



Water Superintendent.....David Love

Service Statement

Raw water from Lake Huron is purchased from the Saginaw-Midland Municipal Water Supply Corporation pipeline. The pipeline corporation is jointly owned by the cities of Midland and Saginaw.

The Water Division is responsible for the planning, management, treatment and distribution of potable water. Bringing this precious natural resource into homes and businesses requires the hard work and commitment of knowledgeable and devoted trained specialists working around the clock.

The City of Midland water system operates under oversight from EPA and MDEQ under the U.S. Safe Drinking Water Act of 1974 and the Michigan Safe Drinking Water Act 1976 PA 399.

Our water treatment and distribution system protect us from naturally-occurring and manmade contaminants. Our water treatment plant is capable of producing 48 million gallons a day of high quality water. Chemicals are added to the raw water at the Water Plant to accomplish the purification and disinfection process that includes: coagulation, clarification and filtration. Operators at the plant monitor water quality in "real time" 24 hours a day, 365 days a year. Over 100,000 tests are performed each year by our laboratory - before, during and after treatment - to assure that the water meets or exceeds all the requirements of Federal and State regulations for safe drinking water. Finished water is distributed through separate transmission systems to both our general population or domestic flow and our industrial customers at Dow Chemical's Michigan Division and Dow Corning. The plant maintenance team is responsible for ensuring the reliability of all the electrical and mechanical systems for the treatment and delivery of the water. Water is stored in both elevated and underground facilities located throughout the water system to meet our customers' needs.

The water transmission and distribution system is comprised of over 332 miles of water main providing water for fire protection, business, industry and individual customers in the City of Midland, Homer Township, Larkin Township, Midland Township, Mills Township, Water District #1 of Midland County and the City of Auburn. Water system distribution crews provide for the integrity of this delivery system with emergency water main repair, valve operation, elevated storage inspection and cleaning, hydrant inspections and meter reading and maintenance. The Distribution staff also administers the City's Cross Connection Control Program to protect the system from backflow potential.

Functions

Water Plant Operations

- Maintains water quality within Federal and State requirements to protect public health
- Monitors plant operation 24/7 to optimize treatment efficiency
- Files monthly treatment reports to MDEQ
- Complies with Process Safety (OSHA) and Risk Management (EPA) requirements for chlorine handling
- Performs daily chemical and biological analysis monitoring treatment process
- Develops short- and long-range budget and capital improvement plan
- Responds to citizen service requests and inquiries related to water quality questions
- Performs daily water system testing for bacteriological indicator organism to confirm water quality
- Maintains certification of plant laboratory to meet EPA and MDEQ standards
- Monitors mandated MDEQ operator certification to ensure continuing education requirements are completed
- Conducts water quality control sampling of our distribution system
- Coordinates daily flow request with the Saginaw-Midland Water Supply Corp. to optimize raw water system efficiency
- Monitors and maintains treatment chemical inventories
- Meets MDEQ and Clean Water Act requirements for the disposal of water treatment residuals

Water Plant Maintenance

- Maintains 5 pump stations including: industrial pumping, domestic pumping, pressure district pumping and booster pump stations
- Maintains Supervisor Control and Data Acquisition (SCADA) systems and corresponding remote radio telemetry to insure reliability of the plant controls
- Performs preventive maintenance program on system equipment
- Monthly calibrates online analytical equipment for turbidity and chlorine to ensure regulatory compliance

- Completes all required staff safety training
- Conducts annual maintenance of all treatment basins and process equipment including calibration of all chemical feeders and flow meters
- Completes annual inspection and monitoring program of plant filters

Water Distribution

- Maintains and repairs emergency water main for 332 miles of water main
- Inspects and cleans elevated storage
- Reviews and approves design for all water system extensions and improvements
- Responds to citizen service requests and inquiries related to water quality questions, water pressure problems and water main repair or construction projects
- Provides accurate and timely readings of 18,025 water meters on a quarterly basis for billing purposes
- Administers and enforces City Ordinances relating to our cross connection control program including the facilitation of the testing requirements for 4,828 backflow prevention devices
- Monitors operator MDEQ certification to ensure mandated continuing education requirements are completed
- Conducts annual system flushing program
- Monitors and maintains inventories for water system repair parts and meter stock
- Maintains and repairs emergency valves for 3,032 distribution valves
- Maintains 48" and 36" raw water transmission lines from Saginaw-Midland Municipal Water Supply Corporation to the City of Midland Water Treatment Plant
- Maintains 2,979 fire hydrants including auxiliary valves
- Gathers fire flow test data for City of Midland Fire Department and fire suppression contractors
- Responds to approximately 6,000 requests for utility locates on an annual basis

Department at a Glance

Funding Level Summary	2006-07 Actual	2007-08 Actual	Adjusted 2008-09 Budget	Estimated 2008-09 Budget	Adopted 2009-10 Budget	% of Change
Administration	\$ 1,008,306	\$ 1,060,895	\$ 1,342,232	\$ 1,341,546	\$ 1,416,385	5.6%
Plant Operations	4,016,920	4,114,107	3,274,508	3,196,384	3,264,030	2.1%
Maintenance	2,318,442	2,379,338	2,917,133	3,028,934	3,018,005	-0.4%
Miscellaneous	696,601	1,497,737	57,998	61,812	148,144	139.7%
Debt Service	2,111,327	2,074,217	2,477,627	2,466,417	2,396,212	-2.8%
Capital Outlay	222,557	241,154	3,161,641	1,860,700	2,871,351	54.3%
Operating Transfers Out	100,000	190,000	-	-	-	0.0%
Total Department	\$ 10,474,153	\$ 11,557,448	\$ 13,231,139	\$ 11,955,793	\$ 13,114,127	9.7%

Personal Services	\$ 3,113,342	\$ 3,427,504	\$ 3,468,281	\$ 3,528,433	\$ 3,653,093	3.5%
Supplies	473,457	534,627	621,175	654,977	676,593	3.3%
Other Services/Charges	4,453,470	5,089,946	3,502,415	3,445,266	3,516,878	2.1%
Debt Service	2,111,327	2,074,217	2,477,627	2,466,417	2,396,212	-2.8%
Capital Outlay	222,557	241,154	3,161,641	1,860,700	2,871,351	54.3%
Operating Transfers Out	100,000	190,000	-	-	-	0.0%
Total Department	\$ 10,474,153	\$ 11,557,448	\$ 13,231,139	\$ 11,955,793	\$ 13,114,127	9.7%

Personnel Summary

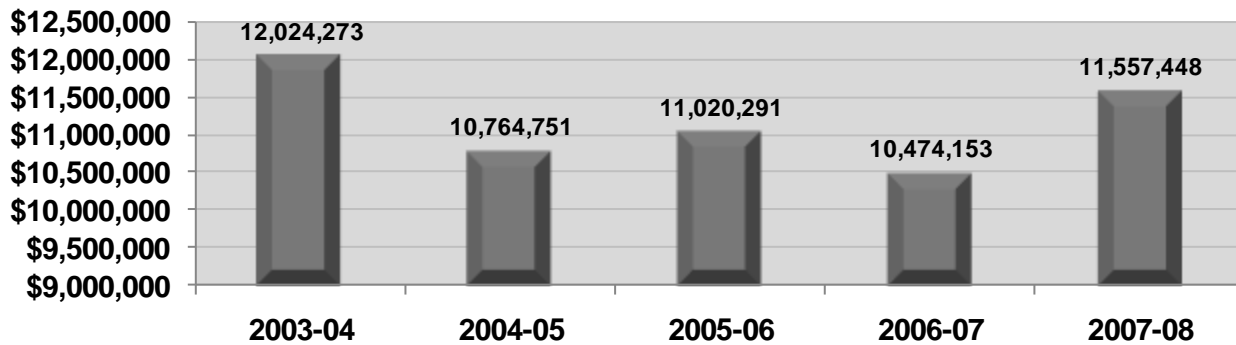
Full-Time	31	31	31	31	30
Regular Part-Time	1	1	1	1	1
Total Department	32	32	32	32	31

Summary of Budget Changes

Significant Notes – 2009-10 Budget Compared to 2008-09 Budget

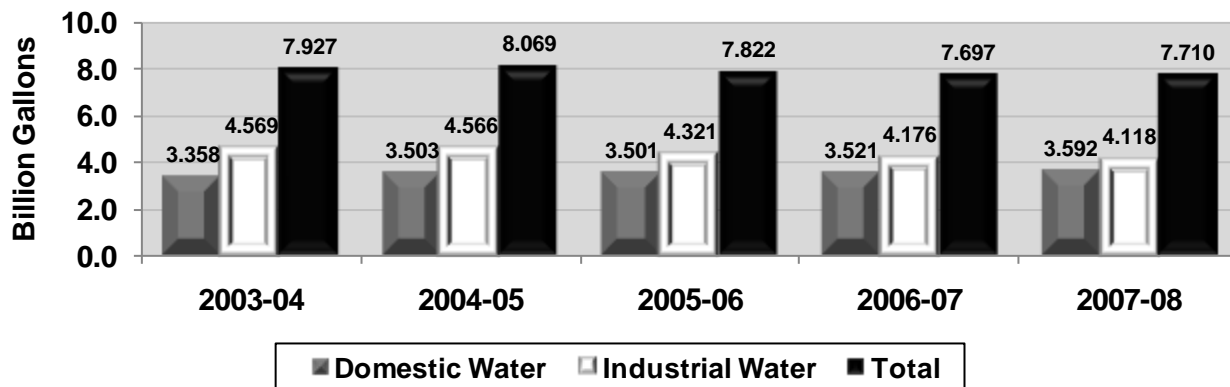
Major capital expenditures will be undertaken to replace and upgrade our existing 28-year-old chemical feed systems along with our 9-year-old Supervisory Control and Data Acquisition hardware and software. The project has a projected completion of June 2010. The second phase of the three-phase project for the West Side Transmission Main system will be completed between Northwood Drive and Saginaw Road; this project, when fully completed, will provide increased flow capacity to the northwest sections of the city.

5-Year Operating Budget History

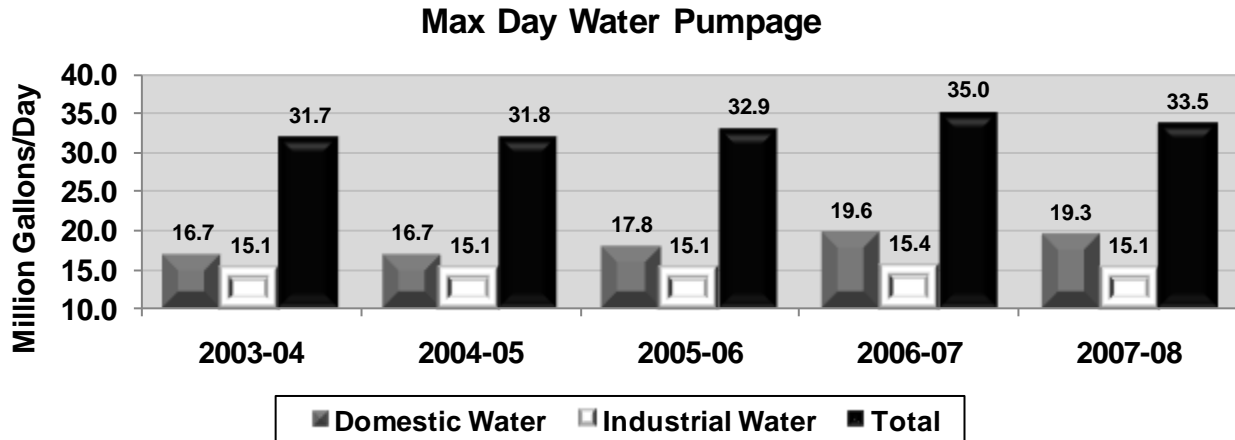


Key Departmental Trends

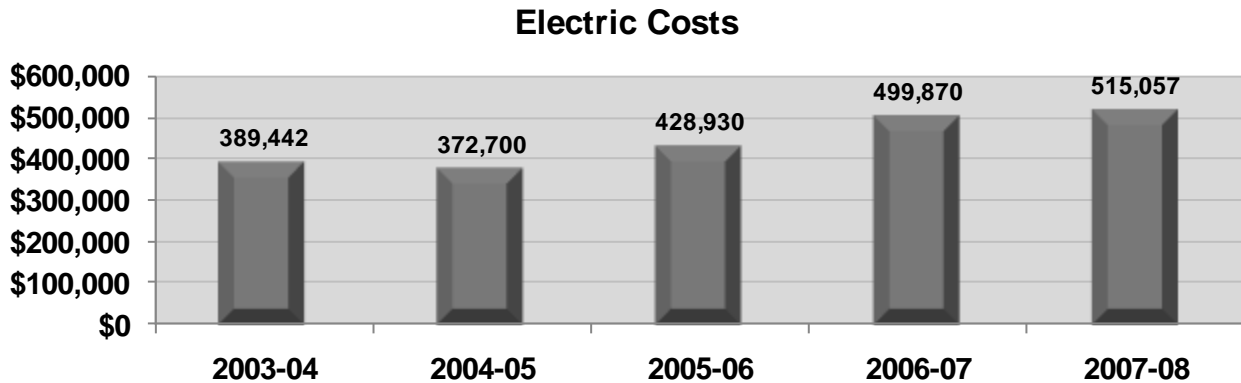
Water Treated



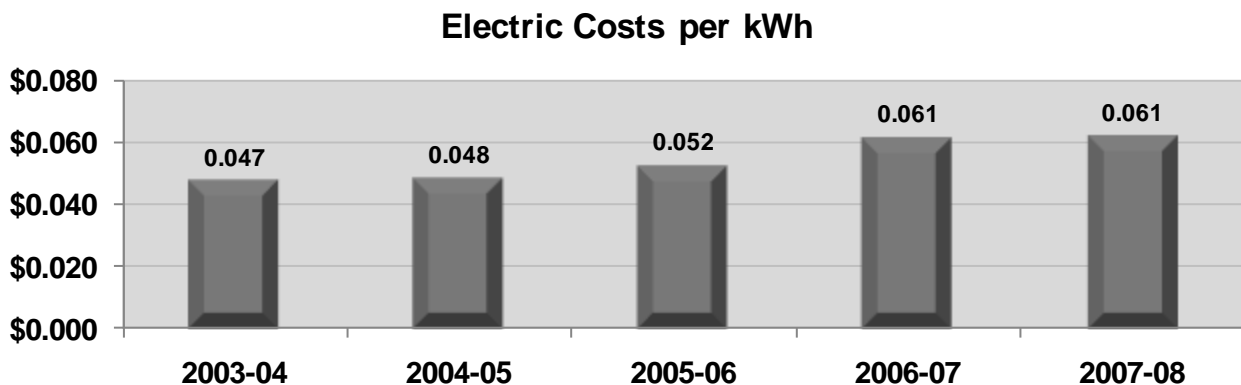
Key Departmental Trends (cont.)



Industrial pumpage has decreased with reduced electrical output from MCV and production adjustments at Dow Chemical’s Michigan Division.

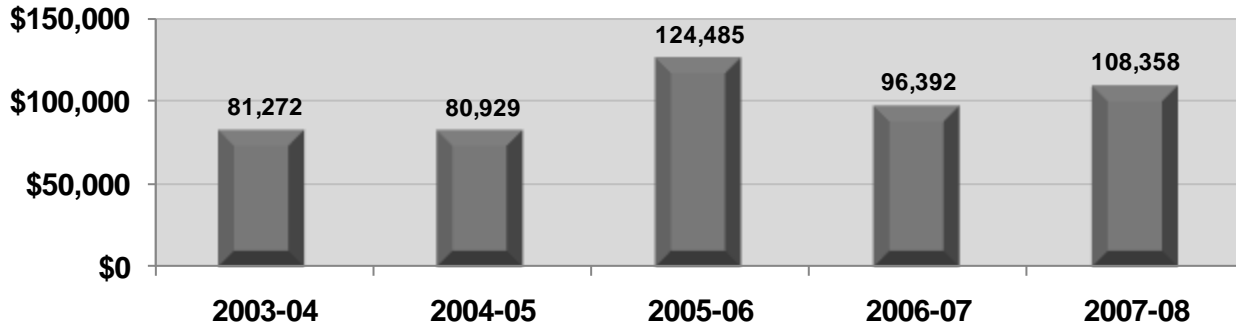


Municipal Rate Customers of Consumers Energy are projected to see an increase of at least 11%. More specifically, Consumers is proposing "the phase-out of discounted tariffs (municipal pumping, metal melting, etc.)" which will cause continued increases in electrical cost.

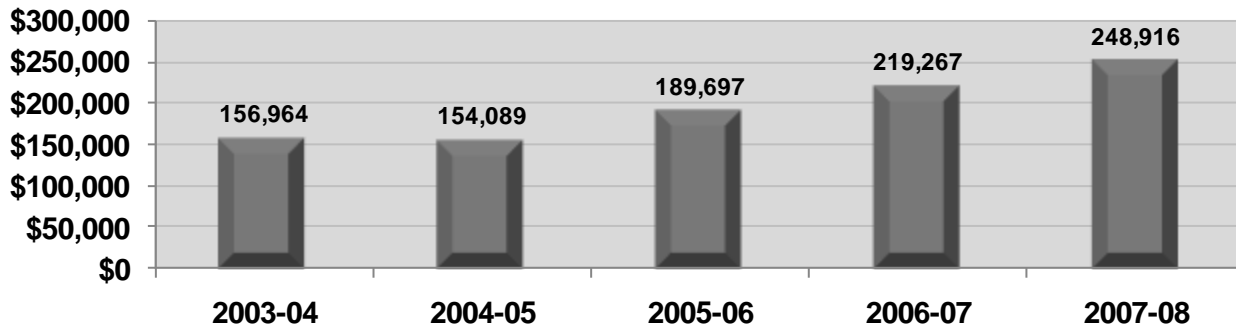


Key Departmental Trends (cont.)

Natural Gas Costs

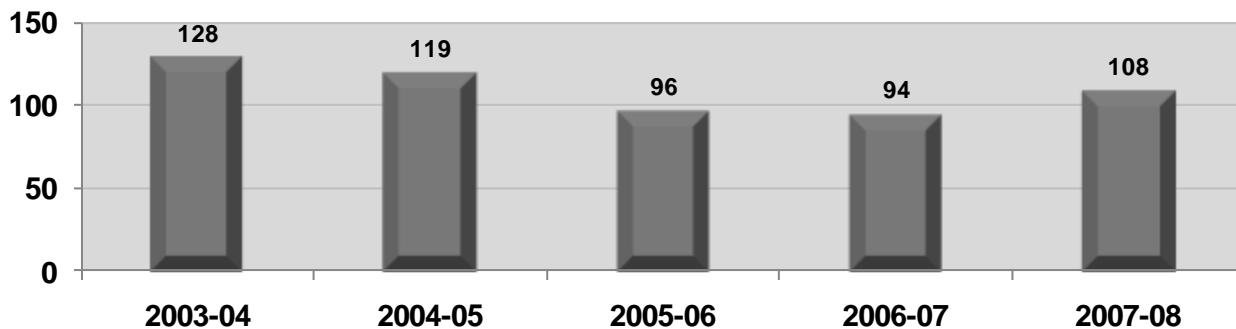


Chemical Costs



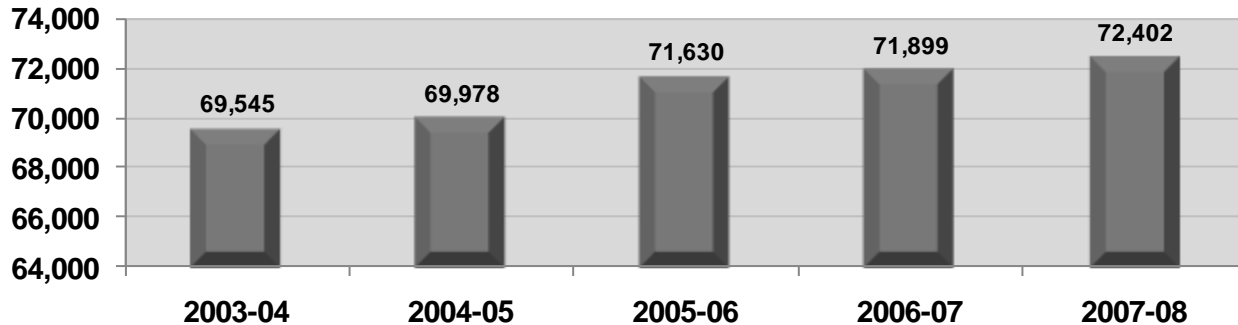
Reduced supplies of some chemicals, such as fluorosilicic acid, are expected to last until production of other products (chlorine and fertilizer, respectively) increase. Widely varying cost increases for different chemicals that have gone up include: hydrofluosilicic acid (HFS) from 50 to 360 percent; and chlorine from 28 to 200 percent.

Water Main Breaks



Key Departmental Trends (cont.)

Water Bills Processed

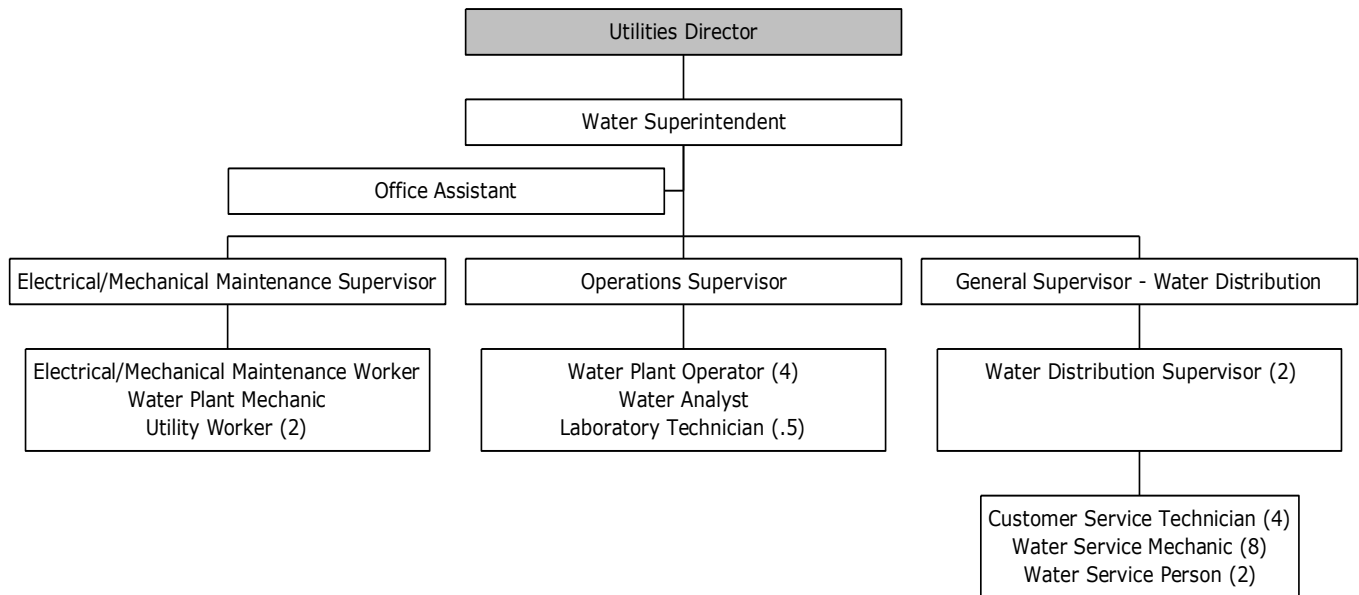


Performance Objectives

Performance Indicators (OUTPUT)	2006-07 Actual	2007-08 Actual	% Change
Water Treated (MG)	7,696.6	7,709.5	0.2%
Contract Water Analyses Performed	7,971	7,297	-8.5%
Main Breaks Repaired	94	108	14.9%
New Service Installations	215	75	-65.1%
Water Bills Processed	71,899	72,402	0.7%
Service Orders Processed	3,804	4,792	26.0%
New Meter Set Installations	196	178	-9.2%
Miles of Water Main	332.8	332.8	0.0%
Fire Hydrants	2,947	2,979	1.1%
Valves	6,189	6,189	0.0%
Utility Locates (Miss Dig)	5,795	6,390	10.3%

Performance Indicators (EFFICIENCY)	2006-07 Actual	2007-08 Actual	% Change
MG Pumped Per Employee	592.04	593.04	0.2%
Costs per MG Treated/Distributed	\$1,325.57	\$1,384.06	4.4%
Chemical Costs per MG Treated	\$28.36	\$32.29	13.8%
Water Main Breaks per Mile of Pipe	0.28	0.32	15.9%
Avg Residential Water Cost/Quarter	\$58.56	\$60.88	4.0%
Customers Billed per Employee	14,380	14,480	0.7%

Organizational Chart



Shaded boxes indicate a reporting structure to a department head that is funded outside of this budget.

Staff Summary	Approved 2007-08	Approved 2008-09	Adopted 2009-10
<u>Full-Time</u>			
Water Superintendent	1	1	1
Electrical/Mechanical Maintenance Supervisor	1	1	1
General Supervisor, Water Distribution	1	1	1
Operations Supervisor	1	1	1
Water Distribution Supervisor	2	2	2
Customer Service Technician	3	4	4
Electrical/Mechanical Maintenance Worker I	1	1	1
Office Assistant	2	1	1
Utility Worker I	2	2	2
Water Analyst	1	1	1
Water Plant Mechanic	1	1	1
Water Plant Operator	4	4	4
Water Service Mechanic	8	8	8
Water Service Person	3	3	2
Total Full-Time	31	31	30
<u>Regular Part-Time</u>			
Laboratory Technician	1	1	1
Total Regular Part-Time	1	1	1
Department Total	32	32	31

Water Treatment and Distribution

FUND 591 - WATER FUND DETAIL OF BUDGET APPROPRIATIONS AND REVENUES Fiscal Year Ending June 30, 2010

	2007-08	2008-09		2009-10
	Actual	Budget	Estimate	Adopted
Operating Revenues				
Water sales				
Filtered water - city	\$ 5,809,836	\$ 6,038,390	\$ 6,025,682	\$ 6,180,340
Filtered water - county/Auburn	435,049	492,425	447,411	450,588
Industrial grade water	1,752,175	1,545,000	1,674,805	1,540,000
Hydrant rentals	383,887	345,000	330,720	345,000
Administrative fees	340,208	413,000	411,000	409,100
Forfeited discounts	96,534	75,480	83,051	75,030
Service connections	79,749	30,510	52,638	23,390
Capital charges	194,310	138,100	183,550	73,470
	<u>9,091,748</u>	<u>9,077,905</u>	<u>9,208,857</u>	<u>9,096,918</u>
Operating Expenses				
Administration	1,060,895	1,342,232	1,341,546	1,416,385
Plant operations	4,079,764	3,241,863	3,164,962	3,226,515
Maintenance				
Plant	538,339	658,790	637,790	649,108
Valley Drive repump	3,217	13,152	11,113	13,255
Clerical activities	39,360	151,430	76,363	85,775
Meter reading	224,729	254,135	289,994	289,158
Elevated tanks	13,620	90,056	84,437	59,085
Water systems	1,265,691	1,434,695	1,604,182	1,591,164
Equipment & structures	48,092	55,801	55,659	58,689
Vehicles	246,290	259,074	269,396	271,771
Utilities safety	34,343	32,645	31,422	37,515
Reserve for contingencies	-	56,998	57,998	100,000
	<u>7,554,340</u>	<u>7,590,871</u>	<u>7,624,862</u>	<u>7,798,420</u>
Net Operating Income	<u>1,537,408</u>	<u>1,487,034</u>	<u>1,583,995</u>	<u>1,298,498</u>
Non-operating Revenues (Expenses)				
Investment earnings	178,335	117,306	81,442	80,000
Rentals	-	2,500	-	-
Contractual revenues				
Dow Chemical	917,395	1,212,275	893,520	1,384,400
Dow Corning	112,752	149,447	82,554	170,794
Miscellaneous revenues	49,857	55,570	164,364	90,046
Miscellaneous expenses	(1,497,737)	(1,000)	(3,814)	(48,144)
Interest expense	(165,729)	(536,579)	(525,370)	(399,351)
	<u>(405,127)</u>	<u>999,519</u>	<u>692,696</u>	<u>1,277,745</u>

Water Treatment and Distribution

FUND 591 - WATER FUND
 DETAIL OF BUDGET APPROPRIATIONS AND REVENUES
 Fiscal Year Ending June 30, 2010

	2007-08	2008-09		2009-10
	Actual	Budget	Estimate	Adopted
Other Financing Sources (Uses)				
Investment in assets	\$ (241,154)	\$ (3,161,641)	\$ (1,860,700)	\$ (2,871,351)
Retirement of debt	(1,908,488)	(1,941,048)	(1,941,047)	(1,996,861)
Less: paid from restricted assets	-	-	-	1,155,000
Operating transfers in	59,997	-	-	-
Operating transfers out	(190,000)	-	-	-
Total other financing sources (uses)	<u>(2,279,645)</u>	<u>(5,102,689)</u>	<u>(3,801,747)</u>	<u>(3,713,212)</u>
Excess of Revenues and Other Sources				
Over (Under) Expenditures and Other Uses	(1,147,364)	(2,616,136)	(1,525,056)	(1,136,969)
Working Capital - beginning of year	<u>5,766,605</u>	<u>4,619,241</u>	<u>4,619,241</u>	<u>3,094,185</u>
Working Capital - end of year	<u><u>\$ 4,619,241</u></u>	<u><u>\$ 2,003,105</u></u>	<u><u>\$ 3,094,185</u></u>	<u><u>\$ 1,957,216</u></u>
Working Capital				
Reserved for capacity improvements	\$ 623,610	\$ 11,710	\$ 807,160	\$ 880,630
Unreserved	3,995,631	1,991,395	2,287,025	1,076,586
	<u><u>\$ 4,619,241</u></u>	<u><u>\$ 2,003,105</u></u>	<u><u>\$ 3,094,185</u></u>	<u><u>\$ 1,957,216</u></u>

Water Treatment and Distribution

WATER FUND FIVE-YEAR FINANCIAL PLAN

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Operating Revenues						
Filtered water - city	\$ 6,025,682	\$ 6,180,340	\$ 6,365,750	\$ 6,556,723	\$ 6,753,424	\$ 6,956,027
Filtered water - county/Auburn	447,411	450,588	464,106	478,029	492,370	507,142
Industrial grade water	1,674,805	1,540,000	1,540,000	1,540,400	1,540,400	1,540,400
Capital charges	183,550	73,470	44,200	39,950	39,950	39,950
Other revenues	877,409	852,520	860,520	868,520	876,520	884,520
Total operating revenues	9,208,857	9,096,918	9,274,576	9,483,622	9,702,664	9,928,039
Operating Expenses						
Administration	1,341,546	1,416,385	1,461,993	1,509,069	1,557,661	1,607,818
Operations	2,074,938	2,126,515	2,187,759	2,250,766	2,315,588	2,382,277
Maintenance	3,028,934	3,018,005	3,132,086	3,250,479	3,373,347	3,500,860
Safety	31,422	37,515	38,918	40,374	41,884	43,450
Saginaw Midland Water Supply	1,090,024	1,100,000	1,133,000	1,166,990	1,202,000	1,238,060
Reserve for contingencies	57,998	100,000	100,000	100,000	100,000	100,000
Total operating expenses	7,624,862	7,798,420	8,053,756	8,317,678	8,590,480	8,872,465
Net Operating Income	1,583,995	1,298,498	1,220,820	1,165,944	1,112,184	1,055,574
Non-operating Revenues (Expenses)						
Investment earnings	81,442	80,000	31,629	40,512	44,308	37,314
Contractual revenues	976,074	1,555,194	1,555,194	1,555,194	1,555,194	1,555,194
Miscellaneous revenues	164,364	90,046	50,000	50,000	50,000	50,000
Interest expense	(525,370)	(399,351)	(298,649)	(264,969)	(228,756)	(193,826)
Miscellaneous expenses	(3,814)	(48,144)	(50,551)	(53,079)	(55,733)	(58,520)
Total non-operating revenues (expenses)	692,696	1,277,745	1,287,623	1,327,658	1,365,013	1,390,162
Other Financing Sources (Uses)						
Investment in assets	(1,860,700)	(2,871,351)	(1,288,000)	(706,500)	(1,886,300)	(2,020,000)
Retirement of debt	(1,941,047)	(1,996,861)	(886,046)	(920,930)	(953,488)	(995,349)
Less: paid from restricted assets	-	1,155,000	-	-	-	-
Total other financing sources (uses)	(3,801,747)	(3,713,212)	(2,174,046)	(1,627,430)	(2,839,788)	(3,015,349)
Excess of Revenues and Other Sources Over (Under) Expenditures and Other Uses	(1,525,056)	(1,136,969)	334,397	866,172	(362,591)	(569,613)
Working Capital - beginning of year	4,619,241	3,094,185	1,957,216	2,291,613	3,157,785	2,795,194
Working Capital - end of year	\$ 3,094,185	\$ 1,957,216	\$ 2,291,613	\$ 3,157,785	\$ 2,795,194	\$ 2,225,581
Working capital - capacity improvements	\$ 807,160	\$ 880,630	\$ 924,830	\$ 964,780	\$ 1,004,730	\$ 1,044,680
Working capital - operations	2,287,025	1,076,586	1,366,783	2,193,005	1,790,464	1,180,901
	\$ 3,094,185	\$ 1,957,216	\$ 2,291,613	\$ 3,157,785	\$ 2,795,194	\$ 2,225,581
ASSUMPTIONS:						
Working capital goal for operations	\$1,000,000					
Filtered water revenue increase:						
2008-09	3.50%					
2009-10 through 2012-13	3.00%					
Industrial water sales increase	0.25%					
Capital charges - based on estimated schedule						
Other income increase per year	1.00%					
Personnel services increase per year	4.50%					
Other operating expenses increase per year	2.25%					
Raw water cost increase	3.00%					
Investment earnings on working capital	1.50%					
Retirement of debt - actual						
Investment in assets: five-year capital plan						