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October 12, 2016

## Sewer Utility Rate Study Update

City of Waukesha, Wisconsin



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# Sewer Utility Rate Study Supporting Worksheets

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**Table 1 - Comparison of Existing vs. Proposed Rates**

	<u>Current Rates</u> Effective 1/1/2016	2017 <u>Proposed</u> Rates	<u>\$</u> Change	<u>%</u> Change
<b><u>City (Inside) User Charges</u></b>				
Quarterly Fixed Charge	\$12.96	\$13.88	\$0.92	7.10%
Volumetric Charge per 1,000 gallons	\$5.48	\$6.02	\$0.54	9.85%
Quarterly flat charge (unmetered users only)	\$164.40	\$180.60	\$16.20	9.85%
Surcharge Rate BOD /lb	\$0.78	\$0.85	\$0.07	8.97%
Surcharge Rate SS /lb	\$0.37	\$0.40	\$0.03	8.11%
Surcharge Rate P /lb	\$6.38	\$6.95	\$0.57	8.93%
Surcharge Rate TKN /lb	\$1.29	\$1.40	\$0.11	8.53%
<b><u>Extraterritorial (Outside) User Charges</u></b>				
Quarterly Fixed Charge	\$12.96	\$13.88	\$0.92	7.08%
Volumetric Charge/1,000 gal	\$7.33	\$8.05	\$0.72	9.85%
Quarterly flat charge (unmetered users only)	\$219.87	\$241.56	\$21.69	9.86%
<b><u>Hauled Waste Charges</u></b>				
Septic Tank Rate per 1,000 gal	\$44.90	\$49.32	\$4.42	9.85%
Holding Tank Rate per 1,000 gal	\$14.84	\$16.30	\$1.46	9.85%
Chemical Toilet Waste Rate per 1,000 gal	\$126.98	\$134.30	\$7.32	5.77%
<b>Annual Cost for Average Residential User (58,500 gallons/year)</b>	<b>\$372.41</b>	<b>\$407.68</b>	<b>\$35.27</b>	<b>9.47%</b>
<b>Quarterly Increase</b>			<b>\$8.82</b>	

**Table 2 - Projected WWTF Flows and Loadings**

<b>Total</b>	<b>Equiv Customers</b>	<b>Flow (1,000 Gal)</b>	<b>BOD (Lbs)</b>	<b>SS (Lbs)</b>	<b>P (Lbs)</b>	<b>TKN (Lbs)</b>
Residential	17,660	913,020	1,789,428	2,588,960	60,917	228,438
Commercial and Multi-Family <sup>(1)</sup>	2,159	741,830	1,453,913	2,103,533	49,495	185,606
Industrial	144	133,630	261,901	378,921	8,916	33,434
Public	106	71,550	140,231	202,887	4,774	17,902
<b>Subtotal City Billable</b>	<b>20,069</b>	<b>1,860,030</b>	<b>3,645,473</b>	<b>5,274,301</b>	<b>124,101</b>	<b>465,380</b>
Unmetered Customers	115	13,800	27,047	39,131	921	3,453
<b>Outside Customers</b>						
Residential	63	2,637	5,168	7,477	176	660
Commercial and Multi-Family	21	4,519	8,856	12,813	301	1,131
Industrial	2	139	273	395	9	35
<b>Subtotal Outside Billable</b>	<b>86</b>	<b>7,295</b>	<b>14,297</b>	<b>20,685</b>	<b>487</b>	<b>1,825</b>
<b>High Strength Industrial</b>						
Ventura Foods						
Excess Loadings			446,691	81,361	984	757
GE Healthcare						
Excess Loadings			11,591	14,648	144	6,769
Waukesha Memorial Hospital						
Excess Loadings			46,186	-	-	2,451
GE Energy-Waukesha Engine						
Excess Loadings			-	-	-	1,314
SPX Transformer						
Excess Loadings			3,232	-	192	2,693
Lifeway Wisconsin, LLC						
Excess Loadings			451,192	65,785	8,344	16,687
DSM Food						
Excess Loadings			2,338	1,435	2,256	-
Midwest Finishing						
Excess Loadings			2,133	-	9	128
Gascoigne Co.						
Excess Loadings			-	-	802	-
Profile Finishing						
Excess Loadings			-	-	-	-
Eaton Badger						
Excess Loadings			-	-	462	3,928
Eaton Lincoln						
Excess Loadings			-	-	-	-
<b>Class 2 Industrial Excess Loadings</b>			<b>1,820</b>	<b>-</b>	<b>237</b>	<b>1,462</b>
<b>Subtotal High Strength Industrial Billable</b>			<b>965,183</b>	<b>163,229</b>	<b>13,429</b>	<b>36,189</b>
Septic Tank Waste		7,500	93,575	381,242	2,940	12,510
Chemical Toilet Waste		86	5,926	6,477	182	2,028
Holding Tank Waste		10,500	56,395	80,127	2,277	8,232
<b>Subtotal Wastehaulers</b>		<b>18,086</b>	<b>155,896</b>	<b>467,846</b>	<b>5,399</b>	<b>22,769</b>
<b>Total Billable</b>	<b>20,155</b>	<b>1,899,211</b>	<b>4,807,895</b>	<b>5,965,192</b>	<b>144,337</b>	<b>529,616</b>
I/I		1,375,290				
<b>Total WTF</b>		<b>3,274,501</b>				
<b>Total For Rate Calcs</b>	<b>20,155</b>	<b>1,899,211</b>	<b>4,807,895</b>	<b>5,965,192</b>	<b>144,337</b>	<b>529,616</b>

Notes:

(1) Includes estimated customer connections and flows from the Village of Wales in 2016.

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN			
	2017 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost		
<b>Operating &amp; Maintenance</b>			65.0%	35.0%								
<b>Sewer Maintenance (7384)</b>												
110 Personal Services												
51110 Salaries	\$63,135	100.0%	\$41,038	\$22,097	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51210 Wages Permanent	\$394,191	100.0%	\$256,224	\$137,967	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51220 Overtime	\$20,733	100.0%	\$13,476	\$7,257	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51250 Wages Temporary	\$0	100.0%	\$0	\$0	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51510 Social Security	\$36,572	100.0%	\$23,772	\$12,800	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51520 Retirement	\$32,508	100.0%	\$21,130	\$11,378	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51540 Health Insurance	\$119,260	100.0%	\$77,519	\$41,741	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51550 Life Insurance	\$1,730	100.0%	\$1,125	\$606	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
51560 Dental Insurance	\$6,879	100.0%	\$4,471	\$2,408	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
120 Contractual Services												
52190 Other Professional Services	\$0	100.0%	\$0	\$0	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
52210 Water And Sewer	\$8,400	100.0%	\$5,460	\$2,940	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
52220 Electric	\$160,000	100.0%	\$104,000	\$56,000	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
52240 Heat	\$330	100.0%	\$215	\$116	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
52410 Vehicle Maintenance	\$30,000	100.0%	\$19,500	\$10,500	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
52435 Conveyance Maintenance	\$82,000	100.0%	\$53,300	\$28,700	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
52490 Pump Station Maintenance	\$100,000	100.0%	\$65,000	\$35,000	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
130 Supplies and Expenses												
53510 Gasoline, Oil, Grease Etc.	\$21,767	100.0%	\$14,149	\$7,618	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
53940 Other (Manhole repairs, inspect)	\$65,000	100.0%	\$42,250	\$22,750	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0	
<b>Subtotal Sewer Maintenance</b>	<b>\$1,142,505</b>	<b>100.0%</b>	<b>\$742,628</b>	<b>\$399,877</b>	<b>0.0%</b>	<b>\$0</b>	<b>0.0%</b>	<b>\$0</b>	<b>0.0%</b>	<b>\$0</b>	<b>0.0%</b>	
<b>Sewer Plant Operations (7388)</b>												
110 Personal Services												
51170 Accrued Compensatory time	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0	5.0%	\$0
51180 Accrued Vacation	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0	5.0%	\$0
51190 Sick Leave Accrual	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0	5.0%	\$0
51210 Wages Permanent	\$959,549	35.0%	\$218,297	\$117,545	30.0%	\$287,865	25.0%	\$239,887	5.0%	\$47,977	5.0%	\$47,977
51220 Overtime	\$80,000	35.0%	\$18,200	\$9,800	30.0%	\$24,000	25.0%	\$20,000	5.0%	\$4,000	5.0%	\$4,000
51250 Wages Temporary	\$12,022	35.0%	\$2,735	\$1,473	30.0%	\$3,607	25.0%	\$2,006	5.0%	\$601	5.0%	\$601
51510 Social Security	\$79,700	35.0%	\$18,132	\$9,763	30.0%	\$23,910	25.0%	\$19,925	5.0%	\$3,985	5.0%	\$3,985
51520 Retirement	\$70,689	35.0%	\$16,082	\$8,659	30.0%	\$21,207	25.0%	\$17,672	5.0%	\$3,534	5.0%	\$3,534
51540 Health Insurance	\$249,177	35.0%	\$56,688	\$30,524	30.0%	\$74,753	25.0%	\$62,294	5.0%	\$12,459	5.0%	\$12,459
51550 Life Insurance	\$3,122	35.0%	\$710	\$382	30.0%	\$937	25.0%	\$781	5.0%	\$156	5.0%	\$156
51560 Dental Insurance	\$14,400	35.0%	\$3,276	\$1,764	30.0%	\$4,320	25.0%	\$3,600	5.0%	\$720	5.0%	\$720
120 Contractual Services												
52190 Lab Testing	\$20,000	0.0%	\$0	\$0	30.0%	\$6,000	20.0%	\$4,000	27.5%	\$5,500	22.5%	\$4,500
52210 Water And Sewer	\$40,000	100.0%	\$26,000	\$14,000	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52220 Electric	\$785,000	17.5%	\$89,294	\$48,081	57.5%	\$451,375	15.0%	\$117,750	5.0%	\$39,250	5.0%	\$39,250
52240 Heat	\$145,000	25.0%	\$23,563	\$12,688	25.0%	\$36,250	25.0%	\$36,250	12.5%	\$18,125	12.5%	\$18,125
52410 Vehicle Maintenance	\$35,550	25.0%	\$5,777	\$3,111	25.0%	\$8,888	25.0%	\$8,888	12.5%	\$4,444	12.5%	\$4,444
52430 Computer Hardware Maint	\$22,000	25.0%	\$1,925	\$1,925	25.0%	\$5,500	25.0%	\$5,500	12.5%	\$2,750	12.5%	\$2,750
52450 Grounds Maintenance & Improv	\$50,000	25.0%	\$8,125	\$4,375	25.0%	\$12,500	25.0%	\$12,500	12.5%	\$6,250	12.5%	\$6,250
52490 Equipment Maintenance	\$160,000	15.0%	\$15,600	\$8,400	30.0%	\$48,000	30.0%	\$48,000	12.5%	\$20,000	12.5%	\$20,000
52990 Environmental Permit Fee	\$15,000	25.0%	\$2,438	\$1,313	25.0%	\$3,750	25.0%	\$3,750	12.5%	\$1,875	12.5%	\$1,875
130 Supplies and Expenses												
53140 Small Equipment	\$5,000	15.0%	\$488	\$263	30.0%	\$1,500	30.0%	\$1,500	12.5%	\$625	12.5%	\$625
53420 Chemistry/Lab/Medical Supplies	\$23,000	0.0%	\$0	\$0	25.0%	\$5,750	25.0%	\$5,750	25.0%	\$5,750	25.0%	\$5,750
53422 WWTP Processing Chemicals	\$300,000	0.0%	\$0	\$0	50.0%	\$150,000	25.0%	\$75,000	25.0%	\$75,000	0.0%	\$0
53440 Janitorial Supplies	\$8,000	10.0%	\$520	\$280	25.0%	\$2,000	25.0%	\$2,000	20.0%	\$1,600	20.0%	\$1,600
53460 Clothing And Uniforms	\$10,000	10.0%	\$650	\$350	25.0%	\$2,500	25.0%	\$2,500	20.0%	\$2,000	20.0%	\$2,000
53490 Other Operating Supplies	\$0	10.0%	\$0	\$0	25.0%	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0
53510 Gasoline, Oil, Grease Etc.	\$14,115	10.0%	\$917	\$494	25.0%	\$3,529	25.0%	\$3,529	20.0%	\$2,823	20.0%	\$2,823
53620 Consumable Tools	\$5,000	10.0%	\$325	\$175	25.0%	\$1,250	25.0%	\$1,250	20.0%	\$1,000	20.0%	\$1,000
53910 Sludge Disposal	\$160,000	0.0%	\$0	\$0	55.0%	\$88,000	40.0%	\$64,000	5.0%	\$8,000	0.0%	\$0

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN			
	2017 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost		
150 Fixed Charges												
55110 Property/Boiler Ins.& Expense	\$59,888	20.0%	\$7,785	\$4,192	20.0%	\$11,978	20.0%	\$11,978	20.0%	\$11,978	20.0%	\$11,978
Subtotal Sewer Plant Operations	\$3,326,212	24.0%	\$519,176	\$279,556	38.5%	\$1,279,367	23.2%	\$771,309	8.4%	\$280,402	5.9%	\$196,402
Pre-treatment Sampling (7381)												
110 Personal Services												
51110 Salaries	\$154,073	15.0%	\$15,022	\$8,089	25.0%	\$38,518	20.0%	\$30,815	20.0%	\$30,815	20.0%	\$30,815
51510 Social Security	\$11,787	15.0%	\$1,149	\$619	25.0%	\$2,947	20.0%	\$2,357	20.0%	\$2,357	20.0%	\$2,357
51520 Retirement	\$10,477	15.0%	\$1,022	\$550	25.0%	\$2,619	20.0%	\$2,095	20.0%	\$2,095	20.0%	\$2,095
51540 Health Insurance	\$39,655	15.0%	\$3,866	\$2,082	25.0%	\$9,914	20.0%	\$7,931	20.0%	\$7,931	20.0%	\$7,931
51550 Life Insurance	\$965	15.0%	\$94	\$51	25.0%	\$241	20.0%	\$193	20.0%	\$193	20.0%	\$193
51560 Dental Insurance	\$2,280	15.0%	\$222	\$120	25.0%	\$570	20.0%	\$456	20.0%	\$456	20.0%	\$456
120 Contractual Services												
52190 Pre-Treatment Sampling	\$10,000	15.0%	\$975	\$525	25.0%	\$2,500	20.0%	\$2,000	20.0%	\$2,000	20.0%	\$2,000
52410 Vehicle Maintenance	\$1,000	15.0%	\$98	\$53	25.0%	\$250	20.0%	\$200	20.0%	\$200	20.0%	\$200
52430 Computer Hardware Maint	\$0	15.0%	\$0	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0	20.0%	\$0
130 Supplies and Expenses												
53120 Office Supplies	\$100	15.0%	\$10	\$5	25.0%	\$25	20.0%	\$20	20.0%	\$20	20.0%	\$20
53220 Subscriptions-Office	\$0	15.0%	\$0	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0	20.0%	\$0
53260 Advertising	\$50	15.0%	\$5	\$3	25.0%	\$13	20.0%	\$10	20.0%	\$10	20.0%	\$10
53510 Gasoline, Oil, Grease Etc.	\$1,235	15.0%	\$120	\$65	25.0%	\$309	20.0%	\$247	20.0%	\$247	20.0%	\$247
Subtotal Pretreatment Sampling	\$ 231,622.00	15.0%	\$22,583	\$12,160	25.0%	\$57,906	20.0%	\$46,324	20.0%	\$46,324	20.0%	\$46,324
Subtotal Collector and Treatment	\$ 4,700,339.00	42.0%	\$1,284,387	\$691,593	28.5%	\$1,337,272	17.4%	\$817,633	7.0%	\$326,727	5.2%	\$242,727
Sewer Administration (7380)												
110 Personal Services												
51110 Salaries	\$555,326	42.0%	\$151,745	\$81,709	28.5%	\$157,993	17.4%	\$96,600	7.0%	\$38,601	5.2%	\$28,677
51180 Accrued Vacation	\$0	42.0%	\$0	\$0	28.5%	\$0	17.4%	\$0	7.0%	\$0	5.2%	\$0
51190 Sick Leave Accrual	\$0	42.0%	\$0	\$0	28.5%	\$0	17.4%	\$0	7.0%	\$0	5.2%	\$0
51210 Wages Permanent	\$34,293	42.0%	\$9,371	\$5,046	28.5%	\$9,757	17.4%	\$5,965	7.0%	\$2,384	5.2%	\$1,771
51220 Overtime	\$3,000	42.0%	\$820	\$441	28.5%	\$854	17.4%	\$522	7.0%	\$209	5.2%	\$155
51510 Social Security	\$45,335	42.0%	\$12,388	\$6,670	28.5%	\$12,898	17.4%	\$7,886	7.0%	\$3,151	5.2%	\$2,341
51520 Retirement	\$40,298	42.0%	\$11,012	\$5,929	28.5%	\$11,465	17.4%	\$7,010	7.0%	\$2,801	5.2%	\$2,081
51540 Health Insurance	\$138,683	42.0%	\$37,896	\$20,405	28.5%	\$39,456	17.4%	\$24,124	7.0%	\$9,640	5.2%	\$7,162
51550 Life Insurance	\$1,946	42.0%	\$532	\$286	28.5%	\$554	17.4%	\$339	7.0%	\$135	5.2%	\$100
51560 Dental Insurance	\$7,980	42.0%	\$2,181	\$1,174	28.5%	\$2,270	17.4%	\$1,388	7.0%	\$555	5.2%	\$412
51570 OPEB Expense	\$125,000	42.0%	\$34,157	\$18,392	28.5%	\$35,563	17.4%	\$21,744	7.0%	\$8,689	5.2%	\$6,455
120 Contractual Services												
52130 Accounting And Auditing	\$83,325	42.0%	\$22,769	\$12,260	28.5%	\$23,706	17.4%	\$14,495	7.0%	\$5,792	5.2%	\$4,303
52131 Utility Billing	\$813,158	42.0%	\$222,199	\$119,646	28.5%	\$231,348	17.4%	\$141,450	7.0%	\$56,524	5.2%	\$41,992
52135 Consulting	\$100,000	42.0%	\$27,325	\$14,714	28.5%	\$28,451	17.4%	\$17,395	7.0%	\$6,951	5.2%	\$5,164
52180 Management Services	\$51,500	42.0%	\$14,073	\$7,578	28.5%	\$14,652	17.4%	\$8,959	7.0%	\$3,580	5.2%	\$2,659
52190 Other Other Professional Services	\$2,750	42.0%	\$751	\$405	28.5%	\$782	17.4%	\$478	7.0%	\$191	5.2%	\$142
52250 Telephone	\$25,000	42.0%	\$6,831	\$3,678	28.5%	\$7,113	17.4%	\$4,349	7.0%	\$1,738	5.2%	\$1,291
52270 Trunk Radio System Startup F	\$249	42.0%	\$68	\$37	28.5%	\$71	17.4%	\$43	7.0%	\$17	5.2%	\$13
52430 Computer Hardware Maint	\$4,000	42.0%	\$1,093	\$589	28.5%	\$1,138	17.4%	\$696	7.0%	\$278	5.2%	\$207
130 Supplies and Expenses												
53110 Postage and Box Rent	\$1,000	42.0%	\$273	\$147	28.5%	\$285	17.4%	\$174	7.0%	\$70	5.2%	\$52
53120 Office Supplies	\$2,400	42.0%	\$656	\$353	28.5%	\$683	17.4%	\$417	7.0%	\$167	5.2%	\$124
53130 Printing/Photocopying	\$6,000	42.0%	\$1,640	\$883	28.5%	\$1,707	17.4%	\$1,044	7.0%	\$417	5.2%	\$310
53135 Internal Printing	\$5,380	42.0%	\$1,470	\$792	28.5%	\$1,531	17.4%	\$936	7.0%	\$374	5.2%	\$278
53220 Subscriptions-Office	\$250	42.0%	\$68	\$37	28.5%	\$71	17.4%	\$43	7.0%	\$17	5.2%	\$13
53240 Membership Dues	\$3,500	42.0%	\$956	\$515	28.5%	\$996	17.4%	\$609	7.0%	\$243	5.2%	\$181
53250 Conference And Training	\$15,000	42.0%	\$4,099	\$2,207	28.5%	\$4,268	17.4%	\$2,609	7.0%	\$1,043	5.2%	\$775
53260 Advertising	\$2,000	42.0%	\$547	\$294	28.5%	\$569	17.4%	\$348	7.0%	\$139	5.2%	\$103

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN			
	2017 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost		
53940 Other Chg	\$450	42.0%	\$123	\$66	28.5%	\$128	17.4%	\$78	7.0%	\$31	5.2%	\$23
150 Fixed Charges												
55120 Auto And Fleet Insurance	\$6,244	42.0%	\$1,706	\$919	28.5%	\$1,776	17.4%	\$1,086	7.0%	\$434	5.2%	\$322
55160 Workman's Comp Insurance	\$85,233	42.0%	\$23,290	\$12,541	28.5%	\$24,249	17.4%	\$14,826	7.0%	\$5,925	5.2%	\$4,401
55190 General Liability Insurance	\$43,482	42.0%	\$11,882	\$6,398	28.5%	\$12,371	17.4%	\$7,564	7.0%	\$3,022	5.2%	\$2,245
184 Interdepartmental Charges												
78422 Data Processing-Allocated	\$202,431	42.0%	\$55,315	\$29,785	28.5%	\$57,593	17.4%	\$35,213	7.0%	\$14,071	5.2%	\$10,454
78650 Employee Safety Programs	\$14,000	42.0%	\$3,826	\$2,060	28.5%	\$3,983	17.4%	\$2,435	7.0%	\$973	5.2%	\$723
78690 Other Employee Benefits	\$0	42.0%	\$0	\$0	28.5%	\$0	17.4%	\$0	7.0%	\$0	5.2%	\$0
89280 TranSkvlt	\$14,400	42.0%	\$3,935	\$2,119	28.5%	\$4,097	17.4%	\$2,505	7.0%	\$1,001	5.2%	\$744
<b>Subtotal</b>	<b>\$ 2,433,613.00</b>	<b>42.0%</b>	<b>\$664,995</b>	<b>\$358,074</b>	<b>28.5%</b>	<b>\$692,376</b>	<b>17.4%</b>	<b>\$423,332</b>	<b>7.0%</b>	<b>\$169,164</b>	<b>5.2%</b>	<b>\$125,672</b>
<b>Total O &amp; M</b>	<b>\$ 7,133,952.00</b>	<b>42.0%</b>	<b>\$1,949,382</b>	<b>\$1,049,667</b>	<b>28.5%</b>	<b>\$2,029,648</b>	<b>17.4%</b>	<b>\$1,240,965</b>	<b>7.0%</b>	<b>\$ 495,890.32</b>	<b>5.2%</b>	<b>\$ 368,399.09</b>
<b>Capital Costs</b>												
Depreciation	\$4,000,000	42.0%	\$1,681,564	\$0	28.5%	\$1,138,022	17.4%	\$695,808	7.0%	\$278,045	5.2%	\$206,561
Return on Investment (ROI)	\$2,749,228	42.0%	\$1,155,751	\$0	28.5%	\$782,170	17.4%	\$478,234	7.0%	\$191,102	5.2%	\$141,971
<b>Total Capital Costs</b>	<b>\$6,749,228</b>		<b>\$2,837,315</b>	<b>\$0</b>		<b>\$1,920,192</b>		<b>\$1,174,041</b>		<b>\$469,148</b>		<b>\$348,532</b>
<b>Subtotal Revenue Requirements</b>	<b>\$13,883,180</b>		<b>\$4,786,698</b>	<b>\$1,049,667</b>		<b>\$3,949,840</b>		<b>\$2,415,006</b>		<b>\$ 965,037.99</b>		<b>\$716,931</b>
<b>Other Income</b>												
Delinquent Fees	(\$60,000)	42.0%	(\$16,395)	(\$8,828)	28.5%	(\$17,070)	17.4%	(\$10,437)	7.0%	(\$4,171)	5.2%	(\$3,098)
Pre-Treatment Charges - Public Charges	(\$60,000)	42.0%	(\$16,395)	(\$8,828)	28.5%	(\$17,070)	17.4%	(\$10,437)	7.0%	(\$4,171)	5.2%	(\$3,098)
Investment Income	\$0	42.0%	\$0	\$0	28.5%	\$0	17.4%	\$0	7.0%	\$0	5.2%	\$0
<b>Total Other Income</b>	<b>(\$120,000)</b>		<b>(\$32,791)</b>	<b>(\$17,656)</b>		<b>(\$34,141)</b>		<b>(\$20,874)</b>		<b>(\$8,341)</b>		<b>(\$6,197)</b>
<b>Total Net Revenue Requirements</b>	<b>\$13,763,180</b>		<b>\$4,753,907</b>	<b>\$1,032,011</b>		<b>\$3,915,700</b>		<b>\$2,394,132</b>		<b>\$956,697</b>		<b>\$710,734</b>
<b>Summary</b>												
<b>Allocation of Costs to Function and Classification for City Rates</b>												
			Flow	Fixed		BOD	SS		P		TKN	
O&M and Replacement	\$7,133,952		\$1,949,382	\$1,049,667		\$2,029,648	\$1,240,965		\$495,890		\$368,399	
Capital	\$6,749,228		\$2,837,315	\$0		\$1,920,192	\$1,174,041		\$469,148		\$348,532	
Other Revenues	(\$120,000)		(\$32,791)	(\$17,656)		(\$34,141)	(\$20,874)		(\$8,341)		(\$6,197)	
<b>Total</b>	<b>13,763,180</b>		<b>4,753,907</b>	<b>1,032,011</b>		<b>3,915,700</b>	<b>2,394,132</b>		<b>956,697</b>		<b>710,734</b>	
<b>Allocation of Costs to Function and Classification for Extraterritorial Rates</b>												
			Flow	Fixed		BOD	SS		P		TKN	
Total Allocation for City Rates	\$13,763,180		\$4,753,907	\$1,032,011		\$3,915,700	\$2,394,132		\$956,697		\$710,734	
Deduct ROI for City	(\$2,749,228)		(\$1,155,751)	\$0		(\$782,170)	(\$478,234)		(\$191,102)		(\$141,971)	
Add ROI for Computation of Extra Rates	\$9,347,376	42.0%	\$3,929,554	\$0	28.5%	\$2,659,380	\$1,625,994	17.4%	\$649,748	7.0%	\$482,701	5.2%
<b>Total</b>	<b>20,361,328</b>		<b>7,527,710</b>	<b>1,032,011</b>		<b>5,792,909</b>	<b>3,541,892</b>		<b>1,415,343</b>		<b>1,051,464</b>	

**Table 4 - Comparison of Operating Expenses and Customer Flows and Loadings**

**2016-2017 Operating and Maintenance Comparison**

Operating and Maintenance Category	2016	2017	Difference	Percentage Change
Sewer Maintenance	\$ 1,080,477	\$ 1,142,505	\$62,028	5.74%
Sewer Plant Operations	\$ 3,479,050	\$ 3,326,212	(\$152,838)	-4.39%
Pre-treatment Sampling	\$ 232,370	\$ 231,622	(\$748)	-0.32%
Subtotal Collection and Treatment	\$ 4,791,897	\$ 4,700,339	(\$91,558)	-1.91%
Sewer Administration	\$ 2,307,750	\$ 2,433,613	\$125,863	5.45%
Total Operating and Maintenance Expenses	\$ 7,099,647	\$ 7,133,952	\$34,305	0.48%

**2016-2017 Billable Flows Comparison**

Customer Class	Billable Flow (000 Gal) 2016	2017	Difference (000 gal)	Percentage Change
Residential	913,550	913,020	(530)	-0.06%
Commercial and Multi-Family	753,215	741,830	(11,385)	-1.51%
Industrial	146,810	133,630	(13,180)	-8.98%
Public	78,550	71,550	(7,000)	-8.91%
Septic Tank Waste	9,200	7,500	(1,700)	-18.48%
Holding Tank Waste	11,800	10,500	(1,300)	-11.02%
Total	1,913,125	1,878,030	(35,095)	-1.83%

Total Loadings all Customer Classes	2016	2017	Difference (lbs)	Percentage Change
BOD (Lbs)	4,927,804	4,807,895	(119,909)	-2.43%
TSS (Lbs)	6,307,836	5,965,192	(342,644)	-5.43%
P (lbs)	145,498	144,337	(1,161)	-0.80%
TKN (lbs)	539,983	529,616	(10,367)	-1.92%

**Table 5 - Wastewater Utility Assets and Depreciation**

**Estimated Asset Detail at 12/31/15**

<b>Description</b>	<b>Original Cost <sup>(1)</sup></b>	<b>Accumulated Depreciation <sup>(2)</sup></b>	<b>Est. 2016</b>	<b>Est. 2017</b>	<b>Est. Accumulated Depreciation at 12/31/2017</b>	<b>Net Book Value</b>
Land	\$31,107	\$0				
Land Improvements	\$2,666,796	\$192,111				
Buildings	\$44,911,268	\$22,731,101				
Building Improvements	\$1,261,025	\$483,736				
Audio/Visual Equipment	\$64,044	\$35,249				
Communications Equipment	\$21,863	\$21,863				
Computer Software	\$573,952	\$560,075				
Computer Hardware	\$17,459	\$4,271				
Machinery and Tools	\$14,946,910	\$11,625,549				
Lab/Science/Engineering	\$166,931	\$87,132				
Furniture and Accessories	\$13,987	\$13,249				
Grounds/Agricultural Equipment	\$3,500	\$3,384				
Contractor/Construction Equipment 1	\$1,195,376	\$608,162				
Utilities/Sewer/Water/Electric	\$3,443,065	\$2,425,964				
Underground Piping	\$37,905,460	\$11,337,942				
All Other Licensed Vehicles	\$684,517	\$581,839				
<b>Subtotal</b>	<b>\$107,907,261</b>	<b>\$50,711,627</b>	<b>\$2,879,842</b>	<b>\$2,879,842</b>	<b>\$56,471,311</b>	<b>\$51,435,951</b>
2016 Capital Projects <sup>(3)</sup>	\$54,000,000		\$520,158	\$1,040,316	\$1,560,474	\$52,439,526
2017 Capital Projects <sup>(3)</sup>	\$6,173,500		\$0	\$79,842	\$79,842	\$6,093,658
<b>Total</b>	<b>\$168,080,761</b>		<b>\$3,400,000</b>	<b>\$4,000,000</b>	<b>\$58,111,627</b>	<b>\$109,969,135</b>

Notes:

(1) From City of Waukesha 12/31/2015 Fixed Asset Master List.

(2) At 12/31/2015

(3) Source: City Finance Department.

**Table 6 - Recovery of Depreciation and ROI**

**Return on Investment - City Customers**

Asset Costs	\$168,080,761
Accumulated Depreciation	<u>\$58,111,627</u>
Estimated 2014 Net Investment Rate Base (NIRB)	\$109,969,135

Return on Investment (ROI) %	2.50%
ROI for test year	\$2,749,228
Depreciation Expense for test year	\$4,000,000
Total Capital Recovery	\$6,749,228

**Return on Investment - Extraterritorial Customers**

Asset Costs	\$168,080,761
Accumulated Depreciation	<u>\$58,111,627</u>
Estimated 2014 Net Investment Rate Base (NIRB)	\$109,969,135

Return on Investment (ROI) %	8.50%
ROI for test year	\$9,347,376
Depreciation Expense for test year	\$4,000,000
Total Capital Recovery	\$13,347,376

**Table 7 - Rate Computation Worksheet**

	City (Inside) Rates			Extraterritorial (Outside) Rates		
	Costs	Billable Units	City Rate	Costs	Billable Units	Extra. Rate
<b>Fixed Charges</b>						
Fixed Charge	1,032,011	20,069	\$51.42	1,032,011	20,069	\$51.42
<b>Volumetric Charges</b>						
Flow Charge per 1,000 gallons	4,753,907	1,903,044	\$2.50	7,527,710	1,899,211	\$3.96
BOD Charge per lb.	3,915,700	4,815,408	\$0.81	5,792,909	4,807,895	\$1.20
TSS Charge per lb.	2,394,132	5,976,062	\$0.40	3,541,892	5,965,192	\$0.59
P Charge per lb.	956,697	144,593	\$6.62	1,415,343	144,337	\$9.81
TKN Charge per lb.	710,734	530,575	\$1.34	1,051,464	529,616	\$1.99
BOD Charge per 1,000 gal			\$1.59			\$2.36
TSS Charge per 1,000 gal			\$1.14			\$1.68
P Charge per 1,000 gal			\$0.44			\$0.65
TKN Charge per 1,000 gal			\$0.34			\$0.50
Total Volumetric Rate per 1,000 gal			\$6.00			\$9.16
<b>Wastehauler Charges</b>						
<b>Septic Charges</b>						
Flow Charge per 1,000 gallons			\$2.50			\$3.96
BOD Charge per 1,000 gal			\$10.15			\$15.03
TSS Charge per 1,000 gal			\$20.36			\$30.18
P Charge per 1,000 gal			\$2.59			\$3.84
TKN Charge per 1,000 gal			\$2.23			\$3.31
Total			\$37.84			\$56.33
<b>Holding Tank Charges</b>						
Flow Charge per 1,000 gallons			\$2.50			\$3.96
BOD Charge per 1,000 gal			\$4.37			\$6.47
TSS Charge per 1,000 gal			\$3.06			\$4.53
P Charge per 1,000 gal			\$1.43			\$2.13
TKN Charge per 1,000 gal			\$1.05			\$1.56
Total			\$12.41			\$18.65
<b>Chemical Toilet Waste Charges</b>						
Flow Charge per 1,000 gallons			\$2.50			\$3.96
BOD Charge per 1,000 gal			\$56.03			\$83.02
TSS Charge per 1,000 gal			\$30.17			\$44.72
P Charge per 1,000 gal			\$14.02			\$20.77
TKN Charge per 1,000 gal			\$31.58			\$46.81
Total			\$134.30			\$199.29
<b>Rate Summary</b>						
Fixed charge per connection			City (Inside) \$51.42			Extraterritorial (Outside) \$51.42
Rate per 1,000 gallons			\$6.00			\$9.16
BOD rate per lb.			\$0.81			\$1.20
TSS rate per lb.			\$0.40			\$0.59
P rate per lb.			\$6.62			\$9.81
TKN rate per lb.			\$1.34			\$1.99

**Table 8 - Rate Summary**

		<u>COS</u>	<u>2017 Proposed</u>
City (Inside)	Fixed charge per connection (annual)	\$51.42	\$55.51
	Volumetric Rate per 1,000 gallons	\$6.00	\$6.02
	BOD rate per lb.	\$0.81	\$0.85
	TSS rate per lb.	\$0.40	\$0.40
	P rate per lb.	\$6.62	\$6.95
	TKN rate per lb.	\$1.34	\$1.40
	Unmetered quarterly flat charge	\$180.13	\$180.60
Extraterritorial (Outside)			
	Fixed charge per connection (annual)	\$51.42	\$55.51
	Volumetric Rate per 1,000 gallons	\$9.16	\$8.05
	BOD rate per lb.	\$1.20	\$1.20
	TSS rate per lb.	\$0.59	\$0.59
	P rate per lb.	\$9.81	\$9.81
	TKN rate per lb.	\$1.99	\$1.99
	Unmetered quarterly flat charge	\$274.79	\$241.56
Wastehauler	Septic Rate per 1,000 Gallons	\$56.33	\$49.32
	Chemical Toilet Rate per 1,000 Gallons	\$134.30	\$134.30
	Holding Tank Rate per 1,000 Gallons	\$18.65	\$16.30

**Table 9 - Revenue Check (Based on COS)**

		Units	Rate	Annual Total
<b>Fixed Charge</b>				
Residential	cust	17,660	\$51.42	\$908,133
Commercial and Multi-Family	cust	2,159	\$51.42	\$111,023
Industrial	cust	144	\$51.42	\$7,405
Public	cust	106	\$51.42	\$5,451
Subtotal		20,069		\$1,032,011
<b>Volumetric Charges-Inside Customers</b>				
Residential	Flow (000 gal)	913,020	\$6.00	\$5,482,115
Commercial & Multiple	Flow (000 gal)	741,830	\$6.00	\$4,454,226
Industrial	Flow (000 gal)	133,630	\$6.00	\$802,365
Public	Flow (000 gal)	71,550	\$6.00	\$429,613
Septic Waste Haulers	Flow (000 gal)	7,500	\$37.84	\$283,769
Chemical Toilet Waste Haulers	Flow (000 gal)	86	\$134.30	\$11,550
Holding Tank Waste Haulers	Flow (000 gal)	10,500	\$12.41	\$130,279
Subtotal		1,878,116		\$11,593,918
Industrial Excess BOD	Lbs	965,183	\$0.81	\$784,849
Industrial Excess TSS	Lbs	163,229	\$0.40	\$65,393
Industrial Excess P	Lbs	13,429	\$6.62	\$88,856
Industrial Excess TKN	Lbs	36,189	\$1.34	\$48,477
Subtotal		1,178,031		\$987,574
Unmetered Customers	cust	115	\$720.53	\$82,860
<b>Volumetric Charges-Outside Customers</b>				
Residential	Flow (000 gal)	2,637	\$9.16	\$24,152
Commercial & Multiple	Flow (000 gal)	4,519	\$9.16	\$41,389
Industrial	Flow (000 gal)	139	\$9.16	\$1,275
Subtotal				\$66,816
Total Revenues				\$13,763,180
Revenue Requirements				\$13,763,180
Difference				\$0

**Table 10 - Revenue Summary**

		Units	Rate	Annual Total
<b>Fixed Charge</b>				
Residential	cust	17,660	\$55.51	\$980,298
Commercial and Multi-Family	cust	2,159	\$55.51	\$119,845
Industrial	cust	144	\$55.51	\$7,993
Public	cust	106	\$55.51	\$5,884
Subtotal		20,069		\$1,114,020
<b>Volumetric Charges - Inside Customers</b>				
Residential	Flow (000 gal)	913,020	\$6.02	\$5,496,380
Commercial & Multiple	Flow (000 gal)	741,830	\$6.02	\$4,465,817
Industrial	Flow (000 gal)	133,630	\$6.02	\$804,453
Public	Flow (000 gal)	71,550	\$6.02	\$430,731
Septic Waste Haulers	Flow (000 gal)	7,500	\$49.32	\$369,920
Holding Tank Waste Haulers	Flow (000 gal)	10,500	\$16.30	\$171,168
Chemical Toilet Waste Haulers	Flow (000 gal)	86	\$134.30	\$11,550
Subtotal		1,878,030		\$11,750,019
Industrial Excess BOD	Lbs	965,183	\$0.85	\$820,406
Industrial Excess TSS	Lbs	163,229	\$0.40	\$65,292
Industrial Excess P	Lbs	13,429	\$6.95	\$93,334
Industrial Excess TKN	Lbs	36,189	\$1.40	\$50,665
Subtotal		1,178,031		\$1,029,696
Unmetered Customers	cust	115	\$722.40	\$83,076
<b>Volumetric Charges - Outside Customers</b>				
Residential	Flow (000 gal)	2,637	\$8.05	\$21,232
Commercial & Multiple	Flow (000 gal)	4,519	\$8.05	\$36,384
Industrial	Flow (000 gal)	139	\$8.05	\$1,121
Subtotal				\$58,736
Total Revenues				\$14,035,547
Revenue Requirements COS				\$13,763,180
Difference				\$272,367
Revenues as % of COS				102.0%

**Table 11 - Test Year Cash Flow Analysis**

	2017
<b>Cash Sources</b>	
Revenues from User Rates <sup>(4)</sup>	\$14,035,547
Allowance for Unknowns (ie. Timing of billing, customer loss)	(\$491,244)
Other Income <sup>(1)</sup>	\$120,000
Investment Income on Unrestricted Cash <sup>(2)</sup>	\$13,298
Other Fees <sup>(3)</sup>	\$60,000
<b>Total Cash Sources</b>	<b>\$13,737,601</b>
<b>Cash Uses</b>	
O&M	\$7,133,952
Net Before Debt Service	\$6,603,649
<b>Debt Service</b>	
Pension State Trust Fund	\$27,293
2012 G.O. Promisary Note	\$343,550
2014 Sewer Revenue Bonds	\$551,675
2014 Clean Water Fund Loan	\$2,210,497
2015 Clean Water Fund Loan	\$969,326
2016 Sewer Revenue Bond	\$257,036
2017 Sewer Revenue Bond	\$40,070
2017 Bond Anticipation Note	\$0
<b>Total Debt Service</b>	<b>\$4,399,447</b>
Capital Outlay (non reserve) <sup>(5)</sup>	\$30,000
<b>Addition to Replacement Fund</b>	<b>\$825,000</b>
<b>Net Cash Flow</b>	<b>\$1,349,202</b>
<b>Unrestricted Cash Balances</b>	
Beginning Year Balance	\$12,263,248
Net Additions	\$1,349,202
<b>End of Year Balance</b>	<b>\$13,612,450</b>
<b>Replacement Fund Balances</b>	
Beginning Year Balance	\$2,971,925
Additions from Rates	\$825,000
Fund Expenditures	(\$766,500)
Interest Income <sup>(2)</sup>	\$6,002
<b>End Year Replacement Fund Balance</b>	<b>\$3,036,427</b>

Notes:

- (1) Subtotal delinquent fees plus pre-treatment sampling fees.
- (2) Estimate of investment income assuming an interest rate of 0.3%.
- (3) Other charges includes connection fees, impact fees and special assessments.
- (4) Estimated user rate projections assume that user rates are taking effect 1/1/16.
- (5) Links to Long Range Capital Improvement Plan.
- (6) Estimated Principal and Interest payments for refinancing BAN with 20-year revenue bonds assuming level principal and interest at 5.00% interest.