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MEMORANDUM

FY 2012-13 Water Rate Report Material

February 11, 2012

To: Sue McCormick, James George

From: Nick Foster

The accompanying material comprises the tables that will be included in the FY 2012-13 Water Rate Report. The narrative for that report is still in production, but we feel it is prudent at this time to distribute the tables from the report. We are presenting this material at the Rates Rollout meeting next week, along with additional material summarizing the rate proposals. We encourage that all of this material be posted on the DWSD web site, and in the customer outreach portal.

We will continue to finalize the report narrative and produce a final report summarizing the development of the FY 2012-13 Water Rates.

We are available to discuss this matter at your convenience.

Table 1
Projection of Revenues Under Existing Rates

	Projected Water <u>Sales</u> Mcf	Existing Water Rate		Projected <u>Revenue</u>	Average <u>Unit Cost</u> \$/Mcf
		Commodity <u>Charge</u> \$/Mcf	Fixed Monthly <u>Charge</u> \$/mo		
City of Allen Park (a)	<u>140,000</u>	\$8.27	\$45,699	<u>\$1,706,200</u>	\$12.19
Total Suburban (b)	16,929,650	\$11.42	\$6,095,000	\$266,556,100	\$15.74
City of Detroit (b)	<u>4,100,000</u>	\$15.86	<u>\$2,084,900</u>	<u>\$90,027,400</u>	\$21.96
TOTAL (b)	21,029,650	\$12.29	\$8,179,900	\$356,583,500	\$16.96

(a) See Table 1A for projections for all customers.

(b) Existing Water Rate reflects average unit cost, including impact of Fixed Monthly Payments

PRELIMINARY

Table 2
Projected Operation and Maintenance Expense

<u>Category</u>	<u>FY 2013</u> \$
Water Treatment Plants	61,493,100
Booster Pumping Stations	15,814,400
Mechanical Maintenance	12,062,600
Maintenance and Repair	20,485,600
Customer Outreach Program	560,000
Suburban Wholesale Customer Metering/Billing	1,800,000
Detroit Retail Customer Metering/Billing	9,243,400
Engineering	3,671,500
Administrative & General	<u>37,908,100</u>
GRAND TOTAL	163,038,700

(a) See Appendix Table 2A for allocation of O&M to Cost Function

PRELIMINARY

Table 3
Capital Improvement Program Projected Expenditures

Line <u>No.</u>	<u>Category</u>	<u>FY 2012</u> \$	<u>FY 2013</u> \$
1	Metro Area Construction	7,044,000	27,670,000
2	Urban System Improvements	20,595,000	24,130,000
3	Mechanical Maintenance	6,200,000	1,000,000
4	Computer Systems	2,600,000	2,815,000
<u>Plant Replacement and Renovation</u>			
5	General Plant	15,363,000	22,942,000
6	Water Works Park	5,500,000	16,000,000
7	Springwells	5,077,000	29,080,000
8	Northeast	2,223,000	13,835,000
9	Southwest	22,540,000	22,164,000
10	Lake Huron	852,000	2,003,000
11	Pumping Stations & Reservoirs	<u>8,575,000</u>	<u>3,562,000</u>
12	Subtotal - Plant	60,130,000	109,586,000
13	Total System	96,569,000	165,201,000

PRELIMINARY

Table 4
Capital Improvement Program Financing Plan

Line No.	Item	FY 2012 \$	FY 2013 \$
Financing Requirements			
1	Capital Improvement Program	90,970,000	142,791,000
Financing Sources			
<u>Improvement and Extension Fund</u>			
2	Beginning Balance	8,893,100	24,782,100
3	Revenue Financed Capital	<u>24,782,100</u>	<u>43,411,100</u>
4	Subtotal - I&E Fund	33,675,200	68,193,200
<u>Construction Bond Funds</u>			
5	Beginning Balance	59,800,000	140,811,300
Bond Proceeds			
6	Water System Revenue Bonds	500,675,000	0
7	Less: Issuance Expenses	<u>(337,586,800)</u>	<u>0</u>
8	Net Bond Proceeds Available	163,088,200	0
9	DWRF Proceeds	<u>0</u>	<u>0</u>
10	Subtotal - Constr. Bond Funds	<u>222,888,200</u>	<u>140,811,300</u>
11	Total Financing Sources Available	256,563,400	209,004,500
Application of Financing Sources			
Projects Funded with . . .			
12	Improvement and Extension Funds	8,893,100	24,782,100
13	Construction Bond Funds	<u>82,076,900</u>	<u>118,008,900</u>
14	Total Financing Sources Applied	90,970,000	142,791,000
Financing Sources Available for Future Requirements			
15	Improvement & Extension Fund	24,782,100	43,411,100
16	Construction Bond Funds	<u>140,811,300</u>	<u>22,802,400</u>
17	Total Financing Sources Available for Future Requirements	165,593,400	66,213,500

Table 5
Revenue Requirements Projections

Line No.	Item	FY 2012 \$	FY 2013 \$
Revenue			
1	Operating Revenue Under Existing Rates	344,560,200	356,583,500
2	Miscellaneous and Non-Op. Revenue	<u>8,664,200</u>	<u>8,594,100</u>
3	Total Revenue Available	353,224,400	365,177,600
Revenue Requirements			
4	Operation and Maintenance Expense	159,661,400	163,038,700
Debt Service			
5	Senior Lien Bonds	114,986,700	130,225,500
6	Second Lien Bonds	36,411,500	40,435,100
7	DWRF Junior Lien Bonds	<u>2,165,500</u>	<u>2,234,600</u>
8	Total Debt Service	153,563,700	172,895,200
9	POC Payments	5,499,700	5,796,300
10	Renewals and Replacements	7,500,000	7,500,000
11	Revenue Financed Major Capital Imps.	24,782,100	43,411,100
12	Extra. Rpr. & Repl. Reserve Fund	0	506,600
13	Operating Reserve Requirement	<u>2,217,500</u>	<u>2,264,400</u>
14	Total Revenue Requirements	353,224,400	395,412,300
15	Balance (Deficiency) (Line 3 - Line 14)	0	(30,234,700)
16	Approximate Annual Percent Increase Required in Revenue from Rates (-Line 15 / Line 1)		8.5%
Debt Service Coverages Under Required Rates			
17	Senior Lien Bonds	168%	178%
18	Second Lien Bonds	128%	136%
19	DWRF Junior Lien Bonds	126%	134%

Table 6
Conversion of Cash Basis Revenue Requirements to Utility Basis

Line No.		<u>O&M</u>	<u>Capital</u>	<u>Total</u>
<u>Cash Basis</u>				
1	Operation and Maintenance Expense	\$163,038,700		\$163,038,700
2	Debt Service		172,895,200	172,895,200
3	Revenue Financed Capital & Reserves	-----	<u>53,682,100</u>	<u>53,682,100</u>
4	Total Cash Basis Revenue Req'ts	163,038,700	226,577,300	389,616,000
<u>Utility Basis</u>				
5	Operation and Maintenance Expense	\$168,835,000		\$168,835,000
6	Depreciation Expense		90,641,900	90,641,900
7	Return on Rate Base	-----	<u>130,139,100</u>	<u>130,139,100</u>
8	Total Utility Basis Revenue Req'ts	168,835,000	220,781,000	389,616,000

PRELIMINARY

**Table 7
Projection of Asset Base**

		Asset Category		
		Plant in Service (PIS)	Construction Work in Progress (CWIP)	Total Asset Base
1	6/30/2011 Starting Point	3,045,809,100	197,274,700	3,243,083,800
<u>FY 2012 Activity</u>				
2	CWIP Balance to PIS - %		100%	
3	CWIP Balance to PIS - \$	<u>197,274,700</u>	<u>(197,274,700)</u>	<u>0</u>
4	Subtotal	3,243,083,800	0	3,243,083,800
5	CIP Balance to PIS - %	50%		
6	Major CIP Additions	45,485,000	45,485,000	90,970,000
7	Routine Additions	<u>7,500,000</u>	<u>0</u>	<u>7,500,000</u>
8	Total @ 6/30/12	3,296,068,800	45,485,000	3,341,553,800
<u>FY 2013 Activity</u>				
9	CWIP Balance to PIS - %		100%	
10	CWIP Balance to PIS - \$	<u>45,485,000</u>	<u>(45,485,000)</u>	<u>0</u>
11	Subtotal	3,341,553,800	0	3,341,553,800
12	CIP Balance to PIS - %	0%		
13	Major CIP Additions	0	142,791,000	142,791,000
14	Routine Additions	<u>7,500,000</u>	<u>0</u>	<u>7,500,000</u>
15	Total @ 6/30/13	3,349,053,800	142,791,000	3,491,844,800

PRELIMINARY

Table 8
Projection of Depreciation Expense

Part 1 - Determination of Composite Depreciation Rate

	<u>Plant-in-Svc</u>	<u>Depreciation</u>	<u>Depr %</u> <i>(a)</i>
FY 2006-07	2,658,642,400	66,004,300	
FY 2007-08	2,662,395,300	67,504,800	2.5391%
FY 2008-09	2,810,993,200	71,084,700	2.6700%
FY 2009-10	3,004,148,000	81,660,100	2.9050%
FY 2010-11	3,045,809,200	71,995,100	2.3965%
Average Rate			2.6276%
Use for Projections			2.7500%

Part 2 - Application to Projected Asset Base

Plant in Service @ 6/30/12	3,296,068,800
Composite Depreciation Rate	2.7500%
Projected FY 2012-13 Depreciation Expense	90,641,900

(a) Calculated as % of prior year's Plant in Service.

PRELIMINARY

Table 9
Projection of Rate Base

Line		
<u>No.</u>		
1	Total Asset Base	3,491,844,800
2	less: Accumulated Depreciation	<u>(1,245,164,100)</u>
3	Book Value Assets - OCLD	2,246,680,700
4	plus: Working Capital	24,439,400
5	plus: Inventories	<u>8,000,000</u>
6	Projected Rate Base	2,279,120,100

Table 10
Determination of Rate of Return

Line		
<u>No.</u>	<u>System Rate of Return</u>	
1	System Return Requirement	130,139,100
2	System Rate Base	2,279,120,100
3	System Rate of Return (1)/(2)	5.71%
	<u>Suburban Wholesale Rate of Return</u>	
	<u>Indicators</u>	
4	Average Cost of Debt	5.81%
5	Average Cost of Debt +150 bp	7.31%
6	Average Cost of Debt x 1.25	7.27%
7	Average of Lines 2&3	7.29%
8	Use for FY 2013 Rates	7.30%

Table 11
Utility Basis Revenue Requirements Allocated to Service Components

<u>Line No.</u>	<u>Description</u>	Operation & Maintenance <u>Expense</u> \$	Depreciation <u>Expense</u> \$	<u>Rate Base</u> \$	Return on <u>Rate Base</u> \$ (a)	<u>TOTAL</u> \$
1	Source of Supply	3,616,000	4,060,100	94,597,700	5,401,600	13,077,700
2	Low Lift Pumps	9,713,600	516,600	66,771,500	3,812,700	14,042,900
3	Purification	30,133,300	38,830,800	553,928,300	31,629,600	100,593,700
4	High Lift Pumps	27,439,100	15,479,700	365,126,900	20,849,000	63,767,800
5	Reservoirs	0	4,595,100	79,932,400	4,564,200	9,159,300
6	Booster Stations	19,076,600	10,733,600	216,651,400	12,370,900	42,181,100
7	Transmission Mains	2,974,700	8,518,700	409,988,500	23,410,600	34,904,000
8	Distribution Mains	11,745,400	5,796,400	389,031,700	22,213,900	39,755,700
9	Meters	0	1,443,500	81,482,400	4,652,700	6,096,200
10	Services	21,810,200	667,400	21,609,500	1,233,900	23,711,500
11	Main Office	1,786,700	0	0	0	1,786,700
12	Admin & General	35,806,500	0	0	0	35,806,500
13	Fire Hydrant Maintenance	2,249,100	0	0	0	2,249,100
14	Wholesale Customer Support	2,484,000	0	0	0	2,484,000
15	Total	168,835,200	90,641,900	2,279,120,300	130,139,100	389,616,200

(a) Based on System Rate of Return of 5.71%

**Table 12
Functional Cost Allocation Matrix**

Line No.	Service Component	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Commodity	Maximum Day Usage	Peak Hour Usage	Peak Hour Increment	Peak Hour Usage Distance	Commodity Distance-Elevation	Maximum Day Distance-Elevation	Peak Hour Usage Distance-Elevation	Peak Hour Increment Distance-Elevation	Customer B	Allocated Directly & Solely to Inside City Customers	Allocated Directly & Solely to Wholesale Customers
<i>Common To All</i>													
CAPITAL COSTS													
1	Source of Supply		100%										
2	Low Lift Pumps		100%										
3	Purification		100%										
4	High Lift Pumps								100%				
5	Reservoirs			100%									
6	Booster Stations								100%				
7	Transmission Mains				100%								
8	Distribution Mains											100%	
9	Meters										100%		
10	Services											100%	
O&M EXPENSE													
11	Source of Supply - Power	50%	50%										
12	Source of Supply - Other		100%										
13	Low Lift Pumps- Power	50%	50%										
14	Low Lift Pumps- Other		100%										
15	Purification - Chemicals	100%											
16	Purification - Other		100%										
17	High Lift Pumps - Power						50%		25%	25%			
18	High Lift Pumps - Other							100%					
19	Reservoirs			100%									
20	Booster Stations						50%		25%	25%			
21	Transmission Mains				100%								
22	Distribution Mains											100%	
23	Meters										0%	X	Y
24	Services											100%	
25	Commercial											X	Y
26	System Control Center						50%		25%	25%			
27	Main Office												
28	Administrative and General												
29	Fire Hydrant Maintenance											100%	
30	Customer Outreach Program												100%

Table 13
Utility Basis Revenue Requirement Allocated to Functional Cost Component

Line No.	Cost Function	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
		<i>Common To All</i>										
		Commodity	Maximum Day Usage	Peak Hour Increment	Peak Hour Usage Distance	Commodity Distance-Elevation	Maximum Day Distance-Elevation	Peak Hour Usage Distance-Elevation	Peak Hour Incr Distance-Elevation	Customer B	Wholesale Customer Support	TOTAL
<u>Revenue Requirements</u>												
1	Operation & Maintenance Expense	14,687,780	41,690,485	0	3,858,640	26,609,823	7,118,561	13,304,911	13,304,911	0	2,483,963	123,059,074
2	Depreciation Expense	0	43,407,472	4,595,149	8,518,680	0	0	26,213,270	0	1,443,529	0	84,178,100
3	Return on Rate Base (a)	0	52,216,714	5,835,066	29,929,157	0	0	42,469,812	0	5,948,217	0	136,398,966
4	Total Utility Basis Revenue Req't	14,687,780	137,314,671	10,430,215	42,306,477	26,609,823	7,118,561	81,987,993	13,304,911	7,391,746	2,483,963	343,636,140
5	Rate Base	0	715,297,500	79,932,400	409,988,500	0	0	581,778,200	0	81,482,400	0	1,868,479,000
6	Net Detroit Only Costs											45,979,860
7	TOTAL COSTS OF SERVICE											389,616,000

(a) Based on Non-Owner Rate of Return of 7.30% applied to Rate Base on Line 5

**Table 14
Allocation of Non-Revenue Water**

Line No.	Allen Park (a)	Suburban Wholesale	Detroit Retail	Total
1	140,000	16,929,650	4,100,000	21,029,650
2		<u>(93,400)</u>	<u>(0)</u>	<u>(93,400)</u>
3	140,000	16,836,250	4,100,000	20,936,250
4	Assumed Non Revenue Percentage			16.3%
5	Total Estimated Water Production			25,013,400 <i>Line 3/(1-Line 4)</i>
6	Non Revenue Water			4,077,150 <i>Line 5-Line 3</i>
7	Dearborn Retail Losses			<u>93,400</u> <i>Line 2</i>
8	Remaining Non Revenue Water			3,983,750 <i>Line 6 - Line 7</i>
9	Meter Slippage %		10.0%	
10	Meter Slippage - Mcf		410,000	410,000 <i>Line 3 x Line 9</i>
11	Remaining Non Revenue Water			3,573,750 <i>Line 8 - Line 10</i>
12	Distribution "Losses" - % (b)		39.5%	
13	Distribution "Losses" - Mcf		1,413,000	<u>1,413,000</u> <i>Line 11 x Line 12</i>
14	Remaining Non Revenue Water			2,160,750 <i>Line 11 - Line 13</i>
15	Transmission "Losses" - Mcf			2,160,750 <i>Line 14</i>
	<u>Transmission "Loss Allocation Basis"</u>			
16	Total Water Sales & "Local Losses"	140,000	16,929,650	5,923,000
17	Distance Factor	21.0	27.2	16.9
18	Distance x Sales	2,940,000	460,248,600	100,098,700
19	Relative %	0.5%	82.1%	17.9%
20	Allocated Transmission Losses	11,300	1,775,100	385,700
				2,160,800 <i>Line 15 x Line 19</i>
21	Total Non Revenue Water - Mcf	11,300	1,775,100	2,208,700
22	Total Non Revenue Water - % of Sales	8.1%	10.5%	53.9%
				3,983,800 <i>Line 10 + Line 13 + Line 20</i>
				18.9% <i>Line 21 / Line 1</i>
23	Total Annual Production - Mcf	151,300	18,704,750	6,308,700
				25,013,450 <i>Line 1 + Line 22</i>

(a) See Appendix Table 14A for calculation for all individual suburban wholesale customers

(b) Basis for assigning Distribution / Transmission Losses:

Pipe Statistics - inch miles

Distribution (< 24")	22,216	39.5%
Distribution (>=24")	33,971	60.5%
	<u>56,187</u>	

Table 15
Development of Max Day and Peak Hour Demand Proxies

Line No.		Suburban		
		Allen Park (a)	Wholesale (b)	Detroit Retail (c)
<u>Average Daily Flow - mgd</u>				
1	Recent Average	3.18	370.57	85.60
2	FY 2012-13 Projection	2.87	346.97	84.03
3	Adjustment Factor (<i>Line 2 / Line 1</i>)	90%	94%	98%
<u>Maximum Daily Flow - mgd</u>				
4	Recent Maximum	6.70	775.60	194.73
5	Uniform Adjustment Factor	20%	19.8%	5%
6	Baseline Contract Proxy (<i>Line 4 * 120%</i>)	8.04	929.52	204.47
7	FY 2012-13 Proxy (<i>Line 6 * Line 3</i>)	7.24	876.57	200.72
8	CONTRACT DEMAND - <i>overrides proxy</i>	6.20	785.01	#N/A
<u>Peak Hour Flow - mgd</u>				
9	Recent Maximum	9.94	1,144.16	211.29
10	Uniform Adjustment Factor	20%	19.7%	5%
11	Baseline Contract Proxy (<i>Line 9 * 120%</i>)	11.93	1,369.89	221.86
12	FY 2012-13 Proxy (<i>Line 11 * Line 3</i>)	10.75	1,297.63	217.79
13	CONTRACT DEMAND - <i>overrides proxy</i>	8.70	1,057.96	#N/A

(a) A complete list of Wholesale Customers is included in the Appendix.

(b) Average of all suburban wholesale - weighted average calculation of adjustment factors

(c) Detroit retail average daily flows do not include local non-revenue water

**Table 16
Development of Distance and Elevation Factors**

	(1)	(2)	(3)	(4)	(5)	(6)
	Meter Size	Relative Meter Capacity	Average Distance to WTPs	Weighted Distance	Meter Elevation	Weighted Elevation
	inches	5/8" equiv	miles	miles	feet	feet
Allen Park (a)						
<u>Meter</u>						
AP04	10	115	21.9	2,519	600	69,000
AP04	2	8	21.9	175	600	4,800
AP05	8	80	21.7	1,736	604	48,320
AP05	2	8	21.7	174	604	4,832
AP06	16	285	21.3	6,071	604	172,140
AP07	8	80	20.6	1,648	600	48,000
AP07	2	8	20.6	165	600	4,800
AP08	8	80	20.3	1,624	598	47,840
AP08	2	8	20.3	162	598	4,784
AP09	8	80	20.8	1,664	600	48,000
AP09	2	8	20.8	166	600	4,800
AP11	8	80	20.4	1,632	604	48,320
AP11	2	8	20.4	163	604	4,832
AP12	8	80	20.3	1,624	600	48,000
AP12	2	8	20.3	162	600	4,800
	-----	-----	-----	-----	-----	-----
Totals	88	936	313.3	19,685	9,016	563,268
Distance Factor - feet (4)/(2)			21.0			
Weighted Average Elevation - feet (6)/(2)					602	
less: Average WTP Elevation - feet					<u>610</u>	
Elevation Differential - feet (Minimum = 0)					0	
Elevation Conversion Factor					10.56	
Elevation Differential - miles (Minimum = 0)					0.0	
Distance-Elevation Factor					21.0	

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Table 17
Consolidated Units of Service - Allen Park Example (a)

Line No.		Proxies/Factors	Units of Service	Applied Units of Service
1	Commodity - Average Daily Sales/Production		383.6	414.5
2	Max Day Usage - mgd Proxy/Mcf Proxy/Production	7.24	967.9	859.7
3	Peak Hour Usage - mgd Proxy/Mcf Proxy/Production	10.75	1,436.8	1,193.9
4	Peak Hour Increment - Line 3 - Line 2			334.2
5	Peak Hour Distance - Distance Factor	21.0		25,072.3
6	Commodity Dist/Elev - Dist/Elev Factor	21.0		8,704.5
7	Max Day Dist/Elev - Dist/Elev Factor			18,054.1
8	Peak Hour USAGE Dist/Elev - Dist/Elev Factor			25,072.3
9	Peak Hour INCREMENT Dist/Elev - Dist/Elev Factor			7,018.2
10	Customer A - Bills			192
11	Customer B - Equivalent Meters			961
12	Wholesale Customer Support - Avg Daily Production			414.5

(a) A complete list of Wholesale Customers is included in the Appendix.

Table 18
Development of Unit Costs of Service - Common Cost Functions

Line No.	Cost Function	Total Utility Basis Revenue Requirement \$	Units of Service	Unit Cost of Service \$/Unit
1	Commodity	14,687,780	68,529.4	214.33
2	Max Day Usage	137,314,671	137,691.0	997.27
3	Peak Hour Usage	0	176,458.3	0.00
4	Peak Hour Increment	10,430,215	38,767.4	269.05
5	Peak Hour Distance	42,306,477	4,446,883.8	9.51
6	Commodity Distance-Elevation	26,609,823	2,258,615.8	11.78
7	Max Day Usage Distance-Elevation	7,118,561	4,676,072.3	1.52
8	Peak Hour Usage Distance-Elevation	81,987,993	6,022,279.5	13.61
9	Peak Hour Increment Distance-Elevation	13,304,911	1,346,206.8	9.88
10	Customer B	7,391,746	437,694	16.89
11	Wholesale Customer Support	2,483,963	51,244	48.47

Table 19
Allocation of Costs to Customers - Allen Park Example (a)

Line No.	<u>Cost Function</u>	Units of <u>Service</u>	Unit Cost of <u>Service</u> \$/Unit	Allocated Cost of <u>Service</u> \$
1	Commodity	414.5	214.33	88,839
2	Max Day Usage	859.7	997.27	857,370
3	Peak Hour Usage	1,193.9	0.00	0
4	Peak Hour Increment	334.2	269.05	89,916
5	Peak Hour Distance	25,072.3	9.51	238,538
6	Commodity Distance-Elevation	8,704.5	11.78	102,548
7	Max Day Usage Distance-Elevation	18,054.1	1.52	27,478
8	Peak Hour Usage Distance-Elevation	25,072.3	13.61	341,335
9	Peak Hour Increment Distance-Elevation	7,018.2	9.88	69,361
10	Customer B	961.0	16.89	16,229
11	Wholesale Customer Support	414.5	48.47	<u>20,092</u>
12	Total Cost of Service			1,851,706

(a) A complete list of Wholesale Customers is included in the Appendix.

Table 20
Calculation of Water Rate - Allen Park Example (a)

Line No.	<u>Cost Function</u>	Units of <u>Service</u>	
1	Allocated Revenue Requirement	1,851,706	
2	Adjustments & Fixed Charges	0	
3	Net Allocated Revenue Requirement	1,851,706	
	<u>Recovery Basis</u>		
4	Fixed Charges	850,158	
5	Commodity Charges	1,001,548	(3)-(4)
6	Projected Billable Volume - Mcf	140,000	
7	Fixed Monthly Charge - \$/month	70,847	(4)/12
8	Commodity Water Rate - \$/Mcf	7.15	(5)/(6)

(a) A complete list of Wholesale Customers is included in the Appendix.

Table 1A
Projection of Revenues Under Existing Rates

	Projected Water Sales Mcf	Existing Water Rate		Projected Revenue	Average Unit Cost \$/Mcf		
		Commodity Charge \$/Mcf	Fixed Monthly Charge \$/mo				
City of Detroit Retail (a)	4,100,000	15.86	2,084,900	90,027,400	21.96		
Suburban Wholesale (b) (c)	<u>16,929,650</u>	<u>11.42</u>	<u>6,095,000</u>	<u>266,556,100</u>	<u>15.74</u>		
	21,029,650	12.29	8,179,900	356,583,500	16.96		
Total System							
(a) Includes Suburban Individual & Fire Protection; ~ average unit cost							
(b) Expressed as average unit cost							
<u>(c) Detailed Suburban Wholesale</u>							
1 Allen Park	140,000	8.27	45,699	1,706,188	12.19		
2 Ash Township	41,200	9.07	12,741	526,576	12.78		
3 Auburn Hills	180,000	15.73	74,504	3,725,448	20.70		
4 Belleville	20,000	10.16	5,893	273,916	13.70		
5 Berlin Township	27,500	13.78	12,275	526,250	19.14		
6 Brownstown Township	133,500	12.83	59,285	2,424,225	18.16		
7 Canton Township	431,500	16.57	192,818	9,463,771	21.93		
8 Center Line	41,000	6.55	9,859	386,858	9.44		
9 Chesterfield Township	182,500	11.89	83,213	3,168,481	17.36		
10 Clinton Township	475,000	7.56	150,133	5,392,596	11.35		
11 Commerce Township	107,500	27.88	62,043	3,741,616	34.81		
12 Dearborn	700,000	7.49	199,207	7,633,484	10.90		
13 Dearborn Heights	247,600	7.82	69,815	2,774,012	11.20		
14 Eastpointe	134,800	5.82	31,393	1,161,252	8.61		
15 Ecorse	142,500	5.15	31,789	1,115,343	7.83		
16 Farmington	53,700	9.33	16,891	703,713	13.10		
17 Farmington Hills	420,000	17.51	179,231	9,504,972	22.63		
18 Ferndale	90,000	6.27	21,406	821,172	9.12		
19 Flat Rock	67,000	9.50	22,669	908,528	13.56		
20 Flint	1,275,000	13.36	443,096	22,351,152	17.53		
21 Fraser	75,900	8.64	23,365	936,156	12.33		
22 Garden City	86,000	9.63	27,136	1,153,812	13.42		
23 Gibraltar	20,000	11.49	7,595	320,940	16.05		
24 Greater Lapeer C.U.A.	110,000	15.11	42,480	2,171,860	19.74		
25 Grosse Ile Township	58,000	13.29	28,313	1,110,576	19.15		
26 Grosse Pt. Park	65,000	10.01	23,389	931,318	14.33		
27 Grosse Pt. Shores	20,000	12.08	10,535	368,020	18.40		
28 Grosse Pt. Woods	85,000	7.53	32,157	1,025,934	12.07		
29 Hamtramck	67,000	5.46	15,500	551,820	8.24		
30 Harper Woods	63,400	8.12	19,813	752,564	11.87		
31 Harrison Township	105,000	8.07	34,904	1,266,198	12.06		
32 Hazel Park	55,000	7.77	17,468	636,966	11.58		
33 Huron Township	62,600	13.73	28,065	1,196,278	19.11		
34 Inkster	122,500	7.85	31,145	1,335,365	10.90		
35 Keego Harbor	11,800	14.18	3,855	213,584	18.10		
36 Lenox Twp.	15,300	9.62	5,334	211,194	13.80		
37 Lincoln Park	178,000	8.43	58,784	2,205,948	12.39		
38 Livonia	573,400	11.58	234,442	9,453,276	16.49		
39 Macomb Township	380,000	15.17	209,698	8,280,976	21.79		
40 Madison Heights	175,600	6.14	40,517	1,564,388	8.91		

Table 1A
Projection of Revenues Under Existing Rates

	Projected Water Sales Mcf	Existing Water Rate		Projected Revenue	Average Unit Cost \$/Mcf
		Commodity	Fixed Monthly		
		Charge \$/Mcf	Charge \$/mo		
41 Melvindale	50,000	6.32	13,078	472,936	9.46
42 New Haven, Vil. of	17,000	12.65	6,102	288,274	16.96
43 Northville	35,000	11.73	12,304	558,198	15.95
44 Northville Township	183,000	21.50	92,545	5,045,040	27.57
45 Novi	281,800	21.90	142,379	7,879,968	27.96
46 Oak Park	117,000	5.76	27,632	1,005,504	8.59
47 Oakland Co. Drain Comm.	12,000	3.77	1,999	69,228	5.77
48 Orion Twp	170,000	19.56	68,317	4,145,004	24.38
49 Plymouth	49,500	11.26	15,299	740,958	14.97
50 Plymouth Township	200,000	18.38	86,460	4,713,520	23.57
51 Pontiac	330,000	8.88	98,572	4,113,264	12.46
52 Redford Township	210,000	8.16	61,997	2,457,564	11.70
53 River Rouge	65,000	5.62	15,650	553,100	8.51
54 Riverview	57,500	9.94	23,119	848,978	14.76
55 Rochester Hills	410,000	18.56	189,183	9,879,796	24.10
56 Rockwood	15,300	10.38	5,060	219,534	14.35
57 Romeo	11,000	16.15	4,764	234,818	21.35
58 Romulus	227,000	8.54	62,950	2,693,980	11.87
59 Roseville	221,100	5.85	49,724	1,890,123	8.55
60 Royal Oak Township	12,900	8.31	4,865	165,579	12.84
61 S O C W A	1,476,000	8.46	473,901	18,173,772	12.31
62 Shelby Township	445,000	17.76	217,869	10,517,628	23.64
63 South Rockwood	4,900	10.26	1,714	70,842	14.46
64 Southgate	140,000	8.41	45,391	1,722,092	12.30
65 Sterling Heights	780,000	10.82	295,481	11,985,372	15.37
66 St. Clair County-Greenwood	15,000	2.93	33,888	450,606	30.04
67 St. Clair County-Burtchville Twp	8,000	15.60	3,712	169,344	21.17
68 St. Clair Shores	294,800	6.22	68,552	2,656,280	9.01
69 Sumpter Township	33,800	12.90	12,499	586,008	17.34
70 Sylvan Lake	7,800	15.07	3,108	154,842	19.85
71 Taylor	360,000	6.94	96,090	3,651,480	10.14
72 Trenton	100,000	9.71	38,028	1,427,336	14.27
73 Troy	576,000	11.92	208,670	9,369,960	16.27
74 Utica	30,000	10.13	9,498	417,876	13.93
75 Van Buren Township	160,000	9.17	54,402	2,120,024	13.25
76 Walled Lake	35,000	14.17	10,896	626,702	17.91
77 Warren	825,000	7.95	255,439	9,624,018	11.67
78 Washington Township	87,000	18.44	43,009	2,120,388	24.37
79 Wayne	145,000	9.18	57,413	2,020,056	13.93
80 West Bloomfield Township	400,050	21.28	188,357	10,773,348	26.93
81 Westland	301,400	10.11	103,578	4,290,090	14.23
82 Woodhaven	90,000	13.30	39,309	1,668,708	18.54
83 Ypsilanti Comm Util Auth	595,000	9.71	196,254	8,132,498	13.67
84 Wixom	105,000	13.38	37,485	1,854,720	17.66

**Table 2A
Allocation of Operation and Maintenance Expense to Functional Components**

Line No.	TOTAL	Source of Supply	Low Lift Pumps	Purification	High Lift Pumps	Reservoirs	Booster Stations	Transmission Mains	Distribution Mains	Meters	Detroit Service Connections	Commercial	System Control Center	Main Office	Yards	Admin & General	Fire Hydrant Maintenance	Wholesale Cust Support	
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
1	61,493,100				23,797,800														
2	15,814,400	3,136,100	8,424,600	26,134,600			15,814,400												
3	12,062,600	260,900	700,800	2,174,000	1,979,700	0	1,918,300	0	3,110,600	0	1,151,000	0	0	639,400	0	0	0	127,900	
4	20,485,600					0	0	2,171,800	5,717,200	0	9,338,900	0	0	1,085,900	0	0	2,171,800	0	
5	560,000																		
6	1,800,000																	560,000	
7	9,243,400										9,243,400							1,800,000	
8	3,671,500	94,800	254,700	790,200	719,600	0	541,200	700,700	555,800	0	0	0	0	0	0	0	0	14,500	
9	37,908,100															37,908,100			
10	GRAND TOTAL	163,038,700	3,491,800	9,380,100	29,098,800	26,497,100	0	18,273,900	2,872,500	9,383,600	0	19,733,300	0	0	1,725,300	0	37,908,100	2,171,800	2,502,400

PRELIMINARY

Table 14A
Allocation of Non Revenue Water Assigned to the Transmission System

	Water Sales + "Local Losses"	Average Daily Sales	Distance Factor	Sales x Distance	Relative Allocation	Allocated Transmission Losses	Total Annual Production	Average Daily Production
	Mcf	Mcf/day	miles	Mcf-miles		Mcf	Mcf	Mcf/day
1 Allen Park	140,000	383.6	21.0	2,940,000	0.52%	11,300	151,300	414.5
2 Ash Township	41,200	112.9	29.9	1,231,900	0.22%	4,800	46,000	126.0
3 Auburn Hills	180,000	493.2	28.8	5,184,000	0.93%	20,000	200,000	547.9
4 Belleville	20,000	54.8	32.5	650,000	0.12%	2,500	22,500	61.6
5 Berlin Township	27,500	75.3	34.6	951,500	0.17%	3,700	31,200	85.5
6 Brownstown Township	133,500	365.8	28.5	3,804,800	0.68%	14,700	148,200	406.0
7 Canton Township	431,500	1,182.2	32.2	13,894,300	2.48%	53,600	485,100	1,329.0
8 Center Line	41,000	112.3	18.0	738,000	0.13%	2,800	43,800	120.0
9 Chesterfield Township	182,500	500.0	28.3	5,164,800	0.92%	19,900	202,400	554.5
10 Clinton Township	475,000	1,301.4	22.8	10,830,000	1.93%	41,800	516,800	1,415.9
11 Commerce Township	107,500	294.5	31.4	3,375,500	0.60%	13,000	120,500	330.1
12 Dearborn	700,000	1,917.8	20.3	14,210,000	2.54%	54,800	754,800	2,067.9
13 Dearborn Heights	247,600	678.4	22.4	5,546,200	0.99%	21,400	269,000	737.0
14 Eastpointe	134,800	369.3	18.1	2,439,900	0.44%	9,400	144,200	395.1
15 Ecorse	142,500	390.4	20.1	2,864,300	0.51%	11,000	153,500	420.5
16 Farmington	53,700	147.1	27.1	1,455,300	0.26%	5,600	59,300	162.5
17 Farmington Hills	420,000	1,150.7	27.4	11,508,000	2.05%	44,400	464,400	1,272.3
18 Ferndale	90,000	246.6	18.2	1,638,000	0.29%	6,300	96,300	263.8
19 Flat Rock	67,000	183.6	29.7	1,989,900	0.36%	7,700	74,700	204.7
20 Flint	1,275,000	3,493.2	52.0	66,300,000	11.83%	255,700	1,530,700	4,193.7
21 Fraser	75,900	207.9	21.0	1,593,900	0.28%	6,100	82,000	224.7
22 Garden City	86,000	235.6	25.0	2,150,000	0.38%	8,300	94,300	258.4
23 Gibraltar	20,000	54.8	30.9	618,000	0.11%	2,400	22,400	61.4
24 Greater Lapeer C.U.A.	110,000	301.4	47.0	5,170,000	0.92%	19,900	129,900	355.9
25 Grosse Ile Township	58,000	158.9	27.0	1,566,000	0.28%	6,000	64,000	175.3
26 Grosse Pt. Park	65,000	178.1	18.0	1,170,000	0.21%	4,500	69,500	190.4
27 Grosse Pt. Shores	20,000	54.8	18.9	378,000	0.07%	1,500	21,500	58.9
28 Grosse Pt. Woods	85,000	232.9	18.9	1,606,500	0.29%	6,200	91,200	249.9
29 Hamtramck	67,000	183.6	16.7	1,118,900	0.20%	4,300	71,300	195.3
30 Harper Woods	63,400	173.7	18.4	1,166,600	0.21%	4,500	67,900	186.0
31 Harrison Township	105,000	287.7	24.0	2,520,000	0.45%	9,700	114,700	314.2
32 Hazel Park	55,000	150.7	18.1	995,500	0.18%	3,800	58,800	161.1
33 Huron Township	62,600	171.5	29.9	1,871,700	0.33%	7,200	69,800	191.2
34 Inkster	122,500	335.6	24.4	2,989,000	0.53%	11,500	134,000	367.1
35 Keego Harbor	11,800	32.3	29.1	343,400	0.06%	1,300	13,100	35.9
36 Lenox Twp.	15,300	41.9	30.5	466,700	0.08%	1,800	17,100	46.8
37 Lincoln Park	178,000	487.7	20.4	3,631,200	0.65%	14,000	192,000	526.0
38 Livonia	573,400	1,571.0	26.2	15,023,100	2.68%	57,900	631,300	1,729.6
39 Macomb Township	380,000	1,041.1	26.8	10,184,000	1.82%	39,300	419,300	1,148.8
40 Madison Heights	175,600	481.1	19.4	3,406,600	0.61%	13,100	188,700	517.0
41 Melvindale	50,000	137.0	19.9	995,000	0.18%	3,800	53,800	147.4
42 New Haven, Vil. of	17,000	46.6	29.8	506,600	0.09%	2,000	19,000	52.1
43 Northville	35,000	95.9	31.1	1,088,500	0.19%	4,200	39,200	107.4
44 Northville Township	183,000	501.4	30.5	5,581,500	1.00%	21,500	204,500	560.3
45 Novi	281,800	772.1	31.4	8,848,500	1.58%	34,100	315,900	865.5
46 Oak Park	117,000	320.5	19.7	2,304,900	0.41%	8,900	125,900	344.9
47 Oakland Co. Drain Comm.	12,000	32.9	20.4	244,800	0.04%	900	12,900	35.3
48 Orion Twp	170,000	465.8	31.1	5,287,000	0.94%	20,400	190,400	521.6
49 Plymouth	49,500	135.6	30.8	1,524,600	0.27%	5,900	55,400	151.8
50 Plymouth Township	200,000	547.9	31.3	6,260,000	1.12%	24,100	224,100	614.0
51 Pontiac	330,000	904.1	27.5	9,075,000	1.62%	35,000	365,000	1,000.0
52 Redford Township	210,000	575.3	22.6	4,746,000	0.85%	18,300	228,300	625.5
53 River Rouge	65,000	178.1	19.4	1,261,000	0.23%	4,900	69,900	191.5
54 Riverview	57,500	157.5	25.3	1,454,800	0.26%	5,600	63,100	172.9

TFG

Table 14A
Allocation of Non Revenue Water Assigned to the Transmission System

	Water Sales + "Local Losses"	Average Daily Sales	Distance Factor	Sales x Distance	Relative Allocation	Allocated Transmission Losses	Total Annual Production	Average Daily Production
	Mcf	Mcf/day	miles	Mcf-miles		Mcf	Mcf	Mcf/day
55 Rochester Hills	410,000	1,123.3	26.9	11,029,000	1.97%	42,500	452,500	1,239.7
56 Rockwood	15,300	41.9	32.7	500,300	0.09%	1,900	17,200	47.1
57 Romeo	11,000	30.1	32.2	354,200	0.06%	1,400	12,400	34.0
58 Romulus	227,000	621.9	27.3	6,197,100	1.11%	23,900	250,900	687.4
59 Roseville	221,100	605.8	19.0	4,200,900	0.75%	16,200	237,300	650.1
60 Royal Oak Township	12,900	35.3	19.2	247,700	0.04%	1,000	13,900	38.1
61 S O C W A	1,476,000	4,043.8	22.3	32,914,800	5.87%	126,900	1,602,900	4,391.5
62 Shelby Township	445,000	1,219.2	26.4	11,748,000	2.10%	45,300	490,300	1,343.3
63 South Rockwood	4,900	13.4	33.4	163,700	0.03%	600	5,500	15.1
64 Southgate	140,000	383.6	23.7	3,318,000	0.59%	12,800	152,800	418.6
65 Sterling Heights	780,000	2,137.0	22.3	17,394,000	3.10%	67,100	847,100	2,320.8
66 St. Clair County-Greenwood	15,000	41.1	45.4	681,000	0.12%	2,600	17,600	48.2
67 St. Clair County-Burtchville Twp	8,000	21.9	47.2	377,600	0.07%	1,500	9,500	26.0
68 St. Clair Shores	294,800	807.7	20.2	5,955,000	1.06%	23,000	317,800	870.7
69 Sumpter Township	33,800	92.6	32.9	1,112,000	0.20%	4,300	38,100	104.4
70 Sylvan Lake	7,800	21.4	29.1	227,000	0.04%	900	8,700	23.8
71 Taylor	360,000	986.3	23.5	8,460,000	1.51%	32,600	392,600	1,075.6
72 Trenton	100,000	274.0	25.8	2,580,000	0.46%	9,900	109,900	301.1
73 Troy	576,000	1,578.1	24.3	13,996,800	2.50%	54,000	630,000	1,726.0
74 Utica	30,000	82.2	24.4	732,000	0.13%	2,800	32,800	89.9
75 Van Buren Township	160,000	438.4	32.5	5,200,000	0.93%	20,100	180,100	493.4
76 Walled Lake	35,000	95.9	31.7	1,109,500	0.20%	4,300	39,300	107.7
77 Warren	825,000	2,260.3	18.0	14,850,000	2.65%	57,300	882,300	2,417.3
78 Washington Township	87,000	238.4	29.6	2,575,200	0.46%	9,900	96,900	265.5
79 Wayne	145,000	397.3	25.9	3,755,500	0.67%	14,500	159,500	437.0
80 West Bloomfield Township	400,050	1,096.0	28.5	11,401,400	2.03%	44,000	444,050	1,216.6
81 Westland	301,400	825.8	26.2	7,896,700	1.41%	30,500	331,900	909.3
82 Woodhaven	90,000	246.6	28.3	2,547,000	0.45%	9,800	99,800	273.4
83 Ypsilanti Comm Util Auth	595,000	1,630.1	35.8	21,301,000	3.80%	82,100	677,100	1,855.1
84 Wixom	105,000	287.7	33.9	3,559,500	0.64%	13,700	118,700	325.2
Detroit	5,923,000	16,227.4	16.9	100,098,700	17.86%	386,100	6,309,100	17,285.2
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	22,852,650	62,610.6		560,347,300		2,160,800	25,013,450	68,529.7

Table 15A
Development of Max Day and Peak Hour Demand Proxies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Average Daily Flow			Recent Max		Uniform Adj Factor		Baseline Contract Flow		FY 2012-13 Proxies		CONTRACT DEMANDS	
	Recent	FY 2011-12	Adj Factor	Max Day	Non-Coin PH	Max Day	Non-Coin PH	Max Day	Peak Hour	Max Day	Peak Hour	Max Day	Peak Hour
			(2)/(1)					(4)*[1+(6)]	(5)*[1+(7)]	(8)*3)	(9)*3)		
1 Allen Park	3.18	2.87	0.90	6.70	9.94	20%	20%	8.04	11.93	7.24	10.75	6.20	8.70
2 Ash Township	0.90	0.84	0.94	1.57	1.97	20%	20%	1.88	2.37	1.77	2.23	1.57	2.10
3 Auburn Hills	4.10	3.69	0.90	10.48	12.87	20%	20%	12.58	15.45	11.32	13.90	10.02	11.57
4 Belleville	0.41	0.41	1.00	0.71	1.38	20%	20%	0.85	1.66	0.85	1.65	0.65	1.00
5 Berlin Township	0.61	0.56	0.92	1.27	2.05	20%	20%	1.52	2.46	1.40	2.26	1.36	2.18
6 Brownstown Township	2.97	2.74	0.92	6.45	11.08	20%	20%	7.74	13.29	7.13	12.26	7.20	11.30
7 Canton Township	8.69	8.84	1.02	22.15	34.97	20%	20%	26.58	41.96	27.06	42.72	22.50	36.00
8 Center Line	0.80	0.84	1.05	1.69	2.52	20%	20%	2.02	3.02	2.13	3.18	1.30	2.05
9 Chesterfield Township	4.24	3.74	0.88	9.98	13.48	20%	20%	11.98	16.17	10.57	14.28	-	-
10 Clinton Township	10.61	9.73	0.92	23.01	26.44	20%	20%	27.61	31.73	25.34	29.12	21.40	24.90
11 Commerce Township	2.30	2.20	0.96	6.44	11.62	20%	20%	7.73	13.94	7.42	13.38	6.43	11.62
12 Dearborn	14.96	14.35	0.96	24.61	34.00	20%	20%	29.53	40.80	28.32	39.12	-	-
13 Dearborn Heights	5.42	5.07	0.94	9.99	14.54	20%	20%	11.99	17.45	11.24	16.35	9.40	13.30
14 Eastpointe	3.06	2.76	0.90	4.97	8.39	20%	20%	5.96	10.07	5.38	9.08	4.20	5.90
15 Ecorse	2.81	2.92	1.04	3.95	4.40	20%	20%	4.74	5.28	4.93	5.49	4.00	4.50
16 Farmington	1.27	1.10	0.87	2.37	3.59	20%	20%	2.85	4.31	2.48	3.75	2.25	2.45
17 Farmington Hills	9.83	8.61	0.88	22.93	41.33	20%	20%	27.51	49.59	24.09	43.41	21.00	38.00
18 Ferndale	1.90	1.84	0.97	3.92	6.50	20%	20%	4.70	7.80	4.56	7.56	3.00	3.75
19 Flat Rock	1.36	1.37	1.01	2.69	3.68	20%	20%	3.23	4.42	3.27	4.48	2.60	3.50
20 Flint	29.47	26.13	0.89	44.78	46.82	20%	20%	53.74	56.19	47.65	49.83	-	-
21 Fraser	1.73	1.56	0.90	3.69	6.24	20%	20%	4.43	7.49	3.98	6.72	3.10	4.90
22 Garden City	2.20	1.76	0.80	4.08	6.57	20%	20%	4.90	7.88	3.93	6.33	3.35	5.35
23 Gibraltar	0.46	0.41	0.89	0.88	1.32	20%	20%	1.06	1.59	0.94	1.41	-	-
24 Greater Lapeer C.U.A.	2.39	2.25	0.94	3.82	4.82	20%	20%	4.58	5.79	4.33	5.47	-	-
25 Grosse Ile Township	1.35	1.19	0.88	3.05	5.15	20%	20%	3.65	6.18	3.21	5.43	-	-
26 Grosse Pt. Park	1.44	1.33	0.93	3.19	5.06	20%	20%	3.83	6.07	3.55	5.62	-	-
27 Grosse Pt. Shores	0.53	0.41	0.78	1.53	2.50	20%	20%	1.84	3.00	1.43	2.34	1.43	2.73
28 Grosse Pt. Woods	2.01	1.74	0.87	4.86	7.95	20%	20%	5.83	9.55	5.04	8.26	4.96	4.96
29 Hamtramck	1.56	1.37	0.88	2.14	2.95	20%	20%	2.57	3.54	2.26	3.10	1.90	2.75
30 Harper Woods	1.47	1.30	0.88	2.66	4.43	20%	20%	3.19	5.32	2.82	4.69	2.55	3.67
31 Harrison Township	2.30	2.15	0.93	4.47	6.75	20%	20%	5.36	8.10	5.01	7.56	4.81	6.13
32 Hazel Park	1.37	1.13	0.82	2.46	3.71	20%	20%	2.95	4.45	2.42	3.65	1.70	2.60

Table 15A
Development of Max Day and Peak Hour Demand Proxies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Average Daily Flow			Recent Max		Uniform Adj Factor		Baseline Contract Flow		FY 2012-13 Proxies		CONTRACT DEMANDS	
	Recent	FY 2011-12	Adj Factor	Max Day	Non-Coin PH	Max Day	Non-Coin PH	Max Day	Peak Hour	Max Day	Peak Hour	Max Day	Peak Hour
			(2)/(1)					(4)*[1+(6)]	(5)*[1+(7)]	(8)*[3]	(9)*[3]		
33 Huron Township	1.37	1.28	0.94	3.20	4.96	20%	20%	3.85	5.95	3.60	5.57	3.42	5.29
34 Inkster	2.73	2.51	0.92	4.22	5.52	20%	20%	5.06	6.63	4.64	6.08	-	-
35 Keego Harbor	0.30	0.24	0.81	0.52	0.72	20%	20%	0.63	0.86	0.51	0.70	0.45	0.65
36 Lenox Twp.	0.33	0.31	0.95	0.47	1.67	20%	20%	0.57	2.01	0.54	1.90	0.53	0.85
37 Lincoln Park	3.97	3.65	0.92	7.20	10.57	20%	20%	8.64	12.68	7.94	11.66	-	-
38 Livonia	13.00	11.75	0.90	27.97	40.23	20%	20%	33.57	48.27	30.35	43.65	31.90	39.60
39 Macomb Township	7.95	7.79	0.98	21.46	30.58	20%	20%	25.75	36.70	25.23	35.97	28.00	40.00
40 Madison Heights	3.94	3.60	0.91	7.05	9.13	20%	20%	8.46	10.96	7.74	10.02	5.65	7.15
41 Melvindale	1.15	1.02	0.89	1.86	2.60	20%	20%	2.24	3.12	2.00	2.79	1.70	2.30
42 New Haven, Vil. of	0.31	0.35	1.11	0.72	1.41	20%	20%	0.87	1.69	0.96	1.87	0.70	1.20
43 Northville	0.75	0.72	0.96	1.51	3.61	20%	20%	1.82	4.34	1.74	4.15	1.59	1.75
44 Northville Township	3.38	3.75	1.11	9.25	16.90	20%	20%	11.10	20.28	12.32	22.51	11.20	18.10
45 Novi	6.19	5.78	0.93	16.08	29.92	20%	20%	19.30	35.90	18.00	33.48	16.80	24.50
46 Oak Park	2.76	2.40	0.87	5.87	10.40	20%	20%	7.04	12.48	6.13	10.86	4.10	4.10
47 Oakland Co. Drain Comm.	0.25	0.25	0.97	0.35	1.72	20%	20%	0.35	0.36	0.35	0.35	0.25	0.25
48 Orion Twp	3.20	3.48	1.09	7.57	10.89	20%	20%	9.09	13.07	9.89	14.23	8.50	12.00
49 Plymouth	1.00	1.01	1.01	1.71	2.47	20%	20%	2.05	2.96	2.07	3.00	1.81	2.62
50 Plymouth Township	3.45	4.10	1.19	9.29	12.89	20%	20%	11.15	15.47	13.25	18.39	10.66	10.76
51 Pontiac	8.80	6.76	0.77	14.06	18.10	20%	20%	16.87	21.72	12.96	16.69	13.00	13.00
52 Redford Township	4.65	4.30	0.92	8.70	12.44	20%	20%	10.44	14.92	9.66	13.80	7.90	11.50
53 River Rouge	1.62	1.33	0.82	2.29	2.74	20%	20%	2.75	3.29	2.25	2.70	2.00	2.40
54 Riverview	1.41	1.18	0.84	2.86	3.99	20%	20%	3.43	4.78	2.87	4.01	-	-
55 Rochester Hills	8.60	8.40	0.98	22.37	44.99	20%	20%	26.85	53.99	26.23	52.74	23.80	37.40
56 Rockwood	0.32	0.31	0.97	0.64	0.91	20%	20%	0.77	1.09	0.75	1.06	0.56	0.90
57 Romeo	0.25	0.23	0.90	0.49	0.77	20%	20%	0.59	0.93	0.54	0.84	0.51	0.72
58 Romulus	5.00	4.65	0.93	8.95	11.27	20%	20%	10.74	13.52	9.99	12.58	8.59	10.60
59 Roseville	4.74	4.53	0.96	8.03	11.44	20%	20%	9.64	13.73	9.22	13.14	6.80	9.20
60 Royal Oak Township	0.32	0.26	0.82	0.67	0.84	20%	20%	0.80	1.01	0.66	0.83	0.51	0.78
61 S O C W A	33.37	30.25	0.91	71.02	93.37	20%	20%	85.23	112.04	77.27	101.58	70.00	70.00
62 Shelby Township	9.25	9.12	0.99	24.07	45.88	20%	20%	28.88	55.05	28.49	54.31	25.00	47.50
63 South Rockwood	0.11	0.10	0.89	0.18	0.36	20%	20%	0.22	0.43	0.19	0.38	0.17	0.28
64 Southgate	3.12	2.87	0.92	6.41	9.89	20%	20%	7.69	11.86	7.07	10.90	6.10	8.10
65 Sterling Heights	15.86	15.99	1.01	39.38	63.16	20%	20%	47.25	75.80	47.62	76.39	40.50	61.00

Table 15A
Development of Max Day and Peak Hour Demand Proxies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Average Daily Flow			Recent Max		Uniform Adj Factor		Baseline Contract Flow		FY 2012-13 Proxies		CONTRACT DEMANDS	
	Recent	FY 2011-12	Adj Factor	Max Day	Non-Coin PH	Max Day	Non-Coin PH	Max Day	Peak Hour	Max Day	Peak Hour	Max Day	Peak Hour
			(2)/(1)					(4)*[1+(6)]	(5)*[1+(7)]	(8)*(3)	(9)*(3)		
66 St. Clair County-Greenwood	0.28	0.31	1.08	1.16	1.37	20%	20%	1.35	1.35	1.35	1.35	-	-
67 St. Clair County-Burtchville Twp	0.19	0.16	0.87	0.40	0.63	20%	20%	0.47	0.75	0.41	0.66	0.45	0.68
68 St. Clair Shores	5.95	6.04	1.02	10.87	15.97	20%	20%	13.04	19.16	13.25	19.47	9.10	13.20
69 Sumpter Township	0.84	0.69	0.83	1.51	2.55	20%	20%	1.82	3.05	1.50	2.52	1.12	1.81
70 Sylvan Lake	0.17	0.16	0.93	0.37	0.60	20%	20%	0.44	0.72	0.41	0.67	0.38	0.53
71 Taylor	7.18	7.38	1.03	13.21	19.11	20%	20%	15.85	22.93	16.29	23.56	13.00	16.30
72 Trenton	2.53	2.05	0.81	5.05	6.89	20%	20%	6.06	8.27	4.91	6.70	-	-
73 Troy	11.70	11.80	1.01	30.98	48.80	20%	20%	37.17	58.56	37.52	59.11	28.00	38.00
74 Utica	0.58	0.61	1.05	1.11	2.09	20%	20%	1.33	2.50	1.40	2.64	1.18	1.93
75 Van Buren Township	3.04	3.28	1.08	7.16	12.75	20%	20%	8.59	15.30	9.28	16.52	6.90	9.40
76 Walled Lake	0.79	0.72	0.91	1.49	2.20	20%	20%	1.78	2.63	1.62	2.40	1.30	1.80
77 Warren	19.32	16.91	0.88	37.82	53.21	20%	20%	45.39	63.86	39.73	55.90	37.07	52.16
78 Washington Township	1.48	1.78	1.21	4.74	9.15	20%	20%	5.69	10.98	6.88	13.26	5.25	8.50
79 Wayne	2.95	2.97	1.01	7.20	9.96	20%	20%	8.65	11.95	8.71	12.03	8.28	8.28
80 West Bloomfield Township	7.76	8.20	1.06	19.21	32.88	20%	20%	23.06	39.46	24.35	41.67	23.10	37.20
81 Westland	7.94	6.18	0.78	15.51	22.25	20%	20%	18.61	26.70	14.48	20.78	13.10	18.70
82 Woodhaven	1.74	1.84	1.06	4.28	7.01	20%	20%	5.14	8.41	5.44	8.91	4.80	8.00
83 Ypsilanti Comm Util Auth	12.86	12.19	0.95	24.14	25.92	20%	20%	28.97	31.11	27.46	29.49	25.00	25.00
84 Wixom	2.15	2.15	1.00	5.48	5.48	0%	0%	5.48	5.48	5.48	5.48	5.10	5.10
Detroit	85.60	84.03	0.98	194.73	211.29	5%	5%	204.47	221.86	200.72	217.79		

Table 16A
Development of Distance and Elevation Factors

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Weighted Average Elevation	Average WTP Elevation	Elevation Differential	Distance / Elevation Conversion Factor	Elevation Factor	Distance Factor	Distance - Elevation Factor
	(ft)	(ft)	(ft)	(ft-e/mi-d)	(miles-dist)	(miles-dist)	(miles-dist)
			(1) -(2) (min=0)		(3)/(4)		(5)+(6)
1 Allen Park	602.0	610.0	0.0	10.56	0.0	21.0	21.0
2 Ash Township	635.0	610.0	25.0	10.56	2.4	29.9	32.3
3 Auburn Hills	954.0	610.0	344.0	10.56	32.6	28.8	61.4
4 Belleville	677.0	610.0	67.0	10.56	6.3	32.5	38.8
5 Berlin Township	598.0	610.0	0.0	10.56	0.0	34.6	34.6
6 Brownstown Township	601.0	610.0	0.0	10.56	0.0	28.5	28.5
7 Canton Township	741.0	610.0	131.0	10.56	12.4	32.2	44.6
8 Center Line	623.0	610.0	13.0	10.56	1.2	18.0	19.2
9 Chesterfield Township	617.0	610.0	7.0	10.56	0.7	28.3	29.0
10 Clinton Township	607.0	610.0	0.0	10.56	0.0	22.8	22.8
11 Commerce Township	977.0	610.0	367.0	10.56	34.8	31.4	66.2
12 Dearborn	605.0	610.0	0.0	10.56	0.0	20.3	20.3
13 Dearborn Heights	624.0	610.0	14.0	10.56	1.3	22.4	23.7
14 Eastpointe	612.0	610.0	2.0	10.56	0.2	18.1	18.3
15 Ecorse	591.0	610.0	0.0	10.56	0.0	20.1	20.1
16 Farmington	760.0	610.0	150.0	10.56	14.2	27.1	41.3
17 Farmington Hills	787.0	610.0	177.0	10.56	16.8	27.4	44.2
18 Ferndale	643.0	610.0	33.0	10.56	3.1	18.2	21.3
19 Flat Rock	601.0	610.0	0.0	10.56	0.0	29.7	29.7
20 Flint	866.0	610.0	256.0	10.56	24.2	52.0	76.2
21 Fraser	617.0	610.0	7.0	10.56	0.7	21.0	21.7
22 Garden City	638.0	610.0	28.0	10.56	2.7	25.0	27.7
23 Gibraltar	588.0	610.0	0.0	10.56	0.0	30.9	30.9
24 Greater Lapeer C.U.A.	849.0	610.0	239.0	10.56	22.6	47.0	69.6
25 Grosse Ile Township	584.0	610.0	0.0	10.56	0.0	27.0	27.0
26 Grosse Pt. Park	583.0	610.0	0.0	10.56	0.0	18.0	18.0
27 Grosse Pt. Shores	587.0	610.0	0.0	10.56	0.0	18.9	18.9
28 Grosse Pt. Woods	587.0	610.0	0.0	10.56	0.0	18.9	18.9
29 Hamtramck	633.0	610.0	23.0	10.56	2.2	16.7	18.9
30 Harper Woods	598.0	610.0	0.0	10.56	0.0	18.4	18.4
31 Harrison Township	587.0	610.0	0.0	10.56	0.0	24.0	24.0
32 Hazel Park	639.0	610.0	29.0	10.56	2.7	18.1	20.8
33 Huron Township	635.0	610.0	25.0	10.56	2.4	29.9	32.3
34 Inkster	638.0	610.0	28.0	10.56	2.7	24.4	27.1
35 Keego Harbor	942.0	610.0	332.0	10.56	31.4	29.1	60.5
36 Lenox Twp.	619.0	610.0	9.0	10.56	0.9	30.5	31.4
37 Lincoln Park	593.0	610.0	0.0	10.56	0.0	20.4	20.4
38 Livonia	688.0	610.0	78.0	10.56	7.4	26.2	33.6
39 Macomb Township	622.0	610.0	12.0	10.56	1.1	26.8	27.9
40 Madison Heights	629.0	610.0	19.0	10.56	1.8	19.4	21.2
41 Melvindale	594.0	610.0	0.0	10.56	0.0	19.9	19.9
42 New Haven, Vil. of	613.0	610.0	3.0	10.56	0.3	29.8	30.1
43 Northville	836.0	610.0	226.0	10.56	21.4	31.1	52.5
44 Northville Township	855.0	610.0	245.0	10.56	23.2	30.5	53.7
45 Novi	936.0	610.0	326.0	10.56	30.9	31.4	62.3
46 Oak Park	669.0	610.0	59.0	10.56	5.6	19.7	25.3

TFG

Table 16A
Development of Distance and Elevation Factors

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Weighted Average Elevation	Average WTP Elevation	Elevation Differential	Distance / Elevation Conversion Factor	Elevation Factor	Distance Factor	Distance - Elevation Factor
	(ft)	(ft)	(ft)	(ft-e/mi-d)	(miles-dist)	(miles-dist)	(miles-dist)
			(1) -(2) (min=0)		(3)/(4)		(5)+(6)
47 Oakland Co. Drain Comm.	617.0	610.0	7.0	10.56	0.7	20.4	21.1
48 Orion Twp	1064.0	610.0	454.0	10.56	43.0	31.1	74.1
49 Plymouth	750.0	610.0	140.0	10.56	13.3	30.8	44.1
50 Plymouth Township	794.0	610.0	184.0	10.56	17.4	31.3	48.7
51 Pontiac	930.0	610.0	320.0	10.56	30.3	27.5	57.8
52 Redford Township	635.0	610.0	25.0	10.56	2.4	22.6	25.0
53 River Rouge	585.0	610.0	0.0	10.56	0.0	19.4	19.4
54 Riverview	594.0	610.0	0.0	10.56	0.0	25.3	25.3
55 Rochester Hills	840.0	610.0	230.0	10.56	21.8	26.9	48.7
56 Rockwood	592.0	610.0	0.0	10.56	0.0	32.7	32.7
57 Romeo	789.0	610.0	179.0	10.56	17.0	32.2	49.2
58 Romulus	652.0	610.0	42.0	10.56	4.0	27.3	31.3
59 Roseville	620.0	610.0	10.0	10.56	0.9	19.0	19.9
60 Royal Oak Township	670.0	610.0	60.0	10.56	5.7	19.2	24.9
61 S O C W A	737.0	610.0	127.0	10.56	12.0	22.3	34.3
62 Shelby Township	694.0	610.0	84.0	10.56	8.0	26.4	34.4
63 South Rockwood	586.0	610.0	0.0	10.56	0.0	33.4	33.4
64 Southgate	601.0	610.0	0.0	10.56	0.0	23.7	23.7
65 Sterling Heights	632.0	610.0	22.0	10.56	2.1	22.3	24.4
66 St. Clair County-Greenwood	774.0	610.0	164.0	10.56	15.5	45.4	60.9
67 St. Clair County-Burtchville Twp	620.0	610.0	10.0	10.56	0.9	47.2	48.1
68 St. Clair Shores	594.0	610.0	0.0	10.56	0.0	20.2	20.2
69 Sumpter Township	663.0	610.0	53.0	10.56	5.0	32.9	37.9
70 Sylvan Lake	938.0	610.0	328.0	10.56	31.1	29.1	60.2
71 Taylor	617.0	610.0	7.0	10.56	0.7	23.5	24.2
72 Trenton	596.0	610.0	0.0	10.56	0.0	25.8	25.8
73 Troy	755.0	610.0	145.0	10.56	13.7	24.3	38.0
74 Utica	660.0	610.0	50.0	10.56	4.7	24.4	29.1
75 Van Buren Township	677.0	610.0	67.0	10.56	6.3	32.5	38.8
76 Walled Lake	959.0	610.0	349.0	10.56	33.0	31.7	64.7
77 Warren	623.0	610.0	13.0	10.56	1.2	18.0	19.2
78 Washington Township	754.0	610.0	144.0	10.56	13.6	29.6	43.2
79 Wayne	646.0	610.0	36.0	10.56	3.4	25.9	29.3
80 West Bloomfield Township	923.0	610.0	313.0	10.56	29.6	28.5	58.1
81 Westland	654.0	610.0	44.0	10.56	4.2	26.2	30.4
82 Woodhaven	597.0	610.0	0.0	10.56	0.0	28.3	28.3
83 Ypsilanti Comm Util Auth	726.0	610.0	116.0	10.56	11.0	35.8	46.8
84 Wixom	944.0	610.0	334.0	10.56	31.6	33.9	65.5
Detroit	632.0	610.0	22.0	10.56	2.1	16.9	19.0

PRELIMINARY

**Table 17A
Consolidated Units of Service**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Commodity	Max Day Usage	Peak Hour Usage	Peak Hour Increment	Peak Hour Distance	Commodity Dist/Elev	Max Day Dist/Elev	Peak Hour Usage Dist/Elev	Peak Hour Incr Dist/Elev	Customer B	
	<i>Mcf/day</i>	<i>Mcf/day</i>	<i>Mcf/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Equiv. Meters</i>
			(3)-(2)							
1 Allen Park	414.5	859.7	1,193.9	334.2	25,072.3	8,704.5	18,054.1	25,072.3	7,018.2	961
2 Ash Township	126.0	223.0	293.8	70.9	8,785.5	4,069.8	7,202.2	9,490.7	2,288.5	160
3 Auburn Hills	547.9	1,394.2	1,601.4	207.2	46,119.9	33,641.1	85,602.6	98,325.0	12,722.4	806
4 Belleville	61.6	93.7	140.5	46.8	4,565.6	2,390.1	3,635.3	5,450.6	1,815.4	123
5 Berlin Township	85.5	192.0	301.6	109.6	10,436.2	2,958.3	6,643.4	10,436.2	3,792.8	211
6 Brownstown Township	406.0	1,002.7	1,550.8	548.1	44,197.5	11,571.0	28,576.9	44,197.5	15,620.6	523
7 Canton Township	1,329.0	3,154.6	4,959.3	1,804.7	159,689.4	59,273.4	140,695.7	221,184.8	80,489.1	1,820
8 Center Line	120.0	181.5	281.7	100.3	5,071.4	2,304.0	3,484.5	5,409.5	1,925.0	155
9 Chesterfield Township	554.5	1,467.9	1,962.5	494.6	55,538.8	16,080.5	42,569.1	56,912.5	14,343.4	725
10 Clinton Township	1,415.9	2,975.3	3,443.1	467.9	78,503.7	32,282.5	67,836.0	78,503.7	10,667.7	1,226
11 Commerce Township	330.1	895.2	1,589.0	693.8	49,893.6	21,852.6	59,260.0	105,189.7	45,929.7	520
12 Dearborn	2,067.9	3,936.1	5,380.3	1,444.2	109,219.2	41,978.4	79,902.0	109,219.2	29,317.2	0
13 Dearborn Heights	737.0	1,315.2	1,836.6	521.4	41,138.7	17,466.9	31,170.2	43,526.3	12,356.1	625
14 Eastpointe	395.1	587.3	814.5	227.3	14,742.7	7,230.3	10,746.8	14,905.6	4,158.8	1,013
15 Ecorse	420.5	564.8	631.7	66.8	12,696.4	8,452.1	11,352.9	12,696.4	1,343.5	285
16 Farmington	162.5	316.2	342.9	26.7	9,293.1	6,711.3	13,058.3	14,162.5	1,104.2	358
17 Farmington Hills	1,272.3	2,928.9	5,201.5	2,272.6	142,520.0	56,235.7	129,457.0	229,904.6	100,447.6	2,997
18 Ferndale	263.8	418.2	518.5	100.3	9,436.7	5,618.9	8,908.5	11,044.1	2,135.5	568
19 Flat Rock	204.7	368.7	489.0	120.3	14,522.8	6,079.6	10,949.5	14,522.8	3,573.3	335
20 Flint	4,193.7	7,071.0	7,360.5	289.5	382,746.0	319,559.9	538,810.2	560,870.1	22,059.9	3,600
21 Fraser	224.7	431.2	671.8	240.6	14,108.5	4,876.0	9,357.3	14,578.8	5,221.6	334
22 Garden City	258.4	470.6	738.0	267.4	18,449.8	7,157.7	13,036.4	20,442.3	7,405.9	491
23 Gibraltar	61.4	132.6	196.2	63.6	6,062.6	1,897.3	4,097.3	6,062.6	1,965.2	176
24 Greater Lapeer C.U.A.	355.9	633.0	786.5	153.5	36,965.5	24,770.6	44,056.8	54,740.4	10,683.6	1,150
25 Grosse Ile Township	175.3	445.7	741.2	295.5	20,012.4	4,733.1	12,033.9	20,012.4	7,978.5	400
26 Grosse Pt. Park	190.4	487.3	763.5	276.2	13,743.0	3,427.2	8,771.4	13,743.0	4,971.6	291
27 Grosse Pt. Shores	58.9	195.3	369.0	173.8	6,975.0	1,113.2	3,690.5	6,975.0	3,284.5	283
28 Grosse Pt. Woods	249.9	680.1	680.1	0.0	12,853.0	4,723.1	12,853.0	12,853.0	0.0	461
29 Hamtramck	195.3	265.7	379.3	113.6	6,334.7	3,691.2	5,021.6	7,169.2	2,147.6	691
30 Harper Woods	186.0	353.2	502.9	149.7	9,253.5	3,422.4	6,498.6	9,253.5	2,754.9	357
31 Harrison Township	314.2	669.5	846.0	176.5	20,303.1	7,540.8	16,068.1	20,303.1	4,235.0	465

**Table 17A
Consolidated Units of Service**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Commodity	Max Day Usage	Peak Hour Usage	Peak Hour Increment	Peak Hour Distance	Commodity Dist/Elev	Max Day Dist/Elev	Peak Hour Usage Dist/Elev	Peak Hour Incr Dist/Elev	Customer B	
	<i>Mcf/day</i>	<i>Mcf/day</i>	<i>Mcf/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Equiv. Meters</i>
			(3)-(2)							
32 Hazel Park	161.1	237.7	358.0	120.3	6,479.2	3,350.9	4,943.3	7,445.8	2,502.5	554
33 Huron Township	191.2	476.9	726.9	250.0	21,733.4	6,175.8	15,403.5	23,477.9	8,074.4	278
34 Inkster	367.1	652.2	845.1	192.9	20,620.4	9,948.4	17,674.6	22,902.2	5,227.6	393
35 Keego Harbor	35.9	63.8	90.5	26.7	2,633.3	2,172.0	3,857.3	5,474.8	1,617.5	123
36 Lenox Twp.	46.8	75.8	118.5	42.8	3,615.1	1,469.5	2,378.6	3,721.8	1,343.2	400
37 Lincoln Park	526.0	1,100.1	1,595.9	495.8	32,556.4	10,730.4	22,442.0	32,556.4	10,114.3	813
38 Livonia	1,729.6	4,423.0	5,452.3	1,029.3	142,851.6	58,114.6	148,613.1	183,198.9	34,585.8	2,527
39 Macomb Township	1,148.8	3,850.8	5,454.9	1,604.2	146,191.9	32,051.5	107,436.1	152,192.3	44,756.2	1,050
40 Madison Heights	517.0	791.2	991.7	200.5	19,239.3	10,960.4	16,773.3	21,024.4	4,251.0	755
41 Melvindale	147.4	237.7	317.9	80.2	6,325.5	2,933.3	4,729.4	6,325.5	1,596.1	533
42 New Haven, Vil. of	52.1	99.1	165.9	66.8	4,944.3	1,568.2	2,982.2	4,994.1	2,011.9	105
43 Northville	107.4	224.1	245.4	21.4	7,633.2	5,638.5	11,762.7	12,885.7	1,122.9	211
44 Northville Township	560.3	1,556.1	2,478.5	922.4	75,594.8	30,088.1	83,563.8	133,096.4	49,532.7	521
45 Novi	865.5	2,339.2	3,368.6	1,029.3	105,773.2	53,920.7	145,734.2	209,862.1	64,127.9	1,919
46 Oak Park	344.9	572.5	572.5	0.0	11,278.1	8,726.0	14,484.0	14,484.0	0.0	285
47 Oakland Co. Drain Comm.	35.3	35.8	35.8	0.0	730.7	744.8	755.8	755.8	0.0	115
48 Orion Twp	521.6	1,192.1	1,660.0	467.9	51,625.0	38,650.6	88,333.5	123,003.5	34,670.0	285
49 Plymouth	151.8	258.2	366.4	108.3	11,286.4	6,694.4	11,384.9	16,160.1	4,775.2	203
50 Plymouth Township	614.0	1,491.1	1,504.5	13.4	47,090.9	29,901.8	72,618.3	73,269.3	651.0	323
51 Pontiac	1,000.0	1,833.7	1,833.7	0.0	50,428.0	57,800.0	105,990.6	105,990.6	0.0	2,005
52 Redford Township	625.5	1,106.3	1,587.5	481.2	35,878.1	15,637.5	27,656.9	39,688.2	12,031.2	1,829
53 River Rouge	191.5	280.8	334.2	53.5	6,484.1	3,715.1	5,446.8	6,484.1	1,037.4	431
54 Riverview	172.9	399.3	550.6	151.3	13,930.2	4,374.4	10,102.3	13,930.2	3,827.9	146
55 Rochester Hills	1,239.7	3,298.0	5,116.1	1,818.1	137,621.8	60,373.4	160,612.5	249,151.8	88,539.3	2,385
56 Rockwood	47.1	80.1	125.5	45.5	4,104.3	1,540.2	2,618.0	4,104.3	1,486.3	88
57 Romeo	34.0	72.1	100.1	28.1	3,224.8	1,672.8	3,546.2	4,927.4	1,381.2	155
58 Romulus	687.4	1,213.8	1,482.5	268.7	40,472.6	21,515.6	37,992.4	46,402.7	8,410.2	944
59 Roseville	650.1	953.3	1,274.2	320.8	24,209.1	12,937.0	18,971.2	25,355.8	6,384.6	885
60 Royal Oak Township	38.1	71.0	107.1	36.1	2,055.8	948.7	1,767.3	2,666.1	898.7	146
61 S O C W A	4,391.5	9,705.3	9,705.3	0.0	216,429.0	150,628.5	332,893.1	332,893.1	0.0	5,156
62 Shelby Township	1,343.3	3,466.1	6,473.9	3,007.8	170,911.6	46,209.5	119,234.3	222,703.1	103,468.7	1,246

**Table 17A
Consolidated Units of Service**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Commodity	Max Day Usage	Peak Hour Usage	Peak Hour Increment	Peak Hour Distance	Commodity Dist/Elev	Max Day Dist/Elev	Peak Hour Usage Dist/Elev	Peak Hour Incr Dist/Elev	Customer B	
	<i>Mcf/day</i>	<i>Mcf/day</i>	<i>Mcf/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Mcf-miles/day</i>	<i>Equiv. Meters</i>
			(3)-(2)							
63 South Rockwood	15.1	25.0	39.0	14.0	1,302.5	504.3	833.7	1,302.5	468.8	88
64 Southgate	418.6	850.5	1,117.8	267.4	26,492.2	9,920.8	20,155.7	26,492.2	6,336.5	361
65 Sterling Heights	2,320.8	5,597.9	8,338.3	2,740.5	185,944.4	56,627.5	136,587.8	203,454.8	66,867.0	3,218
66 St. Clair County-Greenwood	48.2	187.0	187.1	0.1	8,494.3	2,935.4	11,388.3	11,394.4	6.1	438
67 St. Clair County-Burtchville Twp	26.0	64.3	95.0	30.7	4,484.1	1,250.6	3,090.7	4,569.6	1,478.9	105
68 St. Clair Shores	870.7	1,279.5	1,827.6	548.1	36,917.2	17,588.1	25,845.8	36,917.2	11,071.4	1,239
69 Sumpter Township	104.4	161.5	253.8	92.2	8,348.8	3,956.8	6,121.7	9,617.6	3,495.9	123
70 Sylvan Lake	23.8	53.2	73.3	20.1	2,131.6	1,432.8	3,202.6	4,409.7	1,207.1	105
71 Taylor	1,075.6	1,827.1	2,268.3	441.1	53,304.9	26,029.5	44,217.0	54,892.7	10,675.7	1,068
72 Trenton	301.1	683.1	922.3	239.2	23,795.3	7,768.4	17,624.0	23,795.3	6,171.4	1,185
73 Troy	1,726.0	3,891.0	5,227.8	1,336.8	127,034.6	65,588.0	147,856.3	198,654.9	50,798.6	2,694
74 Utica	89.9	165.4	265.7	100.3	6,483.2	2,616.1	4,814.4	7,732.0	2,917.6	155
75 Van Buren Township	493.4	977.4	1,311.6	334.2	42,626.9	19,143.9	37,923.0	50,890.0	12,967.0	1,098
76 Walled Lake	107.7	185.6	252.4	66.8	8,001.9	6,968.2	12,007.3	16,331.9	4,324.6	123
77 Warren	2,417.3	5,112.5	7,129.8	2,017.2	128,336.0	46,412.2	98,160.7	136,891.7	38,731.0	2,292
78 Washington Township	265.5	728.9	1,163.4	434.5	34,436.2	11,469.6	31,489.5	50,258.2	18,768.7	278
79 Wayne	437.0	1,146.6	1,146.6	0.0	29,696.3	12,804.1	33,594.6	33,594.6	0.0	600
80 West Bloomfield Township	1,216.6	3,208.6	5,093.5	1,884.9	145,165.2	70,684.5	186,420.9	295,933.3	109,512.4	2,255
81 Westland	909.0	1,834.4	2,583.0	748.6	67,675.3	27,633.6	55,766.2	78,524.0	22,757.8	1,941
82 Woodhaven	273.4	668.5	1,096.2	427.8	31,023.7	7,737.2	18,917.6	31,023.7	12,106.1	246
83 Ypsilanti Comm Util Auth	1,855.1	3,567.0	3,567.0	0.0	127,699.1	86,818.7	166,936.2	166,936.2	0.0	1,930
84 Wixom	325.2	719.3	719.3	0.0	24,383.3	21,300.6	47,112.2	47,112.2	0.0	155
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Subtotal Wholesale	51,244.2	109,801.3	146,286.5	36,485.2	3,936,979.7	1,930,197.0	4,146,168.5	5,449,014.5	1,302,845.6	70,616
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Detroit Retail	17,285.2	27,889.7	30,171.8	2,282.2	509,904.1	328,418.8	529,903.8	573,265.0	43,361.2	367,078
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TOTAL SYSTEM	68,529.4	137,691.0	176,458.3	38,767.4	4,446,883.8	2,258,615.8	4,676,072.3	6,022,279.5	1,346,206.8	437,694

Table 19A
Allocation of Costs to Customers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Commodity	Max Day Usage	Peak Hour Increment	Peak Hour Distance	Commodity Dist/Elev	Max Day Dist/Elev	Peak Hour Usage Dist/Elev	Peak Hour Incr Dist/Elev	Customer B	Wholesale Cust Support	TOTAL
<i>Unit Costs</i>	214.33	997.27	269.05	9.51	11.78	1.52	13.61	9.88	16.89	48.47	
1 Allen Park	88,839	857,370	89,916	238,538	102,548	27,478	341,334	69,361	16,229	20,092	1,851,705
2 Ash Township	27,005	222,369	19,062	83,585	47,946	10,962	129,206	22,617	2,702	6,108	571,562
3 Auburn Hills	117,430	1,390,369	55,748	438,785	396,326	130,287	1,338,597	125,735	13,612	26,558	4,033,447
4 Belleville	13,203	93,436	12,588	43,437	28,158	5,533	74,204	17,942	2,077	2,986	293,564
5 Berlin Township	18,325	191,481	29,492	99,290	34,852	10,111	142,078	37,484	3,563	4,144	570,820
6 Brownstown Township	87,017	999,960	147,461	420,495	136,318	43,494	601,705	154,378	8,832	19,680	2,619,340
7 Canton Township	284,842	3,145,991	485,544	1,519,285	698,300	214,139	3,011,210	795,474	30,736	64,421	10,249,942
8 Center Line	25,719	180,989	26,975	48,249	27,143	5,303	73,645	19,025	2,618	5,817	415,483
9 Chesterfield Township	118,845	1,463,888	133,070	528,396	189,444	64,790	774,807	141,756	12,244	26,878	3,454,118
10 Clinton Township	303,467	2,967,132	125,882	746,884	380,320	103,246	1,068,749	105,429	20,705	68,633	5,890,447
11 Commerce Township	70,750	892,719	186,665	474,688	257,445	90,194	1,432,053	453,923	8,782	16,001	3,883,220
12 Dearborn	443,209	3,925,304	388,555	1,039,111	494,548	121,611	1,486,910	289,742	0	100,237	8,289,227
13 Dearborn Heights	157,960	1,311,603	140,268	391,394	205,778	47,441	592,567	122,115	10,555	35,725	3,015,406
14 Eastpointe	84,681	585,653	61,143	140,262	85,180	16,357	202,925	41,101	17,108	19,152	1,253,562
15 Ecorse	90,125	563,279	17,983	120,794	99,574	17,279	172,849	13,278	4,813	20,383	1,120,357
16 Farmington	34,828	315,317	7,193	88,415	79,066	19,875	192,808	10,913	6,046	7,877	762,338
17 Farmington Hills	272,690	2,920,887	611,426	1,355,935	662,513	197,034	3,129,921	992,724	50,613	61,672	10,255,415
18 Ferndale	56,540	417,099	26,975	89,781	66,196	13,559	150,354	21,105	9,592	12,787	863,988
19 Flat Rock	43,873	367,662	32,370	138,170	71,624	16,665	197,713	35,315	5,657	9,922	918,971
20 Flint	898,827	7,051,675	77,889	3,641,445	3,764,735	820,069	7,635,686	218,018	60,797	203,281	24,372,422
21 Fraser	48,160	430,031	64,739	134,228	57,444	14,242	198,476	51,605	5,641	10,892	1,015,458
22 Garden City	55,382	469,344	71,932	175,531	84,325	19,841	278,301	73,193	8,292	12,525	1,248,666
23 Gibraltar	13,160	132,238	17,111	57,680	22,352	6,236	82,536	19,422	2,972	2,976	356,683
24 Greater Lapeer C.U.A.	76,279	631,270	41,299	351,690	291,822	67,054	745,236	105,586	19,421	17,252	2,346,909
25 Grosse Ile Township	37,572	444,482	79,503	190,398	55,761	18,316	272,449	78,852	6,755	8,497	1,192,585
26 Grosse Pt. Park	40,808	485,968	74,311	130,751	40,376	13,350	187,097	49,134	4,914	9,229	1,035,938
27 Grosse Pt. Shores	12,624	194,730	46,756	66,360	13,115	5,617	94,958	32,461	4,779	2,855	474,255
28 Grosse Pt. Woods	53,561	678,197	0	122,283	55,643	19,562	174,981	0	7,785	12,113	1,124,125
29 Hamtramck	41,858	264,967	30,571	60,268	43,486	7,643	97,601	21,225	11,670	9,467	588,756
30 Harper Woods	39,865	352,220	40,282	88,038	40,319	9,891	125,977	27,227	6,029	9,016	738,864
31 Harrison Township	67,342	667,674	47,475	193,164	88,838	24,456	276,406	41,855	7,853	15,230	1,430,293
32 Hazel Park	34,528	237,007	32,370	61,643	39,477	7,524	101,367	24,732	9,356	7,809	555,813

Table 19A
Allocation of Costs to Customers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Commodity	Max Day Usage	Peak Hour Increment	Peak Hour Distance	Commodity Dist/Elev	Max Day Dist/Elev	Peak Hour Usage Dist/Elev	Peak Hour Incr Dist/Elev	Customer B	Wholesale Cust Support	TOTAL
<i>Unit Costs</i>	214.33	997.27	269.05	9.51	11.78	1.52	13.61	9.88	16.89	48.47	
33 Huron Township	40,980	475,584	67,257	206,772	72,757	23,444	319,628	79,799	4,695	9,268	1,300,184
34 Inkster	78,680	650,418	51,899	196,182	117,202	26,901	311,791	51,664	6,637	17,794	1,509,168
35 Keego Harbor	7,694	63,582	7,193	25,053	25,588	5,871	74,534	15,986	2,077	1,740	229,318
36 Lenox Twp.	10,031	75,544	11,509	34,394	17,312	3,620	50,669	13,275	6,755	2,269	225,378
37 Lincoln Park	112,737	1,097,093	133,393	309,742	126,415	34,157	443,223	99,960	13,730	25,497	2,395,947
38 Livonia	370,702	4,410,921	276,940	1,359,090	684,648	226,189	2,494,070	341,811	42,676	83,839	10,290,886
39 Macomb Township	246,220	3,840,231	431,595	1,390,870	377,599	163,518	2,071,946	442,326	17,732	55,686	9,037,723
40 Madison Heights	110,808	789,033	53,949	183,043	129,124	25,529	286,226	42,013	12,750	25,061	1,657,536
41 Melvindale	31,592	237,007	21,580	60,181	34,557	7,198	86,115	15,774	9,001	7,145	510,150
42 New Haven, Vil. of	11,166	98,806	17,983	47,040	18,475	4,539	67,990	19,884	1,773	2,525	290,181
43 Northville	23,019	223,440	5,755	72,622	66,427	17,903	175,426	11,098	3,563	5,206	604,459
44 Northville Township	120,088	1,551,869	248,167	719,209	354,468	127,184	1,811,974	489,532	8,799	27,159	5,458,449
45 Novi	185,501	2,332,840	276,940	1,006,326	635,240	221,807	2,857,063	633,776	32,408	41,953	8,223,854
46 Oak Park	73,922	570,926	0	107,300	102,801	22,045	197,185	0	4,813	16,718	1,095,710
47 Oakland Co. Drain Comm.	7,566	35,722	0	6,952	8,774	1,150	10,289	0	1,942	1,711	74,106
48 Orion Twp	111,793	1,188,827	125,882	491,160	455,343	134,444	1,674,570	342,644	4,813	25,284	4,554,760
49 Plymouth	32,535	257,456	29,133	107,379	78,867	17,328	220,004	47,193	3,428	7,358	800,681
50 Plymouth Township	131,597	1,487,059	3,597	448,023	352,273	110,525	997,488	6,434	5,455	29,762	3,572,213
51 Pontiac	214,328	1,828,735	0	479,772	680,942	161,318	1,442,956	0	33,860	48,473	4,890,384
52 Redford Township	134,062	1,103,253	129,478	341,344	184,225	42,094	540,315	118,904	30,888	30,320	2,654,883
53 River Rouge	41,044	279,994	14,386	61,690	43,768	8,290	88,275	10,253	7,279	9,283	564,262
54 Riverview	37,057	398,209	40,707	132,532	51,535	15,376	189,646	37,831	2,466	8,381	913,740
55 Rochester Hills	265,702	3,288,984	489,141	1,309,334	711,259	244,452	3,391,953	875,034	40,278	60,092	10,676,229
56 Rockwood	10,095	79,842	12,229	39,048	18,145	3,985	55,876	14,689	1,486	2,283	237,678
57 Romeo	7,287	71,880	7,553	30,681	19,707	5,397	67,082	13,650	2,618	1,648	227,503
58 Romulus	147,329	1,210,499	72,292	385,056	253,475	57,824	631,726	83,118	15,942	33,320	2,890,581
59 Roseville	139,335	950,722	86,319	230,325	152,411	28,874	345,194	63,099	14,946	31,512	2,042,737
60 Royal Oak Township	8,166	70,783	9,711	19,559	11,177	2,690	36,296	8,882	2,466	1,847	171,577
61 S O C W A	941,221	9,678,814	0	2,059,106	1,774,554	506,663	4,532,007	0	87,075	212,869	19,792,309
62 Shelby Township	287,907	3,456,641	809,240	1,626,053	544,394	181,475	3,031,880	1,022,581	21,042	65,114	11,046,327
63 South Rockwood	3,236	24,892	3,776	12,392	5,941	1,269	17,732	4,633	1,486	732	76,089
64 Southgate	89,718	848,127	71,932	252,047	116,877	30,677	360,665	62,624	6,097	20,291	1,859,055
65 Sterling Heights	497,412	5,582,563	737,307	1,769,075	667,129	207,887	2,769,834	660,847	54,346	112,496	13,058,896

Table 19A
Allocation of Costs to Customers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Commodity	Max Day Usage	Peak Hour Increment	Peak Hour Distance	Commodity Dist/Elev	Max Day Dist/Elev	Peak Hour Usage Dist/Elev	Peak Hour Incr Dist/Elev	Customer B	Wholesale Cust Support	TOTAL
<i>Unit Costs</i>	214.33	997.27	269.05	9.51	11.78	1.52	13.61	9.88	16.89	48.47	
66 St. Clair County-Greenwood	10,331	186,489	27	80,815	34,582	17,333	155,123	60	7,397	2,336	494,493
67 St. Clair County-Burtchville Twp	5,573	64,081	8,272	42,662	14,733	4,704	62,211	14,616	1,773	1,260	219,885
68 St. Clair Shores	186,615	1,275,996	147,461	351,230	207,205	39,337	502,591	109,419	20,924	42,205	2,882,983
69 Sumpter Township	22,376	161,081	24,817	79,430	46,615	9,317	130,934	34,550	2,077	5,061	516,258
70 Sylvan Lake	5,101	53,053	5,395	20,280	16,880	4,874	60,034	11,930	1,773	1,154	180,474
71 Taylor	230,531	1,822,154	118,689	507,143	306,654	67,298	747,309	105,508	18,036	52,138	3,975,460
72 Trenton	64,534	681,233	64,356	226,388	91,520	26,824	323,949	60,992	20,012	14,595	1,574,403
73 Troy	369,930	3,880,321	359,662	1,208,607	772,692	225,037	2,704,488	502,043	45,496	83,664	10,151,940
74 Utica	19,268	164,991	26,975	61,681	30,820	7,328	105,263	28,835	2,618	4,358	452,137
75 Van Buren Township	105,749	974,725	89,916	405,552	225,534	57,719	692,816	128,153	18,543	23,917	2,722,624
76 Walled Lake	23,083	185,078	17,983	76,130	82,092	18,275	222,342	42,740	2,077	5,221	675,021
77 Warren	518,095	5,098,565	542,730	1,220,989	546,782	149,401	1,863,644	382,778	38,707	117,174	10,478,865
78 Washington Township	56,904	726,931	116,890	327,626	135,123	47,927	684,215	185,491	4,695	12,870	2,298,672
79 Wayne	93,661	1,143,441	0	282,531	150,845	51,131	457,357	0	10,133	21,183	2,210,282
80 West Bloomfield Township	260,751	3,199,851	507,124	1,381,102	832,734	283,733	4,028,836	1,082,311	38,082	58,972	11,673,496
81 Westland	194,824	1,829,402	201,411	643,863	325,551	84,876	1,069,026	224,915	32,780	44,062	4,650,710
82 Woodhaven	58,597	666,640	115,092	295,159	91,152	28,793	422,357	119,645	4,154	13,253	1,814,842
83 Ypsilanti Comm Util Auth	397,600	3,557,265	0	1,214,929	1,022,811	254,077	2,272,669	0	32,594	89,922	8,841,867
84 Wixom	69,699	717,305	0	231,983	250,942	71,705	641,385	0	2,618	15,763	2,001,400
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Subtotal Wholesale	10,983,066	109,501,209	9,816,197	37,456,425	22,739,648	6,310,471	74,182,883	12,876,027	1,192,559	2,483,959	287,542,444

**Table 20A
Calculation of Water Rates**

	(1)	(2) Recovery Basis		(3)	(4)	(5) FY 2013 Rate Schedule		(6)
	Allocated Revenue Requirement	Fixed Monthly Charges	Commodity Charges	Commodity Charges	Volume	Monthly Charge	Commodity Rate	
	\$	\$	\$	\$	(Mcf)	\$/month	\$/Mcf	
1 Allen Park	1,851,705	850,158	1,001,547		140,000	70,847	7.15	
2 Ash Township	571,562	239,624	331,938		41,200	19,969	8.06	
3 Auburn Hills	4,033,447	1,407,158	2,626,289		180,000	117,263	14.59	
4 Belleville	293,564	109,605	183,959		20,000	9,134	9.20	
5 Berlin Township	570,820	231,283	339,537		27,500	19,274	12.35	
6 Brownstown Township	2,619,340	1,107,004	1,512,336		133,500	92,250	11.33	
7 Canton Township	10,249,942	3,666,660	6,583,282		431,500	305,555	15.26	
8 Center Line	415,483	178,321	237,162		41,000	14,860	5.78	
9 Chesterfield Township	3,454,118	1,538,743	1,915,375		182,500	128,229	10.50	
10 Clinton Township	5,890,447	2,834,354	3,056,093		475,000	236,196	6.43	
11 Commerce Township	3,883,220	1,077,841	2,805,379		107,500	89,820	26.10	
12 Dearborn	8,289,227	3,778,078	4,511,149		700,000	314,840	6.44	
13 Dearborn Heights	3,015,406	1,315,350	1,700,056		247,600	109,613	6.87	
14 Eastpointe	1,253,562	571,566	681,996		134,800	47,631	5.06	
15 Ecorse	1,120,357	527,230	593,127		142,500	43,936	4.16	
16 Farmington	762,338	313,855	448,483		53,700	26,155	8.35	
17 Farmington Hills	10,255,415	3,378,581	6,876,834		420,000	281,548	16.37	
18 Ferndale	863,988	394,432	469,556		90,000	32,869	5.22	
19 Flat Rock	918,971	397,178	521,793		67,000	33,098	7.79	
20 Flint	24,372,422	8,483,995	15,888,427		1,275,000	707,000	12.46	
21 Fraser	1,015,458	437,983	577,475		75,900	36,499	7.61	
22 Garden City	1,248,666	507,179	741,487		86,000	42,265	8.62	
23 Gibraltar	356,683	150,455	206,228		20,000	12,538	10.31	
24 Greater Lapeer C.U.A.	2,346,909	795,885	1,551,024		110,000	66,324	14.10	
25 Grosse Ile Township	1,192,585	497,811	694,774		58,000	41,484	11.98	
26 Grosse Pt. Park	1,035,938	471,387	564,551		65,000	39,282	8.69	
27 Grosse Pt. Shores	474,255	203,548	270,707		20,000	16,962	13.54	
28 Grosse Pt. Woods	1,124,125	603,313	520,812		85,000	50,276	6.13	
29 Hamtramck	588,756	260,426	328,330		67,000	21,702	4.90	
30 Harper Woods	738,864	340,332	398,532		63,400	28,361	6.29	
31 Harrison Township	1,430,293	663,584	766,709		105,000	55,299	7.30	
32 Hazel Park	555,813	238,233	317,580		55,000	19,853	5.77	
33 Huron Township	1,300,184	533,061	767,123		62,600	44,422	12.25	
34 Inkster	1,509,168	655,657	853,511		122,500	54,638	6.97	
35 Keego Harbor	229,318	70,862	158,456		11,800	5,905	13.43	
36 Lenox Twp.	225,378	92,888	132,490		15,300	7,741	8.66	
37 Lincoln Park	2,395,947	1,084,711	1,311,236		178,000	90,393	7.37	
38 Livonia	10,290,886	4,433,319	5,857,567		573,400	369,443	10.22	
39 Macomb Township	9,037,723	4,011,681	5,026,042		380,000	334,307	13.23	
40 Madison Heights	1,657,536	753,627	903,909		175,600	62,802	5.15	
41 Melvindale	510,150	235,885	274,265		50,000	19,657	5.49	

**Table 20A
Calculation of Water Rates**

	(1)	(2) Recovery Basis		(4)	(5) FY 2013 Rate Schedule		(6)
	Allocated Revenue Requirement	Fixed Monthly Charges	Commodity Charges	Volume	Monthly Charge	Commodity Rate	
	\$	\$	\$	(Mcf)	\$/month	\$/Mcf	
42 New Haven, Vil. of	290,181	115,853	174,328	17,000	9,654	10.25	
43 Northville	604,459	230,366	374,093	35,000	19,197	10.69	
44 Northville Township	5,458,449	1,770,253	3,688,196	183,000	147,521	20.15	
45 Novi	8,223,854	2,613,436	5,610,418	281,800	217,786	19.91	
46 Oak Park	1,095,710	516,628	579,082	117,000	43,052	4.95	
47 Oakland Co. Drain Comm.	74,106	34,847	39,259	12,000	2,904	3.27	
48 Orion Twp	4,554,760	1,304,330	3,250,430	170,000	108,694	19.12	
49 Plymouth	800,681	287,657	513,024	49,500	23,971	10.36	
50 Plymouth Township	3,572,213	1,477,934	2,094,279	200,000	123,161	10.47	
51 Pontiac	4,890,384	1,791,841	3,098,543	330,000	149,320	9.39	
52 Redford Township	2,654,883	1,139,701	1,515,182	210,000	94,975	7.22	
53 River Rouge	564,262	267,608	296,654	65,000	22,301	4.56	
54 Riverview	913,740	408,596	505,144	57,500	34,050	8.79	
55 Rochester Hills	10,676,229	3,580,655	7,095,574	410,000	298,388	17.31	
56 Rockwood	237,678	94,855	142,823	15,300	7,905	9.33	
57 Romeo	227,503	82,204	145,299	11,000	6,850	13.21	
58 Romulus	2,890,581	1,242,164	1,648,417	227,000	103,514	7.26	
59 Roseville	2,042,737	917,841	1,124,896	221,100	76,487	5.09	
60 Royal Oak Township	171,577	71,380	100,197	12,900	5,948	7.77	
61 S O C W A	19,792,309	8,911,393	10,880,916	1,476,000	742,616	7.37	
62 Shelby Township	11,046,327	3,971,019	7,075,308	445,000	330,918	15.90	
63 South Rockwood	76,089	30,813	45,276	4,900	2,568	9.24	
64 Southgate	1,859,055	846,065	1,012,990	140,000	70,505	7.24	
65 Sterling Heights	13,058,896	5,662,143	7,396,753	780,000	471,845	9.48	
66 St. Clair County-Greenwood	494,493	449,580	44,913	15,000	37,500	2.99	
67 St. Clair County-Burtchville Twp	219,885	86,428	133,457	8,000	7,202	16.68	
68 St. Clair Shores	2,882,983	1,270,902	1,612,081	294,800	105,909	5.47	
69 Sumpter Township	516,258	191,496	324,762	33,800	15,958	9.61	
70 Sylvan Lake	180,474	58,302	122,172	7,800	4,859	15.66	
71 Taylor	3,975,460	1,799,973	2,175,487	360,000	149,998	6.04	
72 Trenton	1,574,403	714,743	859,660	100,000	59,562	8.60	
73 Troy	10,151,940	3,929,707	6,222,233	576,000	327,476	10.80	
74 Utica	452,137	177,928	274,209	30,000	14,827	9.14	
75 Van Buren Township	2,722,624	1,089,798	1,632,826	160,000	90,817	10.21	
76 Walled Lake	675,021	205,368	469,653	35,000	17,114	13.42	
77 Warren	10,478,865	4,816,049	5,662,816	825,000	401,337	6.86	
78 Washington Township	2,298,672	821,526	1,477,146	87,000	68,461	16.98	
79 Wayne	2,210,282	1,084,349	1,125,933	145,000	90,362	7.77	
80 West Bloomfield Township	11,673,496	3,580,488	8,093,008	400,050	298,374	20.23	
81 Westland	4,650,710	1,935,935	2,714,775	301,400	161,328	9.01	
82 Woodhaven	1,814,842	749,877	1,064,965	90,000	62,490	11.83	
83 Ypsilanti Comm Util Auth	8,841,867	3,703,836	5,138,031	595,000	308,653	8.64	
84 Wixom	2,001,400	728,721	1,272,679	105,000	60,727	12.12	