

# 2012

## Water & Sewer Rate Study



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## **BACKGROUND:**

The first true cost-of-service study for Canton's water and sewer rates was adopted in 2005. The objective of the study was to align the revenue requirements with the cost of operation, maintenance and replacement of the water and sewer system to ensure long-term sustainability of the fund.

In 2007 the true cost-of-service study was updated by Utility Financial Solutions (original author). In 2008, the report was updated by staff from the Finance and Budget Department, with assistance from Municipal Services.

Many of the concepts of the true cost-of-service study from 2005 remain in this most recent update.

1. A portion of the charges are allocated to the customers to cover costs that we incur regardless of the volume of water purchased or volume of sewage treated (a.k.a. fixed charges). The balance of the costs are paid for through the commodity, or rate per thousand gallons, charge to the customer.
2. Another concept carried forward is the allocation of the fixed charges based on the capacity of the meter that measures flow at the customer's connection. By way of example, a two (2) inch diameter water meter can provide four times the volume of water of a one (1) inch diameter water meter. As such, the fixed charges are four times that of a one-inch residential water account.
3. A third concept carried forward is the additional fixed charge that a homeowner with footing drains connected to the sanitary sewer system pays because of the additional capacity needed in the sanitary sewer system to handle groundwater that enters the footing drains around their home.

## **POLICY CHANGES:**

Although not part of the rate analysis, or part of the recommended ordinance amendments, a few policy changes are being proposed for 2012.

- First, to further ease the burden on our customers, the Treasurer's Office is offering auto-debit options for payment from a customer's checking account. This had been planned for in 2011, but it was delayed until 2012 instead.
- Second, we will continue to promote voluntary irrigation restrictions community-wide in 2012. This year's program will be even more aggressive to try to convince our customers to comply with our odd/even program and to encourage customers with automated irrigation controllers to irrigate between 12 midnight and 6 AM.

## **RATE RECOMMENDATIONS:**

What follows is a section with the recommended rates for 2012 assuming that no additional rate component is required to raise the water and sewer cash balance through the rates. The cash balance for the 2011 fiscal year-end is estimated to be \$13.5 million versus a minimum target of \$11.8 million (2007 dollars per the UFS rate study or \$13.5 million in 2012 dollars).

The detailed rate analysis and impacts are enclosed in the attached appendices to this report. The rates proposed in this report would be effective on the first bills issued after May 1, 2012.

**RECOMMENDED RATES:**

In order to satisfy the revenue requirements under this approach for the 2012 fiscal year, the following rates are recommended for adoption by the Board of Trustees.

**A) Water Charges**

Consumption rate: ~~\$3.99~~ 3.90 per 1,000 gallons.

a. In addition to the consumption charge, there shall be a water cost of service charge per reading cycle, or portion thereof, based on meter size:

<b>Size</b>	<b>Bi-Monthly</b>	<b>Quarterly</b>
1" or less	\$ <del>5.64</del> <b>5.88</b>	\$ <del>8.46</del> <b>8.82</b>
1.5"	<del>12.68</del> <b>13.24</b>	<del>19.02</del> <b>19.86</b>
2.0"	<del>22.54</del> <b>23.54</b>	<del>33.81</del> <b>35.31</b>
3.0"	<del>50.70</del> <b>52.98</b>	<del>76.05</del> <b>79.47</b>
4.0"	<del>90.12</del> <b>94.18</b>	<del>135.18</del> <b>141.27</b>
6.0"	<del>202.78</del> <b>211.92</b>	<del>304.17</del> <b>317.88</b>
8.0"	<del>360.48</del> <b>376.74</b>	<del>550.72</del> <b>565.11</b>
10.0"	<del>563.26</del> <b>588.66</b>	<del>844.89</del> <b>882.99</b>

- 2. a)Water Tap and Meter Charges: no changes from 2011 numbers
- b)Water System Equity Charges: no change from 2011 numbers
- c)Water Construction Charge: no change from 2011 numbers
- d)Water Front Footage Charge: no change from 2011 numbers
- e)Fire Line Meter: no change from 2011 numbers

**B. Sewer Charges**

1. Sewage treatment rate: \$ ~~6.40~~ **6.23** per 1,000 gallons.

a. In addition to the treatment rate charge, for customers connected to the sanitary sewer system there shall be a wastewater cost of service charge per reading cycle, or portion thereof, based on meter size:

<b>Size</b>	<b>Bi-Monthly</b>	<b>Quarterly</b>
1" (or less) without FD	\$ <del>4.90</del> <b>4.82</b>	\$ <del>7.35</del> <b>7.23</b>
1" (or less) with FD	<del>14.18</del> <b>14.80</b>	<del>21.27</del> <b>22.20</b>
1.5"	<del>11.04</del> <b>10.84</b>	<del>16.56</del> <b>16.26</b>
2.0" without FD	<del>19.62</del> <b>19.26</b>	<del>29.43</del> <b>28.89</b>
2.0" with FD	<del>28.90</del> <b>29.24</b>	<del>43.35</del> <b>43.86</b>
3.0"	<del>44.16</del> <b>43.32</b>	<del>66.24</del> <b>64.98</b>
4.0"	<del>78.52</del> <b>77.02</b>	<del>117.78</del> <b>115.53</b>

6.0"	<del>176.66</del> <b>173.28</b>	<del>264.99</del> <b>259.92</b>
8.0"	<del>314.08</del> <b>308.06</b>	<del>471.12</del> <b>462.09</b>
10.0"	<del>490.74</del> <b>481.34</b>	<del>736.11</del> <b>722.01</b>

2. Minimum Sewage Bill:

- a) Minimum bill was eliminated in 2008.
- b) Minimum sewage disposal bill if not connected to the township water system, per quarterly reading cycle based on the County minimum volume of 12,500 gallons per month: ~~\$240.00~~ **233.63** plus the sewer fixed charges.
- c) Minimum sewage disposal bill if not connected to the township water system, per bi-monthly reading cycle based on the County minimum volume of 12,500 gallons per month: ~~\$160.00~~ **155.75** plus the sewer fixed charges.
- d) No changes from 2011 numbers.

3. Sewer Front Footage charge: no change from 2011 numbers.

4. Sewer System Equity charges: no change from 2011 numbers.

5. Sewer Lead Inspection charge: no change from 2011 numbers.

6. DWSD Industrial Waste Control (IWC) charge: as outlined in Appendix D.

7. DWSD Industrial Surcharge rates: as outlined in Appendix E.

**Appendix A**  
**Rate Tables**

**Canton Township  
Water & Sewer Rate Analysis  
Definitions**

**Budgeted Operating Expenses**

**592.537 - Water Operations & Maintenance Budget**

Water Purchases	The amount we pay DWSD for water purchased.
Meter Replacement	
Indirect Costs	The amount budgeted for upgrading the customer meters during the year. The amount charged to Water Maintenance for services performed by employees of the General Fund.
Depreciation	The current year's of depreciation of the Water Fund's capital assets.
Maintenance & Operations	Wages and fringes of the employees of the Water Fund and other operational expenses.

**592.538 - Sewer Operations & Maintenance Budget**

Sewage Treatment	The amount we pay WC-RVIS/DWSD and YCUA for sewer treatment services.
WTUA Operations	Canton's portion of the WTUA operations.
WTUA Debt Service	Canton's portion of the WTUA debt requirements.
WTUA Capital Improvements	Canton's portion of the WTUA capital improvements.
Interest Expense on bonds	The annual interest expense due on the outstanding debt.
Indirect Costs	The amount charged to Sewer Maintenance for services performed by employees of the General Fund.
Depreciation	The current year's of depreciation of the Water Fund's capital assets.
Maintenance & Operations	Wages and fringes of the employees of the Water Fund and other operational expenses.

<b><u>592.560 - Water Billing Budget</u></b>	Wages and fringes of the employees of the Water & Sewer Billing staff and other operational expenses.
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**Current Year Cash Requirements**

Non-Cash Expenses	The amount of depreciation from above. This is not a cash transaction, therefore, we subtract this out in order to calculate our cash needs.
Other Revenues	Revenues that are not dependent on water usage.
Principal Payments	The current year's principal payments due on the outstanding debt.
Increase in Cash Reserves	The amount we need to increase the cash reserves by so that we don't end up with a negative cash flow issue.

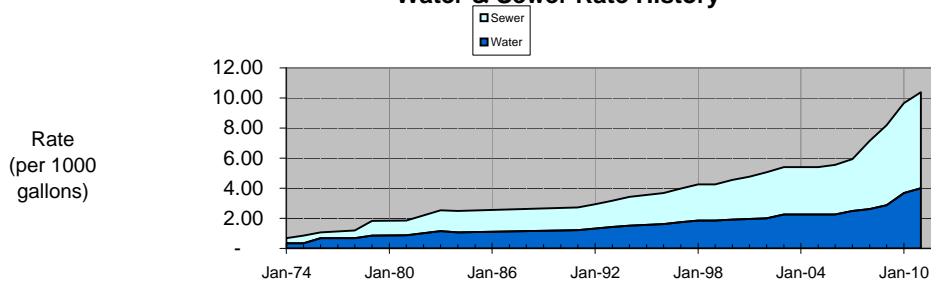
**Canton Township  
Water & Sewer Rate Analysis  
(Commodity Charges Only)**

**WATER & SEWER RATE HISTORY (per thousand gallons)**

<u>Effective Date</u>	<u>Water</u>	<u>Sewer</u>	<u>Total Rate</u>	<u>Total Increase</u>	<u>% Change</u>
December 1, 1974	0.34	0.34	0.68		
December 1, 1975	0.34	0.51	0.85	0.17	25.00%
December 1, 1976	0.69	0.38	1.07	0.22	25.88%
December 1, 1978	0.69	0.51	1.20	0.13	12.15%
December 1, 1979	0.85	0.98	1.83	0.63	52.50%
October 1, 1981	0.87	0.98	1.85	0.02	1.09%
July 1, 1983	1.14	1.40	2.54	0.69	37.30%
September 1, 1984	1.06	1.42	2.48	(0.06)	-2.36%
September 1, 1991	1.22	1.51	2.73	0.25	10.08%
September 1, 1992	1.32	1.61	2.93	0.20	7.33%
September 1, 1993	1.42	1.76	3.18	0.25	8.53%
October 1, 1994	1.52	1.91	3.43	0.25	7.86%
February 1, 1996	1.62	2.06	3.68	0.25	7.29%
August 1, 1997	1.74	2.23	3.97	0.29	7.88%
September 1, 1998	1.86	2.40	4.26	0.29	7.30%
January 1, 1999	1.86	2.40	4.26	-	0.00%
January 1, 2000	1.91	2.64	4.55	0.29	6.81%
April 1, 2001	1.95	2.81	4.76	0.21	4.62%
May 1, 2002	2.00	3.06	5.06	0.30	6.30%
July 1, 2003	2.26	3.15	5.41	0.35	6.92%
July 1, 2004	2.26	3.15	5.41	-	0.00%
July 1, 2005	2.26	3.15	5.41	-	0.00%
June 1, 2006	2.26	3.30	5.56	0.15	2.77%
July 1, 2007	2.48	3.45	5.93	0.37	6.65%
July 1, 2008	2.61	4.54	7.15	1.22	20.57%
July 1, 2009	2.87	5.33	8.20	1.05	14.69%
July 1, 2010	3.69	5.96	9.65	1.45	17.68%
July 1, 2011	3.99	6.40	10.39	0.74	7.67%



**Water & Sewer Rate History**





**Canton Township  
Water & Sewer Rate Analysis**

**WATER TREATMENT & TRANSMISSION COSTS**

***Water Purchased***  
**(per 1,000 gallons)**

<u>Effective Date</u>	<u>DWSD</u>	
	<u>Rate</u>	<u>% Change</u>
July 1, 1995	1.03	
July 1, 1996	1.06	2.9%
July 1, 1997	1.10	3.8%
July 1, 1998	1.18	7.3%
July 1, 1999	1.21	2.5%
July 1, 2000	1.27	5.0%
July 1, 2001	1.42	11.8%
July 1, 2002	1.62	14.1%
July 1, 2003	1.78	9.9%
July 1, 2004	2.00	12.4%
July 1, 2005	2.22	11.0%
July 1, 2006	2.22	0.0%
July 1, 2007	2.37	6.8%
July 1, 2008	2.39	0.8%
July 1, 2009	2.31	-3.3%
July 1, 2010	2.66	15.2%
July 1, 2011	2.93	10.2%
July 1, 2012	3.17	8.2%
Total % Change:		207.8%
Avg increase:		7.0%

<b>SEWER TREATMENT COSTS</b>
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**Sewage Disposal**  
(per 1,000 gallons)

Effective Date	DWSD*		YCUA	
	Rate	% Change	Rate	% Change
July 1, 1995	0.81		0.9834	
July 1, 1996	0.89	9.9%	0.9834	0.0%
July 1, 1997	0.91	2.2%	0.9565	-2.7%
July 1, 1998	0.96	5.5%	0.9808	2.5%
July 1, 1999	1.03	7.3%	1.0352	5.5%
July 1, 2000	1.05	1.9%	1.0023	-3.2%
July 1, 2001	1.02	-2.9%	1.1580	15.5%
July 1, 2002	1.13	10.8%	1.2255	5.8%
July 1, 2003	1.23	8.8%	1.2812	4.5%
July 1, 2004	1.26	2.4%	1.3469	5.1%
July 1, 2005	1.26	0.0%	1.3188	-2.1%
July 1, 2006	1.30	3.2%	1.4644	11.0%
July 1, 2007	1.31	0.8%	1.5236	4.0%
July 1, 2008	1.39	6.1%	1.6093	5.6%
July 1, 2009	1.41	1.4%	1.5759	-2.1%
October 1, 2010	1.47	4.3%	1.4904	-5.4%
July 1, 2011	1.44	-2.0%	1.6760	12.5%
July 1, 2012	1.49	3.5%	1.7263	3.0% **
	Total % Change:	84.0%	Total % Change:	75.5%
	Avg increase:	3.7%	Avg increase:	3.5%

\*These rates exclude the DWSD fixed charges and Wayne County RVIS charges for transporting sewage to DWSD.

\*\*Estimated

## Canton Township Consumption History

(in thousand gallons)

Year	Purchased	Billed	UFW	UFW %	Average
1995	2,355,944	2,343,515	12,429	0.53%	
1996	2,542,252	2,541,189	1,063	0.04%	
1997	2,664,403	2,445,909	218,494	8.20%	
1998	2,661,325	2,908,818	(247,493)	-9.30%	
1999	3,106,622	3,096,507	10,115	0.33%	
2000	2,830,294	2,715,344	114,950	4.06%	
2001	2,864,657	3,047,036	(182,379)	-6.37%	2,728,331
2002	3,395,680	3,297,112	98,568	2.90%	2,799,429
2003	3,304,252	3,091,567	212,685	6.44%	2,831,889
2004	3,380,749	2,987,866	392,883	11.62%	2,847,486
2005	3,357,496	3,367,677	(10,181)	-0.30%	2,894,776
2006	3,067,676	3,041,124	26,552	0.87%	2,906,972
2007	3,470,575	3,316,524	154,051	4.44%	2,938,476
2008	3,227,748	3,095,821	131,927	4.09%	2,949,715
2009	2,740,788	2,711,855	28,933	1.06%	2,933,858
2010	2,705,751	2,756,646	(50,895)	-1.88%	2,922,782
2011	2,858,757	2,817,971	40,786	1.43%	2,916,617
2012	2,916,667	2,800,000	116,667	4.00%	2,910,138

### Projection based on 17 Year Average

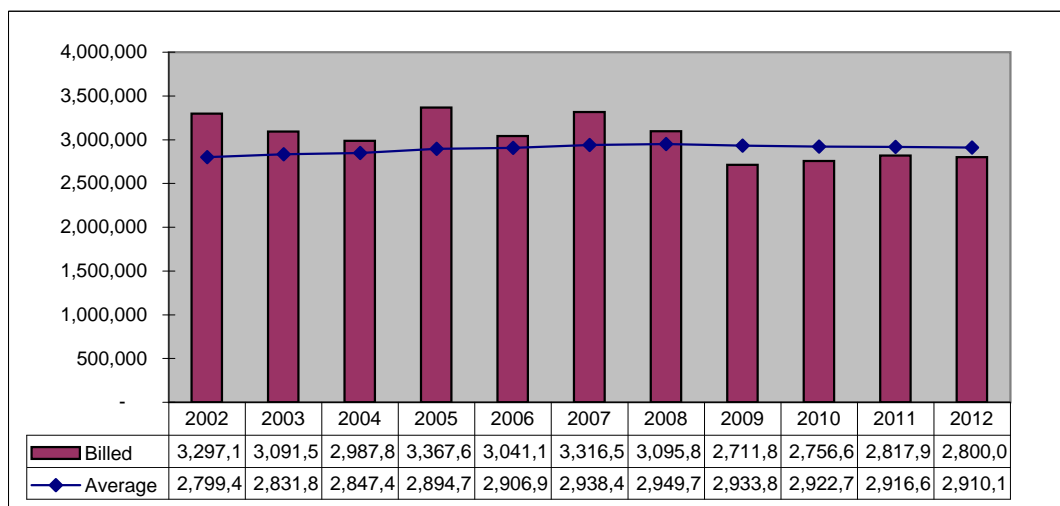
2012	2,972,645	2,916,617	56,029	1.66%
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### Projection based on 16 Year Trend Analysis

2012	3,228,442	3,137,734	90,708	2.81%
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#### Note:

- 1) UFW means unaccounted for water which includes water loss due to leaks in older water mains, master meter error and customer meter error.
- 2) Average column indicates the running average of the annual amount billed.



**Canton Township  
Water & Sewer Rate Analysis  
For the 2012 Budget Year**

**Budgeted Operating Expenses**

592-536 - Water Maintenance Budget	
Water Purchases	\$8,591,000
Meter Replacement	216,000
Indirect Costs	779,596
Depreciation	1,500,000
Maintenance & Operations	2,862,999
592-537 - Sewer Maintenance Budget	
Sewage Disposal	7,328,459
WTUA Operations	1,544,093
WTUA Debt Service	2,866,815
WTUA Capital Improvements	123,072
Interest Expense on bonds	3,277,233
Indirect Costs	879,118
Depreciation	1,100,000
Maintenance & Operations	2,303,844
592.560 - Water Billing Budget	454,339

Budgeted Operating Expenses	\$33,826,568
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**Current Year Cash Requirements**

Budgeted Operating Expenses	\$33,826,568
Less: Non-Cash Expenses (Depreciation)	(2,600,000)
Less: Other Revenues	(1,394,228)
Plus: Principal Payments (Not expensed, reduction of liability)	1,650,000

Current Year Cash Requirements	\$31,482,340
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Canton Township  
Water & Sewer Rate Analysis  
For the 2012 Budget

	Customer Meter Size	Required Revenues to Meet Cash Requirements	Current Amount	Number of Customers	Revenue Projection Based on Current Rates	Proposed \$ Inc(Dec) Over Current Rate	Water/Sewer Rate* Required to Cover 2012 Budgeted Expenses per 1,000 Gallons	Revenue Projection Based on Proposed Rates	% Increase Over Current Rate
Fixed Fee - Monthly Charge	1" (or less) w/o footing drains	\$2,506,523	\$5.27	11,550	\$730,422	\$0.08	\$5.35	\$741,510	1.52%
	2.0" meter w/o footing drains		\$21.08	1,474	\$372,863	\$0.32	\$21.40	\$378,523	1.52%
	1" (or less) with footing drains		\$9.91	10,000	\$1,189,200	\$0.43	\$10.34	\$1,240,800	4.34%
	1.5" meter		\$11.86	3	\$427	\$0.18	\$12.04	\$433	1.52%
	2.0" meter with footing drains		\$25.72	266	\$82,098	\$0.67	\$26.39	\$84,237	2.60%
	3.0" meter		\$47.43	52	\$29,596	\$0.72	\$48.15	\$30,046	1.52%
	4.0" meter		\$84.32	19	\$19,225	\$1.28	\$85.60	\$19,517	1.52%
	6.0" meter		\$189.72	5	\$11,383	\$2.88	\$192.60	\$11,556	1.52%
	<u>Variable rate</u>								
	Water Revenue	10,926,389	3.99		\$11,172,000	(\$0.09)	\$3.90	\$10,920,000	-2.26%
	Sewer Revenue	17,435,028	6.40		\$17,920,000	(\$0.17)	\$6.23	\$17,444,000	-2.66%
Add'l Sewage Treatment	(Customers with footing drains)	614,400			\$511,680			\$614,400	
		<u>\$31,482,340</u>	<u>\$10.39</u>	<u>23,369</u>	<u>\$32,038,894</u>	<u>(\$0.26)</u>	<u>\$10.13</u>	<u>\$31,485,022</u>	<u>-2.50%</u>

**Notes:**

\* Rate based on average volume purchased, in thousand gallons:  
This assumes we get water and sewer charges on every unit billed

PROJECTED CONSUMPTION: 2,800,000 thousand gallons

**2012 Water Fixed Fee Service Charges**

<u>Size</u>	<u>Bimonthly</u>	<u>Quarterly</u>
1" (or less)	5.88	8.82
1.5"	13.24	19.86
2.0"	23.54	35.31
3.0"	52.98	79.47
4.0"	94.18	141.27
6.0"	211.92	317.88
8.0"	376.74	565.11
10.0"	588.66	882.99

Meter Size	Monthly		Water	Sewer
	2011 fee	2012 fee	55.02%	44.98%
1" (or less) w/o	5.27	5.35	2.94	2.41
1" (or less) with	9.91	10.34	2.94	7.40
1.5"	11.86	12.04	6.62	5.42
2.0" w/o	21.08	21.40	11.77	9.63
2.0" with	25.72	26.39	11.77	14.62
3.0"	47.43	48.15	26.49	21.66
4.0"	84.32	85.60	47.09	38.51
6.0"	189.72	192.60	105.96	86.64
8.0"	337.28	342.40	188.37	154.03
10.0"	527.00	535.00	294.33	240.67

**2012 Sewer Fixed Fee Service Charges**

<u>Size</u>	<u>Bimonthly</u>	<u>Quarterly</u>
1" (or less) without FD	4.82	7.23
1" (or less) with FD	14.80	22.20
1.5"	10.84	16.26
2.0"	19.26	28.89
3.0"	43.32	64.98
4.0"	77.02	115.53
6.0"	173.28	259.92
8.0"	308.06	462.09
10.0"	481.34	722.01

Meter Size	Meter Ratios	Notes
1" (or less)	1.00	without footing drains connected
1" (or less)	1.00	with footing drains connected
1.5"	2.25	
2.0"	4.00	without footing drains connected
2.0"	4.00	with footing drains connected
3.0"	9.00	
4.0"	16.00	
6.0"	36.00	
8.0"	64.00	
10.0"	100.00	

**2012 Total Fixed Fee Service Charges**

<u>Size</u>	<u>Bimonthly</u>	<u>Quarterly</u>
1" (or less)	10.70	16.05
1" (or less)	28.04	42.06
1.5"	24.08	36.12
2.0"	42.80	64.20
3.0"	96.30	144.45
4.0"	171.20	256.80
6.0"	385.20	577.80
8.0"	684.80	1,027.20
10.0"	1,070.00	1,605.00

**Canton Township  
Cash and Investment History**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Cash and cash equivalents	\$ 19,329,481	\$ 23,792,673	\$ 21,608,568	\$ 32,441,985	\$ 28,040,505	\$ 10,396,549	\$ 2,639,961	\$ 1,215,735	\$ 367,309	\$ 1,127,553	\$ 7,415,892	\$ 3,611,224	\$ 1,234,533	\$ 2,542,951	\$ 7,377,409
Investments	12,253,050	15,016,269	20,785,038	14,575,001	20,102,119	17,994,363	27,244,640	29,357,464	26,791,414	18,068,304	6,845,841	8,836,014	8,693,832	7,845,446	6,155,463
Restricted assets	208,425	206,632	204,588	202,295	173,325	165,325	163,450	156,450	149,450		43,377,714	29,719,039	18,055,888	14,034,887	12,214,488
	31,790,956	39,015,574	42,598,194	47,219,281	48,315,949	28,556,237	30,048,051	30,729,649	27,308,173	19,195,857	57,639,447	42,166,277	27,984,253	24,423,284	25,747,360
Cash available	31,582,531	38,808,942	42,393,606	47,016,986	48,142,624	28,390,912	29,884,601	30,573,199	27,158,723	19,195,857	14,261,733	12,447,238	9,928,365	10,388,397	13,532,872
Change from prior year		7,226,411	3,584,664	4,623,380	1,125,638	(19,751,712)	1,493,689	688,598	(3,414,476)	(7,962,866)	(4,934,124)	(1,814,495)	(2,518,873)	460,032	3,144,475

**Charter Township of Canton  
Budget Worksheet Report**

**Account Number Description**

**2011 Board**

**Fund: 592 - Water and Sewer**

Revenues

**Department: 000 - Non-Departmental**

Fed Grnts - Federal Grants

501	Federal Grants	0.00
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<b>Account Classification Total: Fed Grnts - Federal Grants</b>		<b>\$0.00</b>
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Cont & Dons - Contributions and Donations

674_0001	Contributions Donated Lines	0.00
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<b>Account Classification Total: Cont &amp; Dons - Contributions and Donations</b>		<b>\$0.00</b>
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CFS - Charges for Services

642_0000	Water Sales Ledger 0	4,500,000.00
642_0001	Water Sales Ledger 1	1,500,000.00
642_0002	Water Sales Ledger 2	2,600,000.00
642_0003	Water Sales Ledger 3	2,750,000.00
642_0010	Water Sales Equity Charges	160,000.00
642_0015	Water Sales Front Footage	10,000.00
642_0020	Water Sales Tap Fees	90,000.00
643_0000	Sewage Disposal Services Ledger 0	7,400,000.00
643_0001	Sewage Disposal Services Ledger 1	2,500,000.00
643_0002	Sewage Disposal Services Ledger 2	4,150,000.00
643_0003	Sewage Disposal Services Ledger 3	4,150,000.00
643_0010	Sewage Disposal Services Equity Charges	300,000.00
643_0015	Sewage Disposal Services Front Footage	20,000.00
643_0020	Sewage Disposal Services Capital Charges	0.00
644	Industrial Waste Charge	400,000.00
645_0000	Fixed Water & Sewer Charges Ledger 0	650,000.00
645_0001	Fixed Water & Sewer Charges Ledger 1	300,000.00
645_0002	Fixed Water & Sewer Charges Ledger 2	700,000.00
645_0003	Fixed Water & Sewer Charges Ledger 3	700,000.00
646_0000	Non-Sump Charge Ledger 0	0.00
646_0001	Non-Sump Charge Ledger 1	0.00
646_0002	Non-Sump Charge Ledger 2	0.00
646_0003	Non-Sump Charge Ledger 3	0.00
647_0000	Water Service Charges Ledger 0	3,000.00
647_0001	Water Service Charges Ledger 1	15,000.00
647_0002	Water Service Charges Ledger 2	8,000.00
647_0003	Water Service Charges Ledger 3	10,000.00
648_0000	Water Penalties Ledger 0	100,000.00
648_0001	Water Penalties Ledger 1	75,000.00
648_0002	Water Penalties Ledger 2	200,000.00
648_0003	Water Penalties Ledger 3	200,000.00
656	Interdept Services	0.00

<b>Account Classification Total: CFS - Charges for Services</b>		<b>\$33,491,000.00</b>
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FF - Fines and Forfeitures

663	Forfeited Bonds & Deposits	20,000.00
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<b>Account Classification Total: FF - Fines and Forfeitures</b>		<b>\$20,000.00</b>
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Int & Rent - Interest and Rental



664	Interest - Investments	110,000.00
665	Interest - Savings	5,000.00
<b>Account Classification Total: Int &amp; Rent - Interest and Rental</b>		<b>\$115,000.00</b>

Other - Other Revenues

671	Miscellaneous Revenue	104,228.00
673	Sale of Fixed Assets	0.00
<b>Account Classification Total: Other - Other Revenues</b>		<b>\$104,228.00</b>

Fund Balance - Fund Balance Appropriation

695	Fund Balance Appropriation	0.00
695_0001	Fund Balance Appropriation F/B Approp - Encumbrances	40,340.00
<b>Account Classification Total: Fund Balance - Fund Balance Appropriation</b>		<b>\$40,340.00</b>

**Department Total: 000 - Non-Departmental \$33,770,568.00**

**Revenues Total \$33,770,568.00**

Expenditures

**Department: 536 - Water Maintenance**

Wages - Salaries and Wages

705_0010	Salaries and Wages Full-time - Civilian	840,312.00
705_0015	Salaries and Wages Part-time	23,000.00
705_0020	Salaries and Wages Longevity	13,200.00
705_0025	Salaries and Wages Holiday Pay	0.00
705_0035	Salaries and Wages Meal Allowance	0.00
705_0055	Salaries and Wages Pay In Lieu	3,600.00
705_0060	Salaries and Wages Physical Skills	625.00
705_0080	Salaries and Wages Vacation Payout	7,517.00
705_0085	Salaries and Wages Sick Payout	0.00
708_0015	Overtime Overtime	16,000.00
<b>Account Classification Total: Wages - Salaries and Wages</b>		<b>\$904,254.00</b>

Fringes - Payroll Taxes and Fringe Benefits

720_0010	Fringe Benefits FICA	69,176.00
720_0020	Fringe Benefits Unemployment	0.00
720_0025	Fringe Benefits Medical	139,232.00
720_0030	Fringe Benefits Dental	19,334.00
720_0035	Fringe Benefits Optical	2,200.00
720_0040	Fringe Benefits Life	1,341.00
720_0045	Fringe Benefits Disability	1,081.00
720_0050	Fringe Benefits Pension Contribution	116,503.00
720_0060	Fringe Benefits OPEB	57,827.00
720_0065	Fringe Benefits Workers Comp	28,433.00
<b>Account Classification Total: Fringes - Payroll Taxes and Fringe Benefits</b>		<b>\$435,127.00</b>

Supplies - Supplies

722	Uniforms	7,643.00
727	Office Supplies	1,950.00
728	Books & Subscriptions	400.00
740	Operating Supplies	29,000.00
<b>Account Classification Total: Supplies - Supplies</b>		<b>\$38,993.00</b>

Other Services - Other Services and Charges

801_0010	Professional and Contractual Svc Financial	20,000.00
801_0020	Professional and Contractual Svc Legal	9,150.00
801_0040	Professional and Contractual Svc Engineering	68,000.00
801_0050	Professional and Contractual Svc Professional	60,000.00
835	Employee Medical Exams	2,440.00
861_0001	Fleet Maintenance Charges Vehicle	90,368.00
861_0002	Fleet Maintenance Charges Equipment	30,396.00
861_0003	Fleet Maintenance Charges Fuel Costs	31,491.00
920_0010	Utilities Electric	18,550.00
920_0020	Utilities Gas	12,000.00
920_0030	Utilities Water	2,850.00
930_0010	Maintenance and Repair Computer Equipment	47,518.00
930_0020	Maintenance and Repair Buildings and Additions	3,500.00
930_0030	Maintenance and Repair Machinery and Equipment	4,100.00
930_0040	Maintenance and Repair Vehicles	48,800.00
930_0050	Maintenance and Repair Infrastructure	264,103.00
930_0060	Maintenance and Repair Office Equipment and Furniture	1,830.00
930_0070	Maintenance and Repair Grounds	9,150.00
805	Dues & Memberships	1,088.00
850	Communications	22,780.00
860	Transportation	1,500.00
900_0040	Printing and Publishing General	2,000.00
911	Liability Insurance	92,971.00
924_0001	WTUA WTUA Administration	0.00
924_0002	WTUA Retention Basin O & M	0.00
924_0003	WTUA Capital/Maintenance Charges	0.00
925	YCUA Capacity Rental	0.00
939	Inventory Purchased	216,000.00
940	Rentals	10,729.00
955	Conference & Seminars	9,272.00
956	Miscellaneous	4,000.00
965	Indirect Costs	779,596.00

**Account Classification Total: Other Services - Other Services and Charges \$1,864,182.00**

Water - Water Purchases

921	Water Purchases	8,591,000.00
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**Account Classification Total: Water - Water Purchases \$8,591,000.00**

Sewer - Sewage Disposal Charges

922	Sewage Disposal Charges	0.00
923	Industrial Waste Charges	0.00
927	Excess Flow Charges	0.00

**Account Classification Total: Sewer - Sewage Disposal Charges \$0.00**

Depreciation - Depreciation

968	Depreciation	1,500,000.00
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**Account Classification Total: Depreciation - Depreciation \$1,500,000.00**

Cap Outlay - Capital Outlay

970_0010	Capital Outlay Computers and Equipment	37,039.00
970_0020	Capital Outlay Buildings and Improvements	0.00
970_0030	Capital Outlay Machinery and Equipment	0.00
970_0040	Capital Outlay Vehicles	52,000.00
970_0050	Capital Outlay Infrastructure	450,000.00
970_0060	Capital Outlay Office Equipment and Furniture	0.00

970_0070	Capital Outlay Land	0.00
970_0080	Capital Outlay Land Improvements	0.00
970_0090	Capital Outlay Work in Progress	0.00

**Account Classification Total: Cap Outlay - Capital Outlay \$539,039.00**

Debt Svc - Debt Service

991	Bond Principal	0.00
995	Bond Interest Expense	0.00
997	Amortization	0.00
998	Paying Agent Fees	0.00

**Account Classification Total: Debt Svc - Debt Service \$0.00**

Transfers - Transfers Out

999_1010	Transfers Out General	0.00
999_4020	Transfers Out Cap Projects - W&S	0.00
999_6610	Transfers Out Fleet Maintenance & Operations	0.00
999_7360	Transfers Out Post Employment Benefits	0.00

**Account Classification Total: Transfers - Transfers Out \$0.00**

Transfers - Transfers In

990	Transfers in Fund Balance	\$77,000.00
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**Account Classification Total: Transfers - Transfers IN \$77,000.00**

**Department Total: 536 - Water Maintenance \$13,949,595.00**

**Department: 537 - Sewer Maintenance**

Wages - Salaries and Wages

705_0010	Salaries and Wages Full-time - Civilian	774,663.00
705_0015	Salaries and Wages Part-time	11,500.00
705_0020	Salaries and Wages Longevity	10,400.00
705_0025	Salaries and Wages Holiday Pay	0.00
705_0055	Salaries and Wages Pay In Lieu	1,320.00
705_0060	Salaries and Wages Physical Skills	375.00
705_0080	Salaries and Wages Vacation Payout	4,552.00
705_0085	Salaries and Wages Sick Payout	0.00
708_0015	Overtime Overtime	5,500.00

**Account Classification Total: Wages - Salaries and Wages \$808,310.00**

Fringes - Payroll Taxes and Fringe Benefits

720_0010	Fringe Benefits FICA	61,796.00
720_0020	Fringe Benefits Unemployment	0.00
720_0025	Fringe Benefits Medical	162,422.00
720_0030	Fringe Benefits Dental	17,185.00
720_0035	Fringe Benefits Optical	1,600.00
720_0040	Fringe Benefits Life	1,246.00
720_0045	Fringe Benefits Disability	1,009.00
720_0050	Fringe Benefits Pension Contribution	109,544.00
720_0060	Fringe Benefits OPEB	53,769.00
720_0065	Fringe Benefits Workers Comp	26,807.00

**Account Classification Total: Fringes - Payroll Taxes and Fringe Benefits \$435,378.00**

Supplies - Supplies

722	Uniforms	6,955.00
727	Office Supplies	1,248.00
728	Books & Subscriptions	273.00

740	Operating Supplies	7,560.00
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<b>Account Classification Total: Supplies - Supplies</b>		<b>\$16,036.00</b>
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Other Services - Other Services and Charges

801_0010	Professional and Contractual Svc Financial	21,500.00
801_0020	Professional and Contractual Svc Legal	15,000.00
801_0040	Professional and Contractual Svc Engineering	68,000.00
801_0050	Professional and Contractual Svc Professional	20,000.00
835	Employee Medical Exams	1,560.00
861_0001	Fleet Maintenance Charges Vehicle	59,206.00
861_0002	Fleet Maintenance Charges Equipment	34,276.00
861_0003	Fleet Maintenance Charges Fuel Costs	20,040.00
920_0010	Utilities Electric	21,515.00
920_0020	Utilities Gas	8,000.00
920_0030	Utilities Water	1,820.00
930_0010	Maintenance and Repair Computer Equipment	30,261.00
930_0020	Maintenance and Repair Buildings and Additions	10,639.00
930_0030	Maintenance and Repair Machinery and Equipment	3,000.00
930_0040	Maintenance and Repair Vehicles	0.00
930_0050	Maintenance and Repair Infrastructure	114,000.00
930_0060	Maintenance and Repair Office Equipment and Furniture	1,170.00
930_0070	Maintenance and Repair Grounds	5,850.00
805	Dues & Memberships	592.00
850	Communications	6,720.00
860	Transportation	1,500.00
900_0040	Printing and Publishing General	2,500.00
911	Liability Insurance	59,441.00
924_0001	WTUA WTUA Administration	354,000.00
924_0002	WTUA Retention Basin O & M	1,190,093.00
924_0003	WTUA Capital/Maintenance Charges	123,072.00
925	YCUA Capacity Rental	338,593.00
939	Inventory Purchased	0.00
940	Rentals	6,860.00
955	Conference & Seminars	5,928.00
956	Miscellaneous	14,858.00
965	Indirect Costs	879,118.00

<b>Account Classification Total: Other Services - Other Services and Charges</b>		<b>\$3,419,112.00</b>
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Sewer - Sewage Disposal Charges

922	Sewage Disposal Charges	5,711,200.00
923	Industrial Waste Charges	536,019.00
927	Excess Flow Charges	742,647.00

<b>Account Classification Total: Sewer - Sewage Disposal Charges</b>		<b>\$6,989,866.00</b>
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Depreciation - Depreciation

968	Depreciation	1,100,000.00
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<b>Account Classification Total: Depreciation - Depreciation</b>		<b>\$1,100,000.00</b>
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Cap Outlay - Capital Outlay

970_0010	Capital Outlay Computers and Equipment	34,559.00
970_0020	Capital Outlay Buildings and Improvements	0.00
970_0030	Capital Outlay Machinery and Equipment	25,000.00
970_0050	Capital Outlay Infrastructure	450,000.00
970_0060	Capital Outlay Office Equipment and Furniture	0.00

<b>Account Classification Total: Cap Outlay - Capital Outlay</b>		<b>\$509,559.00</b>
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Debt Svc - Debt Service		
991	Bond Principal	2,866,815.00
995	Bond Interest Expense	3,277,233.00
998	Paying Agent Fees	325.00

**Account Classification Total: Debt Svc - Debt Service \$6,144,373.00**

Transfers - Transfers Out		
999_1010	Transfers Out General	0.00
999_6610	Transfers Out Fleet Maintenance & Operations	0.00
999_7360	Transfers Out Post Employment Benefits	0.00

**Account Classification Total: Transfers - Transfers Out \$0.00**

**Department Total: 537 - Sewer Maintenance \$19,422,634.00**

**Department: 560 - Water Billing**

Wages - Salaries and Wages		
705_0010	Salaries and Wages Full-time - Civilian	207,914.00
705_0015	Salaries and Wages Part-time	0.00
705_0020	Salaries and Wages Longevity	2,040.00
705_0055	Salaries and Wages Pay In Lieu	2,400.00
705_0060	Salaries and Wages Physical Skills	100.00
705_0080	Salaries and Wages Vacation Payout	0.00
708_0015	Overtime Overtime	2,000.00

**Account Classification Total: Wages - Salaries and Wages \$214,454.00**

Fringes - Payroll Taxes and Fringe Benefits		
720_0010	Fringe Benefits FICA	16,405.00
720_0020	Fringe Benefits Unemployment	0.00
720_0025	Fringe Benefits Medical	32,909.00
720_0030	Fringe Benefits Dental	6,587.00
720_0035	Fringe Benefits Optical	400.00
720_0040	Fringe Benefits Life	400.00
720_0045	Fringe Benefits Disability	301.00
720_0050	Fringe Benefits Pension Contribution	29,984.00
720_0060	Fringe Benefits OPEB	9,811.00
720_0065	Fringe Benefits Workers Comp	488.00

**Account Classification Total: Fringes - Payroll Taxes and Fringe Benefits \$97,285.00**

Supplies - Supplies		
722	Uniforms	0.00
727	Office Supplies	1,900.00
729	Postage	40,000.00

**Account Classification Total: Supplies - Supplies \$41,900.00**

Other Services - Other Services and Charges		
801_0050	Professional and Contractual Svc Professional	63,000.00
930_0060	Maintenance and Repair Office Equipment and Furniture	5,200.00
805	Dues & Memberships	0.00
860	Transportation	0.00
900_0040	Printing and Publishing General	22,000.00
955	Conference & Seminars	1,500.00
956	Miscellaneous	500.00

**Account Classification Total: Other Services - Other Services and Charges \$92,200.00**

Cap Outlay - Capital Outlay

970\_0010

Capital Outlay Computers and Equipment

8,500.00

**Account Classification Total: Cap Outlay - Capital Outlay**

**\$8,500.00**

**Department Total: 560 - Water Billing**

**\$454,339.00**

**Expenditures Total**

**\$33,826,568.00**

**Fund Revenue**

**Total: 592 - Water and Sewer**

**\$33,770,568.00**

**Fund Expenditure**

**Total: 592 - Water and Sewer**

**\$33,826,568.00**

**Fund Net**

**Total: 592 - Water and Sewer**

**(\$56,000.00)**

## **Appendix B**

### **Customer Rate Impact Examples**

## WATER & SEWER COST CHANGES - SUMMARY TABLE

<u>Type</u>	<u>Quarterly Volume</u>	<u>2011 Bill</u>	<u>2012 Bill</u>	<u>Quarterly Amount Change</u>	<u>Percentage Cost Change</u>
<u>Residential Accounts</u>					
low	9,000	\$109.32	\$107.22	-\$2.10	-1.92%
average	32,283	\$351.23	\$343.08	-\$8.15	-2.32%
family of five	44,000	\$472.97	\$461.77	-\$11.20	-2.37%
high	78,750	\$834.02	\$813.79	-\$20.23	-2.43%
<u>HOA Common Area Irrigation Accounts</u>					
low	38,000	\$403.28	\$393.76	-\$9.52	-2.36%
moderate	255,000	\$2,683.26	\$2,618.46	-\$64.80	-2.41%
high	685,000	\$7,150.96	\$6,974.36	-\$176.60	-2.47%
<u>Type</u>	<u>Bi-monthly Volume</u>	<u>2011 Bill</u>	<u>2012 Bill</u>	<u>Bi-Monthly Amount Change</u>	<u>Percent Change</u>
<u>Commercial Accounts</u>					
business	157,000	\$1,673.39	\$1,633.21	-\$40.18	-2.40%
apartments	239,000	\$2,609.69	\$2,549.47	-\$60.22	-2.31%



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**Notes:**

1) These are sample calculations only for a few select types of customers, individual impacts on customer bills will vary depending on usage.

**Appendix C**  
**Communications Plan**

# **Water & Sewer Rates – Strategic Communications Plan**

Last Updated: 4/1/2012

## **Mission:**

The primary purpose of this communications plan is “to better educate the residents and businesses on the cost of providing water and sewer services”.

## **Goals:**

The following goals have been developed in support of our mission.

1. To explain the rationale behind the cost-of-service study (fixed plus variable cost).
2. To demonstrate the value of water and sewer services as an essential service for public health, safety and fire fighting purposes.
3. To have a central repository of documents on rate information that is easily accessible to the public.

## **Communications Update:**

**March:** An article was placed in the Observer Newspaper explaining that the Board was looking to decrease water and sewer rates in order to reflect the full costs of treatment and delivery of drinking water and wastewater utilities. Readers were also asked to attend our Community Rate Forums on March 12th to learn more about rates.

**April:** The complete 2012 Water and Sewer Rate Study will be posted on the Water Billing webpage for easy download.

**May:** An article will be placed in the May Focus Newsletter informing residents of the new 2012 rates. Water Billing’s webpage will be updated with the new rates and water and sewer rate cards will be updated and inserted into water bills mailed out after May 1<sup>st</sup> explaining the increase and directing residents to the website for more information.

In addition, a comprehensive list of frequently asked questions (FAQ) posted on the Water Billing Webpage will be updated. Printed copies will be made available at the Water Billing, Public Works and DPW counters.

Tim Faas will also appear on Canton Contact to discuss the new rates and how it will impact residents’ bills. At the end of the interview, viewers will be directed to the township website for more information. A segment on the new rates will also be prepared for Canton This Month which will run in May/June.

**June:** Informational water rate facts will be updated and added to the Focus Newsletter. For more information on Canton's water and sewer rates, please visit our website at [www.canton-mi.org/water](http://www.canton-mi.org/water).

In addition, PSAs with facts such as the one above will be prepared by the cable studio to be aired throughout the year. Each PSA will end by directing viewers to the website for more information.

**Appendix D**

**DWSD Industrial Waste Control (IWC) Charges**

## Sewage System Schedule of Comparative IWC Service Charges

<u>Meter Size</u> (inches)	<u>Existing Rate</u> (\$/month)	<u>Proposed Rate</u> (\$/month)	<u>Change</u> (\$/month)	<u>% Change</u>
5/8	\$7.85	\$8.46	\$0.61	7.8%
3/4	\$11.78	\$12.69	\$0.91	7.7%
1	\$19.63	\$21.15	\$1.52	7.7%
1.5	\$43.18	\$46.53	\$3.35	7.8%
2	\$62.80	\$67.68	\$4.88	7.8%
3	\$113.83	\$122.67	\$8.84	7.8%
4	\$157.00	\$169.20	\$12.20	7.8%
6	\$235.50	\$253.80	\$18.30	7.8%
8	\$392.50	\$423.00	\$30.50	7.8%
10	\$549.50	\$592.20	\$42.70	7.8%
12	\$628.00	\$676.80	\$48.80	7.8%
14	\$785.00	\$846.00	\$61.00	7.8%
16	\$942.00	\$1,015.20	\$73.20	7.8%
18	\$1,099.00	\$1,184.40	\$85.40	7.8%
20	\$1,256.00	\$1,353.60	\$97.60	7.8%
24	\$1,413.00	\$1,522.80	\$109.80	7.8%
30	\$1,570.00	\$1,692.00	\$122.00	7.8%
36	\$1,727.00	\$1,861.20	\$134.20	7.8%
48	\$1,884.00	\$2,030.40	\$146.40	7.8%

## **Appendix E**

### **DWSD Industrial Surcharge Rates**

## Sewage System Schedule of Comparative Surcharges

<u>Pollutant</u>	<u>Existing Rate</u> (\$/lb)	<u>Proposed Rate</u> (\$/lb)	<u>Change</u> (\$/lb)	<u>% Change</u>
Biochemical Oxygen Demand (BOD) (in excess of 275 mg/L)	\$0.269	\$0.438	\$0.169	62.83%
Total Suspended Solids (TSS) (in excess of 350 mg/L)	\$0.338	\$0.445	\$0.107	31.66%
Phosphorus (P) (in excess of 12 mg/L)	\$3.717	\$6.564	\$2.847	76.59%
Fats, Oils & Grease (FOG) (in excess of 100 mg/L)	\$0.258	\$0.422	\$0.164	63.57%