

# **Section IV**

## **Water Fund**

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**Mission Statement**

The mission of the Water Division is to enhance Concord's quality of life, and through sound management, innovation, teamwork and vision, provide dependable, high quality, responsive water utility services, consistent with values and at reasonable costs to Concord's citizens, businesses, institutions and visitors.

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**Water Fund Highlights**

- The proposed FY15 base level (Step 1) water rate of \$4.59 per unit represents a 4% increase over the FY14 rate of \$4.41 per unit. Since FY 1999, Water rates have increased by an average of 4.3% per year.
- The proposed FY15 capital investment plan is \$1.6 million.
- Water Main Replacement: A budget allowance of \$1,900,000 over FY 2014 and FY 2015 is proposed for multi-year activities planned for the Southfield/Riverdale Road neighborhood.
- The proposed FY15 Operating Income is \$851,802 and Net Income is \$721,487.
- Borrowing request anticipated at April 2015 Annual Town Meeting: Nagog Pond Filtration Plant (\$6.4M) rehabilitation of Annursnac Hill Reservoir (\$980K).

**Expenditure Summary**

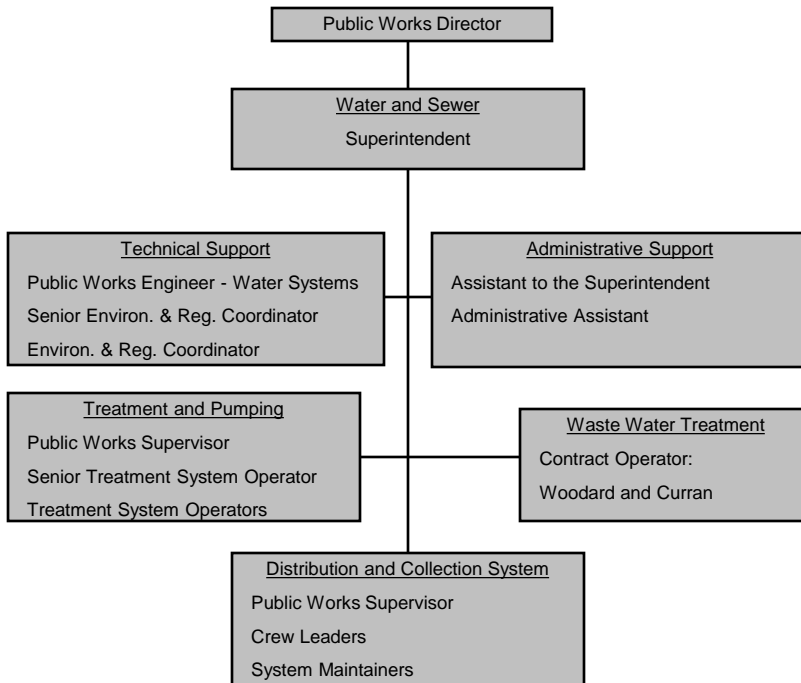
	FY12 Actual	FY13 Actual	FY14 Budget	FY15 Proposed
Operating Income	\$ 1,218,696	\$ 1,395,162	\$ 879,640	\$ 851,802
Net Income	\$ 1,043,555	\$ 1,248,140	\$ 731,821	\$ 721,487
Fund Balance	\$ 6,083,940	\$ 6,353,664	\$ 5,239,306	\$ 4,871,699

**Description:**

Concord received legislative authority to establish a public water system in 1872. Today the system consists of ground-water and surface water sources, a total of seven pumping stations, two advanced treatment facilities, and a high pressure water main network consisting of over 130 miles of pipe. Two covered storage reservoirs, one located at Annursnac Hill and the other located at Pine Hill in Lincoln provide total reserve capacity of 7.5 million gallons.

The 1974 Annual Town Meeting established the Water Fund. Expenses for the water system are covered entirely by user fees. The Water and Sewer Division of Concord Public Works is responsible for managing the day-to-day operations of the water infrastructure. As of 2013, the total value of infrastructure assets was approximately \$19.8 million.

There are presently 5,511 customers receiving potable water service and fire protection from the Town water system. This represents approximately 95% of Concord residents and businesses, along with a small number of Acton properties located on Route 2A.



The Concord Water System is designed to meet a variety of customer needs and interests, which include the provision of safe and reliable potable water, high volume flows for fire protection and integrated water resource protection. Drinking water quality and water withdrawal activities are strictly regulated by the Massachusetts Department of Environmental Protection (MA DEP) and the federal Environmental Protection Agency (EPA).



Water Main Valve Replacement

Long Term Financial Stability

Along with its core mission to operate and maintain the Town’s water system in a reliable and efficient manner, the Water Enterprise must also be financially self-supporting. This means that the Water Division is expected to cover all costs associated with operations, capital maintenance and repairs by generating sufficient revenue through user fees and special service fees. The Water Division maintains a detailed 10-year financial proforma to facilitate long range planning for all revenues and anticipated investments.

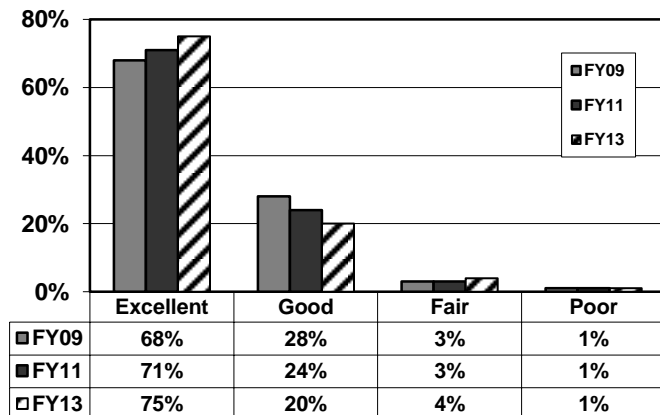
Since the Water Enterprise fund was formally established in 1974, there have been no property tax contributions requested to subsidize annual operations or maintenance of pre-existing infrastructure. Taxpayer contributions would only be sought for major system expansion projects or facility upgrades designed to meet broader community interests. No such projects are presently contemplated.

Citizen Survey

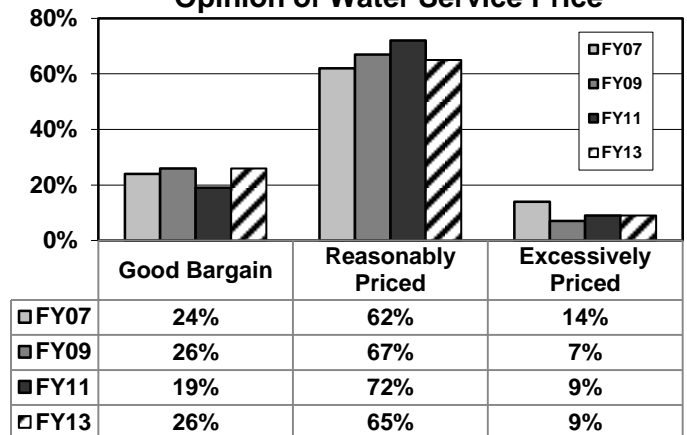
In the fall of 2009, 2011, and 2013 the Town conducted telephone surveys of 300 randomly selected Concord residents. For the Water Division, two questions were asked. Below left are the results of the question, “How would you rate the overall quality of water service?” Of those who said they use the service, the vast majority (75%) thought that the quality is Excellent and another (20%) thought it is Good.

Below right are the results of the question, “What is your opinion of the price of water service?” In FY13, of those who said they use the service, 26% thought that the price is a Good Bargain and 65% thought that it is Reasonably Priced. From FY09 to FY13, we see a consistent opinion that water services are a good bargain.

**Rating of Water Service**



**Opinion of Water Service Price**



Water Rates

The total revenue projected to be raised through water user fees in FY15 is \$4,576,000 which represents 97% of total Water Fund revenues.

User fees are assessed according to actual measured (metered) use.

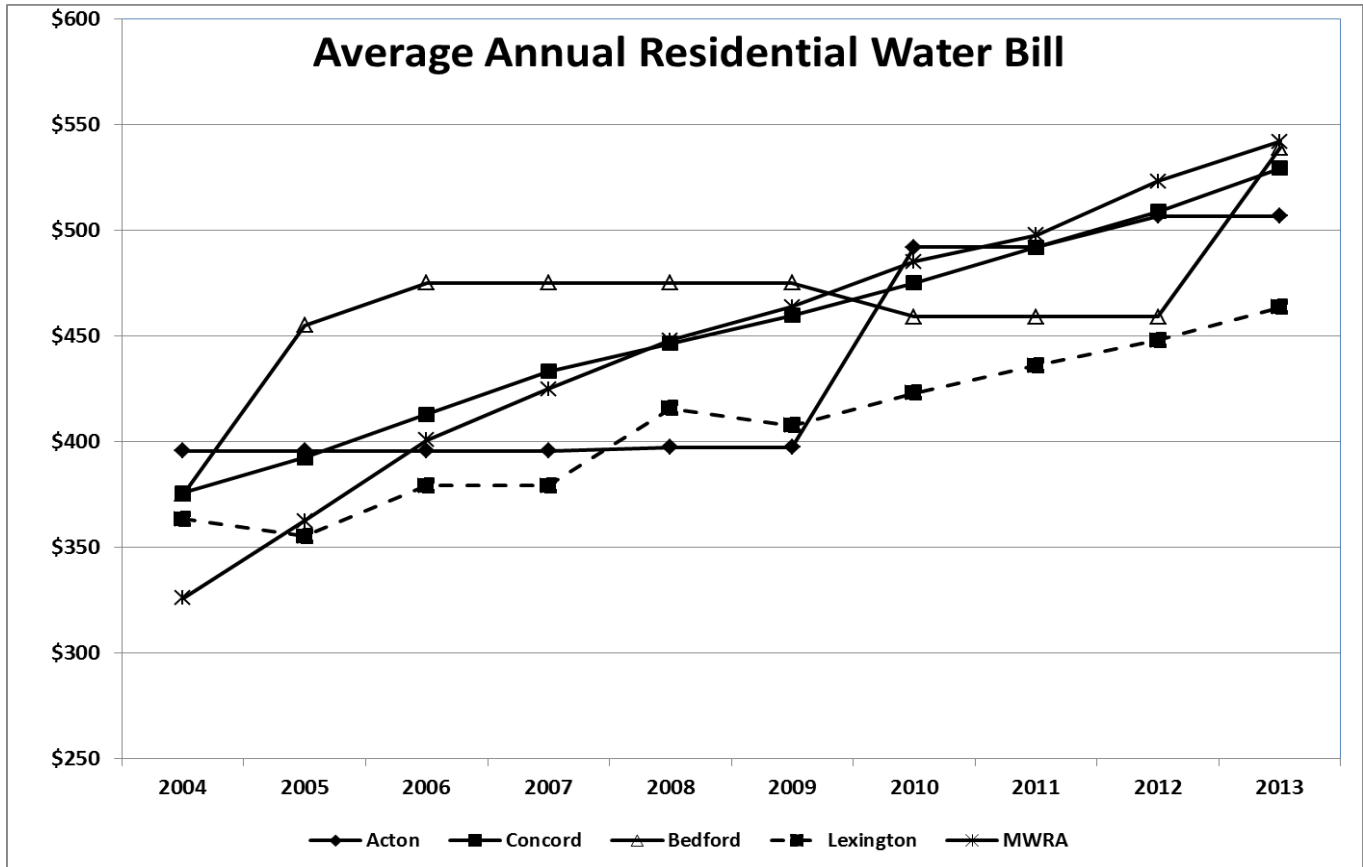
Rates are set each year by the Public Works Commission following a public hearing with the following goals:

1. To ensure that the Division has the resources to operate, maintain, and improve the system;
2. To encourage users to conserve water; and
3. To minimize rate changes so that water use can be a relatively predictable expense for customers.

Water Rate Highlights

**The FY15 proposed Residential Service (step 1) water rate is \$4.59 per unit (1 unit = 748 gallons)**

- The FY15 rate of \$4.59 represents a 4% increase over the FY14 rate of \$4.41.
- In FY15, the average residential customer is expected to pay a total of \$413 in water use over the course of the year. The average residential customer is assumed to use 15 units bimonthly at the step 1 residential service cost of \$4.59 per unit.
- Customers who consume 25 or more units of water bimonthly will pay a higher rate (a Conservation Step).
- Property owners who meet certain age and income criteria may qualify for a 50% discount on the step 1 residential rates.



Rate comparisons are provided for general information only; differences exist in the management and financial structure of every system. Concord prides itself on operating as a full cost accounting enterprise where rates are designed to cover O&M, depreciation and long-term investment needs. Concord is one of only 6% of systems within Massachusetts which have adopted a seasonal ascending-block conservation rate structure. (From Tighe and Bond Survey, 2010)

### Program Highlights

The programs and initiatives highlighted below are provided to raise awareness of some of the more noteworthy and potentially significant challenges facing the short-term and long-term financial well-being of the Water Fund.

#### **State Water Policies:**

In order to develop a water allocation scheme that would be protective of both human and environmental interests, the Massachusetts Department of Environmental Protection (DEP) released new regulations regarding sustainable water management. The regulations contain many components including a new safe yield methodology, biological categorization of rivers and streams based on certain fish species, stream-flow criteria, requirements for minimization of existing impact of water supplies in flow-depleted watersheds, and offsets and mitigation requirements for additional water withdrawal. Once promulgated, future requests for municipal water, via new development or an expansion of an existing use, will need to be offset by an equivalent reduction of water use from somewhere else within the same water supply system, or, if unavailable, by direct or indirect streamflow mitigation. Although a cost-benefit analysis has not been performed, a feasibility analysis by the state suggests that a community like Concord could expect to see investment obligations upwards of \$50,000 per year for compliance. Regardless of the cost and feasibility, these proposed regulations will certainly influence the way a public water system is managed.

#### **Nagog Pond Water Supply Master Plan:**

The use of Nagog Pond continues to be restricted to peak summer demand periods. This rationed use has successfully allowed the Town to maintain a long-standing source water filtration waiver dating back to 1992, based on the demonstrated excellent water quality of the pond. As system needs have evolved, the Public Works Commission has determined that it would be useful for a Nagog Pond Water Supply Master Plan to be developed in order to assess costs associated with the installation of a state-of-the art filtration system, should it be determined necessary to proceed with full scale design, permitting and construction of a filtration facility in the near future.

A contract was awarded to Environmental Partners Group, Inc. (EPG) of Weymouth Massachusetts for this work. EPG was specifically asked to: assess existing watershed management activities (with a goal of determining the highest and best practicable use of these lands); evaluate the most appropriate surface water treatment technologies; and evaluate the 100-year old drinking water intake line to determine if it requires rehabilitation or replacement.

After completing a water quality treatment "alternative analysis", EPG developed a detailed pilot plan to evaluate the most favorable treatment processes and designs. The objectives of the pilot plan were: to assess the use of various oxidation processes for pre-treatment; to assess the role of coagulation/flocculation for the removal of natural organic matter and solids separation performance; to assess the effectiveness of dissolved air flotation (DAF) for clarification and solids separation performance; and to assess the effectiveness of media filtration on solids separation performance. Ultimately, this work will lead to the identification of process operating parameters for the design of a full-scale water treatment facility, including: chemical dosages, mixing, and contact times; plant and process hydraulics; process sizing and loading rates; filtration media depth and materials; process cleaning cycles; and residuals management. This two season (warm and cold weather) pilot plan was approved by MassDEP and commenced on August 1st, 2013.

Environmental Partners Group, working with sub-contractors Epsilon Associates and Mackie Shea O'Brien, also completed a *Nagog Pond Watershed and Solar Feasibility Study*. A draft report presented to the Town is under review. The report characterizes all existing land uses within the Nagog Pond Watershed and highlights Town of Concord owned parcels where modest improvements could potentially allow for the siting of alternative energy systems which would ultimately be used to offset increased energy demands required for advanced drinking water treatment.

Program Highlights (continued)

**Water Testing:** All routine and non-routine water quality testing activities are performed in accordance with Massachusetts Department of Environmental Protection regulations. Testing continues to demonstrate that the drinking water provided to customers satisfies State and Federal requirements imposed on public water systems. A summary of the water quality test results is available on the Town website.

**Cross Connection Control Program:** The Division awarded a new three year contract to Water Safety Services (Woburn, MA). Water Safety Services (WSS) has been working with the Town since the program's inception in 1996. The new contract will allow them to continue to provide the Town with effective and timely assistance and support in implementing a program which has been developed to protect customers from potential sources of contamination from plumbing connections and processes inside the customers' buildings. A provision of this new contract required WSS to re-survey all commercial properties within the Town to identify any new cross connections that could inadvertently compromise water quality within our public supply under certain unusual circumstances. Sixteen new locations meriting the installation of appropriate backflow prevention devices were identified.

**Robinson Well:** Located off Sudbury Road, the Robinson Well was taken off line to allow for the emergency repair of a motor which appeared to have been damaged by a local power supply surge. Fortunately, the event occurred outside of the peak (summer) demand period and resulted in little to no adverse impact on supply or service. Denis L. Maher (Ayer, MA) restored the Robinson well to full service after removing, cleaning, and inspecting the entire pump assembly and furnishing and installing a new 60 HP motor.

**Jennie Dugan Well:** Located off Old Marlboro Road, the Jennie Dugan Well was also taken off line during the off-peak demand period to allow for scheduled refurbishing of all water treatment components and to allow for a thorough cleaning and painting of all interior surfaces. While much of this work was performed by Division operations personnel, Economic Environmental Tech Inc. of Fitchburg Ma, a licensed hazardous material contractor, was called in to remove a small quantity of asbestos pipe insulation which had been installed in 1965 as part of the original heating system.

**Pine Hill and Annursnac Hill Reservoirs:** Solarbee Inc. informed the Water Division that the mixing system the Town had recently procured might be at risk of failure due to an electrical faulting issue. Because of a strong working relationship established between the Town and Solarbee, Inc. (Concord was one of the first systems in the north-east to use this new mixing system), they voluntarily upgraded all three units. The upgraded units have distinct operational advantages over the original units and have been running without incident.

**Mains (New/Replacement):** Working in concert with Concord Public Works Engineering Division, the Water operations group re-laid several hundred feet of 8-inch water main near the intersection of Wilson Road and Nashoba Road. This work was required to accommodate a new stormwater detention basin in the small traffic island located in this intersection. .

**Leak Detection Survey:** Liston Utility Services completed a leak detection survey of approximately 50% of the Town's entire water distribution system. This survey involved the use of strategically placed acoustic sensors and recording instrumentation that pinpoint the location of even extremely small leaks. This work is required to help identify and eliminate "unaccounted for" water losses throughout the distribution system. This past year, the assessment was performed in the northern area of Town (north of Route 2). Once again, the water system was confirmed to be very tight, with only one small leak identified in a private water service. This leak was estimated to be losing water at a rate of approximately 8 gallons per minute (11,520 gallons per day) and was immediately repaired.

**Program Implementation**

The proposed FY15 budget provides for an operating income of \$851,802 and a net income of \$721,487.

Depreciation expense reflects the cost imposed by the annual use, or wear-and-tear, of the Water Division's approximately \$19.8 million worth of infrastructure (as of the end of FY13). The budgeted depreciation expense, totaling \$993,406, represents a depreciation of roughly 5% of these capital assets in FY15.

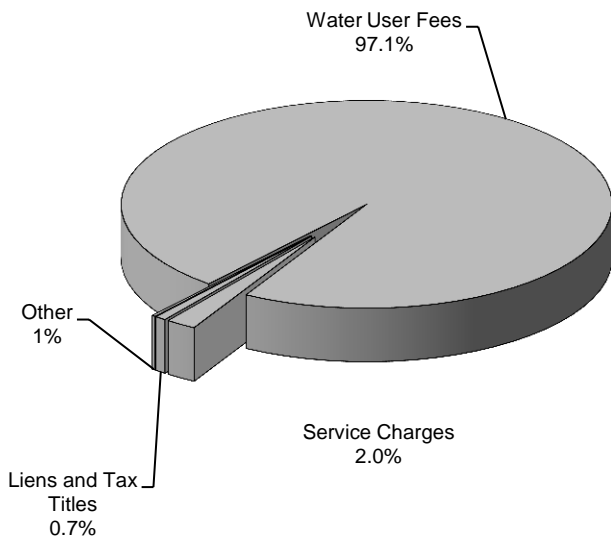
Personnel Services are budgeted to total \$1,192,325 in FY15, a 5.3% increase from the revised FY14 total of \$1,132,394. There is no change in staffing or overtime hours.

The next largest expense categories are for electricity (\$270,330) and chemicals (\$217,147); these vary widely from year-to-year based on the demand for water. Budgets for these accounts are based on anticipating a relatively strong demand for water. This demand is directly affected by weather trends as well as the water conservation behavior of customers.

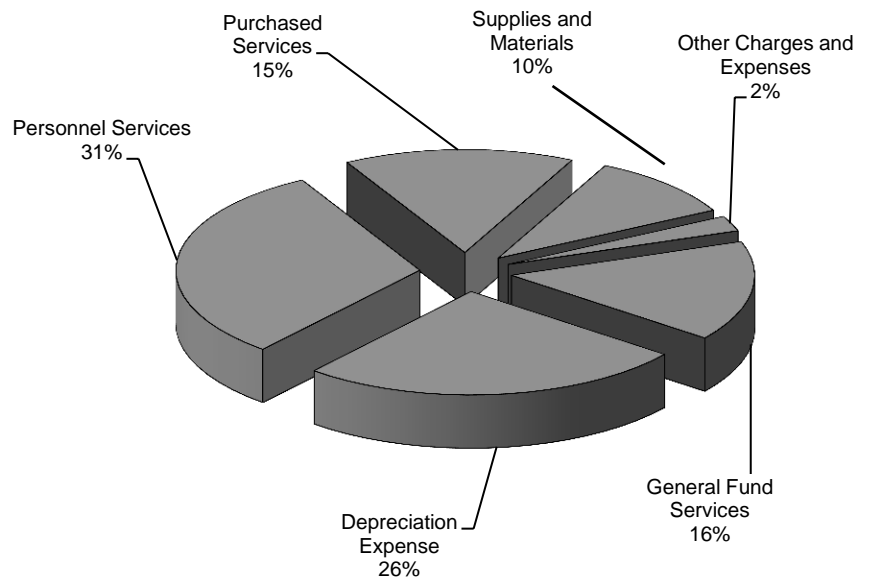
The FY15 Budget also includes \$55,773 for water quality testing at 7 pumping stations, 2 reservoirs and throughout the distribution system.

In addition, the FY15 budget includes \$67,320 for inspection services, including leak detection covering half of the entire system (the entire system is checked every two years) and testing of backflow prevention devices at commercial facilities. The budget also includes \$36,960 for electrical, instrumentation and other maintenance and support services at the pumping stations and reservoirs.

**FY15 Operating Revenues**  
Totaling \$4,715,000



**FY15 Operating Expenditures**  
Totaling \$3,863,199





**OPERATING REVENUES**

	FY12 Actual	FY13 Actual	Rev. FY14 Budget	FY15 Budget
Water User Fees	\$ 4,060,703	\$ 4,416,583	\$ 4,469,000	\$ 4,576,000
Service Charges	215,520	92,280	93,000	94,000
Liens and Tax Titles	35,470	33,722	34,000	34,000
Other	13,621	11,838	11,000	11,000
<b>Operating Revenues Total</b>	<b>\$ 4,325,314</b>	<b>\$ 4,554,423</b>	<b>\$ 4,607,000</b>	<b>\$ 4,715,000</b>

**OPERATING EXPENSES**

	FY12 Actual	FY13 Actual	Rev. FY14 Budget	FY15 Budget
<b><u>Personnel Services</u></b>				
Personnel Expenses	\$ 1,018,424	\$ 1,024,508	\$ 1,132,394	\$ 1,192,325
Audit Adjustment	(5,371)	16,972	-	-
<b>Subtotal</b>	<b>\$ 1,013,053</b>	<b>\$ 1,041,480</b>	<b>\$ 1,132,394</b>	<b>\$ 1,192,325</b>
<b><u>Non-Personnel Services</u></b>				
Purchased Services	423,434	425,265	643,251	590,701
Supplies & Materials	312,295	344,953	382,376	387,718
Other Charges & Expenses	57,303	60,451	92,621	92,722
Audit Adjustment	9,803	(46,883)	-	-
<b>Subtotal</b>	<b>\$ 802,836</b>	<b>\$ 783,786</b>	<b>\$ 1,118,248</b>	<b>\$ 1,071,141</b>
<b><u>Other</u></b>				
General Fund Services	532,935	555,471	584,315	606,327
Depreciation Expense	757,794	778,524	892,403	993,406
<b>Subtotal</b>	<b>\$ 1,290,729</b>	<b>\$ 1,333,995</b>	<b>\$ 1,476,718</b>	<b>\$ 1,599,733</b>
<b>Total Operating Expense</b>	<b>\$ 3,106,618</b>	<b>\$ 3,159,261</b>	<b>\$ 3,727,360</b>	<b>\$ 3,863,199</b>

**RETIREMENT AND OPEB ASSESSMENT**

<i>For Informational Purposes Only</i>				
	FY12 Actual	FY13 Actual	Rev. FY14 Budget	FY15 Budget
<b><u>Personnel Services</u></b>				
Retirement Assessment	\$ 35,345	\$ 36,158	\$ 62,590	\$ 64,305
OPEB Assessment	74,498	18,175	16,402	17,000
<b>Total Assessment</b>	<b>\$ 109,843</b>	<b>\$ 54,333</b>	<b>\$ 78,992</b>	<b>\$ 81,305</b>

**AUTHORIZED POSITIONS**

<b>Regular Staff</b>	<b>FY14 Revised Budget</b>		<b>FY15 Initial Budget</b>	
	<b>\$ Amount</b>	<b>Position/Hours</b>	<b>\$ Amount</b>	<b>Position/Hours</b>
Water and Sewer Superintendent	\$ 85,325	0.80 FTEs	\$ 85,325	0.80 FTEs
Public Works Engineer	14,044	0.20	14,044	0.20
Assistant to Superintendent	67,558	0.80	67,558	0.80
Sr. Environ. & Regulatory. Coord.	59,994	0.80	60,083	0.80
Environ. & Regulatory. Coord.	39,718	0.80	39,718	0.80
Administrative Assistant	47,213	0.80	48,477	0.80
Public Works Supervisor	125,592	1.60	128,663	1.60
Crew Leader	105,170	1.60	107,925	1.60
Senior Treatment Systems Operator	51,766	0.80	53,058	0.80
Treatment System Operator	88,210	1.60	91,509	1.60
System Maintainer	186,720	4.00	196,272	4.00
Standby Pay (5111)	13,751	0.17	14,058	0.17
Charges to Snow Account	(4,328)	-0.08	(4,328)	-0.08
Charges to Capital Projects	(18,929)	N/A	(18,929)	0
Vacancy Savings	-	0	-	0
Salary Adjustments	-	-	19,853	-
<b>Subtotal</b>	<b>\$ 861,804</b>	<b>13.89 FTEs</b>	<b>\$ 903,286</b>	<b>13.89 FTEs</b>
<b>5120</b>				
Environmental Technology Intern	\$ -	0 hrs.	\$ 5,200	520 hrs.
GIS Project Specialist	2,156	112 hrs.	2,156	112 hrs.
<b>Subtotal</b>	<b>\$ 2,156</b>	<b>0.05 FTEs</b>	<b>\$ 7,356</b>	<b>0.30 FTEs</b>
<b>Employee Benefits</b>				
Health Insurance	\$ 76,582	N/A	\$ 75,000	N/A
Life Insurance	-	N/A	-	N/A
Dental Insurance	-	N/A	-	N/A
Retirement Contribution	62,590	N/A	64,305	N/A
OPEB Contribution	16,402	N/A	17,000	N/A
<b>Subtotal</b>	<b>\$ 155,574</b>	<b>N/A</b>	<b>\$ 156,305</b>	<b>N/A</b>
<b>Payroll Taxes</b>				
Medicare Tax	\$ 10,100	N/A	\$ 9,700	N/A
Social Security Contribution	1,900	N/A	1,800	N/A
<b>Subtotal</b>	<b>\$ 12,000</b>	<b>N/A</b>	<b>\$ 11,500</b>	<b>N/A</b>
<b>Other Personnel Costs</b>				
Overtime (5130)	\$ 79,859	1900 hrs.	\$ 91,504	1900 hrs.
Overtime Adjustments (5130)	-	N/A	1,373	N/A
Police Overtime (5131)	7,400	800 hrs.	7,400	800 hrs.
Mobile Phone Allowance	3,456	N/A	3,456	N/A
IT Salary (5111)	10,145	N/A	10,145	N/A
<b>Subtotal</b>	<b>\$ 100,860</b>	<b>N/A</b>	<b>\$ 113,878</b>	<b>N/A</b>
<b>Total Personnel Costs</b>	<b>\$ 1,132,394</b>	<b>13.95 FTEs</b>	<b>\$ 1,192,325</b>	<b>14.20 FTEs</b>

**NET INCOME**

	FY12 Actual	FY13 Actual	Rev. FY14 Budget	FY15 Budget
<b>Statement of Net Income:</b>				
Operating Revenues	\$ 4,325,314	\$ 4,554,423	\$ 4,607,000	\$ 4,715,000
Less Operating Expenses	(3,106,618)	(3,159,261)	(3,727,361)	(3,863,199)
<b>Operating Income</b>	<b>\$ 1,218,696</b>	<b>\$ 1,395,162</b>	<b>\$ 879,640</b>	<b>\$ 851,802</b>
<b>Nonoperating Revenues (Expenses)</b>				
Add Investment Income	\$ 19,626	\$ 14,025	\$ 26,508	\$ 22,829
Add Other Revenue	\$ -	\$ 11,820		
Less Interest Expense	(194,767)	(172,867)	(169,327)	(153,144)
Issuance Expense	-	-	(5,000)	-
<b>Nonoperating Income</b>	<b>\$ (175,141)</b>	<b>\$ (147,022)</b>	<b>\$ (147,819)</b>	<b>\$ (130,315)</b>
<b>Net Income</b>	<b>\$ 1,043,555</b>	<b>\$ 1,248,140</b>	<b>\$ 731,821</b>	<b>\$ 721,487</b>

**AVAILABLE RESOURCES**

<b>Resources Available from Current Operations for Replacement &amp; Renewal of Facility:</b>				
	FY12 Actual	FY13 Actual	Rev. FY14 Budget	FY15 Budget
<b>Capital Purposes</b>				
Add Depreciation Expense	\$ 757,794	\$ 778,524	\$ 892,403	\$ 993,406
Add Net Income	1,043,555	1,248,140	731,821	721,487
Add Debt Financing	-	400,000	-	-
Less Bonds Payable	(670,000)	(470,000)	(520,000)	(520,000)
<b>Net Available for Capital</b>	<b>\$ 1,131,349</b>	<b>\$ 1,956,664</b>	<b>\$ 1,104,224</b>	<b>\$ 1,194,893</b>

**CASH POSITION AND FUND BALANCE FORECAST**

<b>Cash at Year Opening</b>	<b>FY14</b>		<b>FY15</b>	
	Operating Fund	Depreciation Fund	Operating Fund	Depreciation Fund
<b>Cash on July 1st</b>	\$ 5,858,743		\$ 4,744,385	
Add Receivables	829,076		829,076	
Add Inventory & Other Assets	145,601		145,601	
Less Cash held for Liabilities	(479,756)		(479,756)	
<b>Fund Balance on July 1st</b>	<b>\$ 6,353,664</b>		<b>\$ 5,239,306</b>	
<b>Fund Balance Details (projected)</b>	Operating Fund	Depreciation Fund	Operating Fund	Depreciation Fund
Fund Balance on July 1st	\$ 3,820,735	\$ 2,532,929	\$ 4,032,556	\$ 1,206,750
Net Income	731,821	-	721,487	-
Borrowing Proceeds (Repayment)	(520,000)	-	(520,000)	-
User Fee Supported Capital Outlay	-	(2,218,582)	-	(1,562,500)
Borrowing Supported Capital	-	-	-	-
Add Depreciation Exp./Capital Rsv.	-	892,403	-	993,406
Balance Projected at June 30th	4,032,556	1,206,750	4,234,043	637,656
<b>Fund Balance on June 30th</b>	<b>\$ 5,239,306</b>		<b>\$ 4,871,699</b>	
<b>Cash at Year End (projected)</b>				
Fund Balance on June 30th	\$ 5,239,306		\$ 4,871,699	
Less Receivables	(829,076)		(829,076)	
Less Inventory & Other Assets	(145,601)		(145,601)	
Add Unspent Borrowing	-		-	
Add Cash Held for Liabilities	479,756		479,756	
<b>Projected Cash at June 30th</b>	<b>\$ 4,744,385</b>		<b>\$ 4,376,778</b>	

**DEBT SERVICE**

	FY12		FY13		Rev. FY14		FY15	
<b>Long-Term Debt Repayment</b>	Actual		Actual		Budget		Budget	
Principal	\$	670,000	\$	470,000	\$	520,000	\$	520,000
Interest		194,767		172,867		169,327		153,144
Debt Issuance Expense		-		-		5,000		-
<b>Total</b>	<b>\$</b>	<b>864,767</b>	<b>\$</b>	<b>642,867</b>	<b>\$</b>	<b>694,327</b>	<b>\$</b>	<b>673,144</b>

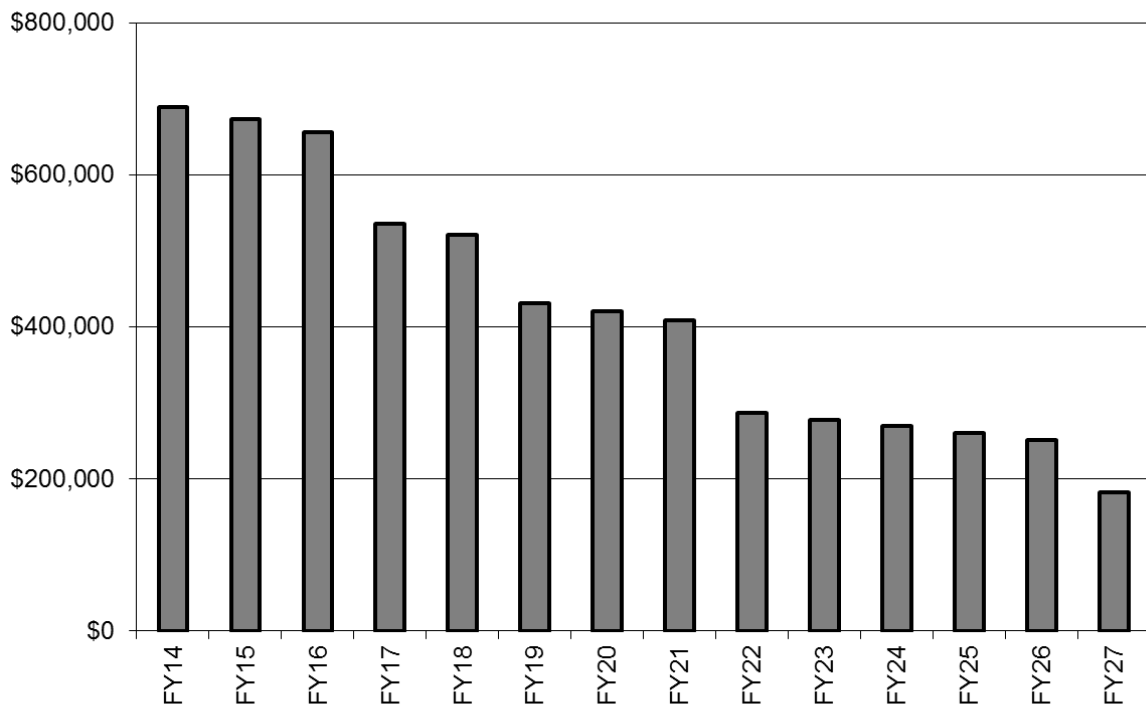
**PAYMENTS TO THE GENERAL FUND**

	FY12		FY13		Rev. FY14		FY15	
	Actual		Actual		Budget		Budget	
<b><u>Management &amp; Engineering</u></b>								
Highway Maintenance	\$	16,530	\$	17,192	\$	17,872	\$	18,044
133/135 Keyes Road		45,511		49,168		48,121		48,666
Public Works Engineering		67,896		69,727		83,824		83,810
Public Works Administration		77,663		82,579		85,208		84,805
<b>Subtotal</b>	<b>\$</b>	<b>207,600</b>	<b>\$</b>	<b>218,666</b>	<b>\$</b>	<b>235,025</b>	<b>\$</b>	<b>235,325</b>
<b><u>Finance &amp; Administrative</u></b>								
Town Manager	\$	55,052	\$	57,616	\$	58,605	\$	58,261
Human Resources		15,460		16,979		17,422		17,251
Town Accountant								
Accounting Services		45,491		47,661		49,612		48,557
Audit Services		6,000		6,000		6,000		6,000
Treasurer-Collector		48,041		49,876		51,099		51,645
Finance Administration		66,626		67,498		70,922		70,583
Town House Facility		7,157		6,891		6,725		6,649
<b>Subtotal</b>	<b>\$</b>	<b>243,827</b>	<b>\$</b>	<b>252,521</b>	<b>\$</b>	<b>260,385</b>	<b>\$</b>	<b>258,946</b>
<b><u>Natural Resources</u></b>								
Planning Administration	\$	35,709	\$	36,740	\$	39,181	\$	41,769
Natural Resource Protection		22,715		23,462		24,128		24,139
Health Department Services		23,084		24,082		25,596		26,438
<b>Subtotal</b>	<b>\$</b>	<b>81,508</b>	<b>\$</b>	<b>84,284</b>	<b>\$</b>	<b>88,905</b>	<b>\$</b>	<b>92,346</b>
Salary Reserve		-		-		-		19,710
Audit Adjustments		-		-		-		-
<b>Totals</b>	<b>\$</b>	<b>532,935</b>	<b>\$</b>	<b>555,471</b>	<b>\$</b>	<b>584,315</b>	<b>\$</b>	<b>606,327</b>

**DEBT SERVICE SCHEDULE**

(Issued through 6/30/2013)

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
FY14	520,000	169,327	689,327
FY15	520,000	153,144	673,144
FY16	520,000	136,681	656,681
FY17	420,000	115,706	535,706
FY18	420,000	101,388	521,388
FY19	345,000	86,213	431,213
FY20	345,000	75,050	420,050
FY21	345,000	63,450	408,450
FY22	235,000	51,850	286,850
FY23	235,000	43,050	278,050
FY24	235,000	34,250	269,250
FY25	235,000	25,300	260,300
FY26	235,000	16,275	251,275
<u>FY27</u>	<u>175,000</u>	<u>7,175</u>	<u>182,175</u>
<b>Totals</b>	<b>\$ 5,255,000</b>	<b>\$ 1,256,603</b>	<b>\$ 6,511,603</b>



DISTRIBUTION SYSTEM

**Mains (New/Replacement): \$1,200,000** - Annual capital outlay for improvements and extension to distribution system including water services within the right of way. The water distribution system consists of over 130 miles of water main ranging in size from 6-inch to 16-inch. The replacement/rehabilitation program is designed to replace aging and deteriorating main in a methodical and prudent manner. The plan of work for FY15 includes over 7,400 feet of replacement water main within the Riverdale and Southfield Road neighborhood and approximately 1,300 feet along Deacon Haynes Road.

**Smart Water Meter Program: \$76,000** - Water Fund portion of costs associated with system-wide meter maintenance and replacement efforts. More and more water systems have begun to adopt smart water meter technology. This technology allows for increased customer awareness of individual water consumption patterns and water saving opportunities. As an initial step towards developing a fully functional system, all new meters purchased by the Water Division have greater sensitivity with respect to water registration. Ultimately, this sensitivity will afford interested customers the ability to monitor usage in units of 7.48 gallons (1 cubic ft.) which is 100 times more sensitive than the old meters.

**Hydrants: \$35,000** - The Water Division conducts annual hydrant inspection and replacement activities to insure that all hydrants operate properly. Budget includes costs to replace approximately 15 of the 1,200 hydrants in the distribution system.

STRUCTURES

**Station Structures: \$59,000** - Annual capital outlay for improvements and replacement of station structures. Planned work includes rehabilitation of one of the nine groundwater wells and replacement of the Second Division Well bulk storage system.

**Pumping Station Equipment: \$45,000** - Annual capital outlay for improvements and replacement of station equipment used to control, monitor, pump, store, and treat water including motors, pumps, motor control panels, and chemical feed systems. The Water Division is responsible for maintaining and making improvements to eight water pumping facilities and two storage reservoirs.

GENERAL PLANT

**Keys Road Facility: \$25,000** - Capital outlay for improvements to Water/Sewer administrative office and garage facilities.

**Vehicles: \$57,000** – The Water/Sewer fleet consists of 17 service vehicles and miscellaneous equipment such as compressor, vacuum, skid steer, and forklifts which are replaced in accordance with CPW criteria based on industry-accepted useful-life measures. Planned improvements include the replacement of a cab and chassis for an existing compressor truck and the replacement of one station service vehicle.

**Miscellaneous Equipment: \$10,000** - Miscellaneous equipment not included in 5-year capital equipment/vehicle plan.

SUPPLY/CAPACITY

**Source Protection: \$12,000** – Funds for ongoing implementation of water resource protection program.

CAPITAL SPENDING PLAN										
	FY12 Actual	FY13 Actual	FY14	FY15	FY16	FY17	FY18	FY19	Total FY15-19	
<b>Distribution System</b>										
Water Mains (0111)	229,813	33,103	706,000	1,200,000	750,000	530,000	546,000	562,000	3,588,000	
Meter Replacements (0112)	25,539	28,627	125,000	76,000	85,000	99,000	91,000	101,000	452,000	
Hydrants (0114)	32,129	9,834	34,000	35,000	36,000	37,000	38,000	39,000	185,000	
<b>Subtotal</b>	<b>287,481</b>	<b>71,564</b>	<b>865,000</b>	<b>1,311,000</b>	<b>871,000</b>	<b>666,000</b>	<b>675,000</b>	<b>702,000</b>	<b>4,225,000</b>	
<b>Pumping Stations/Treatment</b>										
Structures (0121)	284,813	124,246	57,000	59,000	61,000	63,000	65,000	67,000	315,000	
Equipment (0122)	42,611	33,124	22,000	45,000	46,000	47,000	48,000	49,000	235,000	
Reservoir Improvements (129)	50,153	0	108,000	980,000	980,000	1,000,000	150,000		1,130,000	
Nagog Improvements	0	106,254	734,000	1,000,000	1,000,000				1,000,000	
Route 2A Station and Filtration (323)	876,044	83,571	12,844	5,000,000	5,000,000				5,000,000	
Dam Reconstruction (332)	66,932	505,776							0	
Nagog Intake (333)	3,639	37,191	211,809	1,400,000	1,400,000				1,400,000	
<b>Subtotal</b>	<b>1,324,192</b>	<b>890,161</b>	<b>1,145,653</b>	<b>104,000</b>	<b>8,487,000</b>	<b>110,000</b>	<b>263,000</b>	<b>116,000</b>	<b>9,080,000</b>	
<b>General Plant</b>										
Keyes Road CPW Facility (0135)	3,500	21,392	90,000	25,000	26,000	27,000	28,000	500,000	606,000	
GIS				24,000	10,000	10,000	10,000	10,000	64,000	
Vehicles (0236)	128,233	49,207	77,000	57,000	50,000	117,000	107,000	19,000	350,000	
Miscellaneous Equipment				10,000	10,000	10,000	10,000	10,000	50,000	
Depreciable Personnel Services (0899)	17,521	16,972	18,929	19,500	20,090	20,690	21,310	21,950	103,540	
<b>Subtotal</b>	<b>149,254</b>	<b>87,571</b>	<b>195,929</b>	<b>135,500</b>	<b>116,090</b>	<b>184,690</b>	<b>176,310</b>	<b>560,950</b>	<b>1,173,540</b>	
<b>Supply and Capacity</b>										
Source Protection (0124)	0	1,454	12,000	12,000	12,000	12,000	12,000	12,000	60,000	
<b>Subtotal</b>	<b>0</b>	<b>1,454</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>	<b>12,000</b>	<b>60,000</b>	
<b>Total Capital Uses</b>	<b>1,760,927</b>	<b>1,050,749</b>	<b>2,218,582</b>	<b>1,562,500</b>	<b>9,486,090</b>	<b>972,690</b>	<b>1,126,310</b>	<b>1,390,950</b>	<b>14,538,540</b>	
<b>Funding the Capital Plan</b>										
From Debt	946,615	626,538	-	-	7,380,000	-	150,000	-	7,530,000	
From Water Fund Resources	814,312	424,212	2,218,582	1,562,500	2,106,090	972,690	976,310	1,390,950	7,008,540	
<b>Total Capital Sources</b>	<b>1,760,927</b>	<b>1,050,749</b>	<b>2,218,582</b>	<b>1,562,500</b>	<b>9,486,090</b>	<b>972,690</b>	<b>1,126,310</b>	<b>1,390,950</b>	<b>14,538,540</b>	

Water Fund: Plan and Projection	ACTUAL		PROJECTION										10 years	
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 15-24	
<b>Operating Revenue</b>														
User Fees	4,416,583	4,469,000	4,576,000	4,739,000	4,909,000	5,089,000	5,276,000	5,464,000	5,660,000	5,865,000	6,079,000	6,301,000	53,958,000	
Other	137,840	138,000	139,000	140,000	141,000	142,000	143,000	144,000	145,000	146,000	147,000	148,000	1,435,000	
Subtotal	4,554,423	4,607,000	4,715,000	4,879,000	5,050,000	5,231,000	5,419,000	5,608,000	5,805,000	6,011,000	6,226,000	6,449,000	55,393,000	
<b>Operating Expense</b>														
O & M	2,380,738	2,834,957	2,869,793	2,956,567	3,166,475	3,262,248	3,360,949	3,462,668	3,567,502	3,675,548	3,786,906	3,901,682	34,010,338	
Depreciation	778,524	892,403	993,406	1,265,931	1,549,065	1,569,917	1,596,705	1,608,276	1,494,157	1,380,444	1,376,705	1,357,396	14,192,000	
Subtotal	3,159,262	3,727,360	3,863,199	4,222,498	4,715,540	4,832,166	4,957,654	5,070,944	5,061,659	5,055,992	5,163,611	5,259,077	48,202,339	
<b>Operating Income</b>	1,395,161	879,640	851,802	656,502	334,460	398,834	461,346	537,056	743,341	955,008	1,062,389	1,189,923	7,190,662	
ADD: Interest Income	14,025	26,508	22,829	39,883	46,757	56,013	59,250	70,091	87,949	105,140	128,464	157,922	774,299	
Miscellaneous Non-Operating Income	11,820	0	0	0	0	0	0	0	0	0	0	0	0	
LESS: Interest Expense	172,867	169,327	153,144	136,681	115,706	101,388	86,213	75,050	63,450	51,850	43,050	34,250	860,782	
Existing Debt	0	0	0	0	0	332,100	315,495	298,890	307,285	288,180	269,075	249,970	2,060,995	
Future Debt	0	1,000	0	0	55,350	0	0	6,875	0	0	0	0	62,225	
Bond Anticipation Notes (BANs)	0	4,000	0	7,380	73,800	0	500	5,000	0	0	0	0	86,680	
Issuance expense (Premium)	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>Net Income</b>	1,248,139	731,821	721,487	552,324	136,361	21,360	118,389	221,332	460,555	720,119	878,728	1,063,624	4,894,279	
<b>Available Resources from:</b>														
Net income	1,248,139	731,821	721,487	552,324	136,361	21,360	118,389	221,332	460,555	720,119	878,728	1,063,624	4,894,279	
Depreciation expense	778,524	892,403	993,406	1,265,931	1,549,065	1,569,917	1,596,705	1,608,276	1,494,157	1,380,444	1,376,705	1,357,396	14,192,000	
subtotal	2,026,663	1,624,224	1,714,893	1,818,255	1,685,426	1,591,277	1,715,094	1,829,608	1,954,712	2,100,563	2,255,433	2,421,020	19,086,279	
Bond proceeds	400,000	400,000	0	0	7,380,000	0	0	500,000	0	0	0	0	7,880,000	
Loan proceeds	400,000	0	0	7,380,000	0	0	0	0	0	0	0	0	7,880,000	
LESS: Principal repayments														
Existing Debt	470,000	520,000	520,000	520,000	420,000	420,000	345,000	345,000	345,000	235,000	235,000	235,000	3,620,000	
New Debt	0	0	0	0	0	369,000	369,000	369,000	419,000	419,000	419,000	419,000	2,783,000	
BAN Repayment	0	400,000	0	0	7,380,000	0	500,000	0	0	0	0	0	7,880,000	
<b>Net Available for Capital Purposes</b>	1,956,663	1,104,224	1,194,893	8,678,255	1,265,426	802,277	1,001,094	1,615,608	1,190,712	1,446,563	1,601,433	1,767,020	20,563,279	
<b>Capital Plan</b>	1,064,316	2,218,582	1,562,500	9,486,090	972,690	1,126,310	1,390,950	1,002,610	1,006,290	1,043,990	1,072,710	1,102,450	19,766,590	
<b>Cash Position</b>														
Beginning balance	5,167,220	5,858,743	4,744,385	4,376,778	3,568,943	3,861,678	3,537,645	3,147,789	3,760,787	3,945,209	4,347,781	4,876,504		
ADD: Net available	1,956,663	1,104,224	1,194,893	8,678,255	1,265,426	802,277	1,001,094	1,615,608	1,190,712	1,446,563	1,601,433	1,767,020		
LESS: Planned Capital	1,064,316	2,218,582	1,562,500	9,486,090	972,690	1,126,310	1,390,950	1,002,610	1,006,290	1,043,990	1,072,710	1,102,450		
Auditor's Adj.Changes in assets & liab.	200,825	0	0	0	0	0	0	0	0	0	0	0		
Ending balance	5,858,743	4,744,385	4,376,778	3,568,943	3,861,678	3,537,645	3,147,789	3,760,787	3,945,209	4,347,781	4,876,504	5,541,074		



**WATER RATES**

(Per 100 Cubic Feet)

<b>W-14 Class of Customer</b>	<b>Current FY14</b>	<b>Effective 6/1/14</b>	<b>%Chg.</b>
<b>1 &amp; 2 Residential Service</b>	(1 unit = 100 cubic feet = 748 gallons)		
1st Step: (all year)	\$ 4.41	\$ 4.59 **	4.1%
Conservation Step*: (25 - 48 units)	\$ 8.82	\$ 9.18	4.1%
Conservation Step*: (over 48 units) *May 1st through October 31st	\$ 11.03	\$ 11.48	4.1%
<b>3 General Service</b>			
1st Step: (all year)	\$ 4.41	\$ 4.59	4.1%
2nd Step: (all year) (over 50 units bimonthly)	\$ 5.61	\$ 5.83	3.9%
<b>4 Municipal Service</b>			
1st Step: (all year) Interruptible Outdoor Irrigation use	\$ 4.35	\$ 4.52	3.9%
<b>5 Second Meter Service</b>			
A. Irrigation/Pool or Accessory use:			
1st Step: (all year)	\$ 8.82	\$ 9.18	4.1%
Conservation Step: (over 48 units bimonthly, May 1st through October 31st)	\$ 11.03	\$ 11.48	4.1%
B. Non-Irrigation Commercial/Industrial	\$ 5.61	\$ 5.83	3.9%

\*\*A 50% discount on Step 1 water consumption, up to a maximum of 24 units in a bimonthly billing period, is provided for customers of record who meet certain age and income eligibility criteria.

<b>Sample Impacts</b>	<b>Current Annual</b>	<b>New Annual</b>	<b>Annual Change</b>	<b>Monthly Change</b>	<b>% Chg.</b>
1a <b>Average Residential Customer</b> (15 units bimonthly) <i>Approximately two-thirds of residential customers normally use less than the Conservation step threshold.</i>	\$ 397	\$ 413	\$ 16.20	\$ 1.35	4.1%
1b <b>Large Summertime Residential Customer</b> (40 units bimonthly during summer; 25 units bimonthly rest of year)	\$ 1,072	\$ 1,115	\$ 43.74	\$ 3.64	4.1%
3a <b>Small Commercial Customer</b> (25 units bimonthly) <i>Approximately two-thirds of commercial/institutional/Gov't customers normally use less than the 2nd step threshold.</i>	\$ 662	\$ 689	\$ 27.00	\$ 2.25	4.1%
3b <b>Large Commercial Customer</b> (300 units bimonthly)	\$ 9,738	\$ 10,122	\$ 384	\$ 32.00	3.9%
5a <b>Small Municipal Customer</b> (45 units bimonthly)	\$ 1,175	\$ 1,220	\$ 46	\$ 3.83	3.9%
5b <b>Large Municipal Customer</b> (600 units bimonthly)	\$ 15,660	\$ 16,272	\$ 612	\$ 51.00	3.9%

