

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



**2010 FISCAL YEAR  
AS ADOPTED BY CITY COUNCIL**

CITY OF WARREN, MICHIGAN

WATER & SEWER SYSTEM BUDGET

2010 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 2000 population per Federal Census, 138,247

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

## **PRESENT ELECTIVE OFFICERS**

(Terms expire November 11, 2011)

### **MAYOR**

JAMES R. FOUTS

### **COUNCIL**

Mary M. Kamp, President

Scott C. Stevens, Assistant Secretary

Mark Liss

Donna Kaczor Caumartin, Vice President

Robert Boccomino

Kathy J. Vogt

Keith Sadowski, Secretary

Patrick Green

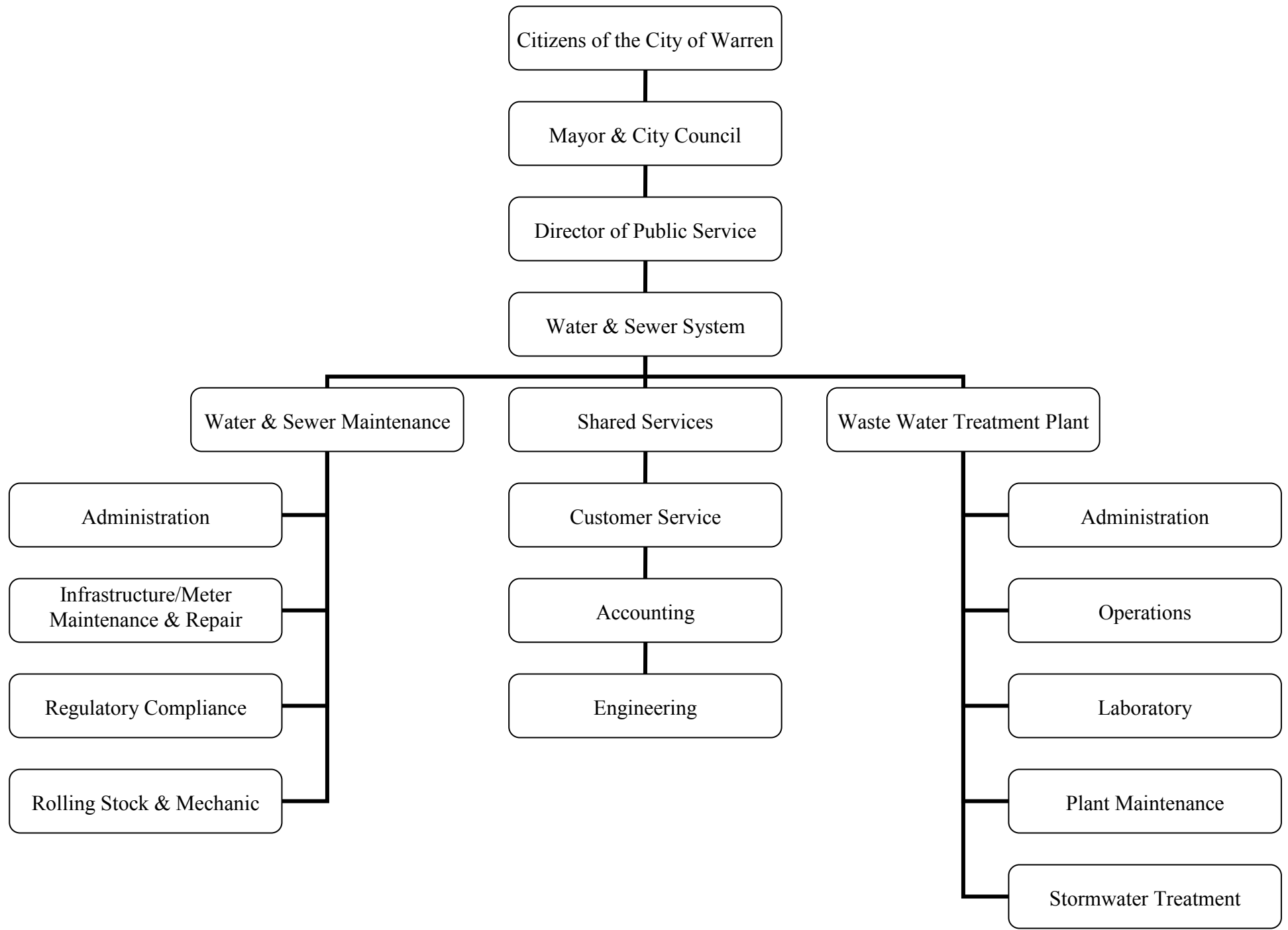
Steven Warner

### **TREASURER**

Carolyn Kurkowski Mocerri

### **CITY CLERK**

Paul Wojno



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET

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CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET

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CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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 2010 City Council Adopted Water & Sewer Budget reflects a 6.3% rate change, completely attributed to an adjustment in the projected sales volumes to recognize declining retail sales. Water sales volumes used to calculate the recommended rates were reduced by 15.3% for Fiscal Year 2010, from 825 million cubic feet to 699 million cubic feet. This significant reduction is necessary in order to bring projected sales in line with actual sales and puts the Water & Sewer System on a better financial foundation.

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 losses resulting from sales falling short of budget projections in prior years have only been partially offset by cost-cutting measures such as not filling labor positions and deferring capital replacements. Vacant positions were permanently eliminated from budgets in Fiscal Years 2007 and 2008. The 2010 City Council Adopted Budget eliminates eight additional labor positions. Further personnel cuts would render the Water & Sewer System unable to provide the attention an aging infrastructure requires and would make it more difficult to respond to problems within the community in a timely manner. Further personnel cuts would also make it impossible to engage in an effective preventative maintenance program.

We must keep in mind that our infrastructure, the water and sewer lines that carry fresh water to homes and businesses and transport waste material to the Waste Water Treatment Plant for processing, is in decline. While we attempt to earmark funds for infrastructure replacement each year, the fact is that much more than what we have provided is needed. This is not merely a local issue. Every major city in the country faces problems similar to ours, particularly in the Midwest and Eastern states where changes in climate have devastating effects on underground utilities.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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  
2010 CITY COUNCIL ADOPTED BUDGET  
RATE CALCULATION  
(continued)

The Water & Sewer System serves three principal functions. The first is the delivery of fresh 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 disposal of solid waste materials and purification of liquids to be returned to the freshwater system.

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 96%) 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 recent billings – in the case of the current proposed budget, from the billing for October 2009. 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 500 for a 10” meter.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
RATE CALCULATION  
(continued)

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.

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 Environmental Quality (DEQ) 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 a reduction in the volume of estimated sales. 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 2007 the average annual sales volume has been just over 9.2 million consumptions per year with a high of 10.2 million in 2002 and a low of 8.4 million in 2006. The projected sales volume for Fiscal 2009 is expected to be approximately 7.0 million consumptions.

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 2008 adopted water & sewer system budget included a proposal to begin a meter change out program coupled with an Automated Meter Reading System (AMR).

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.

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 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 2010 City Council Adopted Budget projects sales at 6.99 million consumptions rather than the 8.25 million estimated in 2009.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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 imminent installation of pressure reducing valves in key areas should stabilize 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. The volatility of state shared revenues in the past several years notwithstanding, 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.

On the other hand, 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.

Adjusting sales volumes is not an option, it 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. To ignore them is a recipe for disaster in the long term.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 BUDGET FINANCIAL STATEMENTS

SCHEDULE A  
DISTRIBUTION OF COSTS TO RATES - COUNCIL ADOPTED

Budget Cost Item:	<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>
<i>Wages &amp; Fringe Benefits</i>					
Water & Sewer Maintenance	\$ 4,783,472	\$ 2,328,533	\$ -	\$ 813,416	\$ 1,641,523
Shared Services	1,923,267	961,634	961,633	-	-
Waste Water Treatment	6,206,763	-	6,206,763	-	-
<i>Total Wages &amp; Fringe Benefits</i>	<u>12,913,502</u>	<u>3,290,167</u>	<u>7,168,396</u>	<u>813,416</u>	<u>1,641,523</u>
<i>Supplies &amp; Other Charges</i>					
Water Purchases	7,440,000	7,440,000	-	-	-
Water & Sewer Maintenance	1,589,000	764,550	-	314,750	509,700
Shared Services	2,867,900	1,433,950	1,433,950	-	-
Waste Water Treatment	3,502,000	-	3,502,000	-	-
<i>Total Supplies &amp; Other Charges</i>	<u>15,398,900</u>	<u>9,638,500</u>	<u>4,935,950</u>	<u>314,750</u>	<u>509,700</u>
<i>Transfers To Reserves</i>					
WWT Improvement	-	-	-	-	-
Infrastructure Replacement	-	-	-	-	-
Capital Equipment	300,000	150,000	150,000	-	-
Debt Service	5,145,000	2,660,486	2,096,523	25,946	362,045
<i>Total Transfers</i>	<u>5,445,000</u>	<u>2,810,486</u>	<u>2,246,523</u>	<u>25,946</u>	<u>362,045</u>
<b>TOTAL COSTS</b>	<u>\$ 33,757,402</u>	<u>\$ 15,739,153</u>	<u>\$ 14,350,869</u>	<u>\$ 1,154,112</u>	<u>\$ 2,513,268</u>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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} \$	33,757,402	\$ 15,739,153	\$ 14,350,869	\$ 1,154,112	\$ 2,513,268
OFFSETS FOR OTHER REVENUES:					
Water Sales - Unmetered	10,000	10,000	-	-	-
Public Fire Protection	90,000	90,000	-	-	-
Penalties	625,000	312,500	312,500	-	-
Water Division - Other Income	25,000	25,000	-	-	-
Land Contract Interest	13,700	13,700	-	-	-
Meter Repairs	40,000	-	-	40,000	-
Outside Service Income	40,000	40,000	-	-	-
Meter Sales	40,000	-	-	40,000	-
Centerline Transmission Charge	10,000	10,000	-	-	-
Pre-Treatment Surcharges	978,800	-	978,800	-	-
Cross Connection Charges	280,000	280,000	-	-	-
Waste Treatment - Other Income	180,000	-	180,000	-	-
Interest On Investments	10,000	5,000	5,000	-	-
Gain {Loss} On Asset Conversion	10,000	5,000	5,000	-	-
Total revenue offsets	<u>2,352,500</u>	<u>791,200</u>	<u>1,481,300</u>	<u>80,000</u>	<u>0</u>
NET COSTS ALLOCATED TO RATES	<u>\$ 31,404,902</u>	<u>\$ 14,947,953</u>	<u>\$ 12,869,569</u>	<u>\$ 1,074,112</u>	<u>\$ 2,513,268</u>
Estimated billable consumption {100 c.f.}		6,990,000	6,710,400		
Supporting rate required		\$ 2.138	\$ 1.918	\$ 0.76	\$ 1.83
Current rate		\$ 2.006	\$ 1.782	\$ 0.76	\$ 1.94
Increase (decrease)		<u>\$ 0.132</u>	<u>\$ 0.136</u>	<u>\$ -</u>	<u>\$ (0.11)</u>

**WATER SERVICE CHARGE**

Meter Size	# of Meters	AWWA Meter Ratio	Equivalent Meters	2009 Service Charge	2010 Service Charge	Estimated Revenue
5/8"	43,822	1	43,822	\$0.76	\$0.76	\$ 399,657
3/4"	7	2	14	\$1.52	\$1.52	128
1"	3,731	4	14,924	\$3.04	\$3.04	136,107
1 - 1/2"	954	10	9,540	\$7.60	\$7.60	87,005
2"	920	25	23,000	\$19.00	\$19.00	209,760
3"	169	45	7,605	\$34.20	\$34.20	69,358
4"	72	90	6,480	\$68.40	\$68.40	59,098
6"	25	170	4,250	\$129.20	\$129.20	38,760
8"	13	300	3,900	\$228.00	\$228.00	35,568
10"	9	500	4,500	\$380.00	\$380.00	41,040
	<u>49,722</u>		<u>118,035</u>			<u>\$ 1,076,481</u>

**SEWER SERVICE CHARGE**

Meter Size	# of Meters	AWWA Meter Ratio	Equivalent Meters	2009 Service Charge	2010 Service Charge	Estimated Revenue
5/8"	43,321	1	43,321	\$1.94	\$1.83	\$ 951,329
3/4"	14	2	28	\$3.88	\$3.66	615
1"	3,602	4	14,408	\$7.76	\$7.32	316,400
1 - 1/2"	925	10	9,250	\$19.40	\$18.30	203,130
2"	878	25	21,950	\$48.50	\$45.75	482,022
3"	168	45	7,560	\$87.30	\$82.35	166,018
4"	70	90	6,300	\$174.60	\$164.70	138,348
6"	25	170	4,250	\$329.80	\$311.10	93,330
8"	13	300	3,900	\$582.00	\$549.00	85,644
10"	8	500	4,000	\$970.00	\$915.00	87,840
	<u>49,024</u>		<u>114,967</u>			<u>\$ 2,524,676</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	Adopted Rate	Increase (Decrease) Amount	%
Water Service Charge	\$ 0.76	\$ 0.76	\$ -	
Sewer Service Charge	1.94	1.83	(0.11)	
Water Charge	20.06	21.38	1.32	
Waste Water Treatment Charge	17.82	19.18	1.36	
Total	\$ 40.58	\$ 43.15	\$ 2.57	6.3%

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET

STATEMENT OF ESTIMATED REVENUES, EXPENSES & CHANGES IN RETAINED  
EARNINGS/RESERVE BALANCES  
YEAR ENDING DECEMBER 31, 2010

	TOTAL	OPERATION & MAINTENANCE 592020	WASTE WATER TREATMENT IMPROVEMENT 592040	INFRASTRUCTURE REPLACEMENT 592044	CAPITAL EQUIPMENT REPLACEMENT 592047	DEBT SERVICE 592072
<b>OPERATING REVENUES:</b>						
Water & sewer charges	\$ 31,405,400	\$ 31,405,400	\$ -	\$ -	\$ -	\$ -
Other operating revenue	2,332,500	2,332,500	-	-	-	-
<b>NON-OPERATING REVENUES:</b>						
Interest on investments	36,000	10,000	5,000	10,000	1,000	10,000
Gain on sale of fixed assets	10,000	10,000	-	-	-	-
Special assessment collections	-	-	-	-	-	-
<b>TRANSFERS FROM:</b>						
Operation & Maintenance Fund	5,445,000	-	-	-	300,000	5,145,000
Restricted Reserves	-	-	-	-	-	-
<b>OTHER FINANCIAL RESOURCES:</b>						
Long term debt	13,820,500	-	-	13,820,500	-	-
<b>TOTAL FINANCIAL RESOURCES</b>	<b>53,049,400</b>	<b>33,757,900</b>	<b>5,000</b>	<b>13,830,500</b>	<b>301,000</b>	<b>5,155,000</b>
<b>OPERATING EXPENSES:</b>						
Water purchases	7,440,000	7,440,000	-	-	-	-
Water & sewer maintenance	6,372,472	6,372,472	-	-	-	-
Shared services	4,791,167	4,791,167	-	-	-	-
Waste water treatment plant	9,708,763	9,708,763	-	-	-	-
<b>NON-OPERATING EXPENSES:</b>						
Construction contracts & related project costs	14,040,000	-	-	13,740,000	300,000	-
Other non-operating expenses	5,176,905	-	-	304,820	-	4,872,085
<b>TRANSFERS TO:</b>						
Reserves	5,445,000	5,445,000	-	-	-	-
<b>TOTAL EXPENSES</b>	<b>52,974,307</b>	<b>33,757,402</b>	<b>-</b>	<b>14,044,820</b>	<b>300,000</b>	<b>4,872,085</b>
<b>NET FISCAL YEAR INCREASE (DECREASE)</b>	<b>75,093</b>	<b>498</b>	<b>5,000</b>	<b>(214,320)</b>	<b>1,000</b>	<b>282,915</b>
<b>OTHER ADJUSTMENTS:</b>						
Estimated Reserves - January 1, 2010	8,709,129	772,366	52,268	1,650,114	66,067	6,168,314
Estimated Reserves - December 31, 2010	\$ 8,784,222	\$ 772,864	\$ 57,268	\$ 1,435,794	\$ 67,067	\$ 6,451,229



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND  
2010 BUDGET FINANCIAL STATEMENTS

**Revenues**

Account Name	Account Number	2008	2009			2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Water &amp; Sewer Charges</b>								
Water Sales - Commercial/Industrial	080-46101	\$ 5,279,304	\$ 6,125,700	\$ 2,078,605	\$ 5,312,600	\$ 6,538,000	\$ 6,086,500	\$ 5,980,000
Water Sales - Residential	080-46102	8,516,036	9,188,700	3,866,031	7,968,900	9,807,100	9,129,800	8,968,000
Water Service Charges	080-46103	1,043,838	1,041,650	528,630	1,055,000	1,149,100	1,074,100	1,074,100
Waste Water Treatment Charges	080-47501	11,202,798	13,182,300	4,989,368	11,377,100	13,912,500	13,240,900	12,870,000
Sewer Service Charges	080-47502	2,607,835	2,608,440	1,298,103	2,643,000	2,745,700	2,671,500	2,513,300
<i>Total Water &amp; Sewer Charges</i>		28,649,811	32,146,790	12,760,737	28,356,600	34,152,400	32,202,800	31,405,400
<b>Other Operating Revenue</b>								
Water Sales - Unmetered	080-46000	7,315	12,000	3,684	10,000	10,000	10,000	10,000
Public Fire Protection	080-46300	90,000	90,000	45,000	90,000	90,000	90,000	90,000
Penalties	080-47000	302,428	300,000	503,027	650,000	625,000	625,000	625,000
Water Division - Other Income	080-47100	20,960	15,000	13,450	20,000	25,000	25,000	25,000
Garage Installment Sale	080-47200	24,544	19,500	11,637	19,500	13,700	13,700	13,700
Meter Repairs	080-47402	60,058	40,000	8,202	40,000	40,000	40,000	40,000
Outside Service Income	080-47404	27,400	10,000	31,884	40,000	40,000	40,000	40,000
Meter Sales	080-47405	23,185	35,000	43,395	50,000	40,000	40,000	40,000
Centerline Transmission Charge	080-47406	10,361	17,000	3,203	10,000	10,000	10,000	10,000
Pre-Treatment Surcharges	080-47407	805,113	940,200	375,902	940,200	978,800	978,800	978,800
Cross Connection Charges	080-47408	274,610	320,000	108,222	280,000	280,000	280,000	280,000
Waste Treatment - Other Income	080-47410	169,449	160,000	82,632	180,000	180,000	180,000	180,000
<i>Total Other Operating Revenue</i>		1,815,423	1,958,700	1,230,238	2,329,700	2,332,500	2,332,500	2,332,500
<b>Total Operating Revenue</b>		30,465,234	34,105,490	13,990,975	30,686,300	36,484,900	34,535,300	33,737,900
<b>Non-Operating Revenue</b>								
Interest On Investments	080-66500	116,154	150,000	4,448	10,000	10,000	10,000	10,000
Gain {Loss} On Asset Conversion	080-47401	-	10,000	1,283	10,000	10,000	10,000	10,000
<i>Total Non-Operating Revenue</i>		116,154	160,000	5,731	20,000	20,000	20,000	20,000
<b>GRAND TOTAL</b>		\$ 30,581,388	\$ 34,265,490	\$ 13,996,706	\$ 30,706,300	\$ 36,504,900	\$ 34,555,300	\$ 33,757,900

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**Expenditure Summary**

Account Name	Account Number	2008	2009		2010			
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Wages &amp; Fringe Benefits</b>								
Water & Sewer Maintenance	1540	\$ 4,780,887	\$ 5,077,187	\$ 2,462,725	\$ 5,247,187	\$ 5,277,929	\$ 4,903,730	\$ 4,783,472
Shared Services	1560	2,074,868	2,117,553	993,839	2,137,553	2,291,028	1,985,725	1,923,267
Waste Water Treatment	1580	5,841,526	6,857,727	2,610,340	6,824,216	6,571,907	6,546,907	6,206,763
<i>Total Wages &amp; Fringe Benefits</i>		12,697,281	14,052,467	6,066,904	14,208,956	14,140,864	13,436,362	12,913,502
<b>Supplies &amp; Other Charges</b>								
Water Purchases	1537-92700	6,920,391	8,025,000	1,897,151	6,950,600	7,440,000	7,440,000	7,440,000
Water & Sewer Maintenance	1540	1,300,367	1,824,000	564,395	1,674,000	1,884,000	1,864,000	1,589,000
Shared Services	1560	2,672,500	2,867,000	1,301,545	2,819,250	2,867,900	2,867,900	2,867,900
Waste Water Treatment	1580	3,504,411	3,497,000	1,357,047	3,367,000	3,677,000	3,502,000	3,502,000
<i>Total Supplies &amp; Other Charges</i>		14,397,669	16,213,000	5,120,138	14,810,850	15,868,900	15,673,900	15,398,900
<b>Transfers To Reserves</b>								
Retained Earnings	1537-96501	(1,213,562)	23	809,664	(2,687,106)	136	38	498
Capital Equipment	1537-96547	-	-	-	-	1,350,000	300,000	300,000
Debt Service	1537-96572	4,700,000	4,000,000	2,000,000	4,373,600	5,145,000	5,145,000	5,145,000
<i>Total Transfers</i>		3,486,438	4,000,023	2,809,664	1,686,494	6,495,136	5,445,038	5,445,498
<b>GRAND TOTAL</b>		<b>\$ 30,581,388</b>	<b>\$ 34,265,490</b>	<b>\$ 13,996,706</b>	<b>\$ 30,706,300</b>	<b>\$ 36,504,900</b>	<b>\$ 34,555,300</b>	<b>\$ 33,757,900</b>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 BUDGET FINANCIAL STATEMENTS

**10 Year History of Expenditures**

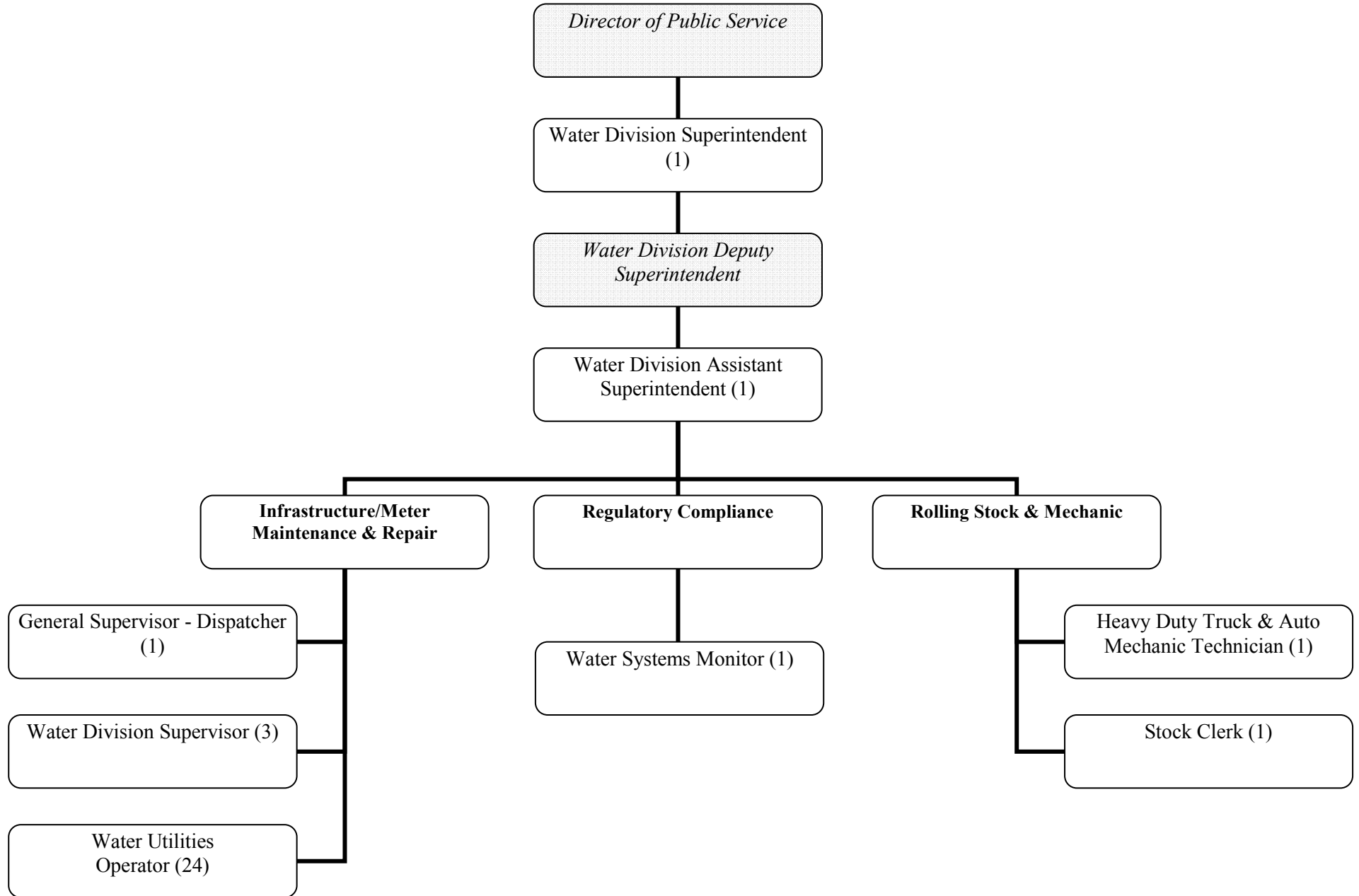
Fiscal Year	Water &			Waste
	Water Purchases	Sewer Maintenance	Shared Services	Water Treatment
2001	\$ 5,999,460	\$ 5,127,376	\$ 2,902,329	\$ 8,240,905
2002	\$ 7,232,632	\$ 5,445,014	\$ 3,509,087	\$ 7,422,741
2003	\$ 7,578,869	\$ 5,373,938	\$ 3,653,705	\$ 7,774,064
2004	\$ 6,832,765	\$ 5,916,995	\$ 4,042,620	\$ 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 Projected	\$ 6,950,600	\$ 6,921,187	\$ 4,956,803	\$ 10,191,216
2010 Council Adopted	\$ 7,440,000	\$ 6,372,472	\$ 4,791,167	\$ 9,708,763

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Water Purchases**

An agreement between the City of Warren and the City of Detroit Board of Water Commissioners provides for the sale and delivery of water to the City of Warren. This agreement is for a minimum term of thirty-five (35) years, commencing on January 23, 1980, and requires ninety (90) days notice in the event of any rate change. The rate at October 1, 2009, was \$9.47 per 1,000 cubic feet.

It is erroneous to label the difference between what we pay the City of Detroit for water and what we charge end users as “profit”. The price that we pay for water to Detroit is only for delivery to our corporate boundaries. Over 400 miles of water mains must be maintained, repaired, and replaced as needed. Though the cost of water purchases is a significant part of the cost to deliver water to Warren homes and businesses, it is not our only cost. It is not even the majority of the cost. Outlays for personnel, supplies, equipment and debt service on bond issues used for large replacement projects are all expenses that have to be considered in determining the charges to end users.

# Water & Sewer Maintenance



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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 Assistant Superintendent** 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 operation and maintenance of three newly installed Pressure Reducing Valves (PRV) located at Eight-Mile and Ryan, Eight-Mile and Van Dyke, Eight-Mile and Groesbeck were assigned to this operation. The control of water pressures on the City's aging infrastructure is of increasing importance in providing safe drinking water to our community while limiting water main breaks caused by excessive water delivery pressures from Detroit, our water supplier.**

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.

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. 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.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Water & Sewer Maintenance**  
**(continued)**

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

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 testing services; building maintenance services, contractual sewer line repairs, line locating services.

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  
2010 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 Approved</u>	
	#	Rate	#	Rate	#	Rate	#	Rate
Superintendent	1	\$ 93,317	1	\$ 93,581	1	\$ 93,581	1	\$ 93,581
Assistant Superintendent	1	86,461	1	86,725	1	86,725	1	86,725
General Supervisor/Dispatcher	1	36.35/hr.	1	36.49/hr.	1	36.49/hr.	1	36.49/hr.
Water Division Supervisor	3	33.67/hr.	3	33.81/hr.	3	33.81/hr.	3	33.81/hr.
Water Utilities Operator	-	-	-	-	-	-	24	(e) 27.20/hr.
Water & Sewer Maintenance Technician	8	26.88/hr.	8	27.02/hr.	8	27.02/hr.	-	(e) -
Water & Sewer Maintenance Specialist	7	26.42/hr.	7	26.56/hr.	6	{d} 26.56/hr.	-	(e) -
Meter Repair Technician	6	27.06/hr.	6	27.20/hr.	6	27.20/hr.	-	(e) -
General Laborer	5	17.76/hr.	4	{c} 17.90/hr.	4	{c} 17.90/hr.	-	(e) -
Water Systems Monitor	1	62,956	1	63,220	1	63,220	1	63,220
Heavy Duty Truck & Auto Mechanic Technician	1	30.50/hr.	1	30.64/hr.	1	30.64/hr.	1	30.64/hr.
Stock Clerk	1	25.26/hr.	1	25.40/hr.	1	25.40/hr.	1	25.40/hr.
Janitor	1	24.53/hr.	1	24.67/hr.	1	24.67/hr.	-	{d} -
Overtime		250,000		325,000		200,000		200,000
Temporary Employees		60,000		60,000		60,000		60,000
Total Personnel	<u>36</u>		<u>35</u>		<u>34</u>		<u>33</u>	

- {a} Wage rates are based on the AFSCME Local 1250, Local 1917, and U.A.W. Local 412 Unit 35 contracts that expired 6/30/09.
- {c} General Laborer transferred to Shared Services and reclassified as Office Assistant
- {d} Position deleted.
- {e} W&S Maintenance Technicians and Specialists, Meter Repair Technicians and General Laborers reclassified to Water Utilities Operators



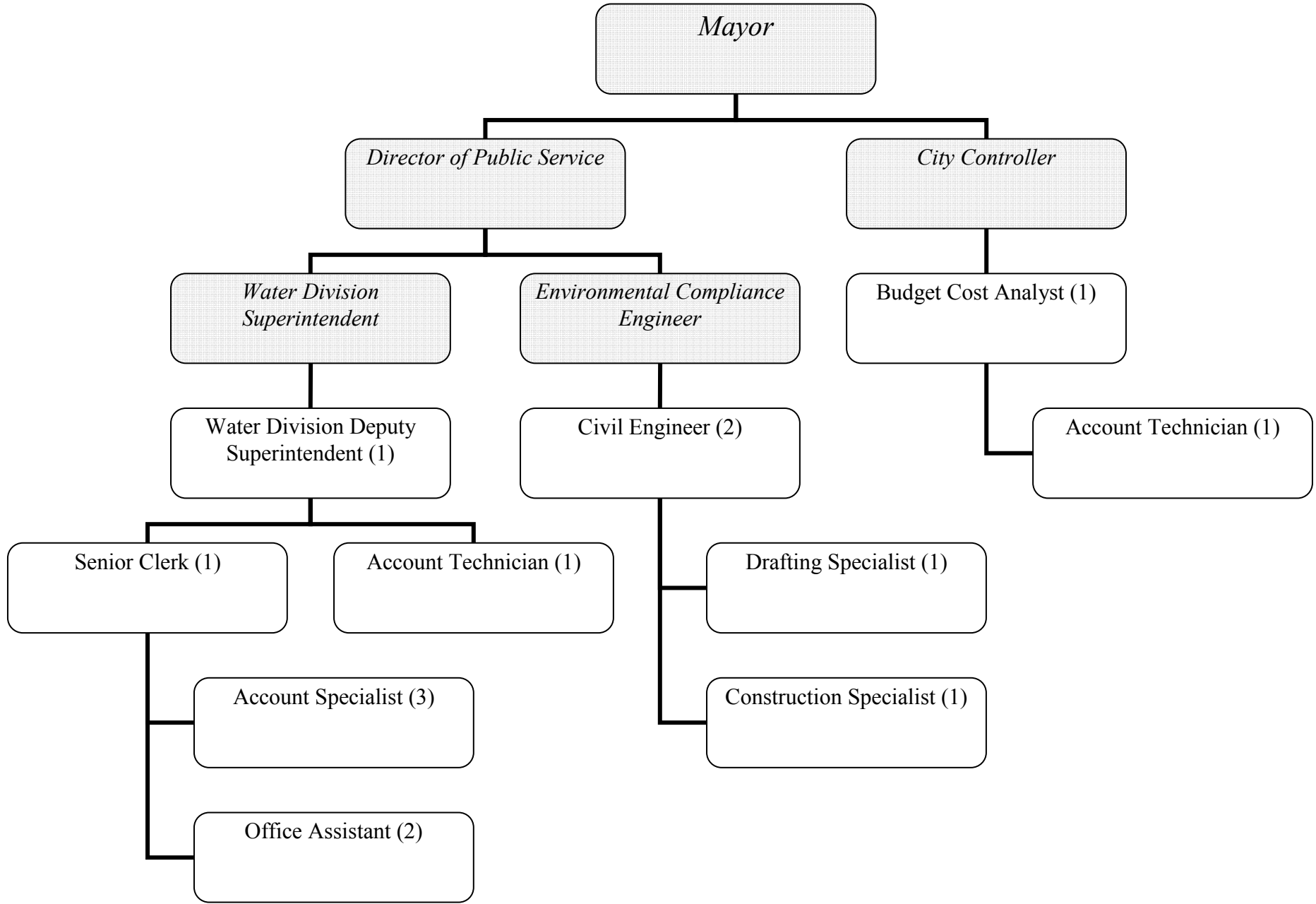
CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

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**Water & Sewer Maintenance**

Account Name	Account Number	2008		2009		2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Personnel Services</b>								
Permanent Employees	70600	\$ 1,905,187	\$ 2,083,552	\$ 921,391	\$ 2,083,552	\$ 2,018,952	\$ 1,963,491	\$ 1,911,978
Temporary Labor	70700	60,238	60,000	25,425	55,000	60,000	60,000	60,000
Overtime	70900	397,658	250,000	253,505	425,000	325,000	200,000	200,000
<b>Employee Benefits</b>								
Education & Training	71302	9,824	8,950	3,411	8,950	8,200	7,800	7,800
Auto Allowance	71305	5,611	6,600	3,292	6,600	3,000	3,000	3,000
Social Security	71500	184,617	192,822	95,806	192,822	193,656	179,621	175,347
Insurances	71900	408,850	600,694	189,568	600,694	596,268	582,415	572,439
Employees' VEBA Trust	71904	711,963	758,995	389,548	758,995	805,820	740,628	720,777
Health Savings	71905	1,450	1,624	639	1,624	2,006	2,006	2,006
Supplemental Life Insurance	71906	972	972	555	972	978	894	552
Longevity	72100	75,009	82,080	50,315	82,080	83,747	83,747	80,347
Retirement Fund	72200	965,402	959,767	508,026	959,767	1,117,052	1,017,452	987,124
Defined Contribution Expense	72201	37,003	50,505	17,846	50,505	43,772	43,772	43,772
Cost Of Living Allowance	72400	6,860	8,431	-	8,431	7,973	7,744	7,515
Uniforms	72401	5,289	6,460	928	6,460	6,080	5,890	5,700
My Lawyer	72505	4,954	5,735	2,470	5,735	5,425	5,270	5,115
<b>Other Charges</b>								
Operating Supplies	74000	279,264	320,000	132,615	300,000	320,000	320,000	320,000
Materials	78700	47,819	95,000	22,173	70,000	75,000	75,000	75,000
Meter Replacement	78900	94,651	50,000	338	50,000	70,000	50,000	25,000
Professional Services	80100	55,452	130,000	22,301	100,000	300,000	300,000	150,000
Dirt Removal	80102	69,324	150,000	81,668	170,000	120,000	120,000	120,000
Concrete, Lawn & Manhole Repairs	80103	459,516	750,000	190,704	700,000	700,000	700,000	600,000
Telephone	85300	9,944	9,000	4,218	9,000	9,000	9,000	9,000
Auto Expense	86300	165,614	190,000	58,124	130,000	140,000	140,000	140,000
Utilities	92000	106,424	110,000	47,040	110,000	110,000	110,000	110,000
Facility Maintenance	97500	12,359	20,000	5,214	35,000	40,000	40,000	40,000
<b>Total Water &amp; Sewer Maintenance</b>		<b>\$ 6,081,254</b>	<b>\$ 6,901,187</b>	<b>\$ 3,027,120</b>	<b>\$ 6,921,187</b>	<b>\$ 7,161,929</b>	<b>\$ 6,767,730</b>	<b>\$ 6,372,472</b>

Shared Services



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Shared Services**

The 2010 Water & Sewer System Adopted Budget includes fourteen employees in the Shared Services section, with job responsibilities apportioned into the following three function categories:

Accounting  
Customer Service  
Engineering

The Deputy Superintendent reports directly to the Water Division Superintendent 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 Deputy Superintendent also fills in for the Superintendent during periods of absence to assure operational efficacy. The person in this position will be responsible for the direct supervision, assemblage of work rules, guidelines and enforcement in this area.

A Budget Cost Analyst and two Account Technicians assemble data and issue financial reports for both the Water Division and Waste Water Treatment Plant. Their responsibilities include the review and computer entry of all purchase requisitions, purchase orders and invoices. All financial activity for the Water & Sewer System, including List-of-Bills, cash receipts and City Treasurer investments are verified and entered in the System's official computerized financial records by accounting personnel. They are responsible for verifying time cards and correctly distributing Water & Sewer System payroll costs. Preparation of all interim financial reports, the Water & Sewer System Annual Financial Report and annual Budget are handled by the Accounting staff. 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.

Customer Service personnel are also assigned to the task of reviewing 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 this task also coordinate the mailing of bills to the customers.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Shared Services**  
**(continued)**

Meter Reading is vital to the Water & Sewer System, providing accurate meter readings and visual inspections on bypass seals to assure accountability in our water sales. Currently, there are approximately 50,000 monthly accounts in the City from which physical readings must be taken. The commercial accounts include several meters that are located in meter pits, making the reading process very time consuming.

Through an agreement with Consumers Energy we now provide monthly readings for all accounts. This agreement is a prelude to a broad based cooperative venture to implement the technology changes for metering and remote access reading.

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  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**Shared Services  
Personnel**

	<u>Present</u>		<u>Department Requested {a}</u>		<u>Recommended By Mayor {a}</u>		<u>Council Approved</u>	
	#	Rate	#	Rate	#	Rate	#	Rate
Deputy Superintendent	1	\$ 88,407	1	\$ 88,671	1	\$ 88,671	1	\$ 88,671
W & S System Accounting Supervisor	1	86,098	-	{d} -	-	{d} -	-	{d} -
Senior Clerk	1	53,425	1	53,689	1	53,689	1	53,689
Budget Cost Analyst	1	69,527	1	69,791	1	69,791	1	69,791
Account Technician	2	53,421	2	53,685	2	53,685	2	53,685
Account Specialist	3	49,816	3	50,080	3	50,080	3	50,080
Office Assistant	2	34,279	3	{c} 34,543	3	{c} 34,543	2	34,543
Civil Engineer	2	78,425	2	78,689	2	78,689	2	78,689
Drafting Specialist	1	57,865	1	58,129	1	58,129	1	58,129
Construction Specialist	1	29.73/hr.	1	29.87/hr.	1	29.87/hr.	1	29.87/hr.
Overtime		135,000		151,775		100,000		100,000
Temporary Employees		35,000		24,700		24,700		35,000
Total Personnel	<u>15</u>		<u>15</u>		<u>15</u>		<u>14</u>	

{a} Wage rates are based on the AFSCME Local 1250, Local 1917, and U.A.W. Local 412 Unit 59 contracts that expired 6/30/09.

{c} General Laborer transferred from Water & Sewer Maintenance and reclassified as Office Assistant

{d} Position deleted.

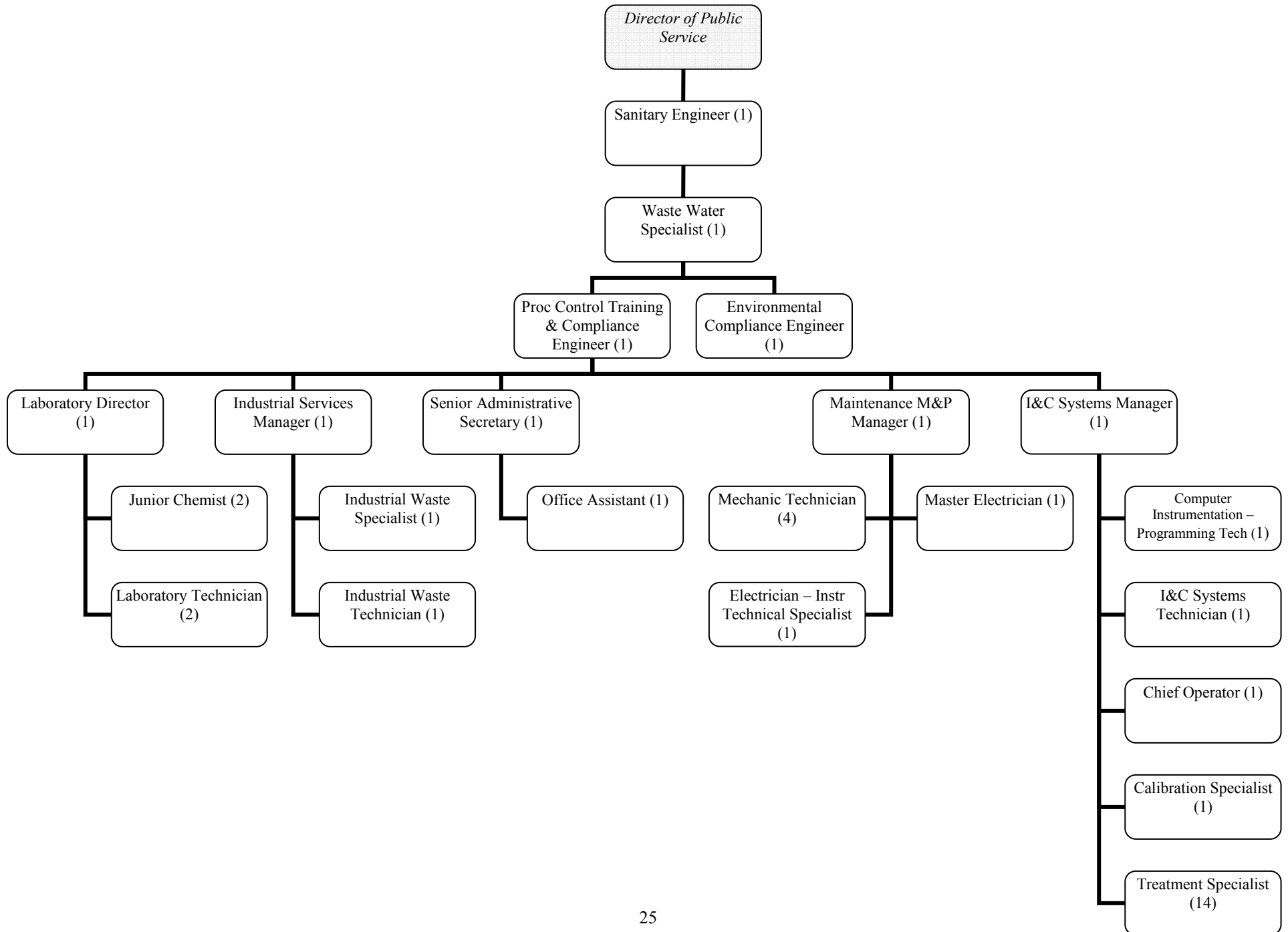
CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

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**Shared Services**

Account Name	Account Number	2008		2009		2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Personnel Services</b>								
Permanent Employees	70600	\$ 869,972	\$ 912,362	\$ 426,748	\$ 912,362	\$ 941,493	\$ 850,021	\$ 815,337
Temporary Employees	70700	27,139	35,000	11,571	30,000	24,700	24,700	35,000
Overtime	70900	159,510	135,000	79,680	160,000	151,775	100,000	100,000
<b>Employee Benefits</b>								
Education & Training	71302	5,189	9,600	136	9,600	3,400	3,400	3,400
Auto Allowance	71305	1,750	3,000	1,500	3,000	3,000	3,000	3,000
Social Security	71500	83,294	85,824	40,901	85,824	90,033	78,915	76,210
Insurances	71900	294,646	209,914	110,169	209,914	244,041	222,121	204,921
Employees' VEBA Trust	71904	289,372	328,541	153,702	328,541	364,123	312,477	299,913
Health Savings	71905	1,281	917	658	917	1,256	1,256	1,256
Supplemental Life Insurance	71906	1,355	1,087	591	1,087	649	649	649
Longevity	72100	32,468	37,218	17,585	37,218	33,862	33,862	33,862
Retirement Fund	72200	220,749	283,613	107,594	283,613	360,662	284,375	284,375
Defined Contribution Expense	72201	83,010	69,723	41,791	69,723	65,910	65,195	59,960
Cost Of Living Allowance	72400	2,884	3,239	-	3,239	3,454	3,239	3,024
Uniforms	72401	47	190	61	190	190	190	190
My Lawyer	72505	2,202	2,325	1,152	2,325	2,480	2,325	2,170
<b>Other Charges</b>								
Operating Supplies	74000	12,162	12,000	4,535	10,000	12,000	12,000	12,000
Professional Services	80100	408,945	550,000	166,128	500,000	500,000	500,000	500,000
Auditing	80105	15,500	16,000	13,000	16,000	16,500	16,500	16,500
Postage	80200	198,444	200,000	100,708	204,250	209,600	209,600	209,600
Unemployment Benefits	80300	2,800	1,000	-	3,000	3,000	3,000	3,000
Auto Expense	86300	1,118	3,000	187	1,000	1,000	1,000	1,000
General Insurance	91000	400,000	400,000	200,000	400,000	400,000	400,000	400,000
Utilities	92000	464	1,000	237	1,000	1,000	1,000	1,000
Administrative Expense	94200	1,611,250	1,658,000	816,750	1,658,000	1,698,800	1,698,800	1,698,800
M.S.D.W.A. Annual Fee	96202	21,817	25,000	-	25,000	25,000	25,000	25,000
Agents Fees	99602	-	1,000	-	1,000	1,000	1,000	1,000
<b>Total Shared Services</b>		<b>\$ 4,747,368</b>	<b>\$ 4,984,553</b>	<b>\$ 2,295,384</b>	<b>\$ 4,956,803</b>	<b>\$ 5,158,928</b>	<b>\$ 4,853,625</b>	<b>\$ 4,791,167</b>

# Waste Water Treatment Plant



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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 2<sup>nd</sup> Place Award for outstanding Pretreatment Program for the protection of the facility and the environment from harmful commercial and industrial discharges.

**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.



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Waste Water Treatment Plant**  
**(continued)**

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 mixed with tertiary effluent, chlorinated 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.
- **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:** Tertiary filter effluent enters the chlorine contact tank and is dosed with chlorine for disinfection via a remote vacuum chlorination system. The system is capable of feeding 8,000 lbs/day by two 2,000 lbs/day chlorinators, one 4,000 lbs/day chlorinator and one 8,000 lbs/day evaporator. Chlorine gas is mixed with the filtered effluent, and is retained in the chlorine contact tank for 30 minutes at 36 mgd. The normal fecal coliform count from the Warren WWTP effluent is less than 100 counts per 100 milliliters (ml), well within the state-imposed effluent standard of 200 counts per 100 ml.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Waste Water Treatment Plant**  
**(continued)**

- **Dechlorination Facility:** 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 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.
- **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 forty-two (42) employees will operate and maintain the Treatment Plant in Fiscal 2010. Their responsibilities include plant operations, plant maintenance, laboratory operations, the Industrial Pretreatment Monitoring and Enforcement, employee safety, grounds maintenance, and administrative support.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Waste Water Treatment Plant**  
**(continued)**

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  
2010 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 Approved</u>	
	#	Rate	#	Rate	#	Rate	#	Rate
Sanitary Engineer	1	\$ 101,415	1	\$ 101,679	1	\$ 101,679	1	\$ 101,679
Wastewater Specialist	1	83,784	1	84,048	1	84,048	1	84,048
Facility Engineer	1	85,781	1	86,045	1	86,045	-	{d}
Process Control/Training & Compliance Engineer	1	85,632	1	85,896	1	85,896	1	85,896
Environmental Compliance Engineer	1	85,632	1	85,896	1	85,896	1	85,896
<b>Laboratory Section:</b>								
Laboratory Director	1	80,113	1	80,377	1	80,377	1	80,377
Junior Chemist	2	30.19/hr.	2	30.33/hr.	2	30.33/hr.	2	30.33/hr.
Laboratory Technician	2	26.87/hr.	2	27.01/hr.	2	27.01/hr.	2	27.01/hr.
<b>Maintenance Section:</b>								
Maintenance M&P Manager	1	73,243	1	73,507	1	73,507	1	73,507
Maintenance Management Technician	1	47,115	-	{c}	-	{c}	-	{c}
Mechanic Technician	2	61,900	4	{c}	4	{c}	4	{c}
Mechanic Specialist	2	56,717	1	{c}	1	{c}	-	{d}
Master Electrician	1	68,622	1	68,886	1	68,886	1	68,886
Electrician/Instrumentation Technical Specialist	1	75,637	1	75,901	1	75,901	1	75,901

{a} Wage rates are based on the AFSCME Local 1250, Local 1917, and U.A.W. Local 412 Unit 35 and 59 contracts that expired 6/30/09.

{c} Reclassification of Maintenance Management Technician to Mechanic Specialist and Mechanic Specialist to Mechanic Technician.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND  
2010 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 Approved</u>	
	#	Rate	#	Rate	#	Rate	#	Rate
<b><i>Industrial Services/Stormwater Section:</i></b>								
Industrial Services Manager	1	75,637	1	75,901	1	75,901	1	75,901
Industrial Waste Specialist	1	59,845	1	60,109	1	60,109	1	60,109
Industrial Waste Technician	1	53,055	1	53,319	1	53,319	1	53,319
<b><i>Operating Section:</i></b>								
I & C System Manager	1	80,214	1	80,478	1	80,478	1	80,478
Comp. Instr./Programming Technician	1	58,717	1	58,981	1	58,981	1	58,981
I & C System Technician	1	67,539	1	67,803	1	67,803	1	67,803
Chief Operator	1	85,632	1	85,896	1	85,896	1	85,896
Treatment Specialist	16	28.90/hr.	14	{d} 29.04/hr.	14	{d} 29.04/hr.	14	{d} 29.04/hr.
Calibration Specialist	1	58,818	1	59,082	1	59,082	1	59,082
<b>Clerical Section:</b>								
Senior Administrative Secretary - WWTP	1	55,435	1	55,699	1	55,699	1	55,699
Office Assistant	1	34,279	1	34,543	1	34,543	1	34,543
Overtime		250,000		225,000		225,000		225,000
Temporary Employees		50,000		50,000		50,000		50,000
Total Personnel	<u>44</u>		<u>42</u>		<u>42</u>		<u>40</u>	

{a} Wage rates are based on the AFSCME Local 1250, Local 1917, and U.A.W. Local 412 Unit 35 and 59 contracts that expired 6/30/09.

{d} Position deleted.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - OPERATION & MAINTENANCE FUND  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

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**Waste Water Treatment**

Account Name	Account Number	2008	2009		2010			
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Personnel Services</b>								
Permanent Employees	70600	\$ 2,567,367	\$ 2,916,110	\$ 1,173,695	\$ 2,916,110	\$ 2,806,916	\$ 2,806,916	\$ 2,663,307
Temporary Employees	70700	26,538	50,000	5,265	30,000	50,000	50,000	50,000
Overtime	70900	223,344	250,000	107,727	250,000	225,000	225,000	225,000
<b>Employee Benefits</b>								
Education & Training	71302	40,871	75,000	15,362	60,000	75,000	50,000	49,250
Certification Bonuses	71303	43,640	45,000	-	45,000	35,000	35,000	35,000
Social Security	71500	230,108	268,179	104,774	268,179	256,008	256,008	244,523
Holiday Pay	71700	63,586	73,883	34,351	73,883	67,309	67,309	67,309
Insurances	71900	642,022	720,137	270,983	720,137	689,362	689,362	644,244
Employees' VEBA Trust	71904	930,655	1,108,798	432,637	1,108,798	1,070,305	1,070,305	1,016,957
Health Savings	71905	751	1,011	945	2,500	2,803	2,803	2,803
Supplemental Life Insurance	71906	2,445	2,276	1,144	2,276	2,237	2,237	2,237
Longevity	72100	102,140	104,601	50,430	104,601	98,297	98,297	94,897
Retirement Fund	72200	764,631	1,050,231	318,002	1,050,231	982,581	982,581	901,077
Defined Contribution Expense	72201	186,805	169,861	91,355	169,861	189,597	189,597	189,597
Cost Of Living Allowance	72400	6,906	9,740	-	9,740	9,282	9,282	8,852
Uniforms	72401	3,944	6,080	828	6,080	5,700	5,700	5,510
My Lawyer	72505	5,773	6,820	2,842	6,820	6,510	6,510	6,200
<b>Other Charges</b>								
Operating Supplies	74000	64,730	75,000	21,929	75,000	80,000	80,000	80,000
Chemicals	74300	367,900	400,000	105,103	400,000	400,000	375,000	375,000
Professional Services	80100	160,669	150,000	85,185	150,000	250,000	150,000	150,000
Building Lease	80104	54,000	54,000	27,000	54,000	54,000	54,000	54,000
Odor Control	80107	428	45,000	1,283	5,000	10,000	10,000	10,000
Ash Removal Contract	81800	49,763	85,000	791	70,000	70,000	70,000	70,000
Telephone	85300	11,632	13,000	8,005	13,000	13,000	13,000	13,000
Auto Expense	86300	14,931	15,000	8,875	15,000	15,000	15,000	15,000
Utilities	92000	1,161,520	1,000,000	270,446	800,000	900,000	875,000	875,000
Electric Power	92001	1,072,186	1,100,000	594,664	1,200,000	1,200,000	1,175,000	1,175,000
Repairs & Maintenance	93000	511,250	525,000	215,311	550,000	650,000	650,000	650,000
Management Agency Fee	96201	35,402	35,000	18,455	35,000	35,000	35,000	35,000
<b>Total Waste Water Treatment</b>		<b>\$ 9,345,937</b>	<b>\$ 10,354,727</b>	<b>\$ 3,967,387</b>	<b>\$ 10,191,216</b>	<b>\$ 10,248,907</b>	<b>\$ 10,048,907</b>	<b>\$ 9,708,763</b>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**WATER AND WASTE WATER RATES**

Water Consumption Rates Based on the amount of metered water	Present Rate	2010 Department Requested	2010 Recommended By Mayor	2010 Council Adopted
0 to 600 Cubic Feet	\$2.006 per C	\$2.338 per C	\$2.177 per C	\$2.138 per C
Each 100 Cubic Feet Thereafter	\$2.006 per C	\$2.338 per C	\$2.177 per C	\$2.138 per C
<u>Monthly Water Service Charge:</u>				
Meter Size:				
5/8"	\$ 0.76	\$ 0.81	\$ 0.76	\$ 0.76
3/4"	\$ 1.52	\$ 1.62	\$ 1.52	\$ 1.52
1"	\$ 3.04	\$ 3.24	\$ 3.04	\$ 3.04
1-1/2"	\$ 7.60	\$ 8.10	\$ 7.60	\$ 7.60
2"	\$ 19.00	\$ 20.25	\$ 19.00	\$ 19.00
3"	\$ 34.20	\$ 36.45	\$ 34.20	\$ 34.20
4"	\$ 68.40	\$ 72.90	\$ 68.40	\$ 68.40
6"	\$ 129.20	\$ 137.70	\$ 129.20	\$ 129.20
8"	\$ 228.00	\$ 243.00	\$ 228.00	\$ 228.00
10"	\$ 380.00	\$ 405.00	\$ 380.00	\$ 380.00
<u>Monthly Water Service Charge</u>				
<u>Fire Line Only - Flat Rate:</u>				
Service Line Size:				
5/8"	\$ 4.97	\$ 5.69	\$ 5.31	\$ 5.24
3/4"	\$ 5.73	\$ 6.50	\$ 6.07	\$ 6.00
1"	\$ 7.25	\$ 8.12	\$ 7.59	\$ 7.52
1-1/2"	\$ 28.67	\$ 32.48	\$ 30.37	\$ 29.98
2"	\$ 40.07	\$ 44.63	\$ 41.77	\$ 41.38
3"	\$ 55.27	\$ 60.83	\$ 56.97	\$ 56.58
4"	\$ 89.47	\$ 97.28	\$ 91.17	\$ 90.78
6"	\$ 150.27	\$ 162.08	\$ 151.97	\$ 151.58
8"	\$ 249.07	\$ 267.38	\$ 250.77	\$ 250.38
10"	\$ 401.07	\$ 429.38	\$ 402.77	\$ 402.38

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

Waste Water Treatment Consumption Rates Based on the amount of metered water	Present Rate	2010 Department Requested	2010 Recommended By Mayor	2010 Council Adopted
0 to 600 Cubic Feet	\$1.782 per C	\$2.073 per C	\$1.973 per C	\$1.918 per C
Each 100 Cubic Feet Thereafter	\$1.782 per C	\$2.073 per C	\$1.973 per C	\$1.918 per C
<u>Monthly Sewer Service Charge:</u>				
Meter Size:				
5/8"	\$ 1.94	\$ 1.99	\$ 1.94	\$ 1.83
3/4"	\$ 3.88	\$ 3.98	\$ 3.88	\$ 3.66
1"	\$ 7.76	\$ 7.96	\$ 7.76	\$ 7.32
1-1/2"	\$ 19.40	\$ 19.90	\$ 19.40	\$ 18.30
2"	\$ 48.50	\$ 49.75	\$ 48.50	\$ 45.75
3"	\$ 87.30	\$ 89.55	\$ 87.30	\$ 82.35
4"	\$ 174.60	\$ 179.10	\$ 174.60	\$ 164.70
6"	\$ 329.80	\$ 338.30	\$ 329.80	\$ 311.10
8"	\$ 582.00	\$ 597.00	\$ 582.00	\$ 549.00
10"	\$ 970.00	\$ 995.00	\$ 970.00	\$ 915.00
<u>Unmetered Minimum Bill</u>				
<u>Per Month - Sewer Only Charge:</u>				
Water Service Size:				
5/8"	\$ 5.50	\$ 6.14	\$ 5.89	\$ 5.67
3/4"	\$ 7.44	\$ 8.13	\$ 7.83	\$ 7.50
1"	\$ 11.32	\$ 12.11	\$ 11.71	\$ 11.16
1-1/2"	\$ 37.22	\$ 40.63	\$ 39.13	\$ 37.48
2"	\$ 66.32	\$ 70.48	\$ 68.23	\$ 64.93
3"	\$ 105.12	\$ 110.28	\$ 107.03	\$ 101.53
4"	\$ 192.42	\$ 199.83	\$ 194.33	\$ 183.88
6"	\$ 347.62	\$ 359.03	\$ 349.53	\$ 330.28
8"	\$ 599.82	\$ 617.73	\$ 601.73	\$ 568.18
10"	\$ 987.82	\$ 1,015.73	\$ 989.73	\$ 934.18



CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**WATER AND WASTE WATER RATES**

Meter Minimum Bill Per Month With 5/8" Meter Service Charge:	Present Rate	2010 Department Requested	2010 Recommended By Mayor	2010 Council Adopted
Water Service Charge	\$ 0.76	\$ 0.81	\$ 0.76	\$ 0.76
Sewer Service Charge	1.94	1.99	1.94	1.83
Water 0 - 200 Cubic Feet	4.01	4.68	4.35	4.28
Waste Water Treatment 0 - 200 Cubic Feet	3.56	4.15	3.95	3.84
<b>Total</b>	<b>\$ 10.27</b>	<b>\$ 11.63</b>	<b>\$ 11.00</b>	<b>\$ 10.71</b>

Waste Water Extra Strength Surcharges  
Per Pound:

Bio-chemical Oxygen Demand (BOD)	\$ 0.2347	\$ 0.2380	\$ 0.2380	\$ 0.2380
Suspended Solids (SS)	\$ 0.3004	\$ 0.3113	\$ 0.3113	\$ 0.3113
Phosphorus (P)	\$ 2.5217	\$ 2.6871	\$ 2.6871	\$ 2.6871
Ammonia (NH3-N)	\$ 0.4700	\$ 0.5779	\$ 0.5779	\$ 0.5779

Waste Water Pretreatment Charge:

Per Sample	\$ 150.00	\$ 180.00	\$ 180.00	\$ 180.00
Per Analysis	\$ 60.00	\$ 75.00	\$ 75.00	\$ 75.00

Commodity Charge Per 100 Cubic Feet:

Non-Domestic User	\$ 0.2329	\$ 0.2808	\$ 0.2808	\$ 0.2808
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Cross-Connection Charge Per 100 Cubic Feet:

Non-Domestic User	\$ 0.1008	\$ 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

Building Construction

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Debt Service Reserve**

The Debt Service Reserve Fund was established to set aside funds for the payment of bonded indebtedness. Included in Fiscal 2010 appropriations are the actual debt service costs the following debt instruments issued directly by the Water & Sewer System or in conjunction with other city funding entities:

Conventional revenue bonds:

- \$8.005 million of the \$12.0 million revenue refunding bonds issued in 1999 to refinance revenue bond issues from 1994 and 1996
- \$11.4 million revenue bonds issued in 1999 {refinanced in 2005 - \$150,000 outstanding}
- \$13.75 million revenue bonds issued in 2000 (refinanced in 2005 - \$1.8 million outstanding)
- \$20.95 million of the \$21.675 million revenue refunding bonds issued in 2005 to refinance bond issues from 1999 and 2000

State Revolving Fund {SRF} revenue bonds:

- \$3.98 million of \$4.75 million issued in 2003 {5134-01}
- \$5.935 million of \$6.465 million issued in 2004 {5134-02}
- \$942,091 of \$1,147,091 issued in 2004 {5134-03}
- \$7.495 million of \$8.2 million issued in 2005 {5134-04}

Capital Equipment financing:

- \$42,605 of \$266,280 Building Authority capital equipment bonds issued in 2002
- \$1,045,000 of \$1,280,543 of City of Warren capital improvement bonds issued in 2003
- \$2,092,533 of \$2,120,700 City of Warren capital improvement bonds issued in 2006

The SRF bond issues differed from conventional revenue bonds in that the proceeds were transmitted to the City as construction progressed on a reimbursement basis. As a result, repayment schedules fluctuated from year to year. Disbursements for each project 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.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

9072

Debt Service

Account Name	Account Number	2008	2009			2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Revenues:</b>								
Interest on Investments	66500	\$ 21,496	\$ 25,000	\$ 1,712	\$ 5,000	\$ 10,000	\$ 10,000	\$ 10,000
<b>Transfer From:</b>								
Operation & Maintenance Fund	67620	4,700,000	4,000,000	1,000,000	4,000,000	5,145,000	5,145,000	5,145,000
Waste Water Treatment Improvement	67640	1,000,000	-	-	-	-	-	-
<b>Total Financial Resources</b>		<b>5,721,496</b>	<b>4,025,000</b>	<b>1,001,712</b>	<b>4,005,000</b>	<b>5,155,000</b>	<b>5,155,000</b>	<b>5,155,000</b>
<b>Expenditures:</b>								
<i>Revenue Bond Debt Service</i>								
Principal	99600	1,585,000	1,680,000	930,000	1,680,000	1,755,000	1,755,000	1,755,000
Interest	99601	1,379,091	1,319,090	669,543	1,319,090	1,241,983	1,241,983	1,241,983
<i>Building Authority Bond Debt Service</i>								
Principal	99602	91,014	97,605	55,000	97,605	55,000	55,000	55,000
Interest	99603	42,397	37,024	18,821	37,024	34,128	34,128	34,128
<i>Capital Improvement Bond Debt Service</i>								
Principal	99604	14,082	14,082	-	14,082	14,082	14,082	14,082
Interest	99605	107,901	80,530	40,296	80,530	80,001	80,001	80,001
Interest - 2009 bond issue {estimated}	99605	-	-	-	-	343,429	343,429	343,429
<i>State Revolving Fund Bond Debt Service</i>								
Principal	99606	880,000	895,000	635,000	895,000	915,000	915,000	915,000
Interest	99607	371,835	361,585	183,716	361,585	343,463	343,463	343,463
Interest - 2009 SRF fund bonds	99607	-	-	-	-	87,500	87,500	87,500
Other costs	99700	1,433	2,500	562	2,500	2,500	2,500	2,500
<b>Total Transfers &amp; Expenditures</b>		<b>4,472,753</b>	<b>4,487,416</b>	<b>2,532,938</b>	<b>4,487,416</b>	<b>4,872,085</b>	<b>4,872,085</b>	<b>4,872,085</b>
Net Increase (Decrease)	96501	1,248,743	(462,416)	(1,531,226)	(482,416)	282,915	282,915	282,915
FY Beginning Restricted Reserve		5,501,863	6,650,730	6,650,730	6,650,730	6,168,314	6,168,314	6,168,314
Reassign Debt Service Liability		(99,876)						
FY Ending Restricted Reserve		\$ 6,650,730	\$ 6,188,314	\$ 5,119,504	\$ 6,168,314	\$ 6,451,229	\$ 6,451,229	\$ 6,451,229

CITY OF WARREN, MICHIGAN  
 WATER & SEWER SYSTEM  
 2010 BUDGET WORKPAPERS  
 DEBT SERVICE DETAIL - REVENUE BONDS

Date	1999 Refunding Issue \$12,000,000		1999 Revenue Bonds {after Refunding} \$300,000		2000 Revenue Bonds {after Refunding} \$3,750,000		2005 Refunding Issue \$21,675,000		Combined Total		Fiscal Year
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Total
05/01/2010	975,000.00	159,941.25	-	2,225.00	-	31,390.63	-	437,915.63	975,000.00	631,472.51	
11/01/2010	-	138,978.75	50,000.00	2,225.00	600,000.00	31,390.63	130,000.00	437,915.63	780,000.00	610,510.01	2,996,982.52
05/01/2011	1,035,000.00	138,978.75	-	1,125.00	-	16,015.63	-	435,559.38	1,035,000.00	591,678.76	
11/01/2011	-	116,467.50	50,000.00	1,125.00	625,000.00	16,015.63	135,000.00	435,559.38	810,000.00	569,167.51	3,005,846.27
05/01/2012	1,080,000.00	116,467.50	-	-	-	-	-	433,028.13	1,080,000.00	549,495.63	
11/01/2012	-	92,167.50	-	-	-	-	865,000.00	433,028.13	865,000.00	525,195.63	3,019,691.26
05/01/2013	1,135,000.00	92,167.50	-	-	-	-	-	416,809.38	1,135,000.00	508,976.88	
11/01/2013	-	66,630.00	-	-	-	-	885,000.00	416,809.38	885,000.00	483,439.38	3,012,416.26
05/01/2014	1,060,000.00	66,630.00	-	-	-	-	-	400,215.63	1,060,000.00	466,845.63	
11/01/2014	-	42,250.00	-	-	-	-	930,000.00	400,215.63	930,000.00	442,465.63	2,899,311.26
05/01/2015	1,050,000.00	42,250.00	-	-	-	-	-	381,615.63	1,050,000.00	423,865.63	
11/01/2015	-	17,575.00	-	-	-	-	975,000.00	381,615.63	975,000.00	399,190.63	2,848,056.26
05/01/2016	740,000.00	17,575.00	-	-	-	-	-	362,115.63	740,000.00	379,690.63	
11/01/2016	-	-	-	-	-	-	1,870,000.00	362,115.63	1,870,000.00	362,115.63	3,351,806.26
05/01/2017	-	-	-	-	-	-	-	324,715.63	-	324,715.63	
11/01/2017	-	-	-	-	-	-	2,005,000.00	324,715.63	2,005,000.00	324,715.63	2,654,431.26
05/01/2018	-	-	-	-	-	-	-	283,362.50	-	283,362.50	
11/01/2018	-	-	-	-	-	-	2,040,000.00	283,362.50	2,040,000.00	283,362.50	2,606,725.00
05/01/2019	-	-	-	-	-	-	-	241,287.50	-	241,287.50	
11/01/2019	-	-	-	-	-	-	2,075,000.00	241,287.50	2,075,000.00	241,287.50	2,557,575.00
05/01/2020	-	-	-	-	-	-	-	197,193.75	-	197,193.75	
11/01/2020	-	-	-	-	-	-	2,110,000.00	197,193.75	2,110,000.00	197,193.75	2,504,387.50
05/01/2021	-	-	-	-	-	-	-	152,356.25	-	152,356.25	
11/01/2021	-	-	-	-	-	-	2,170,000.00	152,356.25	2,170,000.00	152,356.25	2,474,712.50
05/01/2022	-	-	-	-	-	-	-	106,243.75	-	106,243.75	
11/01/2022	-	-	-	-	-	-	1,030,000.00	106,243.75	1,030,000.00	106,243.75	1,242,487.50
05/01/2023	-	-	-	-	-	-	-	83,068.75	-	83,068.75	
11/01/2023	-	-	-	-	-	-	1,025,000.00	83,068.75	1,025,000.00	83,068.75	1,191,137.50
05/01/2024	-	-	-	-	-	-	-	60,006.25	-	60,006.25	
11/01/2024	-	-	-	-	-	-	1,015,000.00	60,006.25	1,015,000.00	60,006.25	1,135,012.50
05/01/2025	-	-	-	-	-	-	-	37,168.75	-	37,168.75	
11/01/2025	-	-	-	-	-	-	1,010,000.00	37,168.75	1,010,000.00	37,168.75	1,084,337.50
05/01/2026	-	-	-	-	-	-	-	13,181.25	-	13,181.25	
11/01/2026	-	-	-	-	-	-	555,000.00	13,181.25	555,000.00	13,181.25	581,362.50
<b>Total</b>	<b>\$ 7,075,000.00</b>	<b>\$ 1,108,078.75</b>	<b>\$ 100,000.00</b>	<b>\$ 6,700.00</b>	<b>\$ 1,225,000.00</b>	<b>\$ 94,812.52</b>	<b>\$ 20,825,000.00</b>	<b>\$ 8,731,687.58</b>	<b>\$ 29,225,000.00</b>	<b>\$ 9,941,278.85</b>	<b>\$ 39,166,278.85</b>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 BUDGET WORKPAPERS  
DEBT SERVICE DETAIL - BUILDING AUTHORITY BONDS

2003 Capital Improvement Bonds  
Total Issue:       \$       3,585,000  
Water Share:       \$       1,280,543

Date	Principal	Interest	Fiscal Year Total
<b>06/01/2010</b>	<b>55,000.00</b>	<b>17,414.38</b>	
<b>12/01/2010</b>	-	<b>16,713.13</b>	<b>89,127.51</b>
06/01/2011	55,000.00	16,713.13	
12/01/2011	-	15,956.88	87,670.01
06/01/2012	60,000.00	15,956.88	
12/01/2012	-	15,101.88	91,058.76
06/01/2013	60,000.00	15,101.88	
12/01/2013	-	14,201.88	89,303.76
06/01/2014	65,000.00	14,201.88	
12/01/2014	-	13,186.25	92,388.13
06/01/2015	65,000.00	13,186.25	
12/01/2015	-	12,113.75	90,300.00
06/01/2016	70,000.00	12,113.75	
12/01/2016	-	10,888.75	93,002.50
06/01/2017	70,000.00	10,888.75	
12/01/2017	-	9,628.75	90,517.50
06/01/2018	75,000.00	9,628.75	
12/01/2018	-	8,241.25	92,870.00
06/01/2019	75,000.00	8,241.25	
12/01/2019	-	6,816.25	90,057.50
06/01/2020	80,000.00	6,816.25	
12/01/2020	-	5,256.25	92,072.50
06/01/2021	85,000.00	5,256.25	
12/01/2021	-	3,556.25	93,812.50
06/01/2022	85,000.00	3,556.25	
12/01/2022	-	1,856.25	90,412.50
06/01/2023	90,000.00	1,856.25	91,856.25
<b>Total</b>	<b>\$ 990,000.00</b>	<b>\$ 284,449.42</b>	<b>\$ 1,274,449.42</b>
		<u><u>\$ 1,274,449.42</u></u>	

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 BUDGET WORKPAPERS  
DEBT SERVICE DETAIL - CAPITAL IMPROVEMENT BONDS

2006 Capital Improvement Bonds  
Total Issue: \$ 7,530,000  
Water Share: \$ 2,120,700

Date	Principal	Interest	Fiscal Year Total
<b>03/01/2010</b>	-	<b>40,000.69</b>	
<b>09/01/2010</b>	<b>14,081.65</b>	<b>40,000.69</b>	<b>94,083.03</b>
03/01/2011	-	39,736.66	
09/01/2011	42,244.95	39,736.66	121,718.27
03/01/2012	-	38,944.56	
09/01/2012	42,244.95	38,944.56	120,134.07
03/01/2013	-	38,152.47	
09/01/2013	87,306.23	38,152.47	163,611.17
03/01/2014	-	36,515.48	
09/01/2014	133,775.68	36,515.48	206,806.64
03/01/2015	-	34,007.18	
09/01/2015	140,816.50	34,007.18	208,830.86
03/01/2016	-	31,366.88	
09/01/2016	147,857.33	31,366.88	210,591.09
03/01/2017	-	28,594.55	
09/01/2017	154,898.15	28,594.55	212,087.25
03/01/2018	-	25,690.21	
09/01/2018	161,938.98	25,690.21	213,319.40
03/01/2019	-	22,653.85	
09/01/2019	176,020.63	22,653.85	221,328.33
03/01/2020	-	19,309.46	
09/01/2020	183,061.45	19,309.46	221,680.37
03/01/2021	-	15,785.53	
09/01/2021	197,143.10	15,785.53	228,714.16
03/01/2022	-	11,941.24	
09/01/2022	118,285.86	11,941.24	142,168.34
03/01/2023	-	9,575.52	
09/01/2023	118,285.86	9,575.52	137,436.90
03/01/2024	-	7,209.80	
09/01/2024	119,694.03	7,209.80	134,113.63
03/01/2025	-	4,815.92	
09/01/2025	119,694.03	4,815.92	129,325.87
03/01/2026	-	2,422.04	
09/01/2026	121,102.16	2,422.04	125,946.24
<b>Total</b>	<b>\$ 2,078,451.54</b>	<b>\$ 813,444.08</b>	<b>\$ 2,891,895.62</b>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 BUDGET WORKPAPERS  
DEBT SERVICE DETAIL - STATE REVOLVING FUND REVENUE BONDS

Date	5134-01: \$4,750,000		5134-02: \$6,465,000		5134-03: \$1,147,091		5134-04: \$8,200,000		Combined Total		Fiscal Year Total
	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	
04/01/2010	-	47,187.50	280,000.00	60,137.50	-	9,425.34	370,000.00	57,971.88	650,000.00	174,722.22	
10/01/2010	210,000.00	47,187.50	-	57,162.50	55,000.00	9,425.34	-	54,965.63	265,000.00	168,740.97	1,258,463.19
04/01/2011	-	44,562.50	285,000.00	57,162.50	-	8,840.97	375,000.00	54,965.63	660,000.00	165,531.60	
10/01/2011	215,000.00	44,562.50	-	54,134.38	55,000.00	8,840.97	-	51,918.75	270,000.00	159,456.60	1,254,988.20
04/01/2012	-	41,875.00	290,000.00	54,134.38	-	8,256.59	380,000.00	51,918.75	670,000.00	156,184.72	
10/01/2012	220,000.00	41,875.00	-	51,053.13	55,000.00	8,256.59	-	48,831.25	275,000.00	150,015.97	1,251,200.69
04/01/2013	-	39,125.00	300,000.00	51,053.13	-	7,672.22	385,000.00	48,831.25	685,000.00	146,681.60	
10/01/2013	225,000.00	39,125.00	-	47,865.63	60,000.00	7,672.22	-	45,703.13	285,000.00	140,365.98	1,257,047.58
04/01/2014	-	36,312.50	305,000.00	47,865.63	-	7,034.72	390,000.00	45,703.13	695,000.00	136,915.98	
10/01/2014	230,000.00	36,312.50	-	44,625.00	60,000.00	7,034.72	-	42,534.38	290,000.00	130,506.60	1,252,422.58
04/01/2015	-	33,437.50	310,000.00	44,625.00	-	6,397.22	400,000.00	42,534.38	710,000.00	126,994.10	
10/01/2015	240,000.00	33,437.50	-	41,331.25	60,000.00	6,397.22	-	39,284.38	300,000.00	120,450.35	1,257,444.45
04/01/2016	-	30,437.50	315,000.00	41,331.25	-	5,759.72	405,000.00	39,284.38	720,000.00	116,812.85	
10/01/2016	245,000.00	30,437.50	-	37,984.38	65,000.00	5,759.72	-	35,993.75	310,000.00	110,175.35	1,256,988.20
04/01/2017	-	27,375.00	325,000.00	37,984.38	-	5,069.09	410,000.00	35,993.75	735,000.00	106,422.22	
10/01/2017	250,000.00	27,375.00	-	34,531.25	65,000.00	5,069.09	-	32,662.50	315,000.00	99,637.84	1,256,060.06
04/01/2018	-	24,250.00	330,000.00	34,531.25	-	4,378.47	420,000.00	32,662.50	750,000.00	95,822.22	
10/01/2018	255,000.00	24,250.00	-	31,025.00	65,000.00	4,378.47	-	29,250.00	320,000.00	88,903.47	1,254,725.69
04/01/2019	-	21,062.50	340,000.00	31,025.00	-	3,687.84	425,000.00	29,250.00	765,000.00	85,025.34	
10/01/2019	265,000.00	21,062.50	-	27,412.50	65,000.00	3,687.84	-	25,796.88	330,000.00	77,959.72	1,257,985.06
04/01/2020	-	17,750.00	345,000.00	27,412.50	-	2,997.22	430,000.00	25,796.88	775,000.00	73,956.60	
10/01/2020	270,000.00	17,750.00	-	23,746.88	70,000.00	2,997.22	-	22,303.13	340,000.00	66,797.23	1,255,753.83
04/01/2021	-	14,375.00	355,000.00	23,746.88	-	2,253.47	440,000.00	22,303.13	795,000.00	62,678.48	
10/01/2021	275,000.00	14,375.00	-	19,975.00	70,000.00	2,253.47	-	18,728.13	345,000.00	55,331.60	1,258,010.08
04/01/2022	-	10,937.50	360,000.00	19,975.00	-	1,509.72	445,000.00	18,728.13	805,000.00	51,150.35	
10/01/2022	285,000.00	10,937.50	-	16,150.00	70,000.00	1,509.72	-	15,112.50	355,000.00	43,709.72	1,254,860.07
04/01/2023	-	7,375.00	370,000.00	16,150.00	-	765.97	455,000.00	15,112.50	825,000.00	39,403.47	
10/01/2023	290,000.00	7,375.00	-	12,218.75	70,000.00	765.97	-	11,415.63	360,000.00	31,775.35	1,256,178.82
04/01/2024	-	3,750.00	375,000.00	12,218.75	-	22.22	460,000.00	11,415.63	835,000.00	27,406.60	
10/01/2024	300,000.00	3,750.00	-	8,234.38	2,091.00	22.22	-	7,678.13	302,091.00	19,684.73	1,184,182.33
04/01/2025	-	-	385,000.00	8,234.38	-	-	470,000.00	7,678.13	855,000.00	15,912.51	
10/01/2025	-	-	-	4,143.75	-	-	-	3,859.38	-	8,003.13	878,915.64
04/01/2026	-	-	390,000.00	4,143.75	-	-	475,000.00	3,859.38	865,000.00	8,003.13	873,003.13
<b>Total</b>	<b>\$ 3,775,000.00</b>	<b>\$ 799,625.00</b>	<b>\$ 5,660,000.00</b>	<b>\$ 1,083,325.06</b>	<b>\$ 887,091.00</b>	<b>\$ 148,141.56</b>	<b>\$ 7,135,000.00</b>	<b>\$ 1,030,046.98</b>	<b>\$ 17,457,091.00</b>	<b>\$ 3,061,138.60</b>	<b>\$ 20,518,229.60</b>



CITY OF WARREN, MICHIGAN  
 WATER & SEWER SYSTEM  
 2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**\$9,410,000**  
**CITY OF WARREN**  
**CAPITAL IMPROVEMENT BONDS, SERIES 2009**  
**METER REPLACEMENT PROJECT**

ESTIMATED DEBT SERVICE SCHEDULE-TAXABLE

Date	Principal	Coupon	Interest	Interest Rebate	Total Debt Service	Annual Total
04/01/10			\$160,006.67	\$72,003.00	\$88,003.67	
10/01/10			240,010.00	108,004.50	132,005.50	\$220,009.17
04/01/11	\$300,000.00	3.25%	240,010.00	108,004.50	432,005.50	
10/01/11			235,135.00	105,810.75	129,324.25	561,329.75
04/01/12	325,000.00	3.35%	235,135.00	105,810.75	454,324.25	
10/01/12			229,691.25	103,361.06	126,330.19	580,654.44
04/01/13	325,000.00	3.50%	229,691.25	103,361.06	451,330.19	
10/01/13			224,003.75	100,801.69	123,202.06	574,532.25
04/01/14	325,000.00	3.50%	224,003.75	100,801.69	448,202.06	
10/01/14			218,316.25	98,242.31	120,073.94	568,276.00
04/01/15	350,000.00	4.00%	218,316.25	98,242.31	470,073.94	
10/01/15			211,316.25	95,092.31	116,223.94	586,297.88
04/01/16	350,000.00	4.25%	211,316.25	95,092.31	466,223.94	
10/01/16			203,878.75	91,745.44	112,133.31	578,357.25
04/01/17	375,000.00	4.40%	203,878.75	91,745.44	487,133.31	
10/01/17			195,628.75	88,032.94	107,595.81	594,729.12
04/01/18	400,000.00	4.90%	195,628.75	88,032.94	507,595.81	
10/01/18			185,828.75	83,622.94	102,205.81	609,801.62
04/01/19	400,000.00	5.00%	185,828.75	83,622.94	502,205.81	
10/01/19			175,828.75	79,122.94	96,705.81	598,911.62
04/01/20	425,000.00	5.00%	175,828.75	79,122.94	521,705.81	
10/01/20			165,203.75	74,341.69	90,862.06	612,567.87
04/01/21	450,000.00	5.20%	165,203.75	74,341.69	540,862.06	
10/01/21			153,503.75	69,076.69	84,427.06	625,289.12
04/01/22	475,000.00	5.30%	153,503.75	69,076.69	559,427.06	
10/01/22			140,916.25	63,412.31	77,503.94	636,931.00
04/01/23	500,000.00	5.40%	140,916.25	63,412.31	577,503.94	
10/01/23			127,416.25	57,337.31	70,078.94	647,582.88
04/01/24	525,000.00	5.50%	127,416.25	57,337.31	595,078.94	
10/01/24			112,978.75	50,840.44	62,138.31	657,217.25
04/01/25	550,000.00	5.75%	112,978.75	50,840.44	612,138.31	
10/01/25			97,166.25	43,724.81	53,441.44	665,579.75
04/01/26	600,000.00	5.75%	97,166.25	43,724.81	653,441.44	
10/01/26			79,916.25	35,962.31	43,953.94	697,395.38
04/01/27	625,000.00	5.75%	79,916.25	35,962.31	668,953.94	
10/01/27			61,947.50	27,876.38	34,071.12	703,025.06
04/01/28	650,000.00	5.75%	61,947.50	27,876.38	684,071.12	
10/01/28			43,260.00	19,467.00	23,793.00	707,864.12
04/01/29	700,000.00	5.90%	43,260.00	19,467.00	723,793.00	
10/01/29			22,610.00	10,174.50	12,435.50	736,228.50
04/01/30	760,000.00	5.95%	22,610.00	10,174.50	772,435.50	772,435.50
	<u>\$9,410,000.00</u>		<u>\$6,409,119.17</u>	<u>\$2,884,103.64</u>	<u>\$12,935,015.53</u>	<u>\$12,935,015.53</u>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

**\$3,090,000**  
**CITY OF WARREN**  
**CAPITAL IMPROVEMENT BONDS, SERIES 2009**  
**ULTRAVIOLET DISINFECTION SYSTEM PROJECT**

ESTIMATED DEBT SERVICE SCHEDULE

Date	Principal	Coupon	Interest	Total Debt Service	Annual Total
04/01/10			\$ 25,750	\$ 25,750	
10/01/10			\$ 38,625	\$ 38,625	\$ 64,375
04/01/11	\$ 90,000	2.50%	\$ 38,625	\$ 128,625	
10/01/11			\$ 37,500	\$ 37,500	\$ 166,125
04/01/12	\$ 90,000	2.50%	\$ 37,500	\$ 127,500	
10/01/12			\$ 36,375	\$ 36,375	\$ 163,875
04/01/13	\$ 90,000	2.50%	\$ 36,375	\$ 126,375	
10/01/13			\$ 35,250	\$ 35,250	\$ 161,625
04/01/14	\$ 126,000	2.50%	\$ 35,250	\$ 161,250	
10/01/14			\$ 33,675	\$ 33,675	\$ 194,925
04/01/15	\$ 126,000	2.50%	\$ 33,675	\$ 159,675	
10/01/15			\$ 32,100	\$ 32,100	\$ 191,775
04/01/16	\$ 126,000	2.50%	\$ 32,100	\$ 158,100	
10/01/16			\$ 30,525	\$ 30,525	\$ 188,625
04/01/17	\$ 144,000	2.50%	\$ 30,525	\$ 174,525	
10/01/17			\$ 28,725	\$ 28,725	\$ 203,250
04/01/18	\$ 144,000	2.50%	\$ 28,725	\$ 172,725	
10/01/18			\$ 26,925	\$ 26,925	\$ 199,650
04/01/19	\$ 144,000	2.50%	\$ 26,925	\$ 170,925	
10/01/19			\$ 25,125	\$ 25,125	\$ 196,050
04/01/20	\$ 144,000	2.50%	\$ 25,125	\$ 169,125	
10/01/20			\$ 23,325	\$ 23,325	\$ 192,450
04/01/21	\$ 162,000	2.50%	\$ 23,325	\$ 185,325	
10/01/21			\$ 21,300	\$ 21,300	\$ 206,625
04/01/22	\$ 162,000	2.50%	\$ 21,300	\$ 183,300	
10/01/22			\$ 19,275	\$ 19,275	\$ 202,575
04/01/23	\$ 162,000	2.50%	\$ 19,275	\$ 181,275	
10/01/23			\$ 17,250	\$ 17,250	\$ 198,525
04/01/24	\$ 180,000	2.50%	\$ 17,250	\$ 197,250	
10/01/24			\$ 15,000	\$ 15,000	\$ 212,250
04/01/25	\$ 180,000	2.50%	\$ 15,000	\$ 195,000	
10/01/25			\$ 12,750	\$ 12,750	\$ 207,750
04/01/26	\$ 180,000	2.50%	\$ 12,750	\$ 192,750	
10/01/26			\$ 10,500	\$ 10,500	\$ 203,250
04/01/27	\$ 180,000	2.50%	\$ 10,500	\$ 190,500	
10/01/27			\$ 8,250	\$ 8,250	\$ 198,750
04/01/28	\$ 180,000	2.50%	\$ 8,250	\$ 188,250	
10/01/28			\$ 6,000	\$ 6,000	\$ 194,250
04/01/29	\$ 190,000	2.50%	\$ 6,000	\$ 196,000	
10/01/29			\$ 3,625	\$ 3,625	\$ 199,625
04/01/30	\$ 290,000	2.50%	\$ 3,625	\$ 293,625	\$ 293,625
	<u>\$ 3,090,000</u>		<u>\$ 949,950</u>	<u>\$ 4,039,950</u>	<u>\$ 4,039,950</u>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

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**Waste Water Treatment**

Account Name	Account Number	2008	2009			2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Revenues:								
Interest on Investments	66500	\$ 53,420	\$ 10,000	\$ 1,346	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000
Transfer From:								
Operation & Maintenance	67620	-	-	-	-	-	-	-
Other Sources:								
Financing Proceeds	69600	-	-	-	7,000,000	-	-	-
<b>Total Financial Resources</b>		53,420	10,000	1,346	7,005,000	5,000	5,000	5,000
Expenditures:								
Construction Contracts	97001	3,379	-	14,333	59,775	-	-	-
State Revolving Fund Projects	97002	121,712	-	27,826	7,043,025	-	-	-
Bond issuance costs	97003	-	-	-	-	-	-	-
Transfer To:								
Infrastructure Replacement	96544	1,000,000	-	-	-	-	-	-
Debt Service	96572	1,000,000	-	-	-	-	-	-
<b>Total Expenditures</b>		2,125,091	-	42,159	7,102,800	-	-	-
Net Increase (Decrease)	67601	(2,071,671)	10,000	(40,813)	(97,800)	5,000	5,000	5,000
FY Beginning Restricted Reserve		2,122,362	150,068	150,068	150,068	52,268	52,268	52,268
Reassign Debt Service Liability		99,377						
FY Ending Restricted Reserve		\$ 150,068	\$ 160,068	\$ 109,255	\$ 52,268	\$ 57,268	\$ 57,268	\$ 57,268

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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 are listed on the projects page. Actual projects to be completed will be determined by the reserve's financing ability based on funds carried over from 2009 and allocated from the July 2010 ordinance adjustment.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

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**Infrastructure Replacement**

Account Name	Account Number	2008	2009			2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Revenues:</b>								
Interest on Investments	66500	\$ 66,102	\$ 70,000	\$ 2,190	\$ 7,000	\$ 10,000	\$ 10,000	\$ 10,000
<b>Transfer From:</b>								
Operation & Maintenance	67620	-	-	-	-	-	-	-
Waste Water Treatment Reserve	67640	1,000,000	-	-	-	-	-	-
<b>Other Sources:</b>								
Financing Proceeds	69600	-	-	-	9,329,500	13,820,500	13,820,500	13,820,500
<b>Total Financial Resources</b>		1,066,102	70,000	2,190	9,336,500	13,830,500	13,830,500	13,830,500
<b>Expenditures:</b>								
Non-capitalized expenses	95600	52,273	-	44,160	60,000	25,000	25,000	25,000
Construction Contracts	97001	1,831,496	-	323,388	11,533,500	13,940,000	13,940,000	13,940,000
Bond issuance costs	97003	-	-	-	53,858	79,820	79,820	79,820
<b>Transfer To:</b>								
Debt Service	96572	-	-	-	-	-	-	-
<b>Total Expenditures</b>		1,883,769	-	367,548	11,647,358	14,044,820	14,044,820	14,044,820
Net Increase (Decrease)	67601	(817,667)	70,000	(365,358)	(2,310,858)	(214,320)	(214,320)	(214,320)
FY Beginning Restricted Reserve		4,778,639	3,960,972	3,960,972	3,960,972	1,650,114	1,650,114	1,650,114
FY Ending Restricted Reserve		\$ 3,960,972	\$ 4,030,972	\$ 3,595,614	\$ 1,650,114	\$ 1,435,794	\$ 1,435,794	\$ 1,435,794

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS  
INFRASTRUCTURE REPLACEMENT RESERVE  
Proposed Projects

Project Description	<u>Cost Estimate</u>
<b>Projects to be funded with long term financing (capital projects)</b>	
<i>Water distribution system:</i>	
Ryan Road between Eight & Nine Mile Roads - watermain replacement	\$ 1,115,000
Regency Park Drive watermain loop	180,000
<i>Pressure reducing valves:</i>	
Mound at Eight Mile	750,000
Waltham at Eight Mile	440,000
Fourteen Mile at Schoenherr	480,000
Subtotal	<u>2,965,000</u>
<i>Sanitary sewer system:</i>	
Oakland Macomb interceptor connection(s)	4,500,000
13 Mile Road capacity improvement	2,700,000
11 Mile Road capacity improvement	605,000
Cunningham from Toepfer to Nine Mile - sanitary sewer replacement/repair	600,000
Cleaning and televising existing sanitary mains (50 miles)	890,000
<i>Repair of sewage infiltration into the storm sewer system:</i>	
Nine Mile at Lorraine	100,000
Eight Mile, west of Groesbeck	105,000
Dequindre, north of Eight Mile	125,000
Hoover at Toepfer	150,000
14 Mile at Mound	50,000
Chicago betwee Blair and Dimas	400,000
Lozier, west of Lorraine	550,000
Subtotal	<u>10,775,000</u>
<b>Total projects funded with long term financing</b>	<u>\$ 13,740,000</u>
<b>Projects funded with Infrastructure Replacement Reserve funds</b>	
Emergency watermain break repair program (as-needed basis)	<u>200,000</u>
<b>Total Proposed Projects</b>	<u>\$ 13,940,000</u>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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. All replacement meters were first tested in the Meter Shop by Water Division personnel and then placed in service by an independent contractor.

In 2008, this function was transferred to the Infrastructure Replacement Reserve to consolidate reporting. The balance of funds left in this reserve was transferred to the Capital Equipment Reserve to be used for equipment purchases.



CITY OF WARREN, MICHIGAN  
 WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
 2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

9045

**Meter Replacement**

Account Name	Account Number	2008	2009			2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
Revenues:								
Interest on Investments	66500	\$ 5,979	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Financial Resources</b>		5,979	-	-	-	-	-	-
Expenditures:								
Transfer to Capital Equipment	96547	276,994	-	-	-	-	-	-
<b>Total Expenditures</b>		276,994	-	-	-	-	-	-
Net Increase (Decrease)	67601	(271,015)	-	-	-	-	-	-
FY Beginning Restricted Reserve		271,015	-	-	-	-	-	-
FY Ending Restricted Reserve		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 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.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

9047

**Capital Equipment**

Account Name	Account Number	2008	2009			2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor	Council Adopted
<b>Revenues:</b>								
Interest on Investments	66500	\$ 7,609	\$ 5,000	\$ 437	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
<b>Transfer From:</b>								
Operation & Maintenance	67620	-	-	-	-	1,350,000	300,000	300,000
Meter Replacement	67645	276,994	-	-	-	-	-	-
Building Construction	67660	45,800	-	-	-	-	-	-
Financing Proceeds	69600		152,000	-	-	-	-	-
<b>Total Financial Resources</b>		<b>330,403</b>	<b>157,000</b>	<b>437</b>	<b>1,000</b>	<b>1,351,000</b>	<b>301,000</b>	<b>301,000</b>
<b>Capital Purchases:</b>								
Water Maintenance	98040	215,106	105,000	22,670	106,550	65,000	65,000	65,000
Meter Repair & Service	98050	13,297	25,000	-	25,000	-	-	-
Administration	98060	19,769	20,000	-	20,000	20,000	20,000	20,000
Waste Water Treatment	98080	431,981	204,000	118,219	336,500	150,000	150,000	150,000
Sewer Maintenance	98090	-	7,000	-	7,000	65,000	65,000	65,000
Bond Issuance Costs	97003		8,000	-	-	-	-	-
<b>Transfer To:</b>								
Debt Service	96572	106	-	-	-	-	-	-
<b>Total Expenditures</b>		<b>680,259</b>	<b>369,000</b>	<b>140,889</b>	<b>495,050</b>	<b>300,000</b>	<b>300,000</b>	<b>300,000</b>
Net Increase (Decrease)	67601	(349,856)	(212,000)	(140,452)	(494,050)	1,051,000	1,000	1,000
Reassign Debt Service Liability		40,973	-	-	42,499	-	-	-
FY Beginning Restricted Reserve		826,501	517,618	517,618	517,618	66,067	66,067	66,067
FY Ending Restricted Reserve		\$ 517,618	\$ 305,618	\$ 377,166	\$ 66,067	\$ 1,117,067	\$ 67,067	\$ 67,067

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS  
CAPITAL EQUIPMENT

Funding Category	Item Description	#	New or Replacement	Estimated Cost
<b>98040 Water Maintenance:</b>				
2010-01	Crew van	2	R	\$ 65,000
				<u>65,000</u>
<b>98060 Administration:</b>				
2010-02	Computer equipment & software		R	20,000
				<u>20,000</u>
<b>98090 Sewer Maintenance:</b>				
2010-03	Sewer main camera unit	1	R	65,000
Total Water Division Capital Requests				<u>\$ 150,000</u>
<b>98080 Waste Water Treatment Plant:</b>				
<i>Maintenance</i>				
2010-12	Grit chamber flight chain	1	R	\$ 9,000
2010-13	Primary mechanism parts		R	10,000
2010-14	Vogulsang pump/grinder parts		R	11,000
<i>Safety and Security</i>				
2010-15	Security fence, gate, access system		N	35,000
2010-16	Incinerator control room make up air system		R	30,000
<i>Operations/Process Control</i>				
2010-17	Gas powered pressure washer	1	N	6,000
2010-18	Bug Zappers		N	3,500
2010-19	Radio Communication Base sets		N	10,000
<i>Electrical / Engineering</i>				
2010-20	Batteries for generator switching		R	13,000
2010-21	Switchgear batteries		R	8,500
2010-22	VFD for ID fan	1	N	6,000
2010-23	Cable tugger with pulley system		N	8,000
Total Waste Water Treatment Capital Requests				<u>\$ 150,000</u>
GRAND TOTAL - EQUIPMENT REQUESTS				<u>\$ 300,000</u>

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM  
2010 CITY COUNCIL ADOPTED BUDGET  
**Building Construction Reserve**

The Building Construction Reserve Fund was established to account for the construction cost of the new Water Division Headquarters. The majority of Water Division employees operate from this new facility. The Water Division's rolling stock, major equipment, repair materials and inventory are stored and maintained there as well.

The major portion of the Headquarters' cost was financed through a City of Warren Building Authority bond issue. Payment of principal and interest on the bonds is directly related to lease/purchase payments made by the Water & Sewer System to the Building Authority. Final payment on the bond issue was processed in fiscal year 2004.

This reserve was closed in 2008 with the unused balance of funds transferred to the Capital Equipment Reserve.

CITY OF WARREN, MICHIGAN  
WATER & SEWER SYSTEM - RESTRICTED USE RESERVES  
2010 FISCAL YEAR BUDGET FINANCIAL STATEMENTS

9060

**Building Construction**

Account Name	Account Number	2008	2009		2010		
		Fiscal Year Actual	Amended Budget	Actual Thru June 30	Fiscal Year Estimated	Department Request	Recommended By Mayor
Revenues:							
Interest on Investments	66500	\$ 989	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Financial Resources</b>		989	-	-	-	-	-
Transfer To:							
Capital Equipment	96547	45,800	-	-	-	-	-
<b>Total Expenditures</b>		45,800	-	-	-	-	-
Net Increase (Decrease)	67601	(44,811)	-	-	-	-	-
FY Beginning Restricted Reserve		44,811	-	-	-	-	-
FY Ending Restricted Reserve		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -