CITY OF NEWARK
Delaware

November 3, 2014

TO: The Honorable Mayor and City Council

VIA: Carol S. Houck, City Manager

FROM: Louis C. Vitola, Finance Director

RE: Bill 14-25 – Water Rate Increase

Black & Veatch conducted a water rate study in 2011 that resulted in recommendations to increase water rates according to the schedule below. Actual water rate increases are also reported.

Black & Veatch Recommendation		**Actual Water Rate Increases**	
Date	Increase	Date	Increase
1/1/2012	14.5%	1/1/2012	14.6%
1/1/2013	7.2%	9/1/2013	5.0%
1/1/2014	7.2%	1/1/2014	7.2%
1/1/2015	7.2%	1/1/2015[1]	7.2%
1/1/2016	7.2%	1/1/2016[2]	

[1]Recommended [2]To Be Determined

The increase is tied to the findings of the rate study, which concluded that rate increases are required in order for the City's water fund to meet escalating personnel and operating expenses, to pay for required infrastructure improvements with current revenues, and to meet debt service obligations. The study was re-distributed to Council late in 2013 and is attached to this memo. No study can predict future unknowns such as water volume consumed, revenues, or expenditures with perfect accuracy, but the study did a reasonably good job making estimates. However, the need to maintain the rate increase schedule is highlighted by the fact that revenues in 2013 and 2014 fell behind the study's predictions, and 2015 revenues will fall behind the study's forecast without the increase. Meanwhile, expenses in the three years highlighted either surpassed or are projected to surpass the study's predictions. As a result, capital spending is pressured every year. We are typically unable to fund all infrastructure projects recommended by the water utility, so certain projects are deferred into the out years of the capital program. In 2015, our goal is to fund additional water projects, which reduces the transfer to the general fund by design. Data

excerpted from the Black & Veatch rate study are compared to the City's actual and projected data for 2013, 2014, and 2015 in the table below to illustrate the funding patterns:

	2013 B&V Study	2013 Actual	2013 Difference Fav (Unfav)	2014 B&V Study	2014 Projected[1]	2014 Difference Fav (Unfav)	2015 B&V Study	2015 Projected[1]	2015 Difference Fav (Unfav)
Total Water Revenues	7,570,000	7,041,009	(528,991)	8,142,000	7,718,298	(423,702)	8,758,000	8,855,835	97,835
Total Operating Expenses	3,625,000	3,526,242	98,758	3,776,000	4,128,151	(352,151)	3,937,000	4,365,672	(428,672)
Operating Margin	3,945,000	3,514,767	(430,233)	4,366,000	3,590,147	(775,853)	4,821,000	4,490,163	(330,837)
Transfer to General Fund	353,000	1,588,923	1,235,923	1,288,000	1,430,000	142,000	1,557,000	1,275,000	(282,000)

[1]2014 & 2015 Revenue excludes revenue attributable to smart meter accuracy; Operating Expenses exclude debt

The revenue variance in 2013 resulted from a combination of the delayed rate increase and the wet weather during the year. While water revenue is currently expected to exceed the 2014 budget, the projected water revenue, adjusted to exclude the volume attributable to meter accuracy, is still less than what the study contemplated for 2014. The expense increases are attributable in part to increased personnel expenses, as the full-time positions increased from 17 in 2012 to 21 in 2013 and 22 in 2014-2015. The additions were related primarily to employee reclassifications, not new water positions. In 2013, four employees were moved from engineering, streets, and refuse to the water department in association with a departmental merger that resulted in personnel savings of about $390,000 in the general fund. In the 2014 budget, one equipment operator position was moved to the water department, again in association with merging departments and as a result of supporting a utility function. ***Keeping pace with the water rate study in 2015 will allow us to reach the revenue goals anticipated in the study and increase spending on critical water projects, while decreasing the transfer to the general fund.***

The table below shows a history of water rate increases since 2001 with related statistics. The City did not increase its water rates for a period of nearly eight years from 2001 to 2009. Another two-and-a-half-year lag ensued after the March, 2009 increase. If water rates are increased by 7.2% on January 1st, the annualized growth rate between 2001 and 2015 would equate to 5.6%.

	Water Rates Since 2001 (cost per 100 cubic feet)							
	Effective 7/1/01	Effective 3/31/09	Effective 10/1/09	Effective 1/1/12	Effective 9/1/13	Effective 1/1/14	Proposed 1/1/15	Proposed 1/1/16
Properties Inside City Limits								
First 1273 cubic feet	$2.27	$2.61	$3.52	$4.03	$4.23	$4.53	$4.86	$5.21
All over 1273 cubic feet	$2.89	$3.32	$4.48	$5.13	$5.39	$5.78	$6.20	$6.64
Properties Outside City Limits								
First 1273 cubic feet	$3.01	$3.46	$4.67	$5.36	$5.63	$6.04	$6.47	$6.94
All over 1273 cubic feet	$3.91	$4.50	$6.08	$6.96	$7.31	$7.84	$8.40	$9.01
Quarterly Hydrant Charge	$2.85	$2.85	$2.85	$3.26	$3.42	$3.67	$3.93	$4.22
Average Increase		15.0%	35.0%	14.6%	5.0%	7.2%	7.2%	7.2%
Compound Annual Growth Rate as of 7/1/2014, 7/1/2015, 7/1/2016						5.5%	5.6%	5.7%

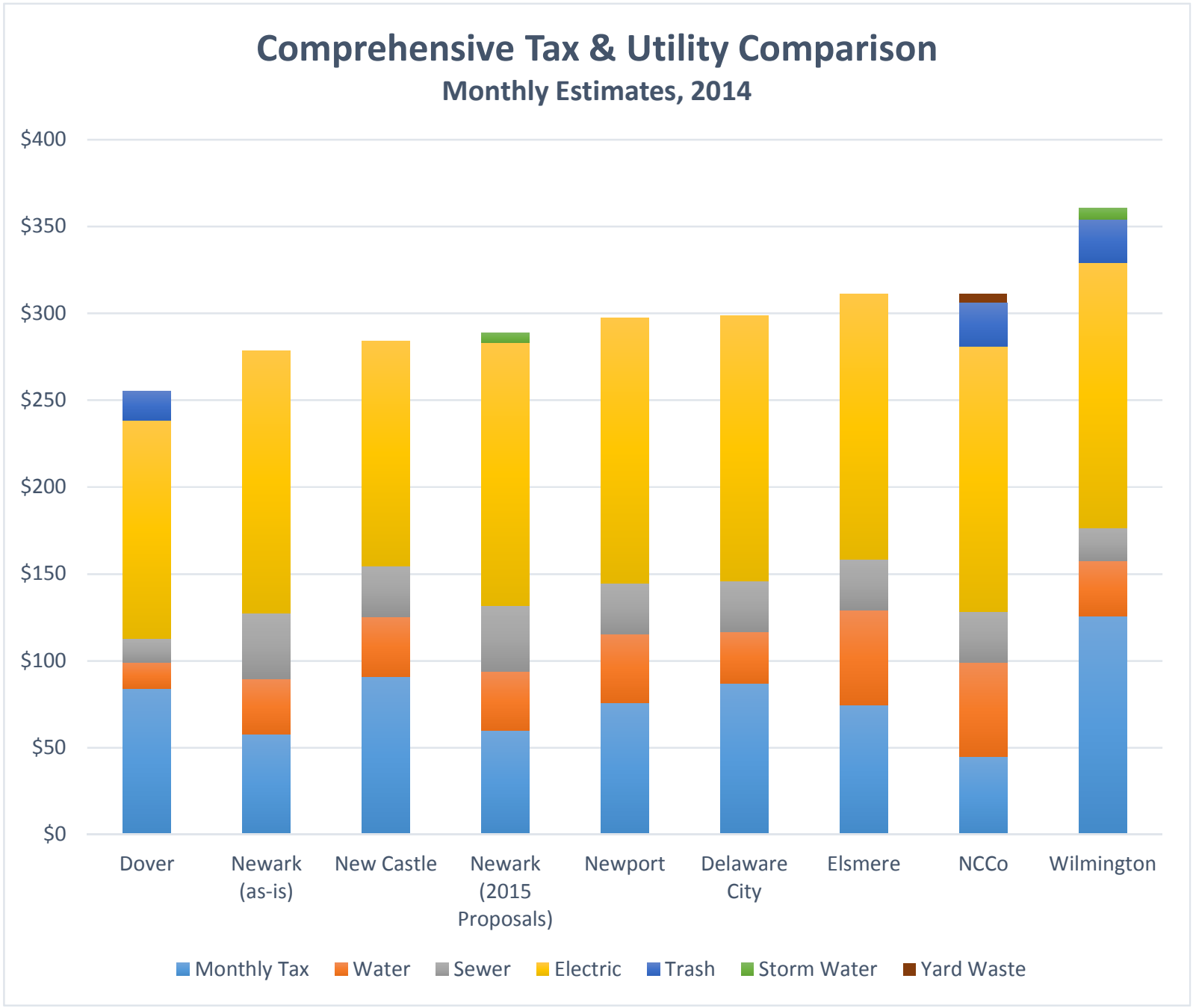
The 7.2% increase will result in a bill that is an additional $2.42 higher per month for a residential household consuming 167 gallons of water per day. Even with the implementation of both increases, the possible introduction of a monthly stormwater fee, and

a 1.5% tax increase, the comprehensive cost of living in Newark will remain competitive with communities in northern New Castle County. The attached analysis shows estimated costs of water, sewer, electric and stormwater utilities, trash service, and property taxes on several comparable jurisdictions in northern New Castle County, as well as the City of Dover in Kent County.

A household successful in reducing water consumption by less than 10 gallons per day this fall will not see an increase in their water bills in January 2015. Cutting one person's shower time by three minutes per day and having one person turn off the faucet while brushing teeth every day can accomplish that goal, according to data compiled by the EPA (www.epa.gov).

A restaurant consuming 2,000 gallons of water per day will see its water bill increase by about $33 per month starting in January.

Thank you for your consideration.


Comprehensive Tax & Utility Comparison
Monthly Estimates, 2014
$400
$350
$300
$250
$200
$150
$100
$50
$0
Dover
Newark (as-is)
New Castle
Newark (2015 Proposals)
Newport
Delaware City
Elsmere
NCCo
Wilmington
Monthly Tax
Water
Sewer
Electric
Trash
Storm Water
Yard Waste

Comprehensive Tax and Utility Comparison

Northern New Castle County and Dover, 2014 Estimates

City	Total Monthly	Electric	Monthly Tax	Water	Sewer	Trash	Yard Waste	Storm Water	Notes
Dover	255.33	125.58	84.05	15.24	13.46	17.00	-	-	4, 5, 7, 8, 12
Newark (as-is)	278.54	151.23	57.86	31.61	37.84	-	-	-	2, 3, 6, 7, 8, 12, 15
New Castle	284.03	129.32	90.81	34.74	29.16	-	-	-	2, 3, 6, 7, 12, 15, 16
Newark (2015 Proposals)	288.74	151.23	60.04	33.88	37.84	-	-	5.75	2, 3, 6, 7, 8, 9, 12, 15, 18
Newport	297.30	152.66	75.96	39.52	29.16	-	-	-	2, 3, 6, 7, 12, 14, 16
Delaware City	298.59	152.66	87.06	29.72	29.16	-	-	-	2, 3, 6, 7, 12, 15, 16
Elsmere	311.02	152.66	74.64	54.55	29.16	-	-	-	2, 3, 6, 7, 12, 13, 15, 16
NCCo	311.18	152.66	44.73	54.55	29.16	25.08	5.00	-	1, 6, 7, 10, 11, 12, 17
Wilmington	360.81	152.66	125.66	31.80	19.14	24.80	-	6.74	2, 3, 6, 7, 8, 12, 18

Notes:

[1]NCCo represents unincorporated areas of New Castle County

[2]All cities and towns in New Castle County adopt the County's 1983 assessment

[3]Residents in incorporated areas of NCCo must pay a reduced NCCo tax based on the service level provided at the municipal level

[4]Dover reassesses property tax values on a regular basis. It's stated or millage rate of .3378 was adjusted to 1983 values based on a rough calculation of 1983 market values versus recent sales data in Newark

[5]Dover residents also pay Kent County's tax of $0.30 per $100 of 60% of the assessed values, which were last assessed in 1987. No adjustment was made to roll the rate back to 1983 levels because the assessment is already reduced by 40%.

[6]All tax amounts assume a $75,000 assessment (1983 values), spread to a monthly average rate

[7]Water rate analysis conducted by Water Resources Agency, October, 2013, based on residential users consuming 167 gallons per day

[8]For cities with water utilities that service customers outside corporate limits, the "inside city" rates are used

[9]Newark's recommended water and tax rates, not current rates, are used.

[10]Water and Electric users in unincorporated NCCo are assumed to be serviced by Artesian Water Company and Delmarva Power, respectively

[11]Residents in unincorporated NCCo are assumed to utilize a trash company with weekly service having a rate equal to the average of several local providers

[12]Electric rates reflect a seasonal average of monthly rates for residential customers consuming 1,000 kwh per month

[13]Elsmere residents are Artesian Water Company customers

[14]Newport residents are United Water Company customers

[15]Cities with no trash charge build the cost of service into the property tax rates or another funding mechanism

[16]Newport, New Castle, Elsmere, and Delaware City residents are New Castle County sewer customers

[17]All cities provide snow removal and yard waste collection at no additional cost. Unincorporated NCCo residents must pay for yard waste. $5/mo assumes 20 bags at $3/bag for cheapest, most comparable private service. Some service is more expensive, three of twelve drop-off sites are free.

[18]Newark residential stormwater fee is expected to range from $4 to $7.50 per month; estimated average of $5.75 reported here; Wilmington stormwater rates increased 11%.

WATER RATE STUDY REPORT

B&V PROJECT NO. 168147

PREPARED FOR

City of Newark, Delaware

12 OCTOBER 2011

BLACK & VEATCH
Building a world of difference.®

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1 Introduction

1.1 BACKGROUND

The City of Newark Water Department (NWD) provides water services to residents and businesses within the City of Newark and in certain areas outside the City. NWD meets the City's water demand with treated surface water from the White Clay Creek and treated ground water from ten water supply wells. The City also has an agreement with United Water to provide service on an emergency basis. The City of Newark Water Department undertook this study to review the City's recovery of the water operations and capital costs from its customers.

1.2 PURPOSE

This report examines the future financial requirements of water services in the City. The report presents (1) a plan for financing future water improvements and funding the ongoing revenue requirements [i.e., operation and maintenance (O&M) expense, debt service, and revenue financed system renewals and replacements] and (2) the development of a schedule of rates and charges that is commensurate with the costs of providing water service.

1.3 SCOPE

The financial plan presented in this report covers a six year study period consisting of the fiscal years ending December 31, 2011 (FY 2011) through December 31, 2016 (FY 2016). Report projections are based on NWD's historical financial records, budgets, operating reports, and capital improvement program (CIP).

The following scope of studies is addressed in the report for the NWD:

- Projection of future system operating revenues and revenue requirements.
- Analysis of future annual revenue needs.
- Development of CIP financing plans.
- Design of a rate schedule for fiscal year 2012 which reflects the annual cost of service considerations and appropriate City policy decisions.

Chapters 2 and 3 of this report develop NWD's financial plan and proposed schedule of service rates and charges.

2 Water Utility Financial Plan

2.1 OVERVIEW

A six year financial plan, beginning with the budget year ending December 31, 2011 (FY 2011) and ending with December 31, 2016 (FY 2016), has been developed for NWD. This plan and other supporting tables are presented at the end of this chapter. The plan for NWD is summarized in Table 2-1.

The System Operations cash flow analysis (Table 2-1, Lines 1 through 22) shows projected water service and other revenues (Table 2-1, Lines 1 through 8) being used to pay the ongoing utility revenue requirements consisting of operation and maintenance (O&M) expense, debt service, and deposits in various reserves and funds in Lines 9 through 22. Table 2-1 also indicates future water revenue increase requirements in Lines 2a through 2e. The Construction Fund cash flow analysis (Table 2-1, Lines 23 through 37) summarizes funding sources required to finance identified capital improvement program projects. A detailed schedule of capital improvements is shown in Table 2-8.

The cash flow analyses also include projections of reserve fund balances and debt service coverage. The projected fund balances for the Water Fund Debt Service Reserve, Operating Reserve Fund, the Contingency Reserve Fund and the Depreciation Reserve Fund is presented on Lines 38 through 41 of Table 2-1, respectively. Annual total debt service coverage is presented on Line 42 of Table 2-1.

Annualized water service revenue increases indicated from the financial plan analyses are as follows:

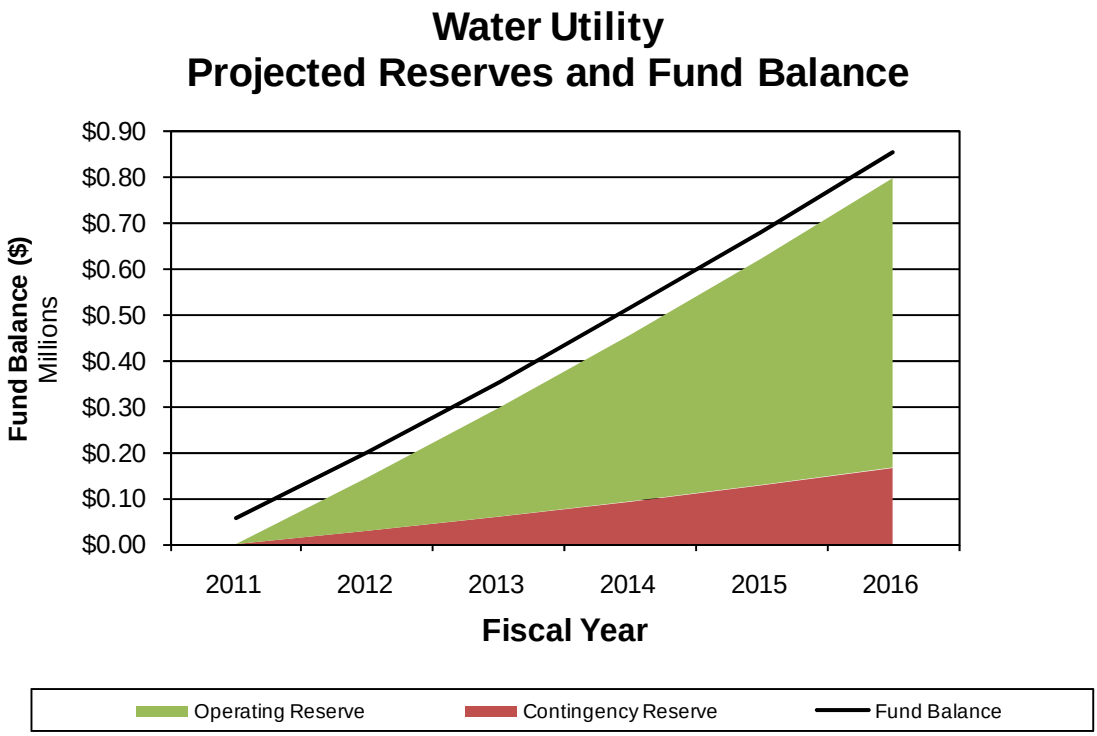
FISCAL YEAR	ANNUAL REVENUE INCREASE
2012	12.7%
2013	7.2%
2014	7.2%
2015	7.2%
2016	7.2%

The need for these future revenue increases is driven by a number of factors including, but not necessarily limited to, the following requirements:

- Cash funding of capital improvement program expenditures.
- Increasing O&M expenses which are expected to escalate due to inflation and system growth.
-
- Establishing targeted balances for the Operating Reserve (1/6th of the annual operating expenses) and the Contingency Reserve (two percent of annual operating revenues).

Figure 2-1 presents the projected annual reserves and fund balances for NWD as developed in Table 2-1. Fund Balance represents the total of all sources of available funds including the end of year System Fund balance (Table 2-1, Line 22), end of year Operations Reserve Balance (Table 2-1, Line 39) and the Contingency Fund balance (Table 2-1, Line 40).

Figure 2- 1



The above graph of NWD projected annual reserves and fund balances illustrates that the proposed water service revenue increases, presented in Lines 2a through 2e of Table 2-1, provide sufficient funding for the projected revenue requirements for the study period.

2.2 SYSTEM OPERATIONS

To provide for the continued operation of NWD on a sound financial basis, annual revenues must be sufficient to meet annual revenue requirements, provide for adequate operating reserves, and produce adequate net revenues to meet debt service coverage requirements. Table 2-1 summarizes NWD estimated future revenues and revenue requirements, reserve levels, and indicated annual water service revenue increases that are necessary to meet these needs.

2.2.1 Beginning Fund Balance

System Operations' beginning balance includes available carryover monies from previous years' operations. This balance provides working capital to meet current and unforeseen operating expenditures if necessary. As shown in Table 2-1, Line 18, the FY 2011 System Operations' beginning balance is estimated to total $56,000 based on audited FY 2010 information.

2.2.2 Revenues

Operating revenues consist of water service revenue, miscellaneous operating revenue, and interest income. Total revenue levels, with proposed annual increases, are projected to rise from $6,224,000 in FY 2011 to $9,421,000 in FY 2016 (Table 2-1, Line 3).

2.2.2.1 Water Service Revenue

Table 2-1, Line 1, shows projected water service revenue under existing rates. Existing rate revenue is expected to increase from $6,224,000 in FY 2011 to $6,329,000 in FY 2016. These revenue projections reflect the addition of approximately 35 active accounts to the system each year. The Water Fund receives revenue from service and commodity charges. For additional details, projected Water Utility average active accounts, billable volume by customer class, and service revenue under existing rates are shown in Tables 2-2, 2-3, and 2-4, respectively. Additional water service revenues (Table 2-1, Lines 2a through 2e) needed to meet projected revenue requirements are discussed later in this chapter.

2.2.2.2 Bad Debt Expense

Table 2-1, Line 4, shows projected bad debt expense. Water Utility bad debt expense is estimated to remain constant at $1,000 from FY 2011 through FY 2016 based on the FY 2011 Budget of $600 and the annual growth factor of 2.5 percent per year.

2.2.2.3 Other Operating Revenue

Other Operating Revenue, shown in Table 2-1, Line 6, is projected to be $246,000 in FY 2011 based on the FY 2011 Budget and average $177,000 annually for the remainder of the study period. Projected Other Operating Water Fund Revenue consists of delinquent penalty charges, reconnection charges, account entry fees, recoveries, laboratory fees, tower rental fees, grant revenue and other miscellaneous revenue. A detailed schedule of historical and projected Other Operating Revenue is shown in Table 2-5.

2.2.2.4 Interest Income

Table 2-1, Line 7, shows projected annual interest income increasing from $9,000 to $13,000 over the study period. Interest income is calculated based on average annual operating fund balances and a 2.0 percent annual interest rate.

2.2.3 Revenue Requirements

Revenue requirements include O&M expense, debt service, and transfers to or from the Reserve Funds, the General Fund, and the Construction Fund.

2.2.3.1 Operation and Maintenance Expense

Projected O&M expense shown in Table 2-1, Line 9, consists of the costs for personnel, materials, supplies, and contractual services incurred on a routine basis to treat and distribute filtered water. Future O&M expense is expected to increase from $3,349,000 in FY 2011 to $4,109,000 in FY 2016. The FY 2011 O&M reflects the FY 2011 budgeted expenses. The magnitude of projected O&M expense for the period FY 2012 to FY 2016 is based on the FY 2011 budget and the following assumed inflation and growth factors based on historical experience and input from NWD staff.

COST CATEGORY	ANNUAL INFLATION AND GROWTH FACTOR
Personal Services	2.5%
Employee Benefits	10.0%
Electricity	2.5%
Other	2.5%

A detailed schedule of projected O&M expenses is shown in Table 2-6.

2.2.3.2 Debt Service

Debt service (principal and interest) on existing Water Utility debt is shown in detail in Table 2-7 and is summarized on Lines 11 and 12 in Table 2-1. There is no existing Revenue Bond debt service (Table 2-1, Line 11a). Existing General Obligation Bond debt service payments (Table 2-1, Line12a) average $1,358,000 annually during the period FY 2011 to FY 2016.

The City does not currently plan to issue any future revenue or general obligation bonds to finance scheduled capital improvements during the study period as indicated on Lines 11b and 12b in Table 2-1.

2.2.3.3 Debt Service Reserve Fund Transfer

Since there are no outstanding revenue bonds and no revenue bonds are expected to be issued during the study period, there are no transfers to or from the Debt Service Reserve during the planning period as illustrated in Table 2-1, Line 13.

2.2.3.4 Operating Reserve Fund

Table 2-1, Line 14, shows anticipated transfers of cash from System Operations to the Operating Reserve Fund to establish the target reserve fund balance by the end of the study period. The target fund balance for the Operating Reserve is 1/6th of the annual operating expenses. The purpose of the fund is to provide reserves to meet temporary fluctuations in cash flow and to provide a cushion for loss of revenues until operating changes can be implemented. Transfers totaling $600,000 are projected for the study period.

2.2.3.5 Contingency Reserve Fund Transfer

Table 2-1, Line 15, shows anticipated transfers of cash from System Operations to the Contingency Reserve Fund to establish the target reserve balance by the end of the study period. The target fund balance for the Contingency Reserve is two percent of annual operating revenues. The City may only use monies in the Contingency Reserve to cover emergencies of a nonrecurring nature that are over and above the normal course of operations. Transfers totaling $167,000 are projected for the study period.

2.2.3.6 Depreciation Reserve Fund Transfer

Table 2-1, Line 16, shows anticipated transfers of cash to the Depreciation Reserve Fund. Funds in the Depreciation Reserve Fund are used to pay for the repair or replacement of existing capital. The transfers total $851,000 for the study period.

2.2.3.7 Transfer to General Fund

Table 2-1, Line 21, shows anticipated transfers of cash to the General Fund. The target amount of the transfer is 20 percent of annual revenue requirements excluding debt service and deposits to Operating and Contingency Reserves. The transfers total $6,486,000 for the study period.

2.2.4 Additional User Charge Revenue Required

Sound financial operating practices require a utility to collect revenues which are sufficient to cover revenue requirements, provide adequate reserves, and meet bond coverage requirements. The cash flow analysis presented in Table 2-1 indicates that current water service revenues are below levels needed to support sound financial operations during the study period. Consequently, annual water service revenue increases are necessary for NWD to maintain good financial standing and support capital improvement program financing requirements. Annual revenue increases, as indicated from the financial plan analysis, are as follows:

FISCAL YEAR	ANNUAL REVENUE INCREASE
2012	12.7%
2013	7.2%
2014	7.2%
2015	7.2%
2016	7.2%

The FY 2012 annual revenue increase is assumed to be effective January 1, 2012. The subsequent annual revenue increases are assumed to be effective each subsequent January 1 thereafter. Revenue increases are needed to:

- Provide cash funding of capital improvement program expenditures.
- Pay for increasing O&M expenses which are expected to escalate due to inflation and system growth.
-
- Meet targeted annual year end balances for the Operating Reserve (1/6th of the annual operating expenses) and the Contingency Reserve (two percent of annual operating revenues).

Line 42 of Table 2-1 presents the projected annual total debt service coverage. Revenue from all sources including interest earnings is included in the test. Net revenues for debt service coverage purposes reflect system revenues net of O&M and Transfers to the General Fund. For G.O. debt, nominal coverage is 1.00 times debt service. The projected total debt service coverage for the study period averages 2.4 times.

2.3 CONSTRUCTION FUND

A capital improvement financing plan is an integral part of a complete utility financial plan for the City to comprehensively evaluate all service requirements. Lines 23 to 37 of Table 2-1 summarize the capital improvement financing plan for NWD. Over the six-year study period, transfers from System Operations of $8,961,000, and transfers from the Depreciation Reserve of $348,000, (all totaling $9,309,000) are needed to finance the anticipated capital improvements during the study period.

2.3.1 Sources of Funds

Funds available to finance the capital improvement needs of NWD include transfers from System Operations, transfers from the Depreciation Reserve, loan and bond proceeds, grants, and interest income.

2.3.1.1 Beginning Fund Balance

The Construction Fund beginning balance includes available carryover monies from the previous years. The annual capital expenditures are currently funded from cash transferred from System Operations and the Depreciation Reserve, therefore no balance is carried in the Construction Fund as shown in Table 2-1, Line 23.

2.3.1.2 System Operations Fund Transfer

Table 2-1, Line 31 shows anticipated transfers of cash from System Operations to the Construction Fund to help cash finance a portion of major capital improvement projects. Total transfers amount to $8,961,000 during the study period.

2.3.1.3 Depreciation Reserve Fund Transfer

Table 2-1, Line 32 shows anticipated transfers of cash from the Depreciation Reserve Fund to the Construction Fund to provide cash funding for renewing and replacing capital. Total transfers amount to $348,000 during the study period.

2.3.1.4 Contingency Reserve Fund Transfer

Table 2-1, Line 33, shows anticipated transfers of cash from the Contingency Reserve Fund to the Construction Fund. No transfers are projected for the study period.

2.3.1.5 Bond Proceeds

Projected proceeds from revenue bond and general obligation bond funding are shown in Table 2-1, Lines 27 and 30. The City does not anticipate the issuance of revenue bonds or general obligation bonds during the study period.

2.3.1.6 Interest Income

Table 2-1, Line 34 shows projected interest income attributable to the Construction Fund. Since the annual capital expenditures are met from cash transferred from System Operations and the Depreciation Reserve and no balance is carried in the Construction Fund, no interest earnings are reflected in the Construction Fund.

2.3.2 Uses of Funds

Available capital improvement funds are used to finance capital improvements, required debt service reserve fund deposits, and debt issuance expenses.

2.3.2.1 Capital Improvements

Table 2-1, Line 36, summarizes NWD's projected capital improvement appropriations. Improvement costs over the six-year study period total $9,309,000. A detailed schedule of capital improvement projects and projected costs is shown in Table 2-8.

2.3.2.2 Debt Issuance Expense

Costs associated with securing debt financing include underwriter, bond attorney, and consultant fees. Since no revenue bonds or general obligation bonds are expected to be issued within the study period no debt issuance expenses are expected as illustrated in Table 2-1, Lines 25 and 29.

2.3.2.3 Proposed Bonds Debt Service Reserve Fund Deposit

For each new revenue bond issue, NWD must usually transfer funds to the bond reserve to maintain a reserve requirement. Since no revenue bonds are expected to be issued during the study period, there are no projected reserve deposits required as shown in Table 2-1, Line 26.

Table 2-1
Water Utility
Projected Flow of Funds

Line No.	Description	Fiscal Year Ending December 31 2011	2012	2013	2014	2015	2016
		$	$	$	$	$	$
	SYSTEM OPERATIONS						
1	Revenues Under FY 2011 Rates	6,224,000	6,245,000	6,266,000	6,287,000	6,308,000	6,329,000
2	Projected Revenue Increases Implemented:						
2 a	12.7% Implemented Jan 1, 2012		793,000	796,000	798,000	801,000	804,000
2 b	7.2% Implemented Jan 1, 2013			508,000	510,000	512,000	514,000
2 c	7.2% Implemented Jan 1, 2014				547,000	549,000	551,000
2 d	7.2% Implemented Jan 1, 2015					588,000	590,000
2 e	7.2% Implemented Jan 1, 2016						633,000
3	Total Water Revenues	6,224,000	7,038,000	7,570,000	8,142,000	8,758,000	9,421,000
4	Bad Debt Expense	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
5	Net Water Revenues	6,223,000	7,037,000	7,569,000	8,141,000	8,757,000	9,420,000
6	Other Operating Revenue	247,000	178,000	178,000	177,000	177,000	177,000
7	Interest Income	9,000	9,000	10,000	11,000	11,000	13,000
8	Total Revenue	6,479,000	7,224,000	7,757,000	8,329,000	8,945,000	9,610,000
9	Operation and Maintenance Expense	(3,349,000)	(3,482,000)	(3,625,000)	(3,776,000)	(3,937,000)	(4,109,000)
10	Net Revenue	3,130,000	3,742,000	4,132,000	4,553,000	5,008,000	5,501,000
	Revenue Bond Debt Service						
11 a	Outstanding Bonds	0	0	0	0	0	0
11 b	Proposed Future Bonds	0	0	0	0	0	0
11	Total Revenue Bond Debt Service	0	0	0	0	0	0
	GO Bond Debt Service						
12 a	Outstanding GO Bonds	(1,366,000)	(1,363,000)	(1,358,000)	(1,357,000)	(1,355,000)	(1,351,000)
12 b	Proposed Future GO Bonds	0	0	0	0	0	0
12	Total GO Bond Debt Service	(1,366,000)	(1,363,000)	(1,358,000)	(1,357,000)	(1,355,000)	(1,351,000)
	Deposits (to)/from Reserve Funds						
13	Deposits (to)/from Debt Service Reserve	0	0	0	0	0	0
14	Deposits (to) Operating Reserve	0	(115,000)	(117,000)	(120,000)	(122,000)	(126,000)
15	Deposits (to) Contingency Reserve	0	(29,000)	(31,000)	(33,000)	(36,000)	(38,000)
16	Deposits (to) Depreciation Reserve	(133,000)	(137,000)	(140,000)	(143,000)	(147,000)	(151,000)
17	Total Deposits (to)/from Reserves	(133,000)	(281,000)	(288,000)	(296,000)	(305,000)	(315,000)
18	Beginning of Year Available Balances	56,000	56,000	56,000	56,000	56,000	56,000
19	Total Available Funds	1,554,000	2,017,000	2,402,000	2,813,000	3,257,000	3,740,000
	Transfers						
20	Transfer to Construction Fund	(1,176,000)	(1,031,000)	(1,993,000)	(1,469,000)	(1,644,000)	(1,648,000)
21	Transfer to General Fund	(322,000)	(930,000)	(353,000)	(1,288,000)	(1,557,000)	(2,036,000)
22	End of Year Available Balance (Excluding Reserves)	**56,000**	**56,000**	**56,000**	**56,000**	**56,000**	**56,000**
	CONSTRUCTION FUND						
23	Beginning of Year Balance (Available Cash)	0	0	0	0	0	0
24	Projected Revenue Bond Issue	0	0	0	*0*	0	0
25	Less: Issuance Costs	0	0	0	0	0	0
26	Less: Debt Service Reserve Fund	0	0	0	0	0	0
27	Net Revenue Bond Proceeds	0	0	0	0	0	0
28	Projected G.O. Bond Issue	0	0	0	0	0	0
29	Less: Issuance Costs	0	0	0	0	0	0
30	Net G.O. Bond Proceeds	0	0	0	0	0	0
31	Transfers from System Operations	1,176,000	1,031,000	1,993,000	1,469,000	1,644,000	1,648,000
32	Transfers from Depreciation Reserve	90,000	100,000	96,000	25,000	37,000	0
33	Transfers from Contingency Reserve	0	0	0	0	0	0
34	Interest Income	0	0	0	0	0	0
35	Total Available Funds	1,266,000	1,131,000	2,089,000	1,494,000	1,681,000	1,648,000
36	Capital Improvement Program Appropriations	(1,266,000)	(1,131,000)	(2,089,000)	(1,494,000)	(1,681,000)	(1,648,000)
37	End of Year Balance	**0**	**0**	**0**	**0**	**0**	**0**
	CUMULATIVE RESERVE BALANCES						
38	Debt Service Reserve Fund (from/to Line 13)	0	0	0	0	0	0
39	Operating Reserve Fund (from/to Line 14)	0	116,000	237,000	363,000	494,000	631,000
40	Contingency Reserve Fund (from/to Line 15)	0	29,000	60,000	93,000	129,000	167,000
41	Depreciation Reserve Fund (from/to Lines 16/33)	646,000	695,000	754,000	888,000	1,017,000	1,190,000
	BOND COVENANTS						
42	Total Debt Service Coverage	2.06	2.06	2.78	2.41	2.55	2.56

Table 2-2
Water Utility
Historical and Projected Active Accounts

Line No.	Classes of Service	Historical				Projected					
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	Inside City	7,348	7,427	7,840	7,868	7,898	7,928	7,958	7,988	8,018	8,048
2	Outside City	2,219	2,227	2,321	2,325	2,330	2,335	2,340	2,345	2,350	2,355
3	Total	9,567	9,654	10,161	10,193	10,228	10,263	10,298	10,333	10,368	10,403
4	Annual Growth		0.91%	5.25%	0.31%	0.34%	0.34%	0.34%	0.34%	0.34%	0.34%

Table 2-3
Water Utility
Historical and Projected Billable Volume

Line No.	Classes of Service	Historical				Projected					
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		Ccf	Ccf	Ccf	Ccf	Ccf	Ccf	Ccf	Ccf	Ccf	Ccf
1	Inside City	1,212,823	1,146,178	1,072,630	1,090,901	1,103,620	1,107,820	1,112,020	1,116,220	1,120,420	1,124,620
2	Outside City	327,191	314,146	303,824	274,544	279,300	279,900	280,500	281,100	281,700	282,300
3	Total	7,825,145	1,460,324	1,376,454	1,365,445	1,382,920	1,387,720	1,392,520	1,397,320	1,402,120	1,406,920
4	Annual Growth		-81.34%	-5.74%	-0.80%	1.28%	0.35%	0.35%	0.34%	0.34%	0.34%

Notes: *Ccf = hundred cubic feet*

Table 2-4
Water Utility
Historical and Projected Revenue Under Existing Rates

Line No.	Classes of Service	Historical				Projected					
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		$	$	$	$	$	$	$	$	$	$
	Service Revenue[1]										
1	Inside City	3,309,000	3,120,000	3,337,000	4,582,000	4,637,000	4,655,000	4,672,000	4,690,000	4,708,000	4,725,000
2	Outside City	1,217,000	1,166,000	1,303,000	1,567,000	1,587,000	1,590,000	1,594,000	1,597,000	1,600,000	1,604,000
3	Total[2]	4,526,000	4,286,000	4,640,000	6,149,000	6,224,000	6,245,000	6,266,000	6,287,000	6,308,000	6,329,000

Notes: [1] Service revenue includes Hydrant Charge for Outside City.
[2] Differences in totals for each summary are due to rounding adjustments.

Table 2-5
Water Utility
Historical and Projected Other Operating Revenue

Line No.	Classes of Service	Historical					Projected				
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
		$	$	$	$	$	$	$	$	$	$
1	Penalties	15,000	15,000	13,000	11,000	12,000	12,000	14,000	14,000	14,000	14,000
2	Service Fees	11,000	58,000	26,000	22,000	29,000	29,000	30,000	30,000	31,000	31,000
3	Grant Revenue	118,000	54,000	126,000	0	24,000	24,000	20,000	20,000	20,000	20,000
4	Assessments	0	0	0	0	0	0	0	0	0	0
5	Tower Rentals	0	0	0	0	0	165,000	100,000	100,000	100,000	100,000
6	Miscellaneous Income	27,000	22,000	25,000	10,000	16,000	16,000	15,000	14,000	13,000	12,000
7	Total[1]	171,000	149,000	190,000	43,000	81,000	246,000	179,000	178,000	178,000	177,000

Notes: [1] Differences in totals for each summary are due to rounding adjustments.
[2] Miscellaneous revenue excludes the FY 2008 litigation settlement of ($3.6) Million.

Table 2-6
Water Utility
Historical and Projected Operation & Maintenance Expense

Line No.	Budget Cost Center	Historical					Projected					
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		$	$	$	$	$	$	$	$	$	$	$
1	Personal Services	1,574,000	1,569,000	1,708,000	1,721,000	1,705,000	1,778,000	1,873,000	1,975,000	2,085,000	2,203,000	2,332,000
2	Materials and Supplies	253,000	248,000	275,000	281,000	301,000	301,000	309,000	317,000	324,000	333,000	341,000
3	Contractual Services	222,000	185,000	480,000	329,000	454,000	515,000	528,000	541,000	555,000	569,000	583,000
4	Other Charges	79,000	81,000	80,000	97,000	70,000	139,000	142,000	146,000	150,000	153,000	157,000
5	Inter Department Charges	391,000	429,000	492,000	427,000	463,000	749,000	768,000	787,000	807,000	827,000	847,000
6	Total[1]	2,519,000	2,512,000	3,035,000	2,855,000	2,993,000	3,482,000	3,620,000	3,766,000	3,921,000	4,085,000	4,260,000
7	Annual Growth		-0.28%	20.82%	-5.93%	4.83%	16.34%	3.96%	4.03%	4.12%	4.18%	4.28%

Notes: [1] Total includes Uncollectible Accounts which is presented as Bad Debt Expense (Line 4 in Table 2-1) and Deposits to Depreciation Reserve as presented in (Line 16 in Table 2-1).

Table 2-7
Water Utility
Summary of Existing Debt Service

Line No.	Description	2011	2012	2013	2014	2015	2016
		$	$	$	$	$	$
	Revenue Bonds						
	No Outstanding Revenue Bonds						
	G.O. Bonds						
1	Series 2002	1,366,000	1,363,000	1,358,000	1,357,000	1,355,000	1,351,000
2	Subtotal[1]	1,366,000	1,363,000	1,358,000	1,357,000	1,355,000	1,351,000
3	Total[1]	1,366,000	1,363,000	1,358,000	1,357,000	1,355,000	1,351,000

Notes: [1] Differences in totals for each summary are due to rounding adjustments.

Table 2-8
Water Utility
Projected Capital Improvement Program
(Inflated)

Line No.	Description	2011	2012	2013	2014	2015	2016
		$	$	$	$	$	$
1	W1101 - Raceway Improvement/Dam Replacement	150,000	75,000	150,000	500,000	1,000,000	500,000
2	W1102 - Lime Silo Rehab and Delivery System	50,000					
3	W1103 - Repairs to Concrete Tank	120,000	75,000	1,000,000			
4	W1104 - Finish Water Mixer	40,000					
5	W1002 - Valve Exerciser	55,000					
6	W0805 - Curtis Plant Filter Upgrades Units 1, 2, 3	250,000					
7	W0806 - Rehabilitate Highfield Booster Station		100,000				
8	W0807 - Arbour Park Booster Station Improvements	150,000					
9	W0503 - Well Restoration	25,000	25,000	27,000	28,000	28,000	28,000
10	W0402 - Fire Hydrant Replacements	11,000	11,000	11,000	11,000	11,000	12,000
11	W0403 - Water Tank Mixing Retrofit		90,000	95,000	100,000	105,000	109,000
12	W0002 - Alternative Disinfection Equipment		150,000				
13	W9410 - Water Plant Lagoon Dredging	200,000					
14	W9302 - Supervisory Control & Data Sys (SCADA)	125,000					
15	W9308 - Water Main Renovation Program		255,000	260,000	500,000	500,000	500,000
16	W8605 - Water Tank Maintenance		250,000	450,000	300,000		
17	WEQSF - Vehicle/Equipment Replacement Program	90,000	100,000	96,000	25,000	37,000	
18	W1201 - Water Main : Windy Hills to Red Mill				30,000		500,000
19	Total	1,266,000	1,131,000	2,089,000	1,494,000	1,681,000	1,649,000
	Summary by Funding Source						
20	Revenue Bonds	0	0	0	0	0	0
21	G.O. Bonds	0	0	0	0	0	0
22	Grants	0	0	0	0	0	0
23	Depreciation Reserve	90,000	100,000	96,000	25,000	37,000	0
24	Cash Funded	1,176,000	1,031,000	1,993,000	1,469,000	1,644,000	1,648,000
25	Total	1,266,000	1,131,000	2,089,000	1,494,000	1,681,000	1,648,000

3 Water Rate Design

A principal consideration in designing rate schedules is to establish rates which are reasonably commensurate with the annual cost of providing water service. Theoretically, the only method of assessing entirely equitable rates for water service would be the determination of each customer's bill based upon the customer's particular service requirements. Since this is impractical for the thousands of accounts served by the utility, schedules of rates are normally designed to meet average conditions for groups (or classes) of customers having similar service requirements. Practicality also dictates the use of a rate schedule which is simple to apply, reasonably recovers costs from all classes, and is subject to as few misinterpretations as possible.

3.1 EXISTING WATER RATES

The schedule of existing rates and charges is shown in Table 3-1. Existing Water Utility service rates consist of a commodity charge applicable to all water usage and a hydrant service charge for outside city service.

3.2 FY 2007 CALCULATED WATER RATES

The Fiscal Year (FY) 2012 proposed schedule of Water Utility rates and charges is shown in Table 3-2. The proposed rates are designed to meet the water revenue increase of 12.7 percent, assuming rates are implemented on January 1, 2012.

The proposed Water Utility rates for all customer classes are based on the current rate structure and the across the board increase required to meet the projected annual net revenue requirements. A rate increase of 14.5 percent is required to meet the 12.7 percent revenue increase due to the pro-rated phase-in of the proposed rates during the first quarter of billing under the proposed rates.

3.2.1 Revenue Comparison

A comparison of projected fiscal year 2012 revenues under proposed and existing rates, as provided on Column (3) of Table 3-3, illustrates that the projected revenues under proposed rates provide the required revenue increase indicated by Table 2-1, Line 2a. A comparison of fiscal year 2012 total annual net revenue requirements to be recovered by service charges, as indicated on Line 3 of Table 2-1, with projected revenues under proposed rates, as shown in Line 5 of Table 3-3, illustrates that the proposed rates result in projected revenues which reasonably recover the annual net revenue requirements.

3.3 FY 2012 ESTIMATED TYPICAL BILLS

Table 3-4 presents a comparison of typical bills under existing rates with typical bills under proposed rates for a variety of meter sizes and usage levels. The comparison provides an indication of the impacts of rate changes on typical customer bills should the City implement the proposed rates.

Table 3-1
Water Utility
Current Rates & Charges
Fiscal Year 2011

	Inside City	Outside City
Commodity Charge ($/Ccf)		
Unit Charge - 1st Block (First 12.73 Ccf)	3.52	4.67
Unit Charge - 2nd Block (Over 12.73 Ccf)	4.48	6.08
Quarterly Hydrant Service Charge	-	2.85

Notes: *Ccf = 100 cubic feet*

Table 3-2
Water Utility
Proposed Rates & Charges
Fiscal Year 2012

	Inside City	Outside City
Commodity Charge ($/Ccf)		
Unit Charge - 1st Block (First 12.73 Ccf)	4.03	5.36
Unit Charge - 2nd Block (Over 12.73 Ccf)	5.13	6.96
Quarterly Hydrant Service Charge	-	3.26

Notes: *Ccf = 100 cubic feet*

Table 3-3
Water Utility
Comparison of Revenues Under Existing and Proposed Rates
Fiscal Year 2012

Line No.	Classes of Service	(1) Revenue Existing Rates $	(2) Revenue Proposed Rates $	(3) Percent Increase
1	Inside City	4,655,000	5,245,000	12.7%
2	Outside City	1,591,000	1,793,000	12.7%
3	Total	6,246,000	7,038,000	12.7%
4	Annual Net Revenue Requirements[1]	7,038,000	7,038,000	
5	Annual Cost Recovery	88.7%	100.0%	

Notes: [1] Annual Net Revenue Requirement to be recovered from service charges as shown on Line 3 of Table 2-1

Table 3-4
Water Utility
Comparison of Typical Bills Under Existing and Proposed Rates
Test Year 2012

		Inside City			Outside City		
Meter Size	Billed Volume	Existing Rates	Proposed Rates	Increase (Decrease)	Existing Rates	Proposed Rates	Increase (Decrease)
Inches	Ccf	$	$		$	$	
5/8	0	0.00	0.00	-	2.85	3.26	14.4%
5/8	10	35.20	40.30	14.5%	49.55	56.86	14.8%
5/8	15	54.98	62.95	14.5%	76.10	87.29	14.7%
5/8	20	77.38	88.60	14.5%	106.50	122.09	14.6%
5/8	30	122.18	139.90	14.5%	167.30	191.69	14.6%
1	25	99.78	114.25	14.5%	136.90	156.89	14.6%
1	100	435.78	499.00	14.5%	592.90	678.89	14.5%
1	200	883.78	1,012.00	14.5%	1,200.90	1,374.89	14.5%
1.5	75	323.78	370.75	14.5%	440.90	504.89	14.5%
1.5	230	1,018.18	1,165.90	14.5%	1,383.30	1,583.69	14.5%
1.5	350	1,555.78	1,781.50	14.5%	2,112.90	2,418.89	14.5%
2	100	435.78	499.00	14.5%	592.90	678.89	14.5%
2	280	1,242.18	1,422.40	14.5%	1,687.30	1,931.69	14.5%
2	650	2,899.78	3,320.50	14.5%	3,936.90	4,506.89	14.5%
3	200	883.78	1,012.00	14.5%	1,200.90	1,374.89	14.5%
3	1,000	4,467.78	5,116.00	14.5%	6,064.90	6,942.89	14.5%
3	1,900	8,499.78	9,733.00	14.5%	11,536.90	13,206.89	14.5%
4	1,000	4,467.78	5,116.00	14.5%	6,064.90	6,942.89	14.5%
4	2,000	8,947.78	10,246.00	14.5%	12,144.90	13,902.89	14.5%
6	1,500	6,707.78	7,681.00	14.5%	9,104.90	10,422.89	14.5%
6	4,000	17,907.78	20,506.00	14.5%	24,304.90	27,822.89	14.5%
8	2,000	8,947.78	10,246.00	14.5%	12,144.90	13,902.89	14.5%
8	6,000	26,867.78	30,766.00	14.5%	36,464.90	41,742.89	14.5%

Notes: *Ccf = 100 cubic feet*