

**CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM BUDGET**



**2012 FISCAL YEAR
AS ADOPTED BY CITY COUNCIL**

CITY OF WARREN, MICHIGAN

WATER & SEWER SYSTEM BUDGET

2012 FISCAL YEAR

CITY OF WARREN

James R. Fouts
Mayor

One City Square
Warren, Michigan 48093

ADMINISTRATION

City of Warren was incorporated January 1, 1957, under Act 279, P.A. 1909 as amended (Home Rule Act). The 2010 population per Federal Census, 134,056

City is administered by a Mayor, a Council of seven members, Treasurer and Clerk, all of whom are elected to four-year terms.

PRESENT ELECTIVE OFFICERS (Terms expire November 11, 2015)

MAYOR
JAMES R. FOUTS

COUNCIL

Cecil St. Pierre Jr., President

Patrick Green, Vice President

Scott C. Stevens, Secretary

Keith Sadowski, Assistant Secretary

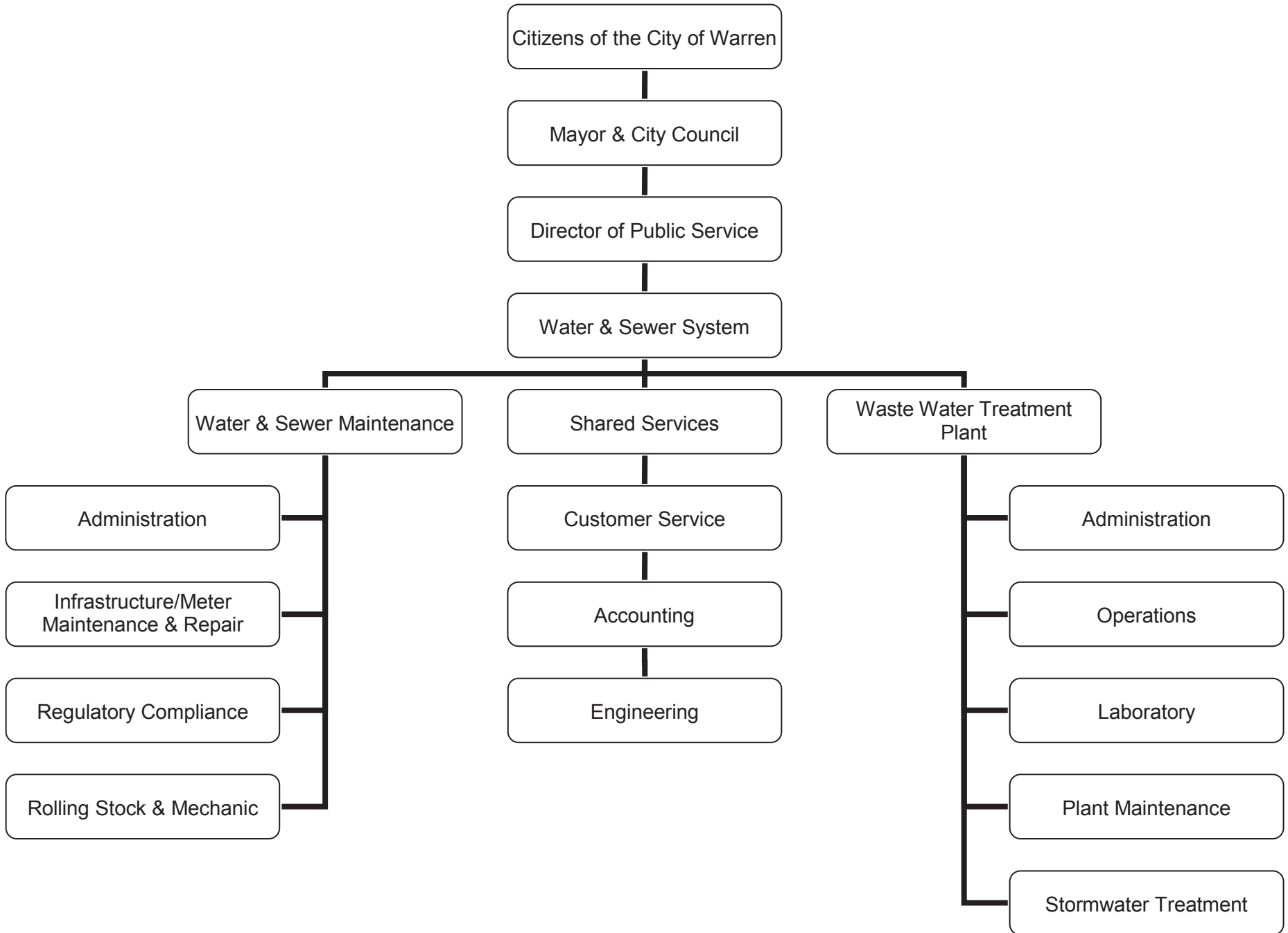
Kelly Colegio

Robert Boccomino

Steven Warner

TREASURER
Carolyn Kurkowski Moceri

CITY CLERK
Paul Wojno



CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
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 WATER & SEWER SYSTEM
 2012 CITY COUNCIL ADOPTED BUDGET
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CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
INTRODUCTION

The Water & Sewer System's functions include the financing, acquisition, operation and maintenance of an adequate water supply and a waste water treatment facility for the benefit of the citizens and business community in the City of Warren. Budget and accounting policies, as presented herein, conform to generally accepted accounting principles for enterprise funds. Revenues are initially deposited in a receiving fund in accordance with State statutes and local revenue ordinances adopted by the City of Warren. Monies are transferred, as needed, to the Operation & Maintenance Fund and Debt Service Reserve and Construction Reserves.

The 2012 City Council Adopted Water & Sewer System Budget is presented with a 1.5 percent rate increase. This slight percent rate increase would not be possible without the joint effort between the administration, members of City Council, and employees to find ways to improve efficiencies and reduce expenses without sacrificing customer services. The 2012 Adopted Budget eliminates two labor positions and contains many reductions in expenses such as overtime, fringe benefits, supplies, and other service costs. Water sales used to calculate the recommended revenues were reduced for Fiscal 2012 to 705 million cubic feet, from the 711 million cubic feet projected for Fiscal 2011 to recognize the continued, but slowing decline in water sales.

Sales volumes have significantly declined in the last decade. There are several potentially contributing factors. The poor economic climate in Michigan has eliminated many businesses as contributing users to the Water & Sewer System and has caused many others to scale back operations and economize their use of resources, including water. This has had a significant carryover effect on residential usage. With declining incomes, residential users are scaling back on discretionary usages such as lawn irrigation. The break down of aging meters has also resulted in declined sales volume over the years through registration loss. This contributing factor is being addressed with the recent approval of the water meter replacement program and will put the Water & Sewer System on a better financial foundation.

The 2012 Adopted Water & Sewer System Budget recognizes the need to improve infrastructure. The City of Warren is not alone when it comes to repairing and improving the underground water and sewer mains. Communities across the country are aging and face problems similar to ours, particularly in the Midwest and Eastern states where changes in climate have devastating effects on utility systems. The 2012 Adopted Budget includes a bond issue to cover \$23.4 million for water system improvements and \$8.02 million for sanitary sewer improvements. The \$23.4 million for water system improvements consist largely of watermain replacements, which will coincide with road repairs funded by the recent voter approved road millage.

Approximately \$8 million is estimated to be transferred to the debt service fund, with approximately \$2 million resulting from the previously approved rate increases designated to pay the debt service cost for necessary infrastructure improvements. Only one project is committed against these funds and has an estimated cost of \$200,625 annually. This budget contains a proposal to commit another \$1.7 million annually and will use the remainder of the available funds.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
RATE CALCULATION

Introduction:

The City of Warren Water & Sewer System's current rate structure is based on the recommendations contained in a study by McNamee, Porter & Seeley completed in 1981. Minor modifications have been made to comply with State Revolving Fund (SRF) financing requirements and in response to changing system needs and customer base structure but it remains essentially as originally adopted.

Overview of rates:

There are four basic rates charged to almost every customer of the system. Two, the water rate and waste water treatment rate, are consumption based. This means that total charges can vary from month to month depending on the usage registered by the customer's meter. Some communities use rates that are progressive (the per unit charge increases with higher volumes of usage) and some use rates that are regressive (the per unit charge *decreases* with higher volumes of usage). In Warren, the rates are constant. That is, the per unit costs are the same regardless of the volume of usage. General Motors pays the same per unit cost as residential users; they just pay it on tens of thousands more units each month. Commercial/industrial customers also pay charges that residential users are not subject to. Those will be discussed in the paragraphs that follow.

The remaining two basic rates are flat rate charges – the water service charge and the sewer service charge. Both are based on the size of the meter at the customer location. Rates are apportioned among the various sizes in accordance with AWWA Demand standards. While there has been debate over the actual relationship between meter size and customer demand, especially when focusing on a very narrow range of accounts, the use of the current standard achieves the purpose of recovering a large percentage of cost from customers with the largest meters and highest overall system demand. Optional methods of cost recovery that achieve substantially the same result are priority areas of the rate study.

In addition to the basic rates there are rates that are solely charged to commercial and industrial customers. The cross-connection charge is consumption based and recovers the cost of the system's infrastructure review to determine the existence of illicit cross-connections that could potentially contaminate the fresh water supply. The commodity charge, also consumption based, recovers the cost of administering the industrial pre-treatment program. Discharge from commercial/industrial sites is tested for compliance with EPA standards and individual customers are charged for the treatment of regulated particulates in excess of EPA limits.

Each rate is directly related to particular areas of budgeted expenditures. For example, the **Water rate** recovers the cost of water purchases from the City of Detroit plus the system's costs in maintaining the infrastructure. These costs include the purchase of sections of water main, materials needed to repair leaks as they occur, costs for the purchase, operation and maintenance of vehicles and equipment to perform repairs, costs to operate and maintain buildings and other storage facilities, the costs for the repair of roadways, driveway approaches, sidewalks and green areas, debt service costs for revenue bonds issued to fund the full scale replacement of water lines that are beyond repair and the cost of labor – wages and benefits for the employees who perform repairs and preventative maintenance services and for those who administer the activities and perform billing and collection services.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
RATE CALCULATION
(continued)

The Water & Sewer System serves three principal functions. The first is the delivery of potable water to each customer within the system. The second is the transport of waste material from customer locations to the Waste Water Treatment Plant. The third is the treatment of residential, commercial and industrial waste by the Waste Water Treatment Plant including removal and disposal of solid waste materials, disinfection, and dechlorination before discharging into the Red Run Drain.

The following pages show how each area of the budget is allocated among these functions for purposes of rate determination. On the first page, Schedule A, the budget Expenditure Summary is allocated to each rate. Wages & Fringe Benefits and Supplies and Other Charges are simple enough to follow. There are elements within Water & Sewer Maintenance that are chargeable to the Meter Service Charge – such as wages & fringe benefits for meter repair personnel. Those costs are subtracted out of the total and the balance allocated between the water consumption charge and the sewer service charge in a 60/40 ratio – the approximate historical allocation of time and materials between water maintenance and sewer maintenance. As indicated previously, the costs for Shared Services is distributed 50/50 between the water rate and the waste water treatment rate. Transfers to reserves for debt service and capital outlay are allocated between the rates in accordance with the proposed usage of those items. For example, if a capital item is for the wastewater treatment plant it is charged to that rate. For debt service, the principal and interest costs are allocated among the rates in accordance with how the borrowed funds were used.

Schedule B starts with the Total Costs from Schedule A and subtracts other revenue sources from it to arrive at the net amount that has to be charged to each rate. If the other revenue is water related, it is subtracted from the charges allocable to the water rate, and other charges specific to a function are subtracted in the same manner. Common other income items, like penalties and interest, are allocated equally between the two largest consumption based rates for water and wastewater treatment.

Once the costs to be recovered from the rates are determined, it is simply a matter of calculating the per unit charges. For the consumption-based rates, the total costs are divided by the number of units expected to be sold during the year, based on historical data. The number of units for wastewater treatment is somewhat smaller than that for water (approximately 95%) since there are some “water-only” customers. Some of these are those with second meters purchased pursuant to recent policy changes. There are also some properties on our borders, or just outside, that get water service from here and sewer from another community and there are also a few existing properties still using septic systems although those are in the process of being eliminated.

For the fixed rates, meter service charges and sewer service charges, the allocation is bit more complex. The total number of meters in the system is distributed according to size. This information comes from previous billings – in the case of the current proposed budget, from the billing for May 2011. An AWWA approved factor is then applied to come up with the total “equivalent meters” in the system. This factor ranges from 1 as the base unit for a 5/8” meter to 1,000 for a 12” meter.

To determine the rate for the base unit, a 5/8” meter, the total charges to be recovered for the year is divided by 12 (to get a monthly value) and divided by the total equivalent meters. The AWWA factor is then applied to arrive at the rate for each of the other meter sizes.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
RATE CALCULATION
(continued)

Other commercial and industrial charges are subject to different formulas, most of which spring from compliance with Environmental Protection Agency (EPA) and the Michigan Department of Natural Resources and Environment (DNRE) mandated policies and procedures. These charges, as stated before, are in addition to the basic charges that all customers pay.

CHANGE IN SALES ESTIMATES

The single largest factor affecting the overall rate is estimating the volume of water that will be purchased by our customers. For many years annual sales volumes were estimated at 10.7 million consumptions (100 cubic feet). The last time we actually sold that much water was in 1999. From 2000 through 2009 the average annual sales volume has been approximately 8.9 million consumptions per year with a high of 10.3 million in 2002 and a low of 7.1 million in 2009. The projected sales volume for Fiscal 2011 is expected to be approximately 7.1 million cubic feet.

There are a number of potential reasons why the billable usage volumes have fallen. The meters in service are at or near the ends of their useful lives and are surely not reading at the same accuracy levels as when they were new. The recently approved contract to begin a meter change out program coupled with an Automated Meter Reading System (AMR) will address this issue with work continuing throughout 2012.

Changes in climate have had a great impact on water usage. For example, the summers of 2004 and 2008 were unusually wet and there was less need for residential, commercial and industrial customers to use water for lawns or other outdoor purposes. On the other hand, the summer of 2010 was unusually dry resulting in more water usage than projected.

As the rates have risen, there is greater incentive for customers to find ways to economize on usage. Small volume users, such as residential customers, can install flow-regulating devices in showers and lavatory facilities to reduce usage and/or change usage habits such as not watering lawns as frequently and using less water in other activities. Large volume commercial and industrial users can install similar devices and change processes to reduce usage volumes. It is an unfortunate situation for the system and the system users. The higher the unit price is of water and waste water treatment, the more incentive there is for the user to economize – but – the user reducing usage does not significantly reduce operating costs. In fact, about the only cost reduced by less customer usage is that of water purchases. Other operating costs like supplies, chemicals and utilities are minimally impacted. Debt service and wages and fringe benefits are not changed at all.

We have no choice but to adjust projected sales volumes to be in line with what we have been experiencing. The 2012 adopted budget projects sales at 705 million cubic feet rather than the 711 million cubic feet projected for 2011.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
RATE CALCULATION
(continued)

We are hopeful that our efforts to pinpoint and repair major problem areas in the infrastructure will reduce water loss and generate savings in water purchase costs as well as lessen the need for costly emergency repairs. The installation of pressure reducing valves in key areas has stabilized water pressure in the water mains, lessening the stress placed on an aging infrastructure. Updating water meters should give a more accurate reading of usage at each user location that in turn results in a more equitable share of operating costs for the customer.

It cannot be overly stressed how important it is to use reasonable estimates for sales volumes. Shortfalls in sales dramatically hinder the Water & Sewer System's ability to meet performance objectives for the year. The resulting cash flow shortages mean that needed personnel positions have to be left vacant, equipment purchases have to be eliminated or delayed and capital projects have to be postponed.

One of the fundamental differences between budgeting in the Water & Sewer System and City's General is the certainty of revenue sources. If you examine the General Fund budget you will find that over 83% of revenue sources are in the form of property taxes, state shared revenues, grants and administrative fees. Notwithstanding the volatility of state shared revenues in the past several years, these are all fairly stable and reliable income sources. At the time the budget is adopted the city knows with reasonable certainty that those monies will be collected.

In contrast, approximately 89% of the revenue sources for the Water & Sewer System can be significantly impacted by circumstances outside our control. All usage based fees can fluctuate dramatically depending on factors such as weather conditions, changes in the makeup of the user base and the general economic climate in the city and the state.

For example, usage typically peaks during the summer months when residential, commercial and industrial customers are all more active. If the summer is unusually cold and rainy, usage will be reduced. Changes in the makeup of the customer base can have long lasting effects on the system. The privatization of the Tank Plant property, while overall a very positive event for the City, resulting in replacing a high-volume industrial quality user with several commercial users with lower volumes of water utility usage. Other commercial and industrial users, affected by the depressed economic climate in Michigan, and in particular with the auto industry, have scaled back discretionary usage and sought alternative, less costly processes. Likewise, residential users have reduced their discretionary usage in response to the economic downturn and rising rates for not only water utilities but all utility costs.

Using a realistic and conservative sales volume to budget revenues is a necessity. Using an inflated volume would reduce rates on paper but would result in the system being far short of the financial resources necessary to operate. We have scaled back expenses as much as possible but basic operations have to be maintained and we have to continue addressing the problems associated with an aging infrastructure.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 BUDGET FINANCIAL STATEMENTS

SCHEDULE A
DISTRIBUTION OF COSTS TO RATES - COUNCIL ADOPTED

Budget Cost Item:	<u>Total</u>	Supporting Revenue			
		<u>Water Rate</u>	<u>Waste Water Rate</u>	<u>Water Service Charge</u>	<u>Sewer Service Charge</u>
<i>Wages & Fringe Benefits</i>					
Water & Sewer Maintenance	\$ 4,838,365	\$ 2,815,241	\$ -	\$ 667,638	\$ 1,355,486
Shared Services	1,985,501	992,751	992,750	-	-
Waste Water Treatment	5,941,191	-	5,941,191	-	-
<i>Total Wages & Fringe Benefits</i>	<u>12,765,057</u>	<u>3,807,992</u>	<u>6,933,941</u>	<u>667,638</u>	<u>1,355,486</u>
<i>Supplies & Other Charges</i>					
Water Purchases	9,300,000	9,300,000	-	-	-
Uncollectible debt	50,000	25,009	19,630	1,612	3,750
Water & Sewer Maintenance	2,054,000	1,197,450	-	280,000	576,550
Shared Services	2,877,400	1,436,010	1,108,650	143,870	188,870
Waste Water Treatment	3,363,000	-	3,363,000	-	-
<i>Total Supplies & Other Charges</i>	<u>17,644,400</u>	<u>11,958,469</u>	<u>4,491,279</u>	<u>425,482</u>	<u>769,170</u>
<i>Transfers To Reserves</i>					
Capital Equipment	924,500	137,163	787,337	-	-
Debt Service	8,282,000	4,134,000	3,586,700	74,000	487,300
<i>Total Transfers</i>	<u>9,206,500</u>	<u>4,271,163</u>	<u>4,374,037</u>	<u>74,000</u>	<u>487,300</u>
TOTAL COSTS	<u>\$ 39,615,957</u>	<u>\$ 20,037,624</u>	<u>\$ 15,799,256</u>	<u>\$ 1,167,120</u>	<u>\$ 2,611,956</u>

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 BUDGET FINANCIAL STATEMENTS

SCHEDULE B
DISTRIBUTION OF COSTS TO RATES - COUNCIL ADOPTED

	<u>Total</u>	<u>Supporting Revenue</u>			
		<u>Water Rate</u>	<u>Waste Water Rate</u>	<u>Water Service Charge</u>	<u>Sewer Service Charge</u>
TOTAL COSTS {FROM PREVIOUS PAGE} \$	39,615,957	\$ 20,037,624	\$ 15,799,256	\$ 1,167,120	\$ 2,611,956
OFFSETS FOR OTHER REVENUES:					
Water Sales - Unmetered	8,000	8,000	-	-	-
Public Fire Protection	90,000	90,000	-	-	-
Penalties	1,500,000	750,000	750,000	-	-
Water Division - Other Income	25,000	25,000	-	-	-
Land Contract Interest	1,610	1,610	-	-	-
Meter Repairs	8,000	-	-	8,000	-
Outside Service Income	25,000	25,000	-	-	-
Meter Sales	40,000	-	-	40,000	-
Centerline Transmission Charge	13,000	13,000	-	-	-
Pre-Treatment Surcharges	896,841	-	896,841	-	-
Cross Connection Charges	278,000	278,000	-	-	-
Waste Treatment - Other Income	220,000	-	220,000	-	-
Interest On Investments	6,000	3,000	3,000	-	-
Gain {Loss} On Asset Conversion	2,500	1,250	1,250	-	-
Total revenue offsets	<u>3,113,951</u>	<u>1,194,860</u>	<u>1,871,091</u>	<u>48,000</u>	<u>-</u>
NET COSTS ALLOCATED TO RATES	<u>\$ 36,502,006</u>	<u>\$ 18,842,764</u>	<u>\$ 13,928,165</u>	<u>\$ 1,119,120</u>	<u>\$ 2,611,956</u>
Estimated billable consumption {100 c.f.}		7,050,000	6,725,700		
Supporting rate required		\$ 2.673	\$ 2.071	\$ 0.80	\$ 1.91
Current rate		\$ 2.673	\$ 1.995	\$ 0.80	\$ 1.91
Increase (decrease)		<u>\$ -</u>	<u>\$ 0.076</u>	<u>\$ -</u>	<u>\$ -</u>

WATER SERVICE CHARGE

Meter Size	# of Meters	AWWA Meter Ratio	Equivalent Meters	2011 Service Charge	2012 Service Charge	Estimated Revenue
5/8"	43,593	1	43,593	\$0.80	\$0.80	\$ 418,493
3/4"	7	2	14	\$1.60	\$1.60	134
1"	3,661	4	14,644	\$3.20	\$3.20	140,582
1 - 1/2"	943	10	9,430	\$8.00	\$8.00	90,528
2"	898	25	22,450	\$20.00	\$20.00	215,520
3"	168	45	7,560	\$36.00	\$36.00	72,576
4"	71	90	6,390	\$72.00	\$72.00	61,344
6"	24	170	4,080	\$136.00	\$136.00	39,168
8"	11	300	3,300	\$240.00	\$240.00	31,680
10"	10	500	5,000	\$400.00	\$400.00	48,000
12"	-	1,000	-	\$800.00	\$800.00	-
	<u>49,386</u>		<u>116,461</u>			<u>\$ 1,118,025</u>

SEWER SERVICE CHARGE

Meter Size	# of Meters	AWWA Meter Ratio	Equivalent Meters	2011 Service Charge	2012 Service Charge	Estimated Revenue
5/8"	43,270	1	43,270	\$1.91	\$1.91	\$ 991,748
3/4"	13	2	26	\$3.82	\$3.82	596
1"	3,579	4	14,316	\$7.64	\$7.64	328,123
1 - 1/2"	923	10	9,230	\$19.10	\$19.10	211,552
2"	869	25	21,725	\$47.75	\$47.75	497,937
3"	167	45	7,515	\$85.95	\$85.95	172,244
4"	69	90	6,210	\$171.90	\$171.90	142,333
6"	24	170	4,080	\$324.70	\$324.70	93,514
8"	11	300	3,300	\$573.00	\$573.00	75,636
10"	9	500	4,500	\$955.00	\$955.00	103,140
12"	-	1,000	-	\$1,910.00	\$1,910.00	-
	<u>48,934</u>		<u>114,172</u>			<u>\$ 2,616,823</u>

EFFECT OF RATE ON THE AVERAGE RESIDENTIAL USER
 {BASED ON 1,000 CUBIC FEET OF WATER METERED WITH A 5/8" WATER METER}
 - PER MONTH -

	Present Rate	Recommended Rate	Increase (Decrease) Amount	%
Water Service Charge	\$ 0.80	\$ 0.80	\$ -	
Sewer Service Charge	1.91	1.91	-	
Water Charge	26.73	26.73	-	
Waste Water Treatment Charge	19.95	20.71	0.76	
Total	\$ 49.39	\$ 50.15	\$ 0.76	1.5%

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
STATEMENT OF ESTIMATED REVENUES, EXPENSES & CHANGES IN RETAINED
EARNINGS/RESERVE BALANCES
YEAR ENDING DECEMBER 31, 2012

	TOTAL	OPERATION & MAINTENANCE 592020	WASTE WATER TREATMENT IMPROVEMENT 592040	INFRASTRUCTURE REPLACEMENT 592044	METER REPLACEMENT 592045	CAPITAL EQUIPMENT REPLACEMENT 592047	DEBT SERVICE 592072
OPERATING REVENUES:							
Water & sewer charges	\$ 36,501,800	\$ 36,501,800	\$ -	\$ -	\$ -	\$ -	\$ -
Other operating revenue	3,105,451	3,105,451	-	-	-	-	-
NON-OPERATING REVENUES:							
Interest on investments	19,900	6,000	100	2,000	10,000	300	1,500
Other Income	201,664	2,500	-	-	-	-	199,164
TRANSFERS FROM:							
Operation & Maintenance Fund	9,206,500	-	-	-	-	924,500	8,282,000
Restricted Reserves	-	-	-	-	-	-	-
OTHER FINANCIAL RESOURCES:							
Financing Proceeds	34,467,253	-	480,009	33,987,244	-	-	-
TOTAL FINANCIAL RESOURCES	83,502,568	39,615,751	480,109	33,989,244	10,000	924,800	8,482,664
OPERATING EXPENSES:							
Water purchases	9,300,000	9,300,000	-	-	-	-	-
Uncollectible debt		50,000	-	-	-	-	-
Water & sewer maintenance	6,892,365	6,892,365	-	-	-	-	-
Shared services	4,862,901	4,862,901	-	-	-	-	-
Waste water treatment plant	9,304,191	9,304,191	-	-	-	-	-
NON-OPERATING EXPENSES:							
Construction contracts & related project costs	36,472,965	-	480,009	32,565,078	2,403,378	1,024,500	-
Other non-operating expenses	7,987,179	-	-	1,581,200	-	-	6,405,979
TRANSFERS TO:							
Reserves	9,206,500	9,206,500	-	-	-	-	-
TOTAL EXPENSES	84,026,101	39,615,957	480,009	34,146,278	2,403,378	1,024,500	6,405,979
NET FISCAL YEAR INCREASE (DECREASE)	(523,533)	(206)	100	(157,034)	(2,393,378)	(99,700)	2,076,685
OTHER ADJUSTMENTS:							
Net decrease (increase) in long term liability	(30,823,015)	(30,823,015)	-	-	-	-	-
Fixed assets capitalized	36,472,965	36,472,965	-	-	-	-	-
Depreciation	(4,690,000)	(4,690,000)	-	-	-	-	-
Estimated Fund Equity - January 1, 2012	23,908,758	11,885,686	113,329	1,089,376	2,541,361	166,110	8,112,896
Estimated Fund Equity - December 31, 2012	\$ 24,345,175	\$ 12,845,430	\$ 113,429	\$ 932,342	\$ 147,983	\$ 66,410	\$ 10,189,581

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 BUDGET FINANCIAL STATEMENTS

Revenues

Account Name	Account Number	2010	2011			2012		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Water & Sewer Charges								
Water Sales	080-46101	\$ 16,872,174	\$ 16,435,800	7,237,595	18,402,500	19,072,300	18,841,800	\$ 18,842,700
Water Service Charges	080-46103	1,088,426	1,104,500	550,068	1,100,136	1,130,100	1,119,100	1,119,100
Waste Water Treatment Charges	080-47501	13,257,423	12,971,200	5,536,296	13,289,800	15,106,300	14,253,500	13,928,100
Sewer Service Charges	080-47502	2,532,475	2,574,800	1,278,845	2,557,690	2,622,500	2,611,900	2,611,900
<i>Total Water & Sewer Charges</i>		33,750,498	33,086,300	14,602,804	35,350,126	37,931,200	36,826,300	36,501,800
Other Operating Revenue								
Water Sales - Unmetered	080-46000	18,018	10,000	3,425	8,275	8,000	8,000	8,000
Public Fire Protection	080-46300	90,000	90,000	37,500	90,000	90,000	90,000	90,000
Penalties	080-47000	1,796,684	1,100,000	892,640	1,809,300	1,500,000	1,500,000	1,500,000
Water Division - Other Income	080-47100	37,088	25,000	3,900	25,000	25,000	25,000	25,000
Garage Installment Sale	080-47200	13,754	7,800	4,689	7,860	1,610	1,610	1,610
Meter Repairs	080-47402	56,249	8,000	4,130	8,000	8,000	8,000	8,000
Outside Service Income	080-47404	23,986	20,000	14,085	27,000	25,000	25,000	25,000
Meter Sales	080-47405	41,453	40,000	35,188	50,000	40,000	40,000	40,000
Centerline Transmission Charge	080-47406	14,431	10,000	7,325	14,000	13,000	13,000	13,000
Pre-Treatment Surcharges	080-47407	802,033	800,000	267,337	800,000	896,841	896,841	896,841
Cross Connection Charges	080-47408	279,677	278,000	105,033	278,000	278,000	278,000	278,000
Waste Treatment - Other Income	080-47410	364,185	185,000	108,460	185,000	220,000	220,000	220,000
<i>Total Other Operating Revenue</i>		3,537,558	2,573,800	1,483,712	3,302,435	3,105,451	3,105,451	3,105,451
<i>Total Operating Revenue</i>		37,288,056	35,660,100	16,086,516	38,652,561	41,036,651	39,931,751	39,607,251
Non-Operating Revenue								
Interest On Investments	080-66500	7,645	7,500	3,400	6,800	6,000	6,000	6,000
Gain {Loss} On Asset Conversion	080-47401	-	2,500	-	2,500	2,500	2,500	2,500
<i>Total Non-Operating Revenue</i>		7,645	10,000	3,400	9,300	8,500	8,500	8,500
GRAND TOTAL		\$ 37,295,701	\$ 35,670,100	\$ 16,089,916	\$ 38,661,861	\$ 41,045,151	\$ 39,940,251	\$ 39,615,751

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Expenditure Summary

Account Name	Account Number	2010	2011			2012		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Wages & Fringe Benefits								
Water & Sewer Maintenance	1540	\$ 4,171,788	\$ 4,924,630	\$ 1,860,473	\$ 4,910,022	\$ 5,032,105	\$ 4,838,365	\$ 4,838,365
Shared Services	1560	1,917,194	1,866,735	925,153	1,893,938	2,025,495	1,985,501	1,985,501
Waste Water Treatment	1580	5,065,538	6,036,359	2,200,716	6,044,359	6,166,308	5,941,191	5,941,191
<i>Total Wages & Fringe Benefits</i>		11,154,520	12,827,724	4,986,341	12,848,319	13,223,908	12,765,057	12,765,057
Supplies & Other Charges								
Water Purchases	1537-92700	8,264,977	8,640,000	4,257,023	8,860,685	9,300,000	9,300,000	9,300,000
Uncollectible debt	1537-95800	45,724	45,000	-	45,000	50,000	50,000	50,000
Water & Sewer Maintenance	1540	1,285,241	1,579,000	217,450	1,512,000	2,474,000	2,054,000	2,054,000
Shared Services	1560	2,806,035	2,815,900	1,325,943	2,815,900	2,877,400	2,877,400	2,877,400
Waste Water Treatment	1580	2,766,732	3,374,270	1,101,793	3,509,500	3,363,000	3,363,000	3,363,000
<i>Total Supplies & Other Charges</i>		15,168,709	16,454,170	6,902,210	16,743,085	18,064,400	17,644,400	17,644,400
Transfers To Reserves								
Retained Earnings	1537-96501	9,191,733	11,702	893,865	2,693,953	(5,157)	(206)	(206)
WWT Improvement Reserve	1537-96540	-	-	-	-	-	-	-
Infrastructure Repair Reserve	1537-96544	-	-	-	-	-	-	-
Meter Replacement Reserve	1537-96545	110,780	-	-	-	-	-	-
Capital Equipment	1537-96547	300,000	307,500	307,500	307,500	1,485,000	1,249,000	924,500
Debt Service	1537-96572	6,344,885	6,069,004	3,000,000	6,069,004	8,277,000	8,282,000	8,282,000
<i>Total Transfers</i>		15,947,398	6,388,206	4,201,365	9,070,457	9,756,843	9,530,794	9,206,294
GRAND TOTAL		\$ 42,270,627	\$ 35,670,100	\$ 16,089,916	\$ 38,661,861	\$ 41,045,151	\$ 39,940,251	\$ 39,615,751

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 BUDGET FINANCIAL STATEMENTS

10 Year History of Expenditures

Fiscal Year	Water Purchases	Water & Sewer Maintenance	Shared Services	Waste Water Treatment
2002	\$ 7,232,632	\$ 5,445,014	\$ 3,509,087	\$ 7,422,741
2003	\$ 7,578,869	\$ 5,373,938	\$ 3,653,705	\$ 7,774,064
2004	\$ 6,832,765	\$ 5,916,995	\$ 4,042,620	\$ 8,568,872
2005	\$ 7,395,809	\$ 5,807,447	\$ 4,480,884	\$ 8,758,069
2006	\$ 7,007,742	\$ 5,822,573	\$ 4,273,600	\$ 9,004,903
2007	\$ 8,087,453	\$ 5,969,095	\$ 4,438,312	\$ 9,036,253
2008	\$ 6,920,391	\$ 6,081,254	\$ 4,747,368	\$ 9,345,937
2009	\$ 7,198,830	\$ 6,559,534	\$ 4,829,751	\$ 8,938,894
2010	\$ 8,264,977	\$ 5,457,029	\$ 4,723,229	\$ 7,832,270
2011 Projected	\$ 8,860,685	\$ 6,422,022	\$ 4,709,838	\$ 9,553,859
2012 Council Adopted	\$ 9,300,000	\$ 6,892,365	\$ 4,862,901	\$ 9,304,191

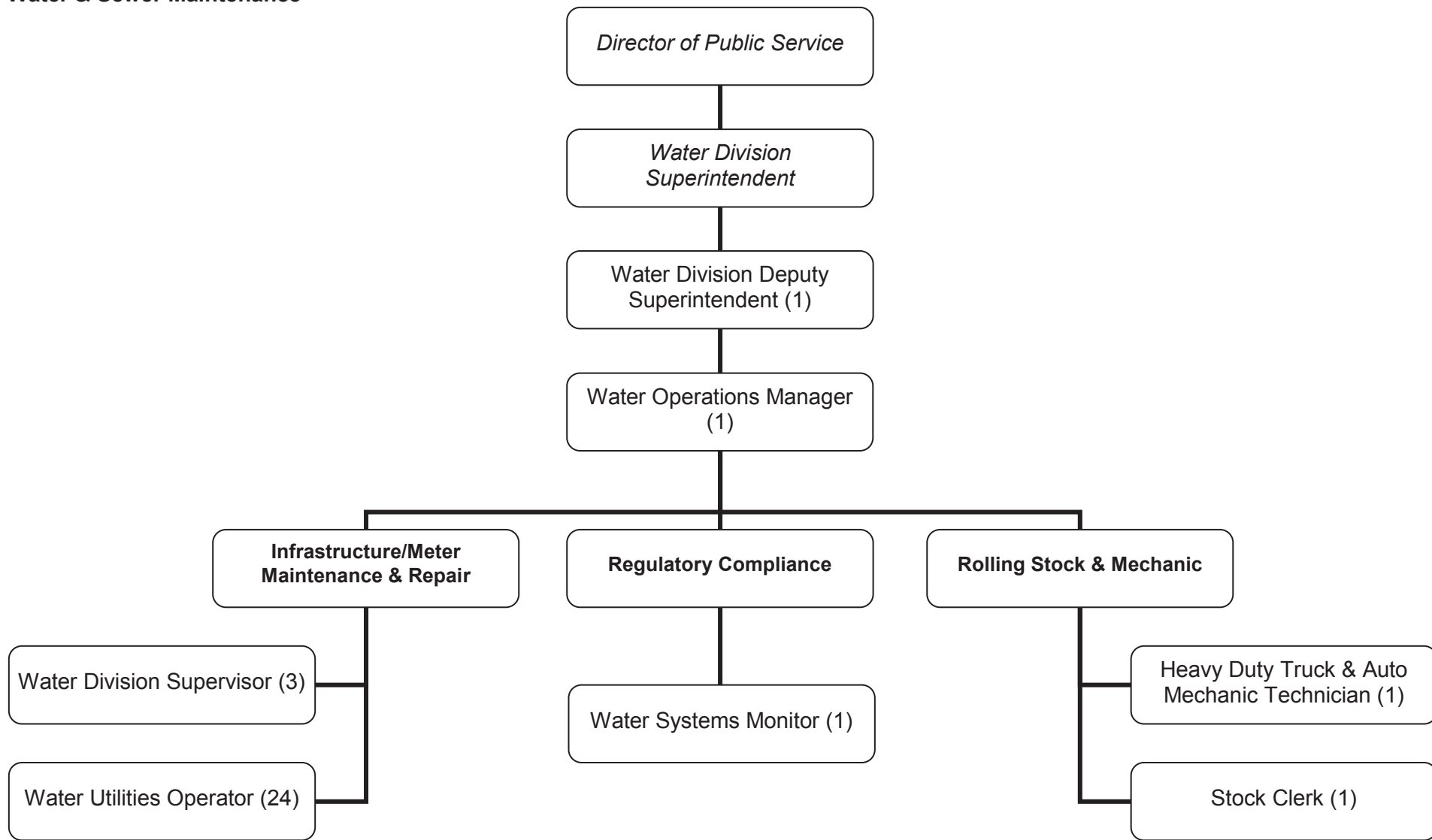
CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Water Purchases

An agreement between the City of Warren and the City of Detroit Board of Water Commissioners was approved by our City Council on October 26, 2010 and provides for the sale and delivery of water to the City of Warren. This requires the Board to provide a written notice of a proposed rate change and the underlying data used to calculate the rate. In addition, the notice must be provided not less than thirty (30) calendar days prior to the rate hearing required by Act 279.

The consumption based rate at July 1, 2011, was \$7.95 per 1,000 cubic feet, and the monthly fixed charge was \$255,439.

The impact of the newly implemented fixed charge is already reflected in the current rate charged to the City of Warren customers. This change took effect July 1, 2011 and as a result, a mid-year adjustment was necessary to cover the cost.

Water & Sewer Maintenance



CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Water & Sewer Maintenance

Water Maintenance services include the maintenance and repair of the water mains throughout the City, water service installation, service repairs, responses to requests from the Miss Dig system, gate valve maintenance (repairing and cleaning), and hydrant repair and maintenance.

The Water Division Superintendent delegates the Deputy Superintendent and the Water Operations Manager assignments. These vary from inventory control, general supervision, assisting in the resolution of personnel issues, and the direction of the Water Division to maintain operational efficiency.

The Heavy Duty Truck & Auto Mechanic Technician will perform repairs to the Water Division fleet as assigned. The repair and relocation of hydrants throughout the City, at the request of the Fire Department, are water maintenance responsibilities. Other water maintenance services include the routine repair of water main breaks and leaking services, performance of gate valve inspection and maintenance and emergency repairs required to protect the health and safety of citizens of Warren. Meter Repair services include repairing of meters in the shop and in the field, the installation of meters, repairing remote units, responding to service order requests, and maintaining records for proper reading and billing purposes are responsibilities of this section.

The operation and maintenance of three installed Pressure Reducing Valves (PRV) located at Eight-Mile and Ryan, Eight-Mile and Van Dyke, Eight-Mile and Groesbeck will be complimented by the installation of a fourth PRV at Eight Mile and Mound within the next couple of months. To improve the management and control of water pressures, several pressure monitoring stations will be installed within the City's water distribution network over the next several months. These stations will enhance the City's capabilities to more uniformly balance the water pressures throughout the City's water distribution network by regulating the operating pressures among the PRV's. The control of water pressures on the City's aging infrastructure is vitally important in providing safe drinking water to our community while limiting water main breaks caused by excessive water delivery pressures from Detroit, our water supplier.

During the second quarter of 2011 the City commenced the installation of a new Fixed Based Automatic Meter Reading System (AMR). The fixed based reading system's infrastructure, known as the Aclara Star Network, which consist of the Network Central Computer (NCC), the Data Collection Units (DCU) and the appropriate operating software, has been installed. In June, 2011 the City initiated replacing all the residential water meters, registers and manual reading systems with new water meters and the Aclara Star Network Meter Interface Unit (MIU) for reading the water meter. The implementation of the new meter program will enable the City to make significant improvements in operational efficiencies and allow more accurate registration of water consumption usage. The meter replacement program is scheduled for completion by the end of 2013.

Two major testing and repair or replacement programs are in operation. During the winter months, the repair or replacement of 1-1/2" and 2" meters is conducted at service locations. The summer program focuses on the testing and repair of large meters at service locations to insure that reading accuracy is maintained within acceptable parameters.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Water & Sewer Maintenance
(continued)

In shop testing and repair of small meters is also performed year round. Other services performed include the installation of meters in new homes and businesses, servicing meters and remote reading units in the field and responding to service orders written up by the Customer Service personnel for customer inquiries regarding noisy meters, high bills and water leaks.

As more remote readers have been installed, the remote repair work has developed into a very technical job. Locating defective wiring, shorts, pinched wires, bad pins and no lights due to no contact with the remote head are just some of the problems the service personnel encounter. The complexity of the remote system requires the running of continuity tests on each unit that is in need of repair.

Sewer Maintenance services include the televising, cleaning, jetting and vactoring of the main sewers.

The general work assignments are detailed as follows:

The cleaning of sanitary sewers throughout the city is a priority activity. A systematic program of sewer cleaning helps reduce basement flooding, since a clean sewer acts as a reservoir for sanitary sewage. Specialized equipment, such as jet, vactor, rodder, and bucket machines, are utilized in the performance of this function. This, and other related equipment must be properly maintained and available for use, without delay, as the need arises.

The filming of sanitary sewers where problems are suspected confirms the nature and extent of existing problems and provides the data necessary for effective repair or replacement.

Other tasks of sewer maintenance include repairing manholes on a regular basis and investigating and resolving citizen complaints regarding plugged main sewers.

Major non-personnel budget line items within the Water & Sewer Maintenance section are utilized as follows:

Operating Supplies - asphalt, gravel, and other fill materials used in water main repair; safety equipment {barricades, etc.}; building maintenance and minor repairs supplies; Miss Dig; trade publications, meter parts for repair & maintenance of in-service meters and reconditioning of meters placed back into inventory, sand and other fill materials used in sewer main repair.

Materials - repair sleeves; water main sections; other repair water main repair materials; hydrants.

Meter Replacement - purchase of residential, commercial and industrial meters to replace worn out in-service meters.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Water & Sewer Maintenance
(continued)

Professional Services - computer system consulting; professional water main testing services; communication equipment rental, elevator maintenance, building maintenance services, professional meter testing of large meters in use at commercial and/or industrial locations, professional sewer televising and cleaning services, building maintenance services, and contractual sewer line repairs.

Concrete, Lawn & Manhole Repairs - restoration of sidewalks, roadways, driveway approaches and grass areas disturbed as the result of water main repair activities.

Facility Maintenance - major repairs to heating & cooling systems, garage doors and building structure.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**Water & Sewer Maintenance
Personnel**

	<u>Present</u>		<u>Department Requested {a}</u>		<u>Recommended By Mayor {a}</u>		<u>Council Adopted</u>	
	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>
Deputy Superintendent	1	88,407	1	88,407	1	88,407	1	88,407
Assistant Superintendent	1	86,461	1	86,461	-	(d) -	-	(d) -
Water Operations Manager	-	-	-	-	1	(b) 84,000	1	(b) 84,000
General Supervisor/Dispatcher	1	36.35/hr.	1	36.35/hr.	-	(d) -	-	(d) -
Water Division Supervisor	3	33.67/hr.	3	33.67/hr.	3	33.67/hr.	3	33.67/hr.
Water Utilities Operator	24	27.06/hr.	24	27.06/hr.	24	27.06/hr.	24	27.06/hr.
Water Systems Monitor	1	62,956	1	62,956	1	62,956	1	62,956
Heavy Duty Truck & Auto Mech. Technician	1	30.50/hr.	1	30.50/hr.	1	30.50/hr.	1	30.50/hr.
Stock Clerk	1	25.26/hr.	1	25.26/hr.	1	25.26/hr.	1	25.26/hr.
Overtime		200,000		150,000		150,000		150,000
Temporary Employees		60,000		88,000		88,000		88,000
Total Personnel	<u>33</u>		<u>33</u>		<u>32</u>		<u>32</u>	

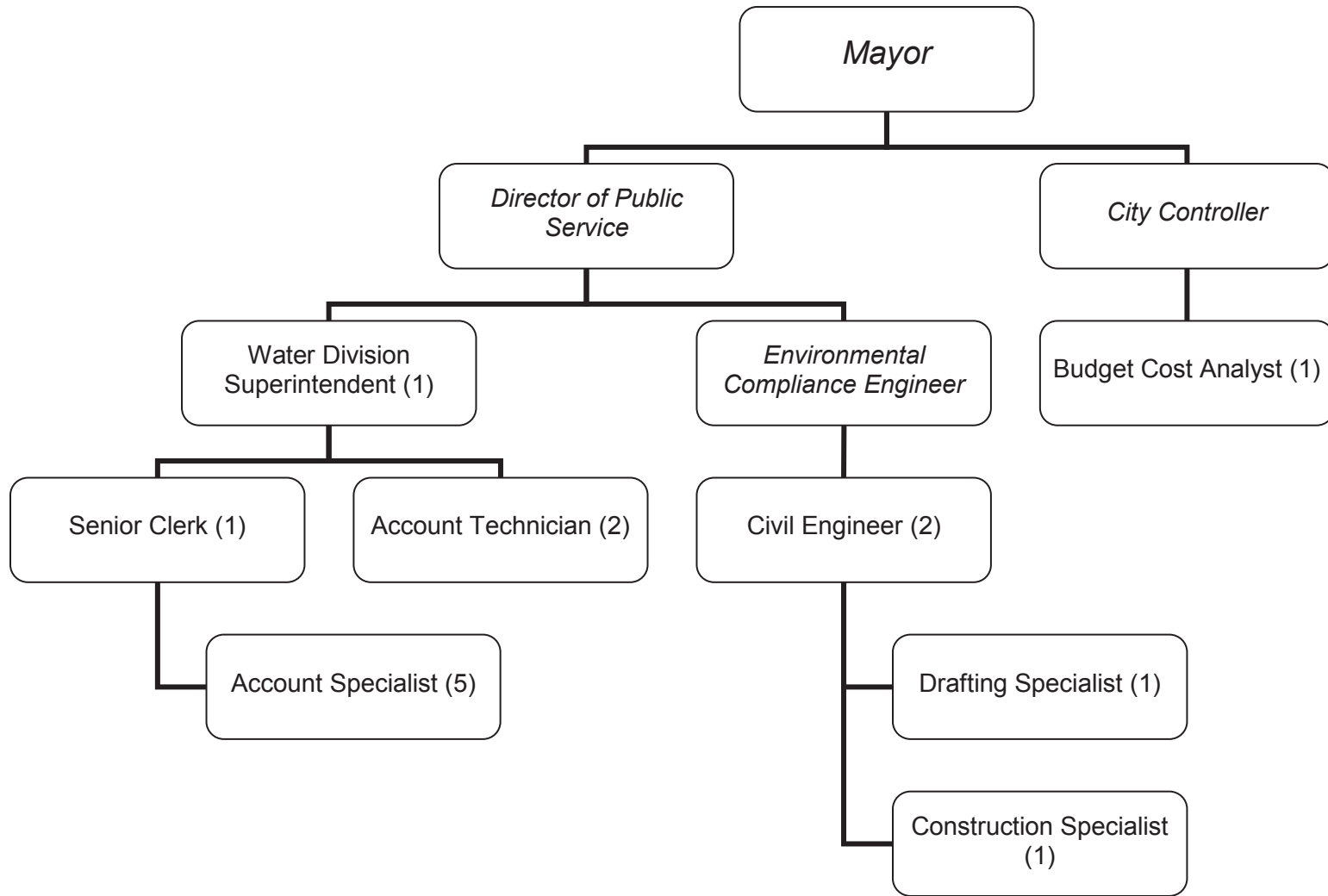
- (a) Wage rates are based on the AFSCME Local 1250, Local 1917, UAW Local 412 Unit 59 contracts that expire 6/30/12.
- (b) New position.
- (d) Position deleted.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Water & Sewer Maintenance

Account Name	Account Number	2010	2011			2012		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Personnel Services								
Permanent Employees	70600	\$ 1,816,673	\$ 1,972,126	\$ 800,483	\$ 1,972,126	\$ 1,987,433	\$ 1,909,060	\$ 1,909,060
Temporary Labor	70700	107,961	120,000	53,341	110,000	88,000	88,000	88,000
Overtime	70900	76,946	200,000	48,731	200,000	150,000	150,000	150,000
Employee Benefits								
Education & Training	71302	12,885	15,000	1,420	15,000	12,800	12,800	12,800
Auto Allowance	71305	-	3,000	-	-	-	-	-
Social Security	71500	158,981	183,363	72,680	183,363	179,184	172,878	172,878
Insurances	71900	476,535	514,402	167,005	514,402	544,907	523,918	523,918
Employees' VEBA Trust	71904	595,585	721,841	282,318	721,841	746,617	715,696	715,696
Health Savings	71905	2,559	2,469	1,194	2,469	2,592	2,592	2,592
Supplemental Life Insurance	71906	983	1,014	496	1,014	1,164	1,164	1,164
Longevity	72100	82,524	67,315	47,057	67,315	80,720	80,720	80,720
Retirement Fund	72200	774,951	1,061,395	353,554	1,061,395	1,172,163	1,115,202	1,115,202
Defined Contribution Expense	72201	52,695	50,657	29,210	50,657	60,825	60,825	60,825
Cost Of Living Allowance	72400	2,254	3,774	747	2,666	-	-	-
Uniforms	72401	5,866	5,700	163	5,700	5,700	5,510	5,510
My Lawyer	72505	4,390	2,574	2,074	2,074	-	-	-
Other Charges								
Operating Supplies	74000	156,323	320,000	88,286	320,000	320,000	200,000	200,000
Materials	78700	50,942	60,000	-	60,000	60,000	60,000	60,000
Meter Replacement	78900	95,123	50,000	-	50,000	50,000	50,000	50,000
Professional Services	80100	174,081	150,000	2,351	100,000	200,000	200,000	200,000
Contractual Swr Cleaning/Televising	80100	-	-	-	-	800,000	500,000	500,000
Dirt Removal	80102	89,818	130,000	11,025	110,000	110,000	110,000	110,000
Concrete, Lawn & Manhole Repairs	80103	500,468	560,000	734	560,000	600,000	600,000	600,000
Telephone	85300	7,625	9,000	5,530	12,000	24,000	24,000	24,000
Auto Expense	86300	101,693	150,000	63,171	150,000	150,000	150,000	150,000
Utilities	92000	99,609	110,000	43,482	110,000	80,000	80,000	80,000
Facility Maintenance	97500	9,559	40,000	2,871	40,000	80,000	80,000	80,000
Total Water & Sewer Maintenance		\$ 5,457,029	\$ 6,503,630	\$ 2,077,923	\$ 6,422,022	\$ 7,506,105	\$ 6,892,365	\$ 6,892,365

Shared Services



CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Shared Services

The 2012 Water & Sewer System Budget includes fourteen employees in the Shared Services section, with job responsibilities apportioned into the following five function categories:

Accounting
Customer Service
Consumption Review
Meter Reading
Engineering

The Superintendent reports directly to the Director of Public Service and is responsible for assisting in confidential matters and other duties such as reports to the Mayor and Council, budget preparation, education and training of employees in Federal, State, Municipal and divisional matters of health and safety and ordinance compliance. The Superintendent also is responsible for the direct supervision, assemblage of work rules, guidelines and enforcement in the Customer Service area.

A Budget Cost Analyst assembles data and issues financial information for both the Water Division and Waste Water Treatment Plant. This position is responsible for verifying that all financial activity for the Water & Sewer System, including List-of-Bills, accounts receivable, cash receipts, and City Treasurer investments are accurately entered in the System's official computerized financial records. The Budget Cost Analyst also assists in the preparation of all interim financial reports, the Water & Sewer System Annual Financial Report, and the annual Budget. Two Account Technicians are included in this section. Their responsibilities include the review and computer entry of all purchase requisitions, purchase orders and invoices, as well as the preparation of the List-of-Bills. They are responsible for verifying time cards and correctly distributing Water & Sewer System payroll costs. They also prepare monthly reports on work performed by the maintenance sections and office staff and invoice private parties and other City departments for reimbursement of costs incurred on their behalf by the Water & Sewer System.

Customer Service personnel serve as customer relations representatives for the Water Division. They handle all questions regarding water bills, water taps, meter installations, repairing or replacing stop boxes, plugged main sewers, and the availability of water and sewer service. Other responsibilities of this subsection include the issuance of all water permits and resolution of delinquent accounts. Contact is made with customers whose accounts are delinquent and payment arrangements are coordinated. Customer Service also compiles a listing of all unpaid accounts as of December 31st, since all unpaid accounts as of that date are placed on the tax roll for collection.

Personnel assigned to the consumption review function review the accuracy of readings entered into our permanent records for each meter in service. Included in this review is a check for inordinately high or low readings that could indicate a mechanical malfunction of either the meter or remote reading devices or a customer problem that requires resolution. Any changes as a result of this review are entered in the master Accounts Receivable records. Those individuals assigned to the consumption review function also assist with the mailing of bills to the customers.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Shared Services
(continued)

The City has approximately 50,000 water accounts that have their meters physically read and billed monthly. The meter readings are performed through an agreement with Consumers Energy. The Water Division staff reads the City's large commercial and industrial accounts because they are located in meter pits, which makes the reading process more difficult and time consuming. The City has negotiated an agreement with Consumers Energy that phases out their reading services concurrent with the City's implementation schedules for the new meter reading system. Once the new AMR system is fully implemented, all meter accounts will no longer be physically read by Consumers Energy and the City's Water Division staff.

Responses to high bill inquiries, re-checking meter readings in cases of dispute, and the collection of our delinquent accounts are other tasks assigned to this section.

Under the direction of the City Engineer, two Civil Engineers, a Drafting Specialist and a Construction Specialist draft and inspect Water Division projects performed in the right-of-way.

Major non-personnel budget line items within the Shared Services section are utilized as follows:

Postage - cost of mailing utility billings and public information notices to customers.

General Insurance - insurance on rolling stock, buildings and general liability insurance on employees.

Administration Expense - reimbursement to General Fund for support services from City Administration, City Council, Treasurer and City Clerk such as bill processing, cash collection and deposit, purchasing, legal services, tax roll assessment {delinquent water} and contract review and approval.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**Shared Services
Personnel**

	<u>Present</u>		<u>Department Requested {a}</u>		<u>Recommended By Mayor {a}</u>		<u>Council Adopted</u>	
	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>
Superintendent	1	\$ 93,317	1	\$ 93,317	1	\$ 93,317	1	\$ 93,317
Senior Clerk	1	53,425	1	\$ 53,425	1	53,425	1	53,425
Budget Cost Analyst	1	69,791	1	\$ 69,791	1	69,791	1	69,791
Account Technician	2	53,421	2	\$ 53,421	2	53,421	2	53,421
Account Specialist	5	49,816	5	\$ 49,816	5	49,816	5	49,816
Civil Engineer	2	78,425	2	\$ 78,425	2	78,425	2	78,425
Drafting Specialist	1	57,865	1	\$ 57,865	1	57,865	1	57,865
Construction Specialist	1	29.73/hr.	1	29.73/hr.	1	29.73/hr.	1	29.73/hr.
Overtime		100,000		118,537		100,000		100,000
Temporary Employees		35,000		47,000		47,000		47,000
Total Personnel	<u>14</u>		<u>14</u>		<u>14</u>		<u>14</u>	

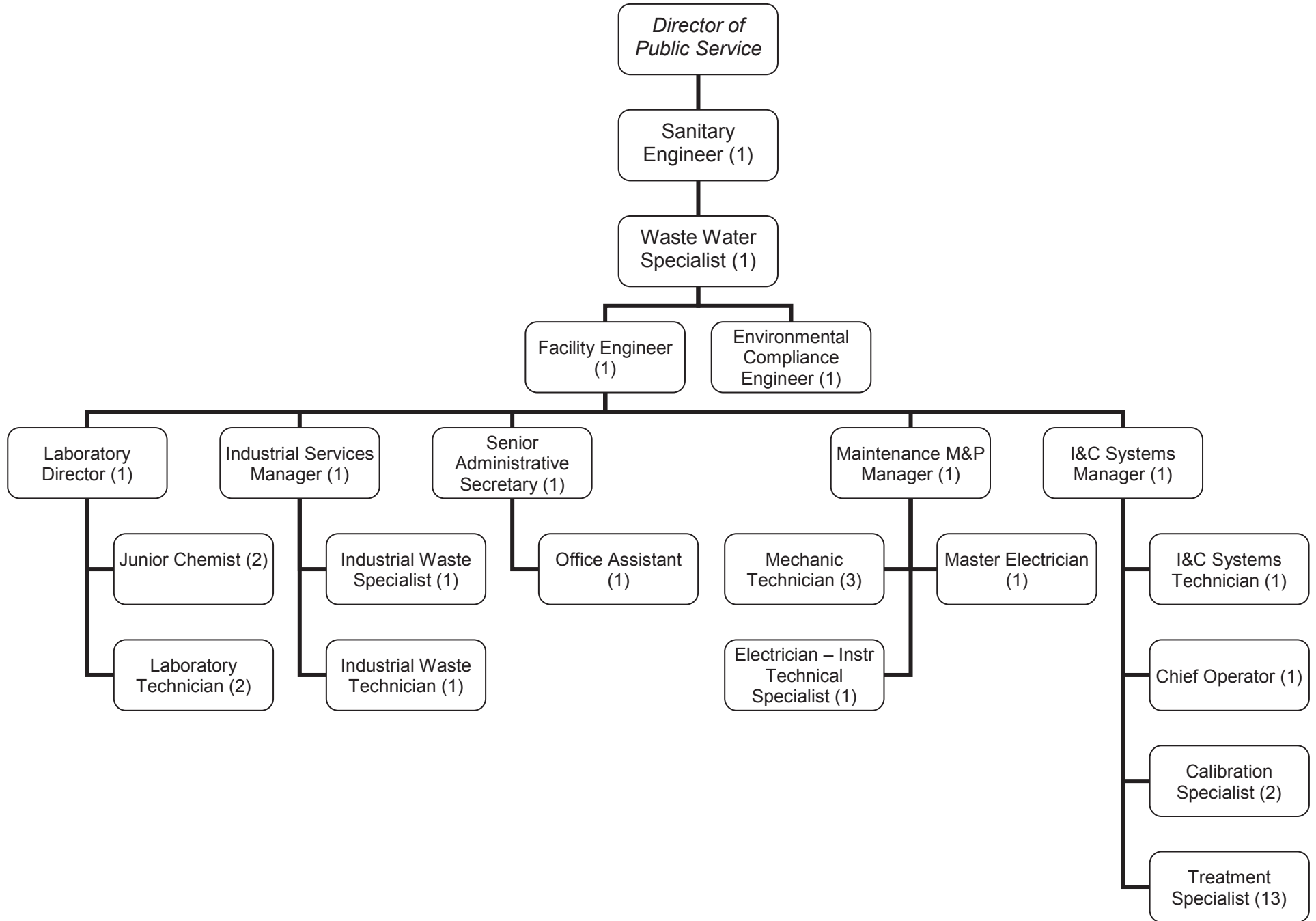
(a) Wage rates are based on the AFSCME Local 1250, Local 1917, UAW Local 412 Unit 59 contracts that expire 6/30/12.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Shared Services

Account Name	Account Number	2010	2011			2012		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Personnel Services								
Permanent Employees	70600	\$ 817,737	\$ 830,745	\$ 416,635	\$ 830,745	\$ 834,069	\$ 834,069	\$ 834,069
Temporary Employees	70700	35,718	60,000	21,684	47,000	47,000	47,000	47,000
Overtime	70900	112,312	74,509	52,062	115,000	118,537	100,000	100,000
Employee Benefits								
Education & Training	71302	5,699	4,000	1,000	4,000	5,000	5,000	5,000
Auto Allowance	71305	917	-	-	-	-	-	-
Social Security	71500	76,541	77,668	38,294	77,668	80,454	79,017	79,017
Insurances	71900	245,570	175,505	88,397	175,505	187,024	187,024	187,024
Employees' VEBA Trust	71904	268,881	255,775	129,602	255,775	285,418	278,374	278,374
Health Savings	71905	1,979	2,338	1,267	2,338	2,399	2,399	2,399
Supplemental Life Insurance	71906	800	712	367	712	580	580	580
Longevity	72100	32,368	32,344	15,343	32,344	35,048	35,048	35,048
Retirement Fund	72200	251,910	294,274	126,848	294,274	373,051	360,075	360,075
Defined Contribution Expense	72201	63,264	56,064	32,221	56,064	56,725	56,725	56,725
Cost Of Living Allowance	72400	1,146	1,519	358	1,248	-	-	-
Uniforms	72401	214	190	-	190	190	190	190
My Lawyer	72505	2,138	1,092	1,075	1,075	-	-	-
Other Charges								
Operating Supplies	74000	4,227	7,500	3,517	7,500	7,500	7,500	7,500
Professional Services	80100	456,210	440,000	155,230	440,000	385,000	385,000	385,000
Auditing	80105	15,500	15,500	13,000	15,500	15,500	15,500	15,500
Postage	80200	206,127	210,000	103,854	210,000	210,000	210,000	210,000
Unemployment Benefits	80300	635	3,000	-	3,000	3,000	3,000	3,000
Auto Expense	86300	2,262	1,000	84	1,000	1,000	1,000	1,000
General Insurance	91000	400,000	400,000	200,000	400,000	526,000	526,000	526,000
Utilities	92000	1,022	1,000	858	1,000	1,000	1,000	1,000
Administrative Expense	94200	1,698,800	1,711,900	849,400	1,711,900	1,702,400	1,702,400	1,702,400
M.S.D.W.A. Annual Fee	96202	21,252	25,000	-	25,000	25,000	25,000	25,000
Agents Fees	99602	-	1,000	-	1,000	1,000	1,000	1,000
Total Shared Services		\$ 4,723,229	\$ 4,682,635	\$ 2,251,096	\$ 4,709,838	\$ 4,902,895	\$ 4,862,901	\$ 4,862,901

Waste Water Treatment Plant



CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Waste Water Treatment Plant

Warren's Waste Water Treatment Facility, constructed in 1959, was one of the first advanced waste water treatment facilities to be placed in service and continues to meet the stringent discharge limitations imposed by State and Federal authorities. Warren residents can be proud of their facility and should be aware that their sewer rates have not dramatically increased over the past several years, as have the rates of suburban customers of the Detroit Sewage Treatment System. The Treatment Plant staff is proud of the many awards received attesting to the outstanding operational performance of the Plant. The exemplary performance record has been maintained, in part, as the result of the solid budgetary support provided in the past and can only be maintained with a continuation of that support.

An Efficiency Study first commissioned in Fiscal 1999 began an elaborate process of evaluating the technologies employed in the operation of the Waste Water Treatment Plant and the work practices of employees at every level of operation. The collaborative efforts of employees and consultants resulted in our WWTP becoming a highly efficient and competitive operation.

The City of Warren Waste Water Treatment Plant is a recognized leader in the protection of the environment in southeast Michigan. In 1983, and again in 1991, the United States Environmental Protection Agency presented an award to the Treatment Plant for being the best operated and maintained pollution control facility in Region V, a six-state region. Also in 1991, the Warren Waste Water Treatment Plant won the award for the best operated and maintained facility in the nation for the "Large WWTP Category", (flow more than 20 MGD).

In 1994, the City's Industrial Pretreatment Program received the Environmental Protection Agency's Nation 2nd Place Award for outstanding Pretreatment Program for the protection of the facility and the environment from harmful commercial and industrial discharges.

In 1997, the City of Warren initiated a Critical Projects Improvement Program, which was funded by the City of Warren sale of Sewer Fund Revenue Bonds. This program to renovate and upgrade the WWTP was undertaken in order to assure Warren's continued compliance with the NPDES permit, to assure reliable operations, to significantly reduce operation and maintenance costs, and to allow better monitoring and control of treatment equipment. Improvements completed under this program included:

- Aeration system upgrade to fine bubble aeration, and new valve actuators.
- Addition of sludge blanket monitors to all final clarifiers.
- Return activated sludge pump improvements – with addition of variable frequency drives.
- Replacement of one of the sludge transfer pumps, and associated controls.
- Installation of one new gravity belt thickener in the sludge system.
- Incinerator mechanical rehabilitation and control system upgrade.
- Polymer system upgrade.
- Ferric chloride feed system upgrade.

This improvement program was completed in 2005 and 2006.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Waste Water Treatment Plant
(continued)

In 2003, the City of Warren developed and implemented a SRF Loan funded WWTP improvement project. This project was carried out to continue and expand operations reliability enhancements begun under the 1997 Critical Projects Improvement Program, to replace aging and outdated equipment, to improve treatment performance and the reliability of operations, to reduce maintenance costs and disruptions to operations, to ensure that the City continues to meet permit requirements, to improve operational efficiencies and lower operational costs, to reduce energy consumption and to improve sludge dewatering performance. Improvements undertaken as part of the 2003 SRF project include:

Plant Wide Project:

- Grit channel effluent improvements to limit flow to Primary System.
- Primary System: Scum skimming improvements.
- Rapid Sand Filter (replace/upgrade all existing sand filter units, and replace and upgrade the control system).
- Filter Building roof access improvements and waste wash water pump replacement.
- Overall improvements to flow metering in the plant.
- Administrative & industrial pretreatment program improvements (including modifications to the Parks and Recreation Facility; Training Space).
- Yard water main improvements, and non-potable water system improvements.

Solids Project:

- Primary Sludge Pumping & Gallery Improvements.
- WAS Pump Replacement.
- Transfer Pump Gallery Modifications.
- Sludge Transfer Pumping Replacement & Controls.
- Eliminated the use of DAF Thickeners.
- Sludge Blending Tanks – Retrofitted/modified all 3 tanks.
- Gravity Belt Thickeners – Added 3 new units, stacked ahead of the Belt Filter Presses.
- Belt Filter Presses – Refurbished the two existing units. Added an additional, new (3rd) belt filter press.
- Yard piping relocation work.
- Other improvements (including: sludge handling piping, odor control, HVAC, conveyors, etc.)

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Waste Water Treatment Plant
(continued)

FACILITY PROCESS DESCRIPTION:

The Warren Waste Water Treatment Plant provides equipment and facilities for primary, secondary, and tertiary treatment with biosolids removal and disposal. All of these integrated processes have recently been fully automated using a state of the art Supervisory Control and Data Acquisition (SCADA) System programmed in-house using WWTP staff. The following is a brief description of the processes utilized at the treatment plant.

Preliminary Treatment

- **Bar Screens:** Three mechanically cleaned bar screens are available to remove large debris and trash. Each screen is capable of handling flow up to 90 mgd. The screenings are trucked to a landfill.
- **Raw Sewage Pumping Station:** After screening, eight raw sewage pumps lift the sewage 65 feet to the grit removal structure. The total pumping capacity is about 200 mgd.
- **Grit Chamber:** The grit chamber consists of three covered channels. The chamber removes coarse, inorganic solids to reduce wear on operating mechanisms and limit solids build-up in the primary settling tanks. The grit and screenings are trucked to a sanitary landfill.

Primary Treatment

- **Primary Settling Tanks:** Flow from the grit chamber is directed to eight primary settling tanks with a total capacity of 1.7 mg. Detention in these tanks results in removal of approximately 60 percent of the suspended solids and 40 percent of the biochemical oxygen demand (BOD). Settled solids are collected and pumped to the sludge processing facility.
- **Retention Basin:** During wet weather, flows greater than the treatment plant hydraulic capacity of 60 mgd are diverted to a 50 mg retention basin. On rare occasions, the basin overflows. Overflow from the basin is chlorinated and de-chlorinated then mixed with tertiary effluent and discharged to the Red Run Drain. When the storm ends, retained flow in the basin is returned to the plant for treatment. During dry periods, the basin can also be used to store sewage with high concentrations of harmful contaminants, which may result from industrial spills, accidents, or illegal dumping. If this occurs, the sewage is returned at a controlled rate for treatment.

Secondary Treatment

- **Aeration Tanks:** This treatment stage consists of a single-stage activated sludge system, which provides removal of both the carbonaceous and nitrogenous oxygen demands. Treatment at this stage is in four of six aeration tanks with a detention time of 4.5 hours at design flow. Two tanks operate as plug flow aeration reactors and two tanks as complete mix aeration basins. Ferric chloride is added for sulfide control and phosphorus removal at the plant influent pumping station. However, ferric chloride or alum can also be fed at the aeration tanks if required for alternate phosphorus removal.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Waste Water Treatment Plant
(continued)

- **Secondary Settling Tanks:** After aeration, the flow is directed to eight settling tanks, with a total volume of 4.9 mg. The solids settle in these tanks. Some of the settled solids from the secondary settling tanks are returned to the aeration tanks for reuse. Excess solids from the settling tanks are transferred to the sludge handling facility. Effluent from these tanks is then pumped to the rapid sand filters for tertiary treatment.

Tertiary Treatment

- **Secondary Effluent Pumping Station:** This station discharges the effluent from the secondary clarifiers to the rapid sand filters. Four vertical mixed flow turbine pumps are utilized, each with 20 mgd capacity.
- **Mixed Media Filters:** Twelve mixed media filter units with a total filter bed area of 8,640 square feet are used at this stage. Filtered water, stored in a 220,000 gallon reservoir is used to backwash the filters. Waste wash water containing solids removed from the filters is returned to the aeration tank for processing.
- **Chlorine Contact Tank:** When the 50 million gallon retention basin fills and overflows, the discharge enters the chlorine contact tank and is dosed with chlorine for disinfection via a sodium hypochlorite feed system. Chlorine is mixed with the filtered effluent, and is retained in the chlorine contact tank for 30 minutes at 36 mgd. The chlorine contact tank has the capacity to efficiently disinfect the maximum retention basin overflow rate of 101 mgd. The normal fecal coliform count from the Warren WWTP effluent after disinfection is less than 100 counts per 100 milliliters (ml), well within the state-imposed effluent standard of 200 counts per 100 ml
- **Ultra Violet Disinfection:** The ultraviolet (UV) disinfection system includes two (2) UV channels with two (2) lamp banks in each channel (640 bulbs total) with each channel capable of handling 30 mgd flow to achieve the WWTP's total hydraulic capacity of 60 mgd. The lamp banks are of the horizontal, low pressure, high intensity type with automatic mechanical/chemical cleaning systems. The lamps are arranged in individual modules which can be removed without impacting the operation of other modules. Installation of the UV system has resulted in a reduction of 143,000 pounds per year of chemicals discharged to the Red Run.
- **Dechlorination Facility:** During wet weather when the retention basin overflows it is treated with sodium hypochlorite. At the end of the chlorine contact tank the chlorinated effluent is dosed with 38% sodium bisulfite for dechlorination. The dechlorination system is capable of feeding 1,460 lbs/day by two 2.6 gallons per hour (gph) metering pumps. The sodium bisulfite reacts with the residual chlorine to reduce the concentration of total residual chlorine below the state imposed effluent standard of 0.038 mg/l. The disinfected and dechlorinated effluent is mixed with ultra violet light disinfected effluent and discharged into the Red Run Drain.

Sludge Handling

- **Sludge Storage Tanks:** Sludge resulting from the primary settling tanks is stored in four 68,000 gallon primary sludge storage tanks. Sludge from the flotation thickeners is stored in two 204,000 gallon activated sludge storage tanks. The two sludges are mixed in three 50,000 gallon blended sludge storage tanks.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Waste Water Treatment Plant
(continued)

- **Belt Filter Presses:** Blended sludge is thickened and dewatered by three 2.2 meter Andritz belt filter presses (BFP's) each with a gravity belt thickener stacked on top. Sludge is conditioned by the addition of a polymer coagulation agent to improve filterability prior to being fed to the filters. The resulting filter cake is discharged to a belt conveyor system for transport to the sludge incinerator.
- **Sludge Incinerator:** Filter cake produced by the BFP's is incinerated in a ten hearth 25"-9" diameter multiple hearth incinerator. Natural gas is used as a supplementary fuel. A counter-flow water impingement plate scrubber is provided to cleanse the exhaust gases before discharge to the atmosphere. Chlorinated plant effluent is used as a liquid medium in the scrubber system.
- **Ash Disposal:** Ash from the furnace is discharged at the bottom and slurried using water discharged from the scrubber system. Slurried ash is pumped to two ash settling lagoons. Overflow water from the lagoons is returned to the treatment plant for processing. Dewatered ash is trucked from the ash lagoons to a landfill.

The investment and commitment in the City's Waste Water Plant provides extremely high levels of treatment protecting the environment in a way that Warren residents can be proud of, including:

- 99% Removal of Solids
- 99% Removal of Biochemical Oxygen Demand
- 99% Removal of Nitrogen
- Diversion and Storage of Sewage During Major Storms for Subsequent Treatment
- Diversion and Storage of Industrial Spills for Subsequent Treatment

A small, but highly technical staff of thirty-nine (38) employees will operate and maintain the Treatment Plant in Fiscal 2012. Their responsibilities include plant operations, plant maintenance, laboratory operations, the Industrial Pretreatment Monitoring and Enforcement, employee safety, grounds maintenance, and administrative support.

Major non-personnel budget line items within the Waste Water Treatment Plant are utilized as follows:

- Operating Supplies – office supplies; small computer software & hardware enhancements; laboratory supplies.
- Chemicals – chemicals used in testing and treatment of effluent.
- Professional Services – computer system consulting; testing services; regulatory compliance consultants.
- Ash Removal – removal and disposal of ash from facility.
- Repairs & Maintenance – repair and replacement of precision equipment used in testing and treatment activities at the Waste Water Treatment Plant.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**Waste Water Treatment Plant
Personnel**

	<u>Present</u>		<u>Department Requested {a}</u>		<u>Recommended By Mayor {a}</u>		<u>Council Adopted</u>	
	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>
Sanitary Engineer	1	\$101,415	1	\$101,415	1	\$101,415	1	\$101,415
Wastewater Specialist	1	83,784	1	83,784	1	83,784	1	83,784
Facility Engineer	1	85,781	1	85,781	1	85,781	1	85,781
Environmental Compliance Engineer	1	85,632	1	85,632	1	85,632	1	85,632
Laboratory Section:								
Laboratory Director	1	80,113	1	80,113	1	80,113	1	80,113
Junior Chemist	2	30.19/hr.	2	30.19/hr.	2	30.19/hr.	2	30.19/hr.
Laboratory Technician	2	26.87/hr.	2	26.87/hr.	2	26.87/hr.	2	26.87/hr.
Maintenance Section:								
Maintenance M&P Manager	1	73,243	1	73,243	1	73,243	1	73,243
Mechanic Technician	4	61,900	4	61,900	3 (d)	61,900	3 (d)	61,900
Master Electrician	1	68,622	1	68,622	1	68,622	1	68,622
Electrician/Instrumentation Technical S	1	75,637	1	75,637	1	75,637	1	75,637

(a) Wage rates are based on the AFSCME Local 1250, Local 1917, UAW Local 412 Unit 59 contracts that expire 6/30/12.

(d) Position deleted.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**Waste Water Treatment Plant
Personnel {continued}**

	<u>Present</u>		<u>Department Requested {a}</u>		<u>Recommended By Mayor {a}</u>		<u>Council Adopted</u>	
	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>	<u>#</u>	<u>Rate</u>
<i>Industrial Services/Stormwater Section:</i>								
Industrial Services Manager	1	75,637	1	75,637	1	75,637	1	75,637
Industrial Waste Specialist	1	59,845	1	59,845	1	59,845	1	59,845
Industrial Waste Technician	1	53,055	1	53,055	1	53,055	1	53,055
<i>Operating Section:</i>								
I & C System Manager	1	80,214	1	80,214	1	80,214	1	80,214
Comp. Instr./Programming Technician	1	58,717	1	58,717	-	(c) -	-	(c) -
I & C System Technician	1	67,539	1	67,539	1	67,539	1	67,539
Chief Operator	1	85,632	1	85,632	1	85,632	1	85,632
Treatment Specialist	13	28.90/hr.	13	28.90/hr.	13	28.90/hr.	13	28.90/hr.
Calibration Specialist	1	58,818	1	58,818	2	(c) 58,818	2	(c) 58,818
<i>Clerical Section:</i>								
Senior Administrative Secretary - WWT	1	55,435	1	55,435	1	55,435	1	55,435
Office Assistant	1	34,279	1	34,279	1	34,279	1	34,279
Overtime		225,000		225,000		225,000		225,000
Temporary Employees		50,000		50,000		50,000		50,000
Total Personnel	<u>39</u>		<u>39</u>		<u>38</u>		<u>38</u>	

(a) Wage rates are based on the AFSCME Local 1250, Local 1917, UAW Local 412 Unit 59 contracts that expire 6/30/12.

(c) Reclassification of Computer Instrument Programming Technician to Calibration Specialist.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Waste Water Treatment

Account Name	Account Number	2010	2011			2012		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Personnel Services								
Permanent Employees	70600	\$ 2,277,202	\$ 2,606,436	\$ 1,051,073	\$ 2,606,436	\$ 2,610,835	\$ 2,537,022	\$ 2,537,022
Temporary Employees	70700	19,874	50,000	3,751	50,000	50,000	50,000	50,000
Overtime	70900	209,627	225,000	96,466	225,000	225,000	225,000	225,000
Employee Benefits								
Education & Training	71302	28,698	45,000	7,539	40,000	48,500	48,500	48,500
Certification Bonuses	71303	26,687	30,000	-	43,000	30,000	30,000	30,000
Social Security	71500	207,888	237,907	92,026	237,907	237,754	232,032	232,032
Holiday Pay	71700	53,405	63,723	31,431	63,723	63,139	63,139	63,139
Insurances	71900	597,494	570,850	200,401	570,850	630,494	610,676	610,676
Employees' VEBA Trust	71904	819,920	988,464	369,384	988,464	990,374	944,361	944,361
Health Savings	71905	2,819	2,824	1,861	2,824	4,115	4,588	4,588
Supplemental Life Insurance	71906	2,099	2,099	1,078	2,099	2,415	2,415	2,415
Longevity	72100	87,055	80,557	27,555	80,557	80,305	80,305	80,305
Retirement Fund	72200	505,339	931,348	205,539	931,348	983,272	898,511	898,511
Defined Contribution Expense	72201	214,915	189,458	107,083	189,458	204,785	209,512	209,512
Cost Of Living Allowance	72400	2,612	4,331	803	4,331	-	-	-
Uniforms	72401	4,950	5,320	2,345	5,320	5,320	5,130	5,130
My Lawyer	72505	4,954	3,042	2,381	3,042	-	-	-
Other Charges								
Operating Supplies	74000	44,467	80,000	18,275	80,000	80,000	80,000	80,000
Chemicals	74300	297,551	400,000	73,959	400,000	400,000	400,000	400,000
Professional Services	80100	16,035	155,000	2,445	170,000	150,000	150,000	150,000
Building Lease	80104	54,000	54,000	27,000	54,000	54,000	54,000	54,000
Odor Control	80107	6,790	20,000	7,611	13,500	20,000	20,000	20,000
Ash Removal Contract	81800	80,076	70,000	1,002	75,000	70,000	70,000	70,000
Telephone	85300	14,300	13,500	5,581	13,000	13,000	13,000	13,000
Auto Expense	86300	9,773	15,000	7,577	17,000	21,000	21,000	21,000
Utilities	92000	650,532	825,000	259,428	800,000	800,000	800,000	800,000
Electric Power	92001	1,106,981	1,056,770	565,417	1,200,000	1,100,000	1,100,000	1,100,000
Repairs & Maintenance	93000	454,567	650,000	115,983	658,000	625,000	625,000	625,000
Management Agency Fee	96201	31,660	35,000	17,516	29,000	30,000	30,000	30,000
Total Waste Water Treatment		\$ 7,832,270	\$ 9,410,629	\$ 3,302,509	\$ 9,553,859	\$ 9,529,308	\$ 9,304,191	\$ 9,304,191

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

WATER AND WASTE WATER RATES

Water Consumption Rates Based on the amount of metered water	Present Rate	2012 Department Requested	2012 Recommended By Mayor	2012 Council Adopted
0 to 600 Cubic Feet	\$2.673 per C	\$2.705 per C	\$2.673 per C	\$2.673 per C
Each 100 Cubic Feet Thereafter	\$2.673 per C	\$2.705 per C	\$2.673 per C	\$2.673 per C
<u>Monthly Water Service Charge:</u>				
Meter Size:				
5/8"	\$ 0.80	\$ 0.81	\$ 0.80	\$ 0.80
3/4"	\$ 1.60	\$ 1.62	\$ 1.60	\$ 1.60
1"	\$ 3.20	\$ 3.24	\$ 3.20	\$ 3.20
1-1/2"	\$ 8.00	\$ 8.10	\$ 8.00	\$ 8.00
2"	\$ 20.00	\$ 20.25	\$ 20.00	\$ 20.00
3"	\$ 36.00	\$ 36.45	\$ 36.00	\$ 36.00
4"	\$ 72.00	\$ 72.90	\$ 72.00	\$ 72.00
6"	\$ 136.00	\$ 137.70	\$ 136.00	\$ 136.00
8"	\$ 240.00	\$ 243.00	\$ 240.00	\$ 240.00
10"	\$ 400.00	\$ 405.00	\$ 400.00	\$ 400.00
12"	\$ 800.00	\$ 810.00	\$ 800.00	\$ 800.00
<u>Monthly Water Service Charge</u>				
<u>Fire Line Only - Flat Rate:</u>				
Service Line Size:				
5/8"	\$ 6.35	\$ 6.42	\$ 6.35	\$ 6.35
3/4"	\$ 7.15	\$ 7.23	\$ 7.15	\$ 7.15
1"	\$ 8.75	\$ 8.85	\$ 8.75	\$ 8.75
1-1/2"	\$ 35.73	\$ 36.15	\$ 35.73	\$ 35.73
2"	\$ 47.73	\$ 48.30	\$ 47.73	\$ 47.73
3"	\$ 63.73	\$ 64.50	\$ 63.73	\$ 63.73
4"	\$ 99.73	\$ 100.95	\$ 99.73	\$ 99.73
6"	\$ 163.73	\$ 165.75	\$ 163.73	\$ 163.73
8"	\$ 267.73	\$ 271.05	\$ 267.73	\$ 267.73
10"	\$ 427.73	\$ 433.05	\$ 427.73	\$ 427.73
12"	\$ 827.73	\$ 838.05	\$ 827.73	\$ 827.73

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

WATER AND WASTE WATER RATES

Waste Water Treatment Consumption Rates Based on the amount of metered water	Present Rate	2012 Department Requested	2012 Recommended By Mayor	2012 Council Adopted
0 to 600 Cubic Feet	\$1.995 per C	\$2.246 per C	\$2.119 per C	\$2.071 per C
Each 100 Cubic Feet Thereafter	\$1.995 per C	\$2.246 per C	\$2.119 per C	\$2.071 per C
<u>Monthly Sewer Service Charge:</u>				
Meter Size:				
5/8"	\$ 1.91	\$ 1.91	\$ 1.91	\$ 1.91
3/4"	\$ 3.82	\$ 3.82	\$ 3.82	\$ 3.82
1"	\$ 7.64	\$ 7.64	\$ 7.64	\$ 7.64
1-1/2"	\$ 19.10	\$ 19.10	\$ 19.10	\$ 19.10
2"	\$ 47.75	\$ 47.75	\$ 47.75	\$ 47.75
3"	\$ 85.95	\$ 85.95	\$ 85.95	\$ 85.95
4"	\$ 171.90	\$ 171.90	\$ 171.90	\$ 171.90
6"	\$ 324.70	\$ 324.70	\$ 324.70	\$ 324.70
8"	\$ 573.00	\$ 573.00	\$ 573.00	\$ 573.00
10"	\$ 955.00	\$ 955.00	\$ 955.00	\$ 955.00
12"	\$ 1,910.00	\$ 1,910.00	\$ 1,910.00	\$ 1,910.00
<u>Unmetered Minimum Bill</u>				
<u>Per Month - Sewer Only Charge:</u>				
Water Service Size:				
5/8"	\$ 5.90	\$ 6.40	\$ 6.15	\$ 6.05
3/4"	\$ 7.81	\$ 8.31	\$ 8.06	\$ 7.96
1"	\$ 11.63	\$ 12.13	\$ 11.88	\$ 11.78
1-1/2"	\$ 39.05	\$ 41.56	\$ 40.29	\$ 39.81
2"	\$ 67.70	\$ 70.21	\$ 68.94	\$ 68.46
3"	\$ 105.90	\$ 108.41	\$ 107.14	\$ 106.66
4"	\$ 191.85	\$ 194.36	\$ 193.09	\$ 192.61
6"	\$ 344.65	\$ 347.16	\$ 345.89	\$ 345.41
8"	\$ 592.95	\$ 595.46	\$ 594.19	\$ 593.71
10"	\$ 974.95	\$ 977.46	\$ 976.19	\$ 975.71
12"	\$ 1,929.95	\$ 1,932.46	\$ 1,931.19	\$ 1,930.71

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

WATER AND WASTE WATER RATES

Meter Minimum Bill Per Month With 5/8" Meter Service Charge:	Present Rate	2012 Department Requested	2012 Recommended By Mayor	2012 Council Adopted
Water Service Charge	\$ 0.80	\$ 0.81	\$ 0.80	\$ 0.80
Sewer Service Charge	1.91	1.91	1.91	1.91
Water 0 - 200 Cubic Feet	5.35	5.41	5.35	5.35
Waste Water Treatment 0 - 200 Cubic Feet	3.99	4.49	4.24	4.14
Total	\$ 12.05	\$ 12.62	\$ 12.30	\$ 12.20

Waste Water Extra Strength Surcharges
Per Pound:

Bio-chemical Oxygen Demand (BOD)	\$ 0.2772	\$ 0.2499	\$ 0.2499	\$ 0.2499
Suspended Solids (SS)	\$ 0.3076	\$ 0.3058	\$ 0.3058	\$ 0.3058
Phosphorus (P)	\$ 2.8909	\$ 2.7868	\$ 2.7868	\$ 2.7868
Ammonia (NH3-N)	\$ 0.5928	\$ 0.4717	\$ 0.4717	\$ 0.4717

Waste Water Pretreatment Charge:

Per Sample	\$ 180.00	\$ 180.00	\$ 180.00	\$ 180.00
Per Analysis	\$ 75.00	\$ 75.00	\$ 75.00	\$ 75.00

Commodity Charge Per 100 Cubic Feet:

Non-Domestic User	\$ 0.3315	\$ 0.3348	\$ 0.3348	\$ 0.3348
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Cross-Connection Charge Per 100 Cubic Feet:

Non-Domestic User	\$ 0.1003	\$ 0.1003	\$ 0.1003	\$ 0.1003
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SPECIAL PURPOSE RESERVES

Debt Service

Waste Water Treatment Improvement

Infrastructure Replacement

Meter Replacement

Capital Equipment Replacement

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Debt Service Reserve

The Debt Service Reserve Fund was established to set aside funds for the payment of finance obligations. Included in Fiscal 2012 appropriations are the actual debt service costs for the following debt instruments issued directly by the Water & Sewer System or in conjunction with other city funding entities:

Conventional revenue bonds:

- \$20.560 million of the \$21.675 million revenue refunding bonds issued in 2005 to refinance bond issues from 1999 and 2000
- \$8.005 million of the \$12.0 million revenue refunding bonds issued in 1999 to refinance revenue bond issues from 1994 and 1996 (refinanced in 2010 - \$5.08 million outstanding)

State Revolving Fund {SRF} revenue bonds:

- \$3.35 million of \$4.75 million issued in 2003 {5134-01}
- \$5.095 million of \$6.465 million issued in 2004 {5134-02}
- \$787,091 of \$1,147,091 issued in 2004 {5134-03}
- \$6.39 million of \$8.2 million issued in 2005 {5134-04}
- \$2.97 million of \$3.09 million issued in 2009 {5401-01}

Capital Improvement financing:

- \$880,000 of \$3.585 million of the City of Warren capital improvement bonds issued in 2003
- \$2,022,125 of \$7.53 million of the City of Warren capital improvement bonds issued in 2006
- \$9.29 million of \$9.29 million of the City of Warren capital improvement bonds issued in 2010
- \$32,909,116 of \$32,909,116 of the *proposed* City of Warren capital improvement bonds to be issued in 2012

Equipment Lease Purchase:

- \$752,039 of \$871,586 of the Grant Capital Management lease purchase approved in 2010

The SRF bond issues differ from conventional revenue bonds in that the proceeds are transmitted to the City as construction progresses on a reimbursement basis. As a result, actual repayment schedules fluctuate from year to year until the projects are complete. Disbursements for projects 5134-01 through 5134-04 have been completed so the amounts listed above and the debt schedules in the debt service section of the budget documents reflect total liability and the final repayment schedules. The amount listed above and the debt schedule for project 5401-01 is estimated and illustrates the total liability expected when the project is complete.

CITY OF WARREN, MICHIGAN
 WATER & SEWER SYSTEM
 2012 CITY COUNCIL ADOPTED BUDGET
Debt Service Reserve
(continued)

Pursuant to section 41-181(3) of the Code of Ordinances of the City of Warren, each July the city could increase the combined water and waste water rates to provide funding to pay the long term financing costs for needed capital improvements. In fiscal years 2009, 2010, and 2011 the mid-year adjustments were 2.5%, 2%, and 2% respectively. Below is a schedule for Fiscal 2012 detailing the estimated revenues from the funding increase, the estimated expenses to be charged against the revenues, and the net balance remaining.

Beginning Balance:		\$2,906,750 {estimated}
2012 Estimated Revenues	\$2,022,000	
2012 Estimated Expenses	<u>(\$693,150)</u>	
Net Cumulative Balance (at December 31, 2012):		\$4,235,600 {estimated}

The following capital projects are committed against these funds:

UV Disinfection System – WWTP State Revolving Fund Revenue Issue #5401-01 \$3,090,000, 2.5% interest, 20 years remaining <i>Estimated</i> Highest Annual Principal & Interest Payment	\$ 200,625
<i>Proposed</i> 2012 Capital Improvement Bond Issue \$19,537,300, <i>estimated</i> 5% interest, 20 years <i>Estimated</i> Highest Annual Principal & Interest Payment	\$1,761,100

The estimated annual revenues noted above will increase according to the Council approved ordinance change allowing for a mid-year increase of 1.5% in fiscal years 2012, 2013, 2014, and 2015. These estimates are not included in the schedule, but will be stated in the Water & Sewer System Financial Report for the year ending December 31, 2012.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Debt Service		2010	2011			2012		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Revenues:								
Interest on Investments	66500	\$ 4,450	\$ 500	\$ 875	\$ 1,000	\$ 1,500	\$ 1,500	\$ 1,500
Miscellaneous Income	47100	-	183,463	183,463	183,463	199,164	199,164	199,164
Transfer From:								
Operation & Maintenance Fund	67620	5,145,000	4,753,230	3,000,000	4,753,230	6,255,000	6,260,000	6,260,000
O&M Fund - Generated from Rate	67622	1,199,885	1,315,774	-	1,315,774	2,022,000	2,022,000	2,022,000
Total Financial Resources		6,349,335	6,252,967	3,184,338	6,253,467	8,477,664	8,482,664	8,482,664
Expenditures:								
<i>Revenue Bond Debt Service</i>								
Principal	99600	1,755,000	1,960,000	1,150,000	1,960,000	2,000,000	2,000,000	2,000,000
Interest	99601	1,066,184	1,030,525	521,013	1,030,525	968,331	968,331	968,331
<i>Building Authority Bond Debt Service</i>								
Principal	99602	55,000	55,000	55,000	55,000	60,000	60,000	60,000
Interest	99603	34,011	32,670	16,713	32,670	31,059	31,059	31,059
<i>Capital Improvement Bond Debt Service</i>								
Principal	99604	14,082	42,245	-	42,245	342,245	342,245	342,245
Interest	99605	206,640	574,071	106,928	574,071	520,477	520,477	520,477
Interest-2011 bonds	99605	-	86,900	-	-	-	-	-
Interest-2012 bonds {proposed}	99605	-	-	-	-	826,500	831,900	831,900
<i>Equipment Lease Purchase</i>								
Principal	99611	-	119,547	76,384	119,547	176,993	176,993	176,993
Interest	99612	-	33,681	25,768	33,681	27,311	27,311	27,311
<i>State Revolving Fund Bond Debt Service</i>								
Principal	99606	910,000	1,045,000	1,045,000	1,045,000	1,065,000	1,065,000	1,065,000
Interest	99607	338,894	402,344	356,576	402,344	380,663	380,663	380,663
Other costs	99700	1,497	2,000	1,025	2,000	2,000	2,000	2,000
Total Transfers & Expenditures		4,381,308	5,383,983	3,354,407	5,297,083	6,400,579	6,405,979	6,405,979
Net Increase (Decrease)	96501	1,968,027	868,984	(170,069)	956,384	2,077,085	2,076,686	2,076,686
FY Beginning Restricted Reserve		5,188,485	7,156,512	7,156,512	7,156,512	8,112,896	8,112,896	8,112,896
FY Ending Restricted Reserve		\$ 7,156,512	\$ 8,025,496	\$ 6,986,443	\$ 8,112,896	\$ 10,189,981	\$ 10,189,582	\$ 10,189,582

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 BUDGET WORKPAPERS
DEBT SERVICE SUMMARY

	2012 Fiscal Year			Total	Average	Highest
	Principal	Interest	Total	Outstanding Debt @ FYE	Annual Debt Service	Annual Debt Service
Revenue Bonds						
2010 Refunding issue	\$ 1,135,000.00	\$ 102,275.00	\$ 1,237,275.00	\$ 3,945,000	\$ 1,072,478	\$ 1,244,275
2005 Refunding issue	865,000.00	866,056.26	1,731,056.26	19,695,000	1,836,316	2,654,431
Total revenue bonds	<u>2,000,000.00</u>	<u>968,331.26</u>	<u>2,968,331.26</u>	<u>23,640,000</u>	<u>2,908,794</u>	<u>3,898,706</u>
Building Authority Bonds						
2003 Capital improvement bonds	60,000.00	31,058.76	91,058.76	820,000	91,471	93,813
Total building authority bonds	<u>60,000.00</u>	<u>31,058.76</u>	<u>91,058.76</u>	<u>820,000</u>	<u>91,471</u>	<u>93,813</u>
Capital Improvement Bonds						
2006 Capital improvement bonds	42,244.95	77,889.12	120,134.07	1,979,880	178,406	228,714
2010 Capital improvement bonds - AMR	300,000.00	243,423.13	543,423.13	8,990,000	625,483	735,145
2012 Capital improvement bonds {proposed}	-	493,900.00	493,900.00	19,537,300	1,526,819	1,761,100
2012 Capital improvement bonds {proposed}	-	338,000.00	338,000.00	13,371,816	1,041,686	1,132,816
Total capital improvement bonds	<u>342,244.95</u>	<u>1,153,212.25</u>	<u>1,495,457.20</u>	<u>43,878,996</u>	<u>3,372,394</u>	<u>3,857,775</u>
State Revolving Fund Bonds						
5134-01: Sand filter	220,000.00	83,750.00	303,750.00	3,130,000	305,087	307,500
5134-02: Water system improvements	290,000.00	105,187.51	395,187.51	4,805,000	396,649	398,919
5134-03: Sand filter stage 2	50,000.00	16,725.68	66,725.68	737,091	69,981	73,623
5134-04: Solids handling improvements	380,000.00	100,750.00	480,750.00	6,010,000	480,015	481,913
5401-01: UV disinfection system	125,000.00	74,250.00	199,250.00	2,845,000	198,336	200,625
Total state revolving fund bonds	<u>1,065,000.00</u>	<u>380,663.19</u>	<u>1,445,663.19</u>	<u>17,527,091</u>	<u>1,450,068</u>	<u>1,462,579</u>
Equipment Lease Purchase						
WWTP waste heat to energy project	176,992.69	27,311.31	204,304.00			
Total equipment lease purchase	<u>176,992.69</u>	<u>27,311.31</u>	<u>204,304.00</u>			
Total 2012 Debt Service	<u>\$ 3,644,237.64</u>	<u>\$ 2,560,576.77</u>	<u>\$ 6,204,814.41</u>	<u>\$ 85,866,087</u>	<u>\$ 7,822,727</u>	<u>\$ 9,312,873</u>

Debt Service Reserve Options - Applies To Bonds

10% of O/S Debt	110% of Avg Debt	Highest Annual
\$ 8,586,609	\$ 8,605,000	\$ 9,312,873

Debt Service Reserve Ordinance Requirement

\$ 8,586,609

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - REVENUE BONDS

Date	2010 Refunding Issue \$12,000,000		2005 Refunding Issue \$21,675,000	
	Principal	Interest	Principal	Interest
05/01/12	\$1,135,000.00	\$ 56,812.50	\$ -	\$ 433,028.13
11/01/12	-	45,462.50	865,000.00	433,028.13
05/01/13	1,165,000.00	45,462.50	-	416,809.38
11/01/13	-	33,812.50	885,000.00	416,809.38
05/01/14	1,065,000.00	33,812.50	-	400,215.63
11/01/14	-	23,162.50	930,000.00	400,215.63
05/01/15	1,025,000.00	23,162.50	-	381,615.63
11/01/15	-	10,350.00	975,000.00	381,615.63
05/01/16	690,000.00	10,350.00	-	362,115.63
11/01/16	-	-	1,870,000.00	362,115.63
05/01/17	-	-	-	324,715.63
11/01/17	-	-	2,005,000.00	324,715.63
05/01/18	-	-	-	283,362.50
11/01/18	-	-	2,040,000.00	283,362.50
05/01/19	-	-	-	241,287.50
11/01/19	-	-	2,075,000.00	241,287.50
05/01/20	-	-	-	197,193.75
11/01/20	-	-	2,110,000.00	197,193.75
05/01/21	-	-	-	152,356.25
11/01/21	-	-	2,170,000.00	152,356.25
05/01/22	-	-	-	106,243.75
11/01/22	-	-	1,030,000.00	106,243.75
05/01/23	-	-	-	83,068.75
11/01/23	-	-	1,025,000.00	83,068.75
05/01/24	-	-	-	60,006.25
11/01/24	-	-	1,015,000.00	60,006.25
05/01/25	-	-	-	37,168.75
11/01/25	-	-	1,010,000.00	37,168.75
05/01/26	-	-	-	13,181.25
11/01/26	-	-	555,000.00	13,181.25
Total	\$5,080,000.00	\$ 282,387.50	\$20,560,000.00	\$ 6,984,737.56

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - BUILDING AUTHORITY BONDS

2003 Capital Improvement Bonds

\$3,585,000

Date	Principal	Interest
06/01/12	\$ 60,000.00	\$ 15,956.88
12/01/12	-	15,101.88
06/01/13	60,000.00	15,101.88
12/01/13	-	14,201.88
06/01/14	65,000.00	14,201.88
12/01/14	-	13,186.25
06/01/15	65,000.00	13,186.25
12/01/15	-	12,113.75
06/01/16	70,000.00	12,113.75
12/01/16	-	10,888.75
06/01/17	70,000.00	10,888.75
12/01/17	-	9,628.75
06/01/18	75,000.00	9,628.75
12/01/18	-	8,241.25
06/01/19	75,000.00	8,241.25
12/01/19	-	6,816.25
06/01/20	80,000.00	6,816.25
12/01/20	-	5,256.25
06/01/21	85,000.00	5,256.25
12/01/21	-	3,556.25
06/01/22	85,000.00	3,556.25
12/01/22	-	1,856.25
06/01/23	90,000.00	1,856.25
Total	\$ 880,000.00	\$ 217,651.90

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - CAPITAL IMPROVEMENT BONDS

2006 Capital Improvement Bonds

\$7,530,000

Date	Principal	Interest
03/01/12	\$ -	\$ 38,944.56
09/01/12	42,244.95	38,944.56
03/01/13	-	38,152.47
09/01/13	87,306.23	38,152.47
03/01/14	-	36,515.48
09/01/14	133,775.68	36,515.48
03/01/15	-	34,007.18
09/01/15	140,816.50	34,007.18
03/01/16	-	31,366.88
09/01/16	147,857.33	31,366.88
03/01/17	-	28,594.55
09/01/17	154,898.15	28,594.55
03/01/18	-	25,690.21
09/01/18	161,938.98	25,690.21
03/01/19	-	22,653.85
09/01/19	176,020.63	22,653.85
03/01/20	-	19,309.46
09/01/20	183,061.45	19,309.46
03/01/21	-	15,785.53
09/01/21	197,143.10	15,785.53
03/01/22	-	11,941.24
09/01/22	118,285.86	11,941.24
03/01/23	-	9,575.52
09/01/23	118,285.86	9,575.52
03/01/24	-	7,209.80
09/01/24	119,694.03	7,209.80
03/01/25	-	4,815.92
09/01/25	119,694.03	4,815.92
03/01/26	-	2,422.04
09/01/26	121,102.16	2,422.04
Total	\$2,022,124.94	\$ 653,969.38

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - TAXABLE CAPITAL IMPROVEMENT BONDS

2010 CAPITAL IMPROVEMENT BONDS - Meters

\$9,290,000

Date	Principal	Interest	Interest Rebate
04/01/12	\$ 300,000.00	\$ 222,381.25	\$ 100,071.56
10/01/12		220,206.25	99,092.81
04/01/13	300,000.00	220,206.25	99,092.81
10/01/13		217,281.25	97,776.56
04/01/14	325,000.00	217,281.25	97,776.56
10/01/14		213,462.50	96,058.13
04/01/15	325,000.00	213,462.50	96,058.13
10/01/15		209,318.75	94,193.44
04/01/16	350,000.00	209,318.75	94,193.44
10/01/16		204,243.75	91,909.69
04/01/17	350,000.00	204,243.75	91,909.69
10/01/17		198,468.75	89,310.94
04/01/18	375,000.00	198,468.75	89,310.94
10/01/18		191,812.50	86,315.63
04/01/19	375,000.00	191,812.50	86,315.63
10/01/19		183,843.75	82,729.69
04/01/20	400,000.00	183,843.75	82,729.69
10/01/20		174,943.75	78,724.69
04/01/21	425,000.00	174,943.75	78,724.69
10/01/21		164,425.00	73,991.25
04/01/22	450,000.00	164,425.00	73,991.25
10/01/22		153,287.50	68,979.38
04/01/23	475,000.00	153,287.50	68,979.38
10/01/23		140,700.00	63,315.00
04/01/24	500,000.00	140,700.00	63,315.00
10/01/24		127,450.00	57,352.50
04/01/25	525,000.00	127,450.00	57,352.50
10/01/25		112,750.00	50,737.50
04/01/26	550,000.00	112,750.00	50,737.50
10/01/26		97,350.00	43,807.50
04/01/27	575,000.00	97,350.00	43,807.50
10/01/27		80,387.50	36,174.38
04/01/28	625,000.00	80,387.50	36,174.38
10/01/28		61,950.00	27,877.50
04/01/29	650,000.00	61,950.00	27,877.50
10/01/29		42,450.00	19,102.50
04/01/30	700,000.00	42,450.00	19,102.50
10/01/30		21,450.00	9,652.50
04/01/31	715,000.00	21,450.00	9,652.50
Total	<u>\$ 9,290,000.00</u>	<u>\$ 5,853,943.75</u>	<u>\$ 2,634,274.74</u>

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - ESTIMATED 2012 BOND COST

Date	Estimated Debt Schedule \$13,371,816		Estimated Debt Schedule \$19,537,300	
	Principal	Interest	Principal	Interest
8/1/2012	\$ -	\$ 338,000	\$ -	\$ 493,900
2/1/2013	-	334,300	-	488,400
8/1/2013	350,000	334,300	490,000	488,400
2/1/2014	-	325,500	-	476,200
8/1/2014	383,000	325,500	540,000	476,200
2/1/2015	-	316,000	-	462,700
8/1/2015	416,000	316,000	590,000	462,700
2/1/2016	-	305,600	-	447,900
8/1/2016	449,000	305,600	640,000	447,900
2/1/2017	-	294,300	-	431,900
8/1/2017	482,000	294,300	690,000	431,900
2/1/2018	-	282,300	-	414,700
8/1/2018	515,000	282,300	740,000	414,700
2/1/2019	-	269,400	-	396,200
8/1/2019	548,000	269,400	790,000	396,200
2/1/2020	-	255,700	-	376,400
8/1/2020	581,000	255,700	840,000	376,400
2/1/2021	-	241,200	-	355,400
8/1/2021	614,000	241,200	890,000	355,400
2/1/2022	-	225,800	-	333,200
8/1/2022	647,000	225,800	940,000	333,200
2/1/2023	-	209,700	-	309,700
8/1/2023	680,000	209,700	990,000	309,700
2/1/2024	-	192,700	-	284,900
8/1/2024	713,000	192,700	1,040,000	284,900
2/1/2025	-	174,800	-	258,900
8/1/2025	746,000	174,800	1,090,000	258,900
2/1/2026	-	156,200	-	231,700
8/1/2026	779,000	156,200	1,140,000	231,700
2/1/2027	-	136,700	-	203,200
8/1/2027	812,000	136,700	1,190,000	203,200
2/1/2028	-	116,400	-	173,400
8/1/2028	845,000	116,400	1,240,000	173,400
2/1/2029	-	95,300	-	142,400
8/1/2029	878,000	95,300	1,290,000	142,400
2/1/2030	-	73,300	-	110,200
8/1/2030	911,000	73,300	1,340,000	110,200
2/1/2031	-	50,600	-	76,700
8/1/2031	944,000	50,600	1,390,000	76,700
2/1/2032	-	27,000	-	41,900
8/1/2032	1,078,816	27,000	1,677,300	41,900
Total	\$ 13,371,816	\$ 8,503,600	\$ 19,537,300	\$ 12,525,900

CITY OF WARREN, MICHIGAN
WATER SEWER SYSTEM
DEBT SERVICE DETAIL - CAPITAL LEASE PURCHASE

WWTP Waste Heat to Energy Equipment
\$871,586

Date	Principal	Interest
03/15/12	\$ 43,593.22	\$ 7,482.78
06/15/12	44,026.97	7,049.03
09/15/12	44,465.04	6,610.96
12/15/12	44,907.46	6,168.54
03/15/13	45,354.29	5,721.71
06/15/13	45,805.57	5,270.43
09/15/13	46,261.33	4,814.67
12/15/13	46,721.63	4,354.37
03/15/14	47,186.51	3,889.49
06/15/14	47,656.02	3,419.98
09/15/14	48,130.20	2,945.80
12/15/14	48,609.09	2,466.91
03/15/15	49,092.75	1,983.25
06/15/15	49,581.23	1,494.77
09/15/15	50,074.56	1,001.44
12/15/15	50,572.75	503.25
Total	\$ 752,038.62	\$ 65,177.38

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - STATE REVOLVING FUND BONDS

Date	Project 5134-01 \$4,750,000		Project 5134-02 \$6,465,000		Project 5134-03 \$1,147,091		Project 5134-04 \$8,200,000	
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
04/01/12	\$ -	\$ 41,875.00	\$ 290,000.00	\$ 54,134.38	\$ -	\$ 8,362.84	\$ 380,000.00	\$ 51,918.75
10/01/12	220,000.00	41,875.00	-	51,053.13	50,000.00	8,362.84	-	48,831.25
04/01/13	-	39,125.00	300,000.00	51,053.13	-	7,831.59	385,000.00	48,831.25
10/01/13	225,000.00	39,125.00	-	47,865.63	55,000.00	7,831.59	-	45,703.13
04/01/14	-	36,312.50	305,000.00	47,865.63	-	7,247.22	390,000.00	45,703.13
10/01/14	230,000.00	36,312.50	-	44,625.00	55,000.00	7,247.22	-	42,534.38
04/01/15	-	33,437.50	310,000.00	44,625.00	-	6,662.84	400,000.00	42,534.38
10/01/15	240,000.00	33,437.50	-	41,331.25	55,000.00	6,662.84	-	39,284.38
04/01/16	-	30,437.50	315,000.00	41,331.25	-	6,078.47	405,000.00	39,284.38
10/01/16	245,000.00	30,437.50	-	37,984.38	60,000.00	6,078.47	-	35,993.75
04/01/17	-	27,375.00	325,000.00	37,984.38	-	5,440.97	410,000.00	35,993.75
10/01/17	250,000.00	27,375.00	-	34,531.25	60,000.00	5,440.97	-	32,662.50
04/01/18	-	24,250.00	330,000.00	34,531.25	-	4,803.47	420,000.00	32,662.50
10/01/18	255,000.00	24,250.00	-	31,025.00	60,000.00	4,803.47	-	29,250.00
04/01/19	-	21,062.50	340,000.00	31,025.00	-	4,165.97	425,000.00	29,250.00
10/01/19	265,000.00	21,062.50	-	27,412.50	60,000.00	4,165.97	-	25,796.88
04/01/20	-	17,750.00	345,000.00	27,412.50	-	3,528.47	430,000.00	25,796.88
10/01/20	270,000.00	17,750.00	-	23,746.88	65,000.00	3,528.47	-	22,303.13
04/01/21	-	14,375.00	355,000.00	23,746.88	-	2,837.84	440,000.00	22,303.13
10/01/21	275,000.00	14,375.00	-	19,975.00	65,000.00	2,837.84	-	18,728.13
04/01/22	-	10,937.50	360,000.00	19,975.00	-	2,147.22	445,000.00	18,728.13
10/01/22	285,000.00	10,937.50	-	16,150.00	65,000.00	2,147.22	-	15,112.50
04/01/23	-	7,375.00	370,000.00	16,150.00	-	1,456.59	455,000.00	15,112.50
10/01/23	290,000.00	7,375.00	-	12,218.75	65,000.00	1,456.59	-	11,415.63
04/01/24	-	3,750.00	375,000.00	12,218.75	-	765.97	460,000.00	11,415.63
10/01/24	300,000.00	3,750.00	-	8,234.38	72,091.00	765.97	-	7,678.13
04/01/25	-	-	385,000.00	8,234.38	-	-	470,000.00	7,678.13
10/01/25	-	-	-	4,143.75	-	-	-	3,859.38
04/01/26	-	-	390,000.00	4,143.75	-	-	475,000.00	3,859.38
Total	\$ 3,350,000.00	\$ 616,125.00	\$ 5,095,000.00	\$ 854,728.18	\$ 787,091.00	\$ 122,658.92	\$ 6,390,000.00	\$ 810,225.09

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
DEBT SERVICE DETAIL - STATE REVOLVING FUND BONDS

2009 Ultraviolet Disinfection System - Estimated

\$3,090,000

Date	Principal	Interest
04/01/12		\$ 37,125.00
10/01/12	125,000.00	37,125.00
04/01/13		35,562.50
10/01/13	125,000.00	35,562.50
04/01/14		34,000.00
10/01/14	130,000.00	34,000.00
04/01/15		32,375.00
10/01/15	135,000.00	32,375.00
04/01/16		30,687.50
10/01/16	135,000.00	30,687.50
04/01/17		29,000.00
10/01/17	140,000.00	29,000.00
04/01/18		27,250.00
10/01/18	145,000.00	27,250.00
04/01/19		25,437.50
10/01/19	145,000.00	25,437.50
04/01/20		23,625.00
10/01/20	150,000.00	23,625.00
04/01/21		21,750.00
10/01/21	155,000.00	21,750.00
04/01/22		19,812.50
10/01/22	160,000.00	19,812.50
04/01/23		17,812.50
10/01/23	165,000.00	17,812.50
04/01/24		15,750.00
10/01/24	165,000.00	15,750.00
04/01/25		13,687.50
10/01/25	170,000.00	13,687.50
04/01/26		11,562.50
10/01/26	175,000.00	11,562.50
04/01/27		9,375.00
10/01/27	180,000.00	9,375.00
04/01/28		7,125.00
10/01/28	185,000.00	7,125.00
04/01/29		4,812.50
10/01/29	190,000.00	4,812.50
04/01/30		2,437.50
10/01/30	195,000.00	2,437.50
Total	\$ 2,970,000	\$ 798,375

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Waste Water Treatment Improvement Reserve

The WWTP Improvement Fund reserves are designated for replacements and improvements at the Waste Water Treatment Plant.

In Fiscal 2012 funds are principally earmarked to cover any final construction costs related to the newly constructed UV disinfection system.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Waste Water Treatment		2010	2011		2012			
Account Name	Account Number	Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Revenues:								
Interest on Investments	66500	\$ -	\$ 100	\$ 104	\$ 200	\$ 100	\$ 100	\$ 100
Other Sources:								
Financing Proceeds	69600	3,729,491	940,500	-	940,500	480,009	480,009	480,009
Total Financial Resources		3,729,491	940,600	104	940,700	480,109	480,109	480,109
Expenditures:								
State Revolving Fund Projects	97002	3,730,345	940,500	586,852	940,500	480,009	480,009	480,009
Total Expenditures		3,730,345	940,500	586,852	940,500	480,009	480,009	480,009
Net Increase (Decrease)	67601	(854)	100	(586,748)	200	100	100	100
FY Beginning Restricted Reserve		113,983	113,129	113,129	113,129	113,329	113,329	113,329
FY Ending Restricted Reserve		\$ 113,129	\$ 113,229	\$ (473,619)	\$ 113,329	\$ 113,429	\$ 113,429	\$ 113,429

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Infrastructure Replacement Reserve

The Capital Improvement Fund was established to account for ongoing capital projects that are approved in the annual Water & Sewer System budget.

Funds are principally earmarked for replacements and/or new installations of water mains and sanitary sewers in the System.

Infrastructure replacements and improvements as determined by the department heads and professional consultants are listed on the projects page.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Infrastructure Replacement		2010	2011			2012		
Account Name	Account Number	Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Revenues:								
Interest on Investments	66500	\$ 10	\$ 1,500	\$ 332	\$ 650	\$ 2,000	\$ 2,000	\$ 2,000
Other Sources:								
Financing Proceeds	69600	-	3,429,800	-	3,429,800	33,771,928	33,987,244	33,987,244
Total Financial Resources		10	3,431,300	332	3,430,450	33,773,928	33,989,244	33,989,244
Expenditures:								
Non-capitalized expenses	95600	15,079	766,000	-	766,000	200,000	100,000	100,000
Construction Contracts	97001	382,312	3,325,000	214,791	3,325,000	32,362,162	32,565,078	32,565,078
Bond issuance costs	97003	-	104,800	-	104,800	1,468,800	1,481,200	1,481,200
Total Expenditures		397,391	4,195,800	214,791	4,195,800	34,030,962	34,146,278	34,146,278
Net Increase (Decrease)	67601	(397,381)	(764,500)	(214,459)	(765,350)	(257,034)	(157,034)	(157,034)
FY Beginning Restricted Reserve		2,252,107	1,854,726	1,854,726	1,854,726	1,089,376	1,089,376	1,089,376
FY Ending Restricted Reserve		\$ 1,854,726	\$ 1,090,226	\$ 1,640,267	\$ 1,089,376	\$ 832,342	\$ 932,342	\$ 932,342

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
INFRASTRUCTURE REPLACEMENT RESERVE

Project Description	Cost Estimate
<i>Watermain Replacement Projects</i>	
Watermain Replacement to Gen Building	\$ 58,826
Watermain Installation to NE Section of WWTP	144,090
Chicago Road, Pagels to Blair (in conjunction with sewer work in same area)	210,000
Regency Park Drive watermain loop (Stephens to 1,200 feet south)	190,000
Replacement of sections of ex watermains in Section 5	300,000
<i>Pressure reducing valves:</i>	
Fourteen Mile at Mound	495,000
Fourteen Mile at Schoenherr	510,000
Replacement of ex 6" dia watermains in Sections 24,25,27,28,29,33,34,35 and 36	19,100,000
Watermain Upsize and Redundant Looping Projects	2,400,000
Subtotal	23,407,916
<i>Infiltration Removal from the Sanitary Sewer System</i>	
Project Plan for Sanitary Collection System Permit Compliance	350,000
RELIEF SEWER CONSTRUCTION:	
13 Mile Road capacity improvement	2,000,000
12 Mile Road capacity improvement	1,660,000
11 Mile Road capacity improvement	560,000
10 Mile Road capacity improvement	1,300,000
<i>Sanitary Sewer Replacements/Repairs due to Condition</i>	
Cunningham from Toepfer to Nine Mile	600,000
<i>Repair of Sewage Infiltration into the Storm Sewer System:</i>	
Eight Mile, west of Groesbeck	250,000
Dequindre, north of Eight Mile	50,000
Hoover at Toepfer	150,000
14 Mile at Mound	50,000
Chicago between Blair and Dimas	500,000
Essex West of Lorraine (Sec 27)	550,000
Subtotal	8,020,000
Emergency watermain break repair program (as-needed basis)	100,000
Total Proposed Projects	\$ 31,527,916

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Meter Replacement Reserve

The Meter Replacement Fund was established to account for the cost of the removal and replacement of meters in the City of Warren Water & Sewer System.

On September 28, 2010, City Council approved a contract with National Field Services Corporation for water meter replacements and an automatic meter reading system including billing software and software installation. The Fiscal 2012 funds are earmarked for this project.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Meter Replacement		2010	2011			2012		
Account Name	Account Number	Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Revenues:								
Interest on Investments	66500	\$ 13,723	\$ 33,500	\$ 6,502	\$ 13,723	\$ 10,000	\$ 10,000	\$ 10,000
Transfer From:								
Operation & Maintenance	67620	110,780	-	-	-	-	-	-
Other Sources:								
Financing Proceeds	69600	9,215,680	-	-	-	-	-	-
Total Financial Resources		9,340,183	33,500	6,502	13,723	10,000	10,000	10,000
Expenditures:								
Construction Contracts	97001	-	6,701,765	1,480,835	6,701,765	2,403,378	2,403,378	2,403,378
Bond issuance costs	97003	110,780	-	-	-	-	-	-
Total Expenditures		110,780	6,701,765	1,480,835	6,701,765	2,403,378	2,403,378	2,403,378
Net Increase (Decrease)	67601	9,229,403	(6,668,265)	(1,474,333)	(6,688,042)	(2,393,378)	(2,393,378)	(2,393,378)
FY Beginning Restricted Reserve		-	9,229,403	9,229,403	9,229,403	2,541,361	2,541,361	2,541,361
FY Ending Restricted Reserve		\$ 9,229,403	\$ 2,561,138	\$ 7,755,070	\$ 2,541,361	\$ 147,983	\$ 147,983	\$ 147,983

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
2012 CITY COUNCIL ADOPTED BUDGET
Capital Equipment Replacement Reserve

The Capital Equipment Replacement Reserve Fund was established to designate monies for the replacement of capital equipment, as needed.

Equipment purchases as determined by the department heads and professional consultants are listed on the items page.

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES
2012 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Capital Equipment		2010	2011			2012		
		Fiscal Year	Amended	Actual Thru	Fiscal Year	Department	Recommended	Council
Account Name	Number	Actual	Budget	June 30	Estimated	Request	By Mayor	Adopted
Revenues:								
Interest on Investments	66500	\$ 223	\$ 200	\$ 218	\$ 300	\$ 300	\$ 300	\$ 300
Transfer From:								
Operation & Maintenance	67620	300,000	307,500	307,500	307,500	1,485,000	1,249,000	924,500
Total Financial Resources		300,223	307,700	307,718	307,800	1,485,300	1,249,300	924,800
Capital Purchases:								
Water Maintenance	98040	7,513	227,500	1,104	227,500	100,000	100,000	100,000
Meter Repair & Service	98050	-	-	-	-	-	-	-
Administration	98060	13,851	80,000	20,061	80,000	52,000	52,000	52,000
Waste Water Treatment	98080	125,579	200,000	42,834	200,000	1,490,243	1,241,327	872,500
Total Expenditures		146,943	507,500	63,999	507,500	1,642,243	1,393,327	1,024,500
Net Increase (Decrease)	67601	153,280	(199,800)	243,719	(199,700)	(156,943)	(144,027)	(99,700)
Reassign Debt Service Liability		-	-	-	-	-	-	-
FY Beginning Restricted Reserve		212,530	365,810	365,810	365,810	166,110	166,110	166,110
FY Ending Restricted Reserve		\$ 365,810	\$ 166,010	\$ 609,529	\$ 166,110	\$ 9,167	\$ 22,083	\$ 66,410

CITY OF WARREN, MICHIGAN
WATER & SEWER SYSTEM
CAPITAL EQUIPMENT RESERVE

Funding Category	Item Description	#	New or Replacement	Estimated Cost
98040 Water Maintenance:				
2012-01	Utility Service Van	2	R	\$ 100,000
				100,000
98060 Administration:				
2012-02	Computer Equipment & Software		R	20,000
2012-03	Drafting Computer (Engineering)	2	R	14,000
2012-04	Plotter/Scanner (Engineering)	1	R	18,000
				52,000
Total Water Division Capital Requests				\$ 152,000
98080 Waste Water Treatment Plant:				
<i>Maintenance</i>				
2012-05	Electrician's Van	1	R	\$ 22,000
2012-06	Electrical Switchgear Replacement		R	250,000
2012-07	Non Potable Pump Motor Repair		R	8,000
2012-08	Vibration Monitor Testing Equipment		N	10,000
<i>Operations/Process Control</i>				
2012-09	Rockwell Tech - Connect Support		R	14,500
2012-10	Influent Gate Actuator		R	15,000
2012-11	Backup Generator Cooling Tower		R	200,000
2012-12	Control System Work Stations		R	12,000
2012-13	Final Clarifer Replacement		R	250,000
2012-14	Screenings Removal Buckets		R	3,000
2012-15	Replacement Hoses for Tank Pumping		R	2,000
2012-16	Air Driven Jack Hammer		N	3,000
2012-17	Furnace Deslagging Tools		N	2,000
2012-18	Replacement Locker Room Shower Stalls		R	15,000
2012-19	Excavator Repair		R	20,000
<i>Laboratory</i>				
2012-20	GIS Software		N	12,000
2012-21	Sampling Vehicle		R	34,000
Total Waste Water Treatment Capital Requests				\$ 872,500
GRAND TOTAL - EQUIPMENT REQUESTS				\$ 1,024,500

