		\$1.50	
	55,001	or more		\$2.00	
1.5" meter (commercial)	0	73,500	\$265.00		3,250,000
	73,501	100,000		\$1.50	
	100,001	or more		\$2.00	
1.5" meter (residential)	0	73,500	\$182.50		3,250,000
	73,501	100,000		\$1.50	
	100,001	or more		\$2.00	
2" meter	0	140,000	\$502.00		6,000,000
	140,001	200,000		\$1.50	
	200,001	or more		\$2.00	
3" meter	0	280,000	\$1,001.00		12,000,000
	280,001	360,000		\$1.50	
	360,001	or more		\$2.00	

The City's current rates provide a significant amount of water to both residential and commercial customers with payment of the monthly minimum charge. Residential customers are permitted to use up to 7,000 gallons per month before the second tier usage charge is assessed. The monthly water use of the typical residential customer exceeds 7,000 gallons only during the irrigation season. Figure 5.1 shows the monthly water use of the median residential customer and thresholds for rate tiers that currently apply to residential customers. With the City's current rate water rates, a typical residential customer has no incentive to use less than 7,000 gallons per month for seven months of the year (October through April).

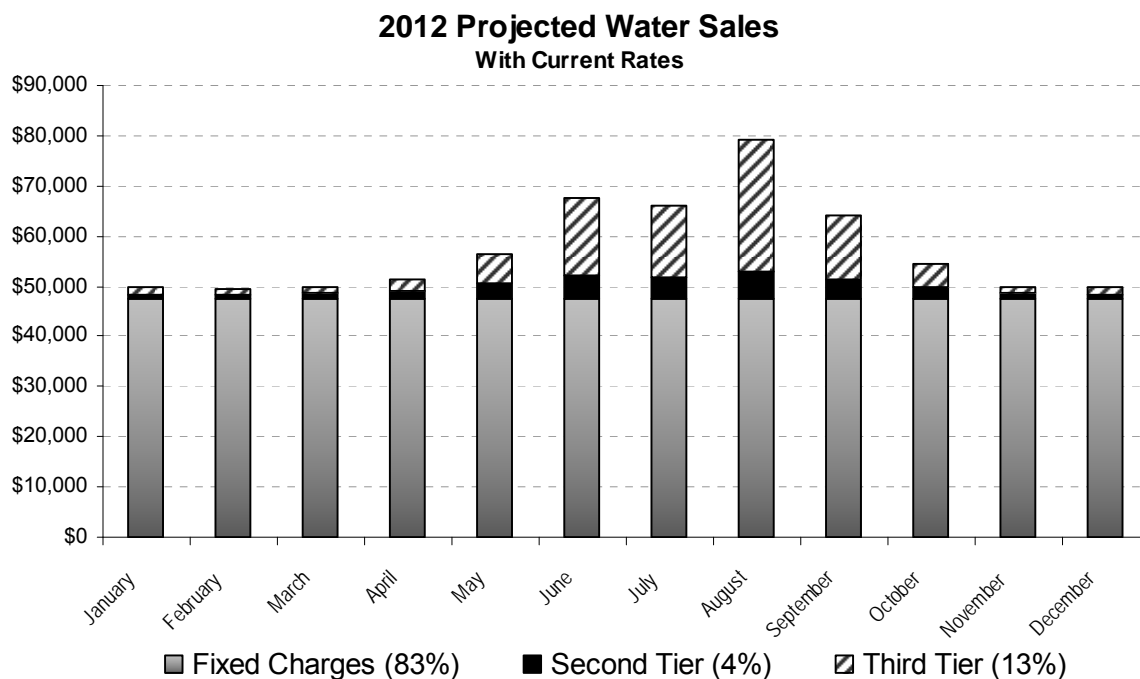
Figure 5.1 -



Minimum monthly charges currently assessed by the City are higher than amounts calculated in the cost-of-service analysis. Currently, residential customers pay a minimum charge of \$28.00 per month (\$336 per year). The minimum charge determined in the cost-of-service analysis is \$17.92 per month (\$215 per year). With the monthly minimums at current amounts and 7,000 gallons provided with the monthly minimum, there is little residential customers can do to lower their water bill. A relatively small percentage of a typical residential customer's annual water use is subject to usage charges under the City's current rate structure.

With higher monthly minimums, a greater percentage of total revenue is fixed and the percentage of revenue recovered through usage charges is lower. **Figure 5.2** shows the amount and percentage of monthly revenue currently derived from monthly minimums and the amount of revenue collected through usage charges in the second and third water rate tiers. It shows that 83% of the City's annual water revenue is currently derived from monthly minimum charges and only 17% from usage charges

Figure 5.2 -



Alternatives presented later in this chapter introduce water rates that reduce or eliminate the provision of water with payment of the monthly minimum and freeze or lower the amount of monthly minimum charges. Reducing both the quantity of water provided with payment of the monthly minimum charge and the amount of the monthly minimum charge will decrease the percentage of annual revenue that is fixed. Any reduction in fixed charges increases the amount generated through user charges.

Water rates with lower minimum charges are more conservation oriented. Such rates provide customers additional incentive to reduce water use. Reducing minimum charges results in more revenue being derived from usage charges, which can introduce additional variability in annual revenues. A particularly wet summer can reduce lawn watering and the amount of revenue generated from usage charges. Water rates that balance the need for revenue stability with incentives for conservation best serve the water provider and its customers.

Proposed Cost-of-Service Rate Alternatives

The cost-of-service analysis prepared for this report indicates water rates for residential customers need to increase by 15.4%. Water rates for commercial customers need to increase by 12.6%. Rate alternatives proposed in this report are based on the need to increase rates by those percentages, which insure that commercial customers are not subsidizing residential customers.

Four rate alternatives are presented for consideration. Each alternative generates revenue in 2013 approximately equal to amounts shown in Table 5.1 from the City's two customer categories: \$686,382 from residential customers and \$103,806 from commercial customers.

Rate Alternative #1

Alternative #1 simply applies the percentage increases developed in the cost-of-service analysis for each customer category to all current monthly minimums and usage charges. The quantity of water provided with the monthly minimum is maintained at current amounts. Some rounding of monthly minimums and usage charges occurs to ease administration and customer understanding.

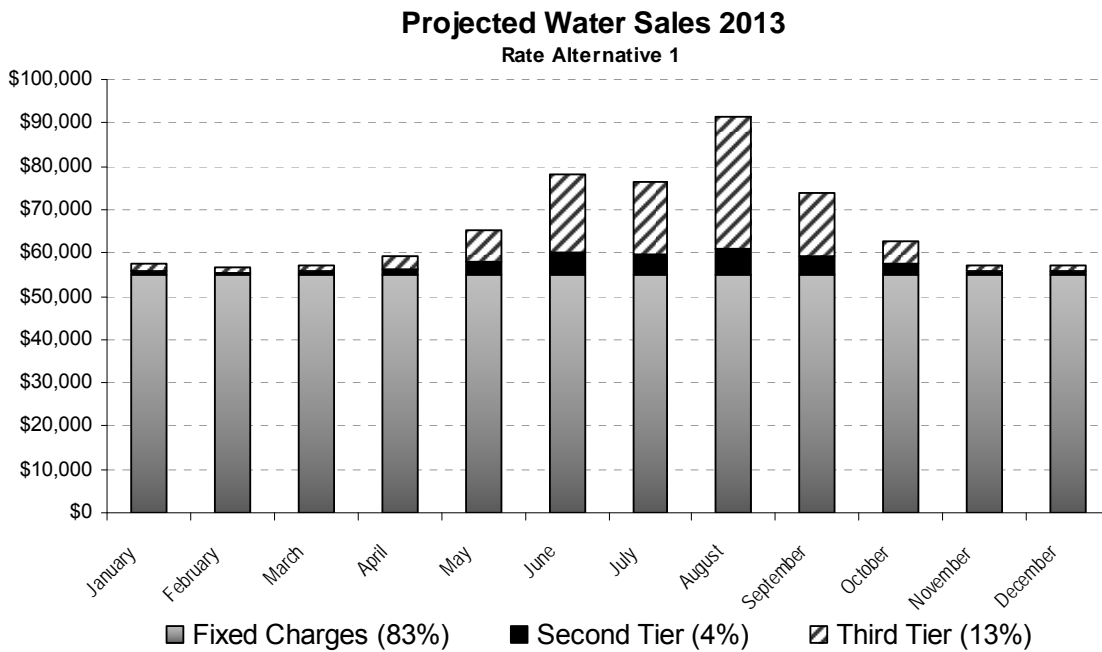
Alternative #1 maintains the status quo. It provides no incentive for residential customers to use less than 7,000 gallons per month outside of the irrigation season. The amount of annual revenue derived from monthly minimums remains at 83%. Table 5.3 shows rates and charges developed for **Alternative #1**.

Table 5.3 - Proposed Water Rates with Rate Alternative #1

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/ thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter (residential)	0	7,000	\$32.30	\$0.00	300,000
	7,001	10,000		\$1.75	
	10,001	or more		\$2.30	
5/8" meter (commercial)	0	7,000	\$32.30	\$0.00	300,000
	7,001	10,000		\$1.70	
	10,001	or more		\$2.25	
3/4" meter	0	17,500	\$69.00	\$0.00	750,000
	17,501	25,000		\$1.70	
	25,001	or more		\$2.25	
1" meter	0	40,000	\$151.00	\$0.00	1,500,000
	40,001	55,000		\$1.70	
	55,001	or more		\$2.25	
1.5" meter (commercial)	0	73,500	\$298.00	\$0.00	3,250,000
	73,501	100,000		\$1.70	
	100,001	or more		\$2.25	
1.5" meter (residential)	0	73,500	\$211.00	\$0.00	3,250,000
	73,501	100,000		\$1.75	
	100,001	or more		\$2.30	
2" meter	0	140,000	\$565.00	\$0.00	6,000,000
	140,001	200,000		\$1.70	
	200,001	or more		\$2.25	
3" meter	0	280,000	\$1,060.00	\$0.00	12,000,000
	280,001	360,000		\$1.70	
	360,001	or more		\$2.25	
	→ Fees, charges and thresholds that are changed from the City's current water rate structure				

Figure 5.3 shows the amount and percentage of monthly revenue derived from monthly minimums and the amount of revenue collected through usage charges in the second and third water rate tiers with Alternative #1. It shows the City's annual water revenue derived from monthly minimum charges remains at 83% as is the case with the current water rate structure.

Figure 5.3 –



Rate Alternative #2

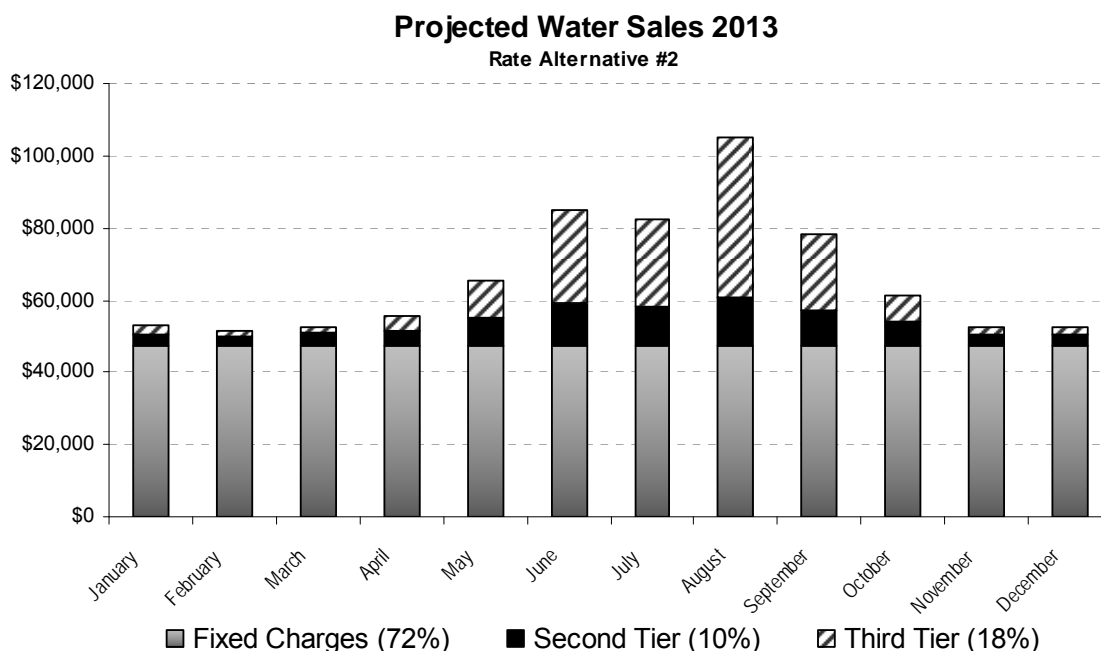
Alternative #2 reduces the amount of water provided with the monthly minimum to 5,000 gallons for residential and commercial customers with 5/8" meters. The dollar amount of the monthly minimum charge remains at current levels for all customers. Usage charges are increased to generate the required amount of revenue from the respective customer categories.

Table 5.4 shows rates and charges developed for Alternative #2. **Figure 5.4** shows that the City's annual water revenue derived from monthly minimum charges decreases to 72% with Alternative #2.

Table 5.4 - Proposed Water Rates with Rate Alternative #2

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/additional thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter (residential)	0	5,000	\$28.00	\$0.00	300,000
	5,001	10,000		\$2.25	
	10,001	or more		\$3.50	
5/8" meter (commercial)	0	5,000	\$28.00	\$0.00	300,000
	5,001	10,000		\$2.00	
	10,001	or more		\$3.00	
3/4" meter	0	17,500	\$61.00	\$0.00	750,000
	17,501	25,000		\$2.00	
	25,001	or more		\$3.00	
1" meter	0	40,000	\$134.00	\$0.00	1,500,000
	40,001	55,000		\$2.00	
	55,001	or more		\$3.00	
1.5" meter (commercial)	0	73,500	\$265.00	\$0.00	3,250,000
	73,501	100,000		\$2.00	
	100,001	or more		\$3.00	
1.5" meter (residential)	0	73,500	\$182.50	\$0.00	3,250,000
	73,501	100,000		\$2.25	
	100,001	or more		\$3.50	
2" meter	0	140,000	\$502.00	\$0.00	6,000,000
	140,001	200,000		\$2.00	
	200,000	or more		\$3.00	
3" meter	0	280,000	\$1,001.00	\$0.00	12,000,000
	280,001	360,000		\$2.00	
	360,001	or more		\$3.00	
	→ Fees, charges and thresholds that are changed from the City's current water rate structure				

Figure 5.4 –



Rate Alternative #3

Alternative #3 reduces the amount of water provided with the monthly minimum to 2,000 gallons for residential customers with 5/8" meters. All water use over 2,000 gallons is billed. A fourth tier for residential customers with a 5/8" meter is added for water usage that exceeds 17,000 gallons.

Alternative #3 reduces the threshold of the first tier for commercial customers with 5/8" meters to 5,000 gallons. Water use by commercial customers in the first tier is billed at \$1.00 per thousand gallons. The threshold for the second tier for both commercial and residential 5/8" customers is 10,000 gallons.

The dollar amount of the monthly minimum charge remains at current levels for all customers. Usage charges are increased to generate the required amount of revenue from the respective customer categories.

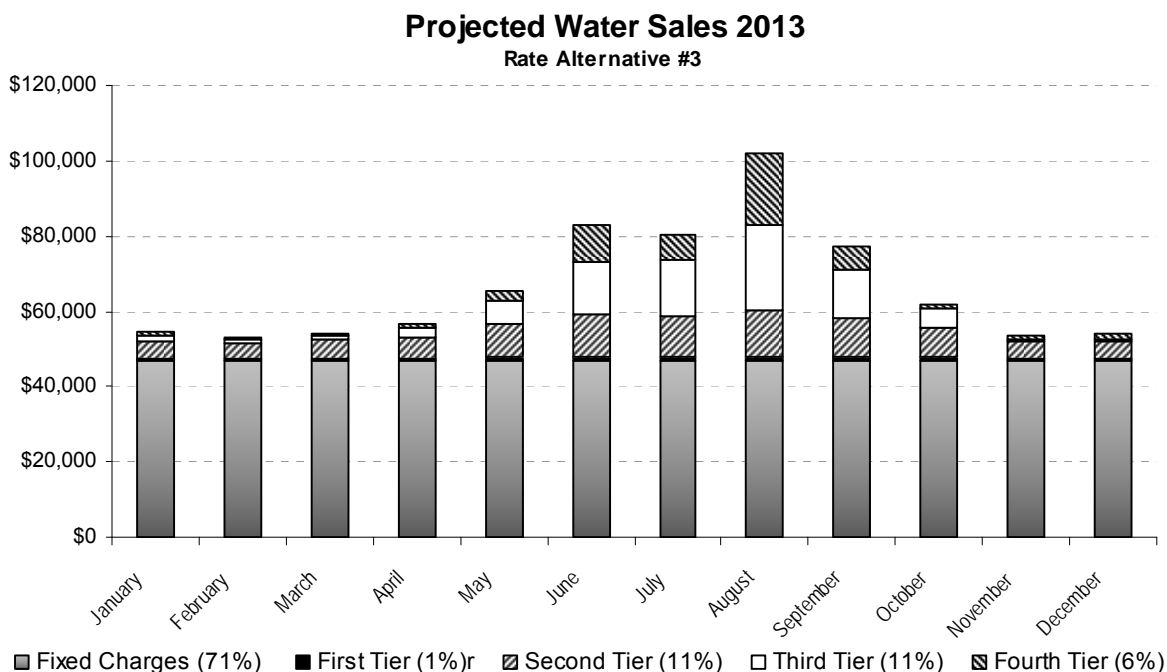
Alternative #3 provides a minimal amount of water to residential customers with payment of the monthly minimum. Providing only 2,000 gallons with the monthly minimum will create an incentive for residential customers to conserve water once they exceed their 2,000 gallons monthly allowance.

Table 5.5 shows rates and charges developed for Alternative #3. **Figure 5.5** shows that the City's annual water revenue derived from monthly minimum charges decreases to 71% with Alternative #3.

Table 5.5 - Proposed Water Rates with Rate Alternative #3

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/ thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter (residential)	0	2,000	\$28.00	\$0	300,000
	2,001	10,000		\$1.25	
	10,001	17,000		\$2.50	
	17,001	or more		\$4.00	
5/8" meter (commercial)	0	5,000	\$28.00	\$1.00	300,000
	5,001	10,000		\$1.65	
	10,001	or more		\$3.00	
3/4" meter	0	17,500	\$61.00	\$1.00	750,000
	17,501	25,000		\$1.65	
	25,001	or more		\$3.00	
1" meter	0	40,000	\$134.00	\$1.00	1,500,000
	40,001	55,000		\$1.65	
	55,001	or more		\$3.00	
1.5" meter (commercial)	0	73,500	\$265.00	\$1.00	3,250,000
	73,501	100,000		\$1.65	
	100,001	or more		\$3.00	
1.5" meter (residential)	0	15,000	\$182.50	\$0	3,250,000
	15,001	73,500		\$1.25	
	73,501	100,000		\$2.50	
	100,001	or more		\$4.00	
2" meter	0	140,000	\$502.00	\$1.00	6,000,000
	140,001	200,000		\$1.65	
	200,001	or more		\$3.00	
3" meter	0	280,000	\$1,001.00	\$1.00	12,000,000
	280,001	360,000		\$1.65	
	360,001	or more		\$3.00	
	→ Fees, charges and thresholds that are changed from the City's current water rate structure				

Figure 5.5 –



Rate Alternative #4

Alternative #4 reduces the amount of water provided in the first tier to 5,000 gallons for residential 5/8" customers and levies a usage charge on all water in the first tier. All water use by all customers is subject to a usage charge in Alternative #4. A fourth tier for residential customers with a 5/8" meter is added for water usage that exceeds 17,000 gallons.

The majority of residential customers do not use more than 17,000 gallons in one month. Those that do would be subject to a usage charge of \$4.25 per 1,000 gallons. This rate is high enough to encourage customers to be especially careful with the amount of irrigation water they use in summer months. This alternative is designed to aggressively encourage conservation by customers with higher than average water use. Alternative #4 allows residential customers to reduce their water bills in proportion to reductions in their water use.

Monthly minimum charges are lowered in Alternative #4 to more closely match actual customer costs calculated in the cost-of-service analysis. This is the only alternative that utilizes monthly minimum charges calculated in the cost-of-service analysis. Usage charges are increased to generate the required amount of revenue from respective customer categories.

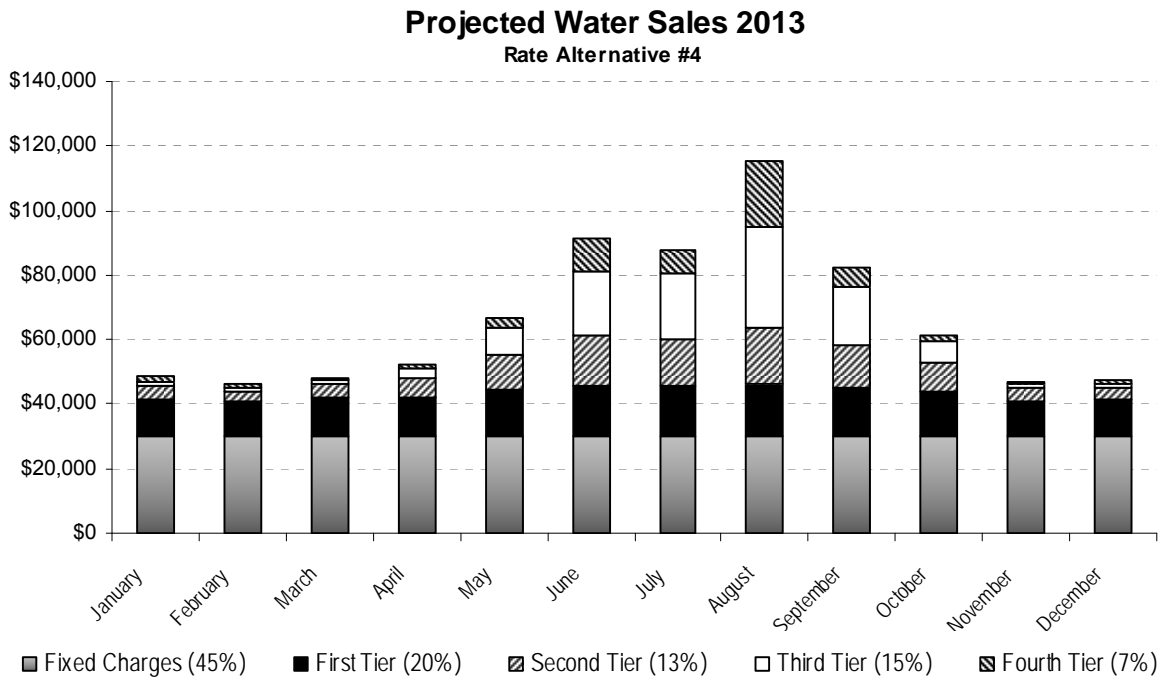
With Alternative #4, a residential customer that uses 5,000 gallons, the threshold for the first tier, would pay \$28.00 (\$18.00 + (5 x \$2.00) = \$28.00). That is equal to the current monthly minimum charge for a residential customer with a 5/8" meter.

Table 5.6 shows rates and charges developed for Alternative #4. Figure 5.6 indicates the City's annual water revenue derived from monthly minimum charges decreases to 45% with Alternative #4.

Table 5.6 - Proposed Water Rates with Rate Alternative #4

Metered Customers	Tiered Gallon Usage		Minimum Monthly Charge	\$/ thousand gallons	Maximum Annual Consumption (metered gallons)
5/8" meter (residential)	0	5,000	\$18.00	\$2.00	300,000
	5,001	10,000		\$3.00	
	10,001	17,000		\$3.75	
	17,001	or more		\$4.25	
5/8" meter (commercial)	0	5,000	\$18.00	\$2.00	300,000
	5,001	10,000		\$3.00	
	10,001	or more		\$3.75	
3/4" meter	0	17,500	\$32.00	\$2.00	750,000
	17,501	25,000		\$3.00	
	25,001	or more		\$3.75	
1" meter	0	40,000	\$63.00	\$2.00	1,500,000
	40,001	55,000		\$3.00	
	55,001	or more		\$3.75	
1.5" meter (commercial)	0	73,500	\$138.00	\$2.00	3,250,000
	73,501	100,000		\$3.00	
	100,001	or more		\$3.75	
1.5" meter (residential)	0	73,500	\$138.00	\$2.00	3,250,000
	73,501	100,000		\$3.00	
	100,001	or more		\$3.75	
2" meter	0	140,000	\$328.00	\$2.00	6,000,000
	140,001	200,000		\$3.00	
	200,000	or more		\$3.75	
3" meter	0	280,000	\$525.00	\$2.00	12,000,000
	280,001	360,000		\$3.00	
	360,001	or more		\$3.75	
	→ Fees, charges and thresholds that are changed from the City's current water rate structure				

Figure 5.6 –



CHAPTER 6 – COMPARISON AND IMPACT ANALYSIS

Impact of Proposed Residential Rate Alternatives

Residential customers represent 95% of all accounts in Dacono and use approximately 81% 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 alternatives adjustments on individual residential customers warrants additional examination.

To measure the effect of the four proposed rate alternatives on residential customers, the water use of customers at the 10th percentile, median and 90th percentile of annual use were analyzed. **Figure 6.1** shows the relative amount of annual charges paid by those representative customers with each alternative. **Table 6.1** compares current annual charges with amounts paid per year by representative residential customers.

Figure 6.1 –

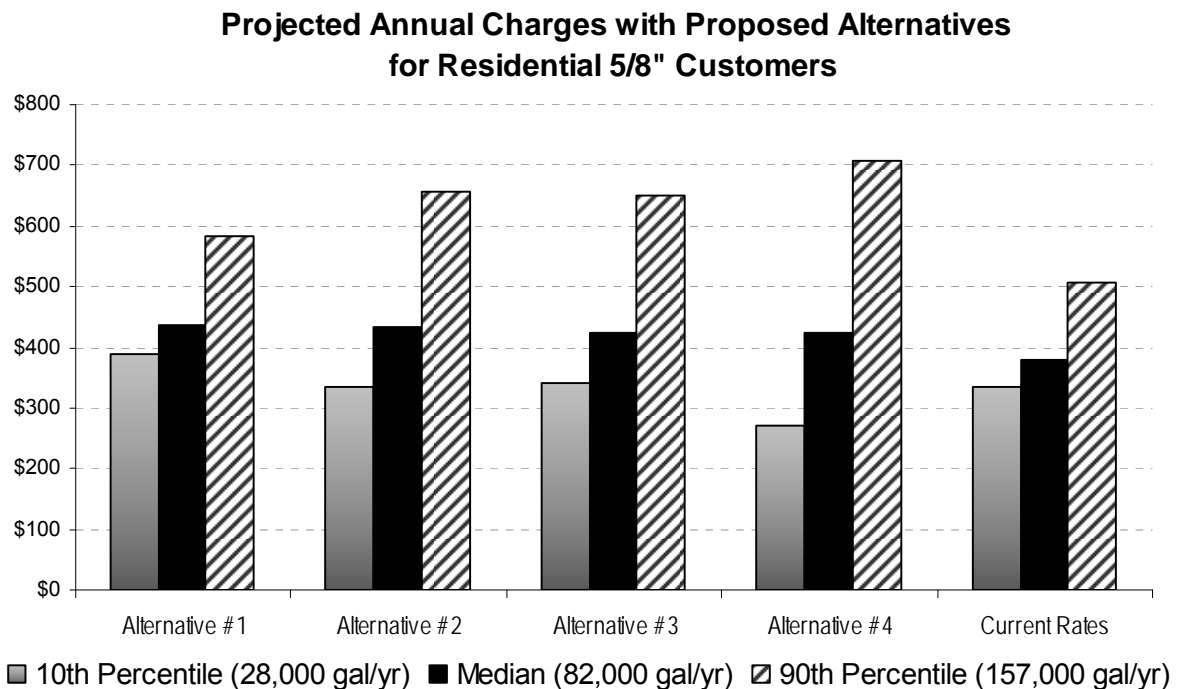


Table 6.1 - Annual Charges and % Change from Current Rates for Representative Customers

Representative Residential Customers	Current Rates	Alternative #1		Alternative #2		Alternative #3		Alternative #4	
	\$/Year	\$/Year	% Change	\$/Year	% Change	\$/Year	% Change	\$/Year	% Change
10 th Percentile	\$336.00	\$387.60	15%	\$336.00	0%	\$342.25	2%	\$272.00	-19%
Median	\$379.50	\$437.95	15%	\$432.00	14%	\$423.50	12%	\$425.00	12%
90 th Percentile	\$507.00	\$584.70	15%	\$657.75	30%	\$650.75	28%	\$706.50	39%

The four proposed water rate alternatives developed in this study all generate the amount of revenue required by the City in 2013 and equitably distribute costs between residential and commercial customers. Some alternatives generate a higher percentage of revenue from monthly minimum charges. Those alternatives would generate a predictable amount of revenue, but they might not be especially equitable. Some alternatives will encourage conservation, but introduce a degree of variability in annual revenue.

Table 6.2 presents a comparison of the four rate alternatives relative to how they rate on several important considerations in rate design. This comparison is subjective and not particularly scientific, but it does provide the City with an estimate of the effect of the four alternatives on its customers and revenue.

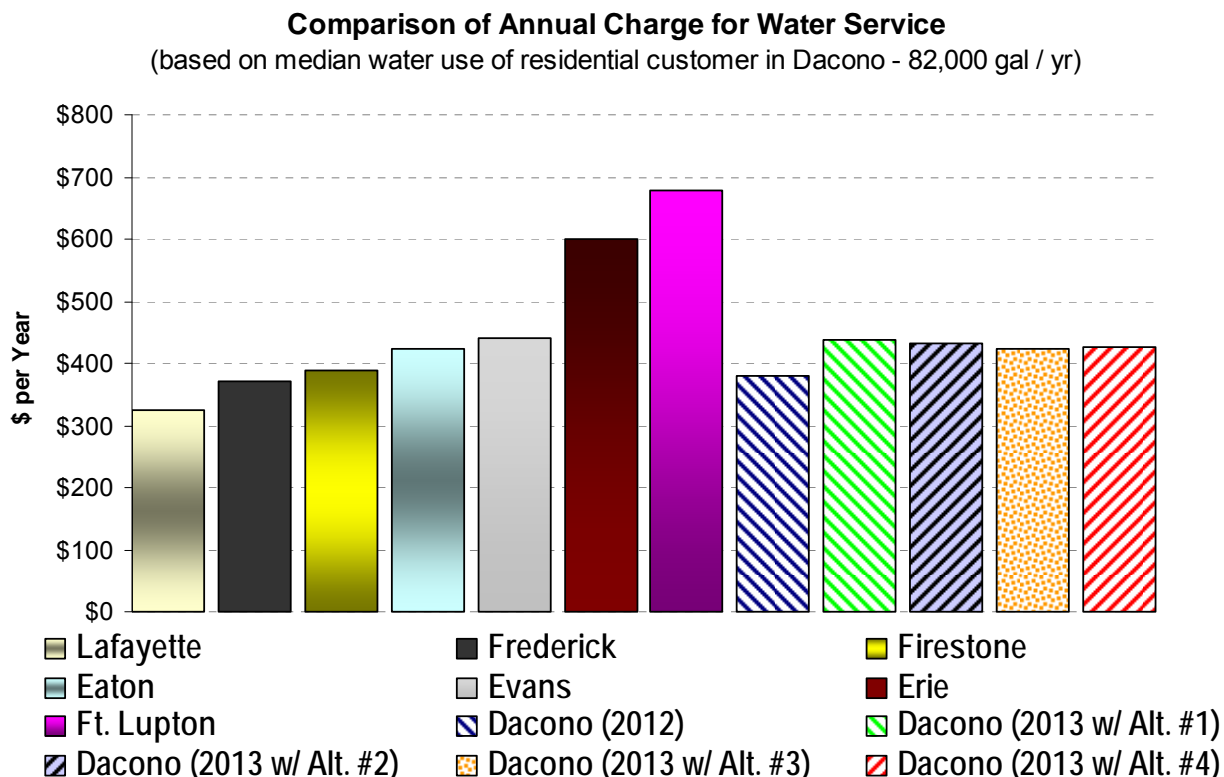
Table 6.2 – Comparison of Rate Alternatives

	Conservation Incentive	Equity	Revenue Stability	Ease of Administration	Customer Understanding
Current Rates	Poor	Poor	Good	Good	Good
Alternative #1	Poor	Poor	Good	Good	Good
Alternative #2	Fair	Fair	Good	Good	Good
Alternative #3	Fair	Fair	Good	Fair	Fair
Alternative #4	Good	Good	Fair	Fair	Fair

Comparison of Residential Water Bills

Figure 6.2 compares the annual cost of water for the median Dacono residential customer using 82,000 gallons per year with the amount that customer would pay for the same amount of water in nearby communities based on rates currently charged in those communities. The annual amount paid by the median Dacono single family customer with existing (2012) and proposed (2013) residential water rates is shown.

Figure 6.2 –



Each water provider has unique challenges and costs that determine their water rates. Revenue requirements are affected by the availability of water, age of system, rate of growth, financial policies, contractual obligations, capital needs, pumping requirements, source water quality, and a number of other variables. These variables make it difficult to fully understand differences in the cost of water from one community to another.

Comparing the cost of water in different communities is of interest, but should not drive decisions on water rates. Water rates in any community are ultimately determined by the budgets and policies adopted by their governing boards.

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 recently prepared for Dacono. 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 overall water use by 10% over a ten-year planning period (2012-2021).

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

- Leaving monthly minimum charges at current amounts increases the portion of bills attributable to usage charges. When customers pay more for the water they use, they tend to monitor their water use more carefully and make modifications when possible. Fixed charges currently comprise 83% of water sales revenue. With proposed Alternative #2, fixed charges are projected to be 72% of water sales in 2013.
- Future rate increases are recommended to consist of slight increases in monthly minimum charges and higher increases in usage charges. Reducing the amount of customers' water bills that result from fixed monthly charges will reward customers that conserve water during irrigation season.
- Tiered rates proposed in Alternative #2 have a larger dollar amount between tiers than the existing rates. With the proposed rate tiers, customers will have a better understanding of the consequence of higher water use and a greater incentive to conserve water.

The current residential usage charge in Tier 3 is \$2.00 per thousand gallons. The charge for residential water usage in Tier 3 with Alternative #2 is \$3.50 per thousand gallons, an increase of 75% from the existing usage charge. The current commercial usage charge in Tier 3 is \$2.00 per thousand gallons. The charge for commercial water usage in Tier 3 with Alternative #2 is \$3.00 per thousand gallons, an increase of 50% from the existing usage charge.

- Rates proposed in Alternative #2 will have little impact on residential customers with low water use. They receive a financial reward for maintaining lower than average water use.

Residential customers at the ninetieth percentile of water use will experience a 30% increase in the amount they pay for water. Such a significant increase in charges for customers with higher water use provide the kind of price signal necessary to motivate those customers to lower their water use.

CHAPTER 8 – CONCLUSIONS AND RECOMMENDATIONS

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

Recommendations

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

- In anticipation of funding NISP and other capital projects, the City's water rate revenue needs to increase by 15% in 2013, and 5% each year from 2014 through 2018.
- The 15% overall increase in water sales revenue required in 2013 needs to be generated by increasing residential water rates by 15.4% and commercial water rates by 12.6%.
- Alternative #2 is recommended to replace the existing water rate structure. Alternative #2 reduces the amount of water provided to 5/8" customers with the monthly minimum from 7,000 gallons to 5,000 gallons. The monthly minimum charge for all customers remains at current amounts and no new tiers are introduced.
- Implementation of 5% rate increases in future years should be achieved by slight increases in monthly minimum charge and higher increases in usage charges. Reducing the amount of customers' water bills that result from fixed monthly charges will require higher usage charges. Higher usage charges in Tiers 2 and 3 will reward customers that reduce their water use within those tiers.
- Independently audit bills after implementation of rate changes to insure the utility billing system generates the correct charges for all customers.
- Update the cost-of-service analysis every three to five years or whenever significant changes to the water enterprise 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 City's cost-of-service.

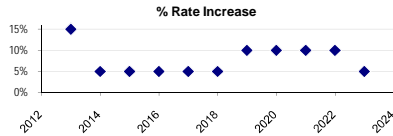
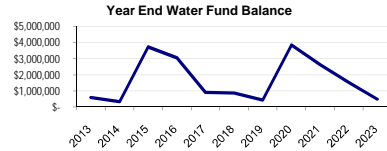


APPENDIX A

10-YR Cash Flow Projection Water Fund

APPENDIX 'A'

City of Dacono - 10 Year Cash Flow Projection - Water Fund



Assumptions for Cash Flow Projection	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of Customers	1,546	1,548	1,552	1,558	1,566	1,576	1,588	1,600	1,612	1,624	1,636	1,648
Number of Equivalent Meters	1,647	1,649	1,653	1,659	1,667	1,677	1,689	1,701	1,713	1,725	1,737	1,749
Number of New Residential Customers	2	4	6	8	10	12	12	12	12	12	12	12
Growth - Number of Customers		0.1%	0.3%	0.4%	0.5%	0.6%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%
Tap Fee	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000	\$11,000
Tap Fee Retained by Dacono	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Growth - O&M and Administration, Assessments		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Growth - Treated Water Purchase CWCWD		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Investment Income - Interest Rate		1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Financing												
20 Year Revenue Bonds @	4.00%			\$ 4,000,000				\$ 4,000,000				
Issuance Cost (% of Principal) @	1.60%			\$ 64,000				\$ 64,000				

	2011 Amended	2011 Actual	2012 Projected	Projected	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Starting Balance	\$ 1,045,040	\$ 1,045,040	\$ 893,038	\$ 733,802	\$ 597,083	\$ 329,637	\$ 3,743,093	\$ 3,057,394	\$ 904,327	\$ 868,441	\$ 427,405	\$ 3,860,213	\$ 2,638,789	\$ 1,536,290
REVENUES														
Increase in Water Sales from Growth					\$ 2,042	\$ 3,215	\$ 4,501	\$ 5,906	\$ 7,439	\$ 7,808	\$ 8,583	\$ 9,435	\$ 10,372	\$ 11,401
% Rate Adjustment				15.00%	5.00%	5.00%	5.00%	5.00%	5.00%	10.00%	10.00%	10.00%	10.00%	5.00%
Increase in Water Sales from Rate Adjustment				\$ 103,068	\$ 39,509	\$ 41,587	\$ 43,827	\$ 46,243	\$ 48,851	\$ 103,331	\$ 114,445	\$ 126,748	\$ 140,366	\$ 77,720
002-340-4480 WATER SALES	\$ 650,000	\$ 686,855	\$ 687,120	\$ 790,188	\$ 831,739	\$ 876,542	\$ 924,870	\$ 977,019	\$ 1,033,309	\$ 1,144,449	\$ 1,267,477	\$ 1,403,660	\$ 1,554,398	\$ 1,643,519
002-340-4483 SPECIAL CHARGES	\$ 26,000	\$ 28,285	\$ 27,600	\$ 28,290	\$ 28,997	\$ 29,722	\$ 30,465	\$ 31,227	\$ 32,008	\$ 32,808	\$ 33,628	\$ 34,469	\$ 35,330	\$ 36,214
002-340-4485 CAPITAL IMPROVEMENT FEES	\$ 350,000	\$ 354,247	\$ 351,000	\$ 351,454	\$ 352,362	\$ 353,724	\$ 355,541	\$ 357,811	\$ 360,536	\$ 363,260	\$ 365,984	\$ 368,709	\$ 371,433	\$ 374,158
002-340-4486 TAP CONNECTION FEES	\$ 220,000	\$ 27,000	\$ 22,000	\$ 44,000	\$ 66,000	\$ 88,000	\$ 110,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000
002-340-4487 MATERIALS SOLD	\$ 3,000	\$ 2,846	\$ 1,100	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
002-340-4488 TRASH COLLECTION CHARGES	\$ 145,305	\$ 146,139	\$ 157,320	\$ 161,462	\$ 165,926	\$ 170,731	\$ 175,898	\$ 181,447	\$ 187,399	\$ 193,536	\$ 199,862	\$ 206,384	\$ 213,106	\$ 220,036
002-360-4400 OTHER INCOME	\$ 25,000	\$ 23,551	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000	\$ 16,000
002-360-4401 INTEREST INCOME	\$ 1,200	\$ 886	\$ 1,000	\$ 1,000	\$ 1,000	\$ 3,296	\$ 37,431	\$ 30,574	\$ 9,043	\$ 8,684	\$ 4,274	\$ 38,602	\$ 26,388	\$ 15,363
002-360-4405 STATE GRANTS	\$ 35,300	\$ 35,105	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
002-360-4409 PROCEEDS FROM NOTES PAYABLE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
002-360-4410 PROCEEDS FROM CAPITAL LEASES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
002-360-4411 BOND ISSUE PROCEEDS	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,936,000	\$ -	\$ -	\$ -	\$ 3,936,000	\$ -	\$ -	\$ -	\$ -
002-360-4515 WATER LEASES	\$ -	\$ 400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
002-360-4516 WATER SHARES SOLD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
002-360-4517 WATER SHARES DEDICATED	\$ 52,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Water Fund Revenues	\$ 1,508,305	\$ 1,305,314	\$ 1,263,140	\$ 1,394,394	\$ 1,464,024	\$ 5,476,016	\$ 1,652,205	\$ 1,728,078	\$ 1,772,295	\$ 1,892,737	\$ 5,957,225	\$ 2,201,823	\$ 2,350,656	\$ 2,439,289

	2011 Amended	2011 Actual	2012 Projected	Projected	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EXPENSES														
Administration														
002-415-5000 SALARIES - CITY PAYROLL	\$ 134,725	\$ 135,636	\$ 140,655	\$ 144,171	\$ 147,776	\$ 151,470	\$ 155,257	\$ 159,138	\$ 163,117	\$ 167,195	\$ 171,374	\$ 175,659	\$ 180,050	\$ 184,552
002-415-5003 CONTRACT WAGES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
002-415-5005 OVERTIME WAGES	\$ 460	\$ 26	\$ 470	\$ 482	\$ 494	\$ 506	\$ 519	\$ 532	\$ 545	\$ 559	\$ 573	\$ 587	\$ 602	\$ 617
002-415-5008 OPERATING COSTS	\$ 7,500	\$ 6,479	\$ 7,500	\$ 7,688	\$ 7,880	\$ 8,077	\$ 8,279	\$ 8,486	\$ 8,698	\$ 8,915	\$ 9,138	\$ 9,366	\$ 9,601	\$ 9,841
002-415-5009 OFFICE SUPPLIES	\$ 2,000	\$ 797	\$ 1,000	\$ 1,025	\$ 1,051	\$ 1,077	\$ 1,104	\$ 1,131	\$ 1,160	\$ 1,189	\$ 1,218	\$ 1,249	\$ 1,280	\$ 1,312
002-415-5010 POSTAGE	\$ 7,600	\$ 8,060	\$ 7,600	\$ 7,790	\$ 7,985	\$ 8,184	\$ 8,389	\$ 8,599	\$ 8,814	\$ 9,034	\$ 9,260	\$ 9,491	\$ 9,729	\$ 9,972
002-415-5011 OFFICE EQUIPMENT MAINTENANCE	\$ 7,000	\$ 5,226	\$ 7,200	\$ 7,380	\$ 7,565	\$ 7,754	\$ 7,947	\$ 8,146	\$ 8,350	\$ 8,559	\$ 8,773	\$ 8,992	\$ 9,217	\$ 9,447
002-415-5012 FACILITIES MAINTENANCE	\$ 3,000	\$ 3,042	\$ 3,000	\$ 3,075	\$ 3,152	\$ 3,231	\$ 3,311	\$ 3,394	\$ 3,479	\$ 3,566	\$ 3,655	\$ 3,747	\$ 3,840	\$ 3,936
002-415-5015 TRAINING AND SEMINARS	\$ 200	\$ -	\$ 700	\$ 718	\$ 735	\$ 754	\$ 773	\$ 792	\$ 812	\$ 832	\$ 853	\$ 874	\$ 896	\$ 918
002-415-5016 TRAVEL	\$ 100	\$ -	\$ 300	\$ 308	\$ 315	\$ 323	\$ 331	\$ 339	\$ 348	\$ 357	\$ 366	\$ 375	\$ 384	\$ 394
002-415-5019 DUES AND SUBSCRIPTIONS	\$ 600	\$ 580	\$ 650	\$ 666	\$ 683	\$ 700	\$ 717	\$ 735	\$ 754	\$ 773	\$ 792	\$ 812	\$ 832	\$ 853
002-415-5020 UTILITIES	\$ 3,000	\$ 2,283	\$ 3,000	\$ 3,075	\$ 3,152	\$ 3,231	\$ 3,311	\$ 3,394	\$ 3,479	\$ 3,566	\$ 3,655	\$ 3,747	\$ 3,840	\$ 3,936
002-415-5021 TELEPHONE	\$ 2,450	\$ 2,450	\$ 2,000	\$ 2,050	\$ 2,101	\$ 2,154	\$ 2,208	\$ 2,263	\$ 2,319	\$ 2,377	\$ 2,437	\$ 2,498	\$ 2,560	\$ 2,624
002-415-5022 UNEMPLOYMENT INSURANCE	\$ 410	\$ 405	\$ 425	\$ 436	\$ 447	\$ 458	\$ 469	\$ 481	\$ 493	\$ 505	\$ 518	\$ 531	\$ 544	\$ 558
002-415-5023 WORKER COMPENSATION INSURANCE	\$ 285	\$ 276	\$ 290	\$ 297	\$ 305	\$ 312	\$ 320	\$ 328	\$ 336	\$ 345	\$ 353	\$ 362	\$ 371	\$ 381
002-415-5024 FICA TAXES	\$ 10,345	\$ 9,989	\$ 10,800	\$ 11,070	\$ 11,347	\$ 11,630	\$ 11,921	\$ 12,219	\$ 12,525	\$ 12,838	\$ 13,159	\$ 13,488	\$ 13,825	\$ 14,171
002-415-5025 EMPLOYEE BENEFITS	\$ 15,525	\$ 15,084	\$ 15,890	\$ 16,287	\$ 16,694	\$ 17,112	\$ 17,540	\$ 17,978	\$ 18,428	\$ 18,888	\$ 19,360	\$ 19,844	\$ 20,341	\$ 20,849
002-415-5026 WORKER'S COMPENSATION DEDUCTIBLE	\$ -	\$ -	\$ 1,000	\$ 1,025	\$ 1,051	\$ 1,077	\$ 1,104	\$ 1,131	\$ 1,160	\$ 1,189	\$ 1,218	\$ 1,249	\$ 1,280	\$ 1,312
002-415-5028 EMPLOYEE PENSION	\$ 10,815	\$ 11,008	\$ 11,290	\$ 11,572	\$ 11,862	\$ 12,158	\$ 12,462	\$ 12,774	\$ 13,093	\$ 13,420	\$ 13,756	\$ 14,100	\$ 14,452	\$ 14,813
002-415-5029 VEHICLE MAINTENANCE	\$ 200	\$ -	\$ 200	\$ 205	\$ 210	\$ 215	\$ 221	\$ 226	\$ 232	\$ 238	\$ 244	\$ 250	\$ 256	\$ 262
002-415-5030 VEHICLE FUEL & OIL	\$ 100	\$ -	\$ 100	\$ 103	\$ 105	\$ 108	\$ 110	\$ 113	\$ 116	\$ 119	\$ 122	\$ 125	\$ 128	\$ 131
002-415-5032 ATTORNEY FEE	\$ 2,000	\$ -	\$ 1,000	\$ 1,025	\$ 1,051	\$ 1,077	\$ 1,104	\$ 1,131	\$ 1,160	\$ 1,189	\$ 1,218	\$ 1,249	\$ 1,280	\$ 1,312
002-415-5034 CITY INSURANCE	\$ 395	\$ 395	\$ 435	\$ 446	\$ 457	\$ 468	\$ 480	\$ 492	\$ 504	\$ 517	\$ 530	\$ 543	\$ 557	\$ 571
002-415-5036 PUBLISHING	\$ 500	\$ 378	\$ 500	\$ 513	\$ 525	\$ 538	\$ 552	\$ 566	\$ 580	\$ 594	\$ 609	\$ 624	\$ 640	\$ 656
002-415-5102 AUDITING	\$ 2,500	\$ 2,425	\$ 2,500	\$ 2,563	\$ 2,627	\$ 2,692	\$ 2,760	\$ 2,829	\$ 2,899	\$ 2,972	\$ 3,046	\$ 3,122	\$ 3,200	\$ 3,280
002-415-5301 DOMESTIC WATER PURCHASES	\$ 190,000	\$ 197,584	\$ 198,000	\$ 202,950	\$ 208,024	\$ 213,224	\$ 218,555	\$ 224,019	\$ 229,619	\$ 235,360	\$ 241,244	\$ 247,275	\$ 253,457	\$ 259,793
002-415-5304 WATER TAPS PURCHASED (to CWCWD)	\$ 220,000	\$ 30,000	\$ 20,000	\$ 40,000	\$ 60,000	\$ 80,000	\$ 100,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000
002-415-5313 WATER ASSESSMENTS	\$ 46,700	\$ 45,780	\$ 46,700	\$ 47,868	\$ 49,064	\$ 50,291	\$ 51,548	\$ 52,837	\$ 54,158	\$ 55,512	\$ 56,899	\$ 58,322	\$ 59,780	\$ 61,274
002-415-5314 WATER SHARES PURCHASE	\$ 350	\$ 175	\$ 350	\$ 359	\$ 368	\$ 377	\$ 386	\$ 396	\$ 406	\$ 416	\$ 426	\$ 437	\$ 448	\$ 459
002-415-5315 WATER STUDY	\$ 40,000	\$ 37,966	\$ 6,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000	\$ 2,000
002-415-5316 NISP PARTICIPATION	\$ 37,500	\$ 37,500	\$ 25,000	\$ 25,000	\$ 13,000	\$ 234,000	\$ 245,000	\$ 2,219,000	\$ 83,000	\$ 610,000	\$ 616,000	\$ 1,485,000	\$ 1,485,000	\$ 1,485,000
002-415-5714 MERP	\$ 1,500	\$ 526	\$ 2,000	\$ 2,050	\$ 2,101	\$ 2,154	\$ 2,208	\$ 2,263	\$ 2,319	\$ 2,377	\$ 2,437	\$ 2,498	\$ 2,560	\$ 2,624
002-415-5914 WATER ADMIN CAPITAL OUTLAY	\$ 5,000	\$ -	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Administration	\$ 752,760	\$ 554,070	\$ 521,555	\$ 544,194	\$ 564,124	\$ 817,352	\$ 860,886	\$ 2,867,733	\$ 744,901	\$ 1,285,399	\$ 1,305,234	\$ 2,188,414	\$ 2,202,950	\$ 2,217,849

	2011 Amended	2011 Actual	2012 Projected	Projected	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023														
Operations																												
002-433-5000 SALARIES - CITY PAYROLL	\$	125,000	\$	125,445	\$	130,500	\$	133,763	\$	137,107	\$	140,534	\$	144,048	\$	147,649	\$	151,340	\$	155,123	\$	159,002	\$	162,977	\$	167,051	\$	171,227
002-433-5005 OVERTIME WAGES	\$	3,010	\$	2,062	\$	3,150	\$	3,229	\$	3,309	\$	3,392	\$	3,477	\$	3,564	\$	3,653	\$	3,744	\$	3,838	\$	3,934	\$	4,032	\$	4,133
002-433-5008 OPERATING COSTS	\$	5,000	\$	4,164	\$	5,600	\$	5,740	\$	5,884	\$	6,031	\$	6,181	\$	6,336	\$	6,494	\$	6,657	\$	6,823	\$	6,994	\$	7,168	\$	7,348
002-433-5009 OFFICE SUPPLIES	\$	500	\$	108	\$	500	\$	513	\$	525	\$	538	\$	552	\$	566	\$	580	\$	594	\$	609	\$	624	\$	640	\$	656
002-433-5012 FACILITIES MAINTENANCE	\$	1,000	\$	605	\$	600	\$	615	\$	630	\$	646	\$	662	\$	679	\$	696	\$	713	\$	731	\$	749	\$	768	\$	787
002-433-5013 SHOP EQUIPMENT MAINTENANCE	\$	600	\$	384	\$	600	\$	615	\$	630	\$	646	\$	662	\$	679	\$	696	\$	713	\$	731	\$	749	\$	768	\$	787
002-433-5014 PHOTO-COPIER COST	\$	50	\$	-	\$	50	\$	51	\$	53	\$	54	\$	55	\$	57	\$	58	\$	59	\$	61	\$	62	\$	64	\$	66
002-433-5015 TRAINING AND SEMINARS	\$	1,020	\$	410	\$	850	\$	871	\$	893	\$	915	\$	938	\$	962	\$	986	\$	1,010	\$	1,036	\$	1,062	\$	1,088	\$	1,115
002-433-5016 TRAVEL	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
002-433-5017 GROUND MAINTENANCE	\$	300	\$	266	\$	1,000	\$	1,025	\$	1,051	\$	1,077	\$	1,104	\$	1,131	\$	1,160	\$	1,189	\$	1,218	\$	1,249	\$	1,280	\$	1,312
002-433-5018 EQUIPMENT RENTAL	\$	1,000	\$	70	\$	650	\$	666	\$	683	\$	700	\$	717	\$	735	\$	754	\$	773	\$	792	\$	812	\$	832	\$	853
002-433-5019 DUES AND SUBSCRIPTIONS	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
002-433-5020 UTILITIES	\$	3,100	\$	2,697	\$	3,100	\$	3,178	\$	3,257	\$	3,338	\$	3,422	\$	3,507	\$	3,595	\$	3,685	\$	3,777	\$	3,871	\$	3,968	\$	4,067
002-433-5021 TELEPHONE	\$	1,825	\$	1,916	\$	1,880	\$	1,927	\$	1,975	\$	2,025	\$	2,075	\$	2,127	\$	2,180	\$	2,235	\$	2,291	\$	2,348	\$	2,407	\$	2,467
002-433-5022 UNEMPLOYMENT INSURANCE	\$	385	\$	381	\$	400	\$	410	\$	420	\$	431	\$	442	\$	453	\$	464	\$	475	\$	487	\$	500	\$	512	\$	525
002-433-5023 WORKER COMPENSATION INSURANCE	\$	6,250	\$	6,075	\$	6,435	\$	6,596	\$	6,761	\$	6,930	\$	7,103	\$	7,281	\$	7,463	\$	7,649	\$	7,840	\$	8,036	\$	8,237	\$	8,443
002-433-5024 FICA TAXES	\$	9,795	\$	9,559	\$	10,125	\$	10,378	\$	10,638	\$	10,904	\$	11,176	\$	11,456	\$	11,742	\$	12,035	\$	12,336	\$	12,645	\$	12,961	\$	13,285
002-433-5025 EMPLOYEE BENEFITS	\$	16,235	\$	15,309	\$	16,695	\$	17,112	\$	17,540	\$	17,979	\$	18,428	\$	18,889	\$	19,361	\$	19,845	\$	20,341	\$	20,850	\$	21,371	\$	21,905
002-433-5026 WORKER'S COMPENSATION DEDUCTIBLE	\$	-	\$	-	\$	2,000	\$	2,050	\$	2,101	\$	2,154	\$	2,208	\$	2,263	\$	2,319	\$	2,377	\$	2,437	\$	2,498	\$	2,560	\$	2,624
002-433-5028 EMPLOYEE PENSION	\$	10,245	\$	10,354	\$	10,590	\$	10,855	\$	11,126	\$	11,404	\$	11,689	\$	11,982	\$	12,281	\$	12,588	\$	12,903	\$	13,225	\$	13,556	\$	13,895
002-433-5029 VEHICLE MAINTENANCE	\$	2,000	\$	700	\$	1,500	\$	1,538	\$	1,576	\$	1,615	\$	1,656	\$	1,697	\$	1,740	\$	1,783	\$	1,828	\$	1,873	\$	1,920	\$	1,968
002-433-5030 VEHICLE FUEL & OIL	\$	8,000	\$	9,924	\$	9,000	\$	9,225	\$	9,456	\$	9,692	\$	9,934	\$	10,183	\$	10,437	\$	10,698	\$	10,966	\$	11,240	\$	11,521	\$	11,809
002-433-5033 SURVEYING AND ENGINEERING	\$	2,000	\$	120	\$	1,000	\$	1,025	\$	1,051	\$	1,077	\$	1,104	\$	1,131	\$	1,160	\$	1,189	\$	1,218	\$	1,249	\$	1,280	\$	1,312
002-433-5034 CITY INSURANCE	\$	5,700	\$	6,045	\$	6,650	\$	6,816	\$	6,987	\$	7,161	\$	7,340	\$	7,524	\$	7,712	\$	7,905	\$	8,102	\$	8,305	\$	8,513	\$	8,725
002-433-5200 WEARING APPAREL	\$	1,300	\$	1,094	\$	1,300	\$	1,333	\$	1,366	\$	1,400	\$	1,435	\$	1,471	\$	1,508	\$	1,545	\$	1,584	\$	1,624	\$	1,664	\$	1,706
002-433-5203 SAFETY EQUIPMENT	\$	500	\$	60	\$	500	\$	513	\$	525	\$	538	\$	552	\$	566	\$	580	\$	594	\$	609	\$	624	\$	640	\$	656
002-433-5302 SHOP SUPPLIES	\$	1,000	\$	509	\$	1,000	\$	1,025	\$	1,051	\$	1,077	\$	1,104	\$	1,131	\$	1,160	\$	1,189	\$	1,218	\$	1,249	\$	1,280	\$	1,312
002-433-5303 SHOP EQUIPMENT PURCHASE	\$	750	\$	-	\$	750	\$	769	\$	788	\$	808	\$	828	\$	849	\$	870	\$	892	\$	914	\$	937	\$	960	\$	984
002-433-5306 DOMESTIC SYSTEM MAINTENANCE	\$	13,000	\$	10,373	\$	10,000	\$	10,250	\$	10,506	\$	10,769	\$	11,038	\$	11,314	\$	11,597	\$	11,887	\$	12,184	\$	12,489	\$	12,801	\$	13,121
002-433-5307 HEAVY EQUIPMENT MAINTENANCE	\$	1,000	\$	40	\$	1,000	\$	1,025	\$	1,051	\$	1,077	\$	1,104	\$	1,131	\$	1,160	\$	1,189	\$	1,218	\$	1,249	\$	1,280	\$	1,312
002-433-5308 MATERIALS SOLD	\$	4,000	\$	1,765	\$	3,000	\$	3,075	\$	3,152	\$	3,231	\$	3,311	\$	3,394	\$	3,479	\$	3,566	\$	3,655	\$	3,747	\$	3,840	\$	3,936
002-433-5309 PEST CONTROL	\$	500	\$	392	\$	500	\$	513	\$	525	\$	538	\$	552	\$	566	\$	580	\$	594	\$	609	\$	624	\$	640	\$	656
002-433-5311 MAIN PUMP UTILITY	\$	1,500	\$	976	\$	1,000	\$	1,025	\$	1,051	\$	1,077	\$	1,104	\$	1,131	\$	1,160	\$	1,189	\$	1,218	\$	1,249	\$	1,280	\$	1,312
002-433-5312 TOWER PUMP UTILITY	\$	3,000	\$	1,050	\$	2,000	\$	2,050	\$	2,101	\$	2,154	\$	2,208	\$	2,263	\$	2,319	\$	2,377	\$	2,437	\$	2,498	\$	2,560	\$	2,624
002-433-5388 TRASH COLLECTION	\$	146,400	\$	145,895	\$	157,500	\$	\$161,462	\$	\$165,926	\$	\$170,731	\$	\$175,898	\$	\$181,447	\$	\$187,399	\$	\$193,536	\$	\$199,862	\$	\$206,384	\$	\$213,106	\$	\$220,036
002-433-5903 OFFICE EQUIPMENT	\$	50	\$	-	\$	50	\$	51	\$	53	\$	54	\$	55	\$	57	\$	58	\$	59	\$	61	\$	62	\$	64	\$	66
002-433-5908 VEHICLE LEASE PURCHASE	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
002-433-5909 HEAVY EQUIPMENT PURCHASE	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
002-433-5910 CAPITAL EQUIPMENT OUTLAY	\$	9,735	\$	9,735	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
002-433-5915 CAP. OUTLAY LEASE PURCHASE	\$	84,720	\$	84,716	\$	88,765	\$	83,590	\$	73,280																		
002-433-5916 INTEREST EXPENSE	\$	15,420	\$	15,417	\$	11,375	\$	11,659	\$	11,951																		
002-433-5920 CAPITAL PROJECT	\$	-	\$	-	\$	-	\$	245,415	\$	426,600	\$	420,260	\$	637,600	\$	159,600	\$	200,000	\$	200,000	\$	200,000	\$	200,000	\$	200,000	\$	200,000
002-433-5994 WATER TOWER INSPECTION	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
002-433-5995 WATER TOWER MAINT	\$	1,500	\$	20	\$	3,000	\$	3,075	\$	3,152	\$	3,231	\$	3,311	\$	3,394	\$	3,479	\$	3,566	\$	3,655	\$	3,747	\$	3,840	\$	3,936
Total Operations	\$	487,390	\$	468,636	\$	494,615	\$	745,025	\$	926,729	\$	846,188																