

**City of Waukesha
Sanitary Sewer User Rate Study
2018 Test Year**

October 11, 2017

DRAFT

Table 1 - Comparison of Existing vs. Proposed Rates

	Current Rates Effective 1/1/2017	2018 Proposed Rates	\$ Change	% Change
<u>City (Inside) User Charges</u>				
Quarterly Fixed Charge	\$13.88	\$14.86	\$0.99	7.10%
Volumetric Charge per 1,000 gallons	\$6.02	\$6.62	\$0.60	10.00%
Quarterly flat charge (unmetered users only)	\$180.60	\$198.66	\$18.06	10.00%
Surcharge Rate BOD /lb	\$0.85	\$0.90	\$0.05	5.88%
Surcharge Rate SS /lb	\$0.40	\$0.46	\$0.06	15.00%
Surcharge Rate P /lb	\$6.95	\$7.87	\$0.92	13.24%
Surcharge Rate TKN /lb	\$1.40	\$1.60	\$0.20	14.29%
<u>Extraterritorial (Outside) User Charges</u>				
Quarterly Fixed Charge	\$13.88	\$14.86	\$0.99	7.10%
Volumetric Charge/1,000 gal	\$8.05	\$8.86	\$0.81	10.00%
Quarterly flat charge (unmetered users only)	\$241.56	\$265.72	\$24.16	10.00%
<u>Hauled Waste Charges</u>				
Septic Tank Rate per 1,000 gal	\$49.32	\$54.18	\$4.86	9.85%
Holding Tank Rate per 1,000 gal	\$16.30	\$17.91	\$1.61	9.85%
Chemical Toilet Waste Rate per 1,000 gal	\$134.30	\$150.69	\$16.39	12.20%
Annual Cost for Average Residential User (58,500 gallons/year)	\$407.68	\$446.84	\$39.16	9.61%
Quarterly Increase			\$9.79	

Table 2 - Projected WWTF Flows and Loadings

Total	Equip Customers	Flow (1,000 Gal)	BOD (Lbs)	SS (Lbs)	P (Lbs)	TKN (Lbs)
Residential	17,859	868,330	1,701,840	2,462,237	57,935	217,256
Commercial and Multi-Family ⁽¹⁾	2,170	711,220	1,393,920	2,016,735	47,453	177,947
Industrial	144	129,460	253,729	367,097	8,638	32,391
Public	106	73,000	143,073	206,999	4,871	18,265
Subtotal City Billable	20,279	1,782,010	3,492,561	5,053,068	118,896	445,859
Unmetered Customers	115	13,800	27,047	39,131	921	3,453
Outside Customers						
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
Subtotal Outside Billable	86	7,295	14,297	20,685	487	1,825
High Strength Industrial						
Ventura Foods						
Excess Loadings			818,736	250,505	620	103
GE Healthcare						
Excess Loadings			5,196	3,240	357	4,762
Waukesha Memorial Hospital						
Excess Loadings			34,395	-	-	4,428
GE Distributed Power						
Excess Loadings			63,570	21,840	3,198	4,758
SPX Transformer						
Excess Loadings			-	-	-	738
Lifeway Wisconsin, LLC						
Excess Loadings			360,628	29,038	2,956	12,867
DSM Food						
Excess Loadings			-	4,707	2,653	-
Midwest Finishing						
Excess Loadings			604	-	-	105
Gascoigne Co.						
Excess Loadings			-	-	1,653	-
Profile Finishing						
Excess Loadings			-	-	-	-
Eaton Badger						
Excess Loadings			-	-	527	264
Eaton Lincoln						
Excess Loadings			-	-	-	-
Class 2 Industrial Hauled Excess Loadings			2,132	-	286	1,558
Subtotal High Strength Industrial Billable			1,285,261	309,330	12,250	29,582
Septic Tank Waste		7,340	91,579	373,109	2,877	12,243
Chemical Toilet Waste		135	9,302	10,168	286	3,183
Holding Tank Waste		8,000	42,968	61,049	1,735	6,272
Subtotal Wastehaulers		15,475	143,848	444,326	4,898	21,698
Total Billable	20,365	1,818,580	4,963,014	5,866,539	137,451	502,416
W/I		1,316,902				
Total WTF		3,135,482				
Total For Rate Calcs	20,365	1,818,580	4,963,014	5,866,539	137,451	502,416

Notes:

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

Table 3 - Allocation of Costs to Function

	2018 Budget		Flow		BOD		TSS		P		TKN		
		%	Cost - User Charge	%	Cost - Customer	%	Cost	%	Cost	%	Cost	%	Cost
Operating & Maintenance													
Sewer Maintenance (7384)													
110 Personal Services													
51110 Salaries	\$64,713	100.0%	\$42,083	65.0%	\$22,650	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51210 Wages Permanent	\$404,690	100.0%	\$263,049	65.0%	\$141,642	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51220 Overtime	\$20,793	100.0%	\$13,476	65.0%	\$7,257	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51250 Wages Temporary	\$0	100.0%	\$0	65.0%	\$0	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51510 Social Security	\$37,495	100.0%	\$24,372	65.0%	\$13,123	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51520 Retirement	\$32,665	100.0%	\$21,232	65.0%	\$11,433	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51540 Health Insurance	\$114,589	100.0%	\$74,463	65.0%	\$40,106	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51550 Life Insurance	\$1,462	100.0%	\$950	65.0%	\$512	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
51560 Dental Insurance	\$7,455	100.0%	\$4,846	65.0%	\$2,609	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
120 Contractual Services													
52190 Other Professional Services	\$0	100.0%	\$0	100.0%	\$0	100.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52210 Water And Sewer	\$6,750	100.0%	\$4,388	65.0%	\$2,363	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52220 Electric	\$150,750	100.0%	\$97,968	65.0%	\$52,763	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52240 Heat	\$512	100.0%	\$333	65.0%	\$179	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52410 Vehicle Maintenance	\$60,000	100.0%	\$39,000	65.0%	\$21,000	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52435 Conveyance Maintenance	\$92,000	100.0%	\$59,300	65.0%	\$28,700	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52490 Pump Station Maintenance	\$100,000	100.0%	\$65,000	65.0%	\$35,000	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
180 Supplies and Expenses													
53510 Gasoline, Oil, Grease Etc.	\$20,000	100.0%	\$13,000	65.0%	\$7,000	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
53940 Other (Manhole repairs, inspect)	\$65,000	100.0%	\$42,250	65.0%	\$22,750	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
Subtotal Sewer Maintenance	\$1,168,614	100.0%	\$759,729	65.0%	\$409,085	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
Sewer Plant Operations (7388)													
110 Personal Services													
51170 Accrued Compensatory Time	\$0	35.0%	\$0	35.0%	\$0	35.0%	\$0	25.0%	\$0	25.0%	\$0	25.0%	\$0
51180 Accrued Vacation	\$0	35.0%	\$0	35.0%	\$0	35.0%	\$0	25.0%	\$0	25.0%	\$0	25.0%	\$0
51190 Sick Leave Accrual	\$0	35.0%	\$0	35.0%	\$0	35.0%	\$0	25.0%	\$0	25.0%	\$0	25.0%	\$0
51210 Wages Permanent	\$974,554	35.0%	\$221,711	22.7%	\$119,383	11.3%	\$243,339	25.0%	\$243,339	25.0%	\$48,728	5.0%	\$48,728
51220 Overtime	\$80,000	35.0%	\$18,200	22.7%	\$9,800	12.2%	\$20,000	25.0%	\$20,000	25.0%	\$4,000	5.0%	\$4,000
51250 Wages Temporary	\$12,022	35.0%	\$2,795	23.3%	\$1,473	12.3%	\$3,607	30.0%	\$3,607	30.0%	\$601	5.0%	\$601
51510 Social Security	\$80,846	35.0%	\$18,393	22.7%	\$9,904	12.2%	\$24,254	25.0%	\$24,254	25.0%	\$4,042	5.0%	\$4,042
51520 Retirement	\$70,655	35.0%	\$16,074	22.7%	\$8,655	12.2%	\$21,197	25.0%	\$21,197	25.0%	\$3,533	5.0%	\$3,533
51540 Health Insurance	\$248,850	35.0%	\$160,743	65.0%	\$85,376	32.4%	\$74,555	25.0%	\$74,555	25.0%	\$12,443	5.0%	\$12,443
51550 Life Insurance	\$2,993	35.0%	\$1,946	65.0%	\$1,065	35.5%	\$585	25.0%	\$585	25.0%	\$746	5.0%	\$746
51560 Dental Insurance	\$14,400	35.0%	\$9,276	65.0%	\$4,764	33.1%	\$4,320	25.0%	\$4,320	25.0%	\$720	5.0%	\$720
120 Contractual Services													
52190 Lab Testing	\$20,000	0.0%	\$0	0.0%	\$0	0.0%	\$6,000	20.0%	\$6,000	20.0%	\$5,500	22.5%	\$4,500
52210 Water And Sewer	\$35,000	100.0%	\$22,750	65.0%	\$12,250	35.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
52220 Electric	\$15,000	17.5%	\$9,750	65.0%	\$4,919	32.8%	\$468,825	15.0%	\$122,950	5.0%	\$40,750	5.0%	\$40,750
52240 Heat	\$96,600	25.0%	\$15,698	16.2%	\$8,463	8.8%	\$24,150	25.0%	\$24,150	25.0%	\$12,075	12.5%	\$12,075
52410 Vehicle Maintenance	\$35,000	25.0%	\$22,750	65.0%	\$11,875	34.2%	\$8,750	25.0%	\$8,750	25.0%	\$4,375	12.5%	\$4,375
52430 Computer Hardware Maint	\$22,000	25.0%	\$14,300	65.0%	\$7,350	33.4%	\$5,500	25.0%	\$5,500	25.0%	\$2,750	12.5%	\$2,750
52450 Grounds Maintenance & Improv	\$55,000	25.0%	\$35,750	65.0%	\$18,375	33.4%	\$13,750	25.0%	\$13,750	25.0%	\$6,875	12.5%	\$6,875
52490 Equipment Maintenance	\$185,000	15.0%	\$118,038	64.3%	\$60,519	32.4%	\$55,500	30.0%	\$55,500	30.0%	\$23,125	12.5%	\$23,125
52990 Environmental Permit Fee	\$15,000	25.0%	\$9,375	62.5%	\$4,725	31.5%	\$3,750	25.0%	\$3,750	25.0%	\$1,875	12.5%	\$1,875
130 Supplies and Expenses													
53140 Small Equipment	\$5,000	15.0%	\$3,250	65.0%	\$1,675	33.5%	\$1,500	30.0%	\$1,500	30.0%	\$625	12.5%	\$625
53420 Chemistry/Lab/Medical Supplies	\$25,000	0.0%	\$0	0.0%	\$0	0.0%	\$6,250	25.0%	\$6,250	25.0%	\$6,250	25.0%	\$6,250
53422 WWTP Processing Chemicals	\$300,000	0.0%	\$0	0.0%	\$0	0.0%	\$150,000	25.0%	\$150,000	25.0%	\$75,000	12.5%	\$75,000
53440 Janitorial Supplies	\$8,000	10.0%	\$520	6.5%	\$280	3.5%	\$2,000	25.0%	\$2,000	25.0%	\$1,600	20.0%	\$1,600
53460 Clothing And Uniforms	\$10,000	10.0%	\$650	6.5%	\$350	3.5%	\$2,500	25.0%	\$2,500	25.0%	\$2,000	20.0%	\$2,000
53490 Other Operating Supplies	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%	\$0
53510 Gasoline, Oil, Grease Etc.	\$14,000	10.0%	\$9,100	65.0%	\$4,650	33.2%	\$3,500	25.0%	\$3,500	25.0%	\$1,750	12.5%	\$1,750
53620 Consumable Tools	\$5,000	10.0%	\$3,250	65.0%	\$1,675	33.5%	\$1,500	30.0%	\$1,500	30.0%	\$625	12.5%	\$625
53910 Sludge Disposal	\$160,000	0.0%	\$0	0.0%	\$0	0.0%	\$98,000	40.0%	\$98,000	40.0%	\$8,000	5.0%	\$8,000

Table 3 - Allocation of Costs to Function

2018 Budget	Flow		BOD		TSS		P		TKN	
	%	Cost - User Charge	%	Cost - Customer	%	Cost	%	Cost	%	Cost
\$67,635	20.0%	\$9,819	20.0%	\$4,748	20.0%	\$13,567	20.0%	\$13,567	20.0%	\$13,567
\$3,360,747	23.8%	\$519,416	36.7%	\$273,685	23.2%	\$779,045	8.4%	\$262,953	5.9%	\$198,963
Subtotal Sewer Plant Operations										
Pre-treatment Sampling (7361)										
110 Personal Services										
\$95,149	15.0%	\$8,302	25.0%	\$4,470	20.0%	\$17,030	20.0%	\$17,030	20.0%	\$17,030
\$69,656	15.0%	\$6,791	25.0%	\$9,667	20.0%	\$13,931	20.0%	\$13,931	20.0%	\$13,931
\$11,843	15.0%	\$1,155	25.0%	\$622	20.0%	\$2,369	20.0%	\$2,369	20.0%	\$2,369
\$10,372	15.0%	\$1,011	25.0%	\$545	20.0%	\$2,074	20.0%	\$2,074	20.0%	\$2,074
\$39,655	15.0%	\$3,866	25.0%	\$2,082	20.0%	\$7,931	20.0%	\$7,931	20.0%	\$7,931
\$970	15.0%	\$95	25.0%	\$51	20.0%	\$194	20.0%	\$194	20.0%	\$194
\$2,280	15.0%	\$222	25.0%	\$120	20.0%	\$456	20.0%	\$456	20.0%	\$456
120 Contractual Services										
\$10,000	15.0%	\$975	25.0%	\$525	20.0%	\$2,000	20.0%	\$2,000	20.0%	\$2,000
\$2,410	15.0%	\$98	25.0%	\$53	20.0%	\$200	20.0%	\$200	20.0%	\$200
\$2,430	15.0%	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0	20.0%	\$0
130 Supplies and Expenses										
\$100	15.0%	\$10	25.0%	\$5	20.0%	\$20	20.0%	\$20	20.0%	\$20
\$0	15.0%	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0	20.0%	\$0
\$50	15.0%	\$5	25.0%	\$3	20.0%	\$10	20.0%	\$10	20.0%	\$10
\$1,200	15.0%	\$117	25.0%	\$63	20.0%	\$240	20.0%	\$240	20.0%	\$240
\$292,275.00	15.0%	\$22,647	25.0%	\$12,194	20.0%	\$46,455	20.0%	\$46,455	20.0%	\$46,455
Subtotal Pretreatment Sampling										
\$4,761,836.00	42.1%	\$1,301,792	28.5%	\$700,965	17.3%	\$825,500	6.9%	\$328,438	5.2%	\$245,438
Subtotal Collector and Treatment										
Sewer Administration (7360)										
110 Personal Services										
\$844,214	42.1%	\$94,101	28.5%	\$50,670	17.3%	\$98,215	6.9%	\$33,814	5.2%	\$17,742
\$0	42.1%	\$0	28.5%	\$0	17.3%	\$0	6.9%	\$0	5.2%	\$0
\$0	42.1%	\$0	28.5%	\$0	17.3%	\$0	6.9%	\$0	5.2%	\$0
\$256,344	42.1%	\$70,079	28.5%	\$37,735	17.3%	\$73,143	6.9%	\$17,735	5.2%	\$13,213
\$3,000	42.1%	\$820	28.5%	\$442	17.3%	\$866	6.9%	\$208	5.2%	\$155
\$46,172	42.1%	\$12,663	28.5%	\$6,797	17.3%	\$13,174	6.9%	\$8,004	5.2%	\$2,380
\$40,438	42.1%	\$11,055	28.5%	\$5,953	17.3%	\$11,638	6.9%	\$2,798	5.2%	\$2,084
\$100,000	42.1%	\$27,988	28.5%	\$14,720	17.3%	\$28,533	6.9%	\$6,918	5.2%	\$5,154
\$138,683	42.1%	\$37,913	28.5%	\$20,415	17.3%	\$39,571	6.9%	\$9,594	5.2%	\$7,148
\$1,503	42.1%	\$411	28.5%	\$221	17.3%	\$429	6.9%	\$104	5.2%	\$77
\$7,990	42.1%	\$2,182	28.5%	\$1,175	17.3%	\$2,277	6.9%	\$552	5.2%	\$411
\$125,000	42.1%	\$34,173	28.5%	\$18,401	17.3%	\$35,667	6.9%	\$8,648	5.2%	\$6,443
120 Contractual Services										
\$93,325	42.1%	\$22,779	28.5%	\$12,266	17.3%	\$23,775	6.9%	\$5,765	5.2%	\$4,295
\$704,520	42.1%	\$192,602	28.5%	\$103,709	17.3%	\$201,022	6.9%	\$48,741	5.2%	\$36,613
\$100,000	42.1%	\$27,358	28.5%	\$14,720	17.3%	\$28,533	6.9%	\$6,918	5.2%	\$5,154
\$51,500	42.1%	\$14,079	28.5%	\$7,581	17.3%	\$14,895	6.9%	\$3,563	5.2%	\$2,854
\$0	42.1%	\$0	28.5%	\$0	17.3%	\$0	6.9%	\$0	5.2%	\$0
\$20,000	42.1%	\$5,468	28.5%	\$2,944	17.3%	\$5,707	6.9%	\$1,364	5.2%	\$1,031
\$225	42.1%	\$62	28.5%	\$33	17.3%	\$64	6.9%	\$16	5.2%	\$12
\$4,000	42.1%	\$1,094	28.5%	\$589	17.3%	\$1,141	6.9%	\$277	5.2%	\$206
130 Supplies and Expenses										
\$1,000	42.1%	\$273	28.5%	\$147	17.3%	\$285	6.9%	\$69	5.2%	\$52
\$2,400	42.1%	\$656	28.5%	\$359	17.3%	\$685	6.9%	\$166	5.2%	\$124
\$6,000	42.1%	\$1,640	28.5%	\$889	17.3%	\$1,712	6.9%	\$415	5.2%	\$309
\$5,380	42.1%	\$1,471	28.5%	\$792	17.3%	\$1,535	6.9%	\$372	5.2%	\$277
\$480	42.1%	\$123	28.5%	\$66	17.3%	\$128	6.9%	\$31	5.2%	\$23
\$3,500	42.1%	\$957	28.5%	\$515	17.3%	\$999	6.9%	\$242	5.2%	\$180

Table 3 - Allocation of Costs to Function

	2018 Budget		Flow		BOD		TSS		P		TKN	
			%	Cost -	%	Cost -	%	Cost -	%	Cost -	%	Cost -
				User Charge		Customer						
59250 Conference And Training	\$15,000	\$4,101	42.1%	\$2,208	28.5%	\$4,280	17.3%	\$2,600	6.9%	\$1,038	5.2%	\$773
59260 Advertising	\$2,000	\$547	42.1%	\$294	28.5%	\$571	17.3%	\$347	6.9%	\$138	5.2%	\$103
59340 Other Chg	\$600	\$164	42.1%	\$88	28.5%	\$171	17.3%	\$104	6.9%	\$42	5.2%	\$31
150 Fixed Charges												
55120 Auto And Fleet Insurance	\$7,347	\$2,009	42.1%	\$1,082	28.5%	\$2,096	17.3%	\$1,274	6.9%	\$508	5.2%	\$379
55160 Workman's Comp Insurance	\$72,859	\$19,918	42.1%	\$10,725	28.5%	\$20,789	17.3%	\$12,631	6.9%	\$5,041	5.2%	\$3,755
55190 General Liability Insurance	\$35,964	\$9,832	42.1%	\$5,294	28.5%	\$10,262	17.3%	\$6,235	6.9%	\$2,488	5.2%	\$1,854
184 Intra-departmental Charges												
78422 Data Processing-Allocated	\$229,820	\$62,828	42.1%	\$33,831	28.5%	\$65,575	17.3%	\$39,841	6.9%	\$15,900	5.2%	\$11,846
78650 Employee Safety Programs	\$14,000	\$3,827	42.1%	\$2,061	28.5%	\$3,995	17.3%	\$2,427	6.9%	\$968	5.2%	\$722
78690 Other Employee Benefits	\$0	\$0	42.1%	\$0	28.5%	\$0	17.3%	\$0	6.9%	\$0	5.2%	\$0
89280 TranSkvkt	\$34,585	\$9,455	42.1%	\$5,081	28.5%	\$9,868	17.3%	\$5,996	6.9%	\$2,399	5.2%	\$1,783
Subtotal	\$ 2,457,809.00	\$ 671,916	42.1%	\$ 361,801	28.5%	\$ 701,292	17.3%	\$ 426,080	6.9%	\$ 170,038	5.2%	\$ 126,682
Total O & M	\$ 7,219,645.00	\$ 1,973,708	42.1%	\$ 1,062,766	28.5%	\$ 2,039,936	17.3%	\$ 1,251,580	6.9%	\$ 499,475.94	5.2%	\$ 372,119.57
Capital Costs												
Depreciation	\$5,500,000	\$2,313,217	42.1%	\$0	28.5%	\$1,569,326	17.9%	\$953,466	6.9%	\$380,506	5.2%	\$283,485
Return on Investment (ROI)	\$2,703,628	\$1,137,105	42.1%	\$0	28.5%	\$771,432	17.3%	\$463,694	6.9%	\$187,045	5.2%	\$139,352
Total Capital Costs	\$8,203,628	\$3,450,322		\$0		\$2,340,758		\$1,422,160		\$567,551		\$422,837
Subtotal Revenue Requirements	\$15,423,273	\$5,424,030		\$1,062,766		\$4,400,754		\$2,673,740		\$1,067,026.65		\$784,956
Other Income												
Delinquent Fees												
Pre-Treatment Charges - Public Charges	(\$60,000)	(\$16,403)	42.1%	(\$9,892)	28.5%	(\$17,120)	17.9%	(\$10,401)	6.9%	(\$4,151)	5.2%	(\$3,089)
Investment Income	(\$63,000)	(\$17,223)	42.1%	(\$9,274)	28.5%	(\$17,976)	17.3%	(\$10,922)	6.9%	(\$4,359)	5.2%	(\$3,247)
Total Other Income	(\$123,000)	(\$33,626)	42.1%	(\$18,166)	28.5%	(\$35,096)	17.3%	(\$21,323)	6.9%	(\$8,509)	5.2%	(\$6,340)
Total Net Revenue Requirements	\$15,300,273	\$5,390,404		\$1,044,660		\$4,365,658		\$2,652,417		\$1,058,517		\$788,616
Summary												
Allocation of Costs to Function and Classification for City Rates												
				Flow	Fixed	BOD	SS		P	TKN		
O&M and Replacement	\$7,219,645	\$1,973,708		\$1,062,766		\$2,039,936	\$1,251,580		\$499,476	\$372,120		
Capital	\$8,203,628	\$3,450,322		\$0		\$2,340,758	\$1,422,160		\$567,551	\$422,837		
Other Revenues	(\$123,000)	(\$33,626)		(\$18,166)		(\$35,096)	(\$21,323)		(\$8,509)	(\$6,340)		
Total	15,300,273	5,390,404		1,044,660		4,365,658	2,652,417		1,058,517	788,616		
Allocation of Costs to Function and Classification for Extraterritorial Rates												
				Flow	Fixed	BOD	SS		P	TKN		
Total Allocation for City Rates	\$15,300,273	\$5,390,404		\$1,044,660		\$4,365,658	\$2,652,417		\$1,058,517	\$788,616		
Deduct ROI for City	(\$2,703,628)	(\$1,137,105)		\$0		(\$771,432)	(\$463,694)		(\$187,045)	(\$139,352)		
Add ROI for Computation of Extra Rates	\$10,077,158	\$4,238,301	42.1%	\$0		\$2,875,335	\$1,746,351		\$697,187	\$519,403		
Total	22,673,803	6,491,600		1,044,660		6,469,962	3,930,674		1,568,639	1,168,668		

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

2017-2018 Operating and Maintenance Comparison

Operating and Maintenance Category	2017	2017	Difference	Percentage Change
Sewer Maintenance	\$ 1,142,505	\$ 1,168,814	\$26,309	2.30%
Sewer Plant Operations	\$ 3,326,212	\$ 3,360,747	\$34,535	1.04%
Pre-treatment Sampling	\$ 231,622	\$ 232,275	\$653	0.28%
Subtotal Collection and Treatment	\$ 4,700,339	\$ 4,761,836	\$61,497	1.31%
Sewer Administration	\$ 2,433,613	\$ 2,457,809	\$24,196	0.99%
Total Operating and Maintenance Expenses	\$ 7,133,952	\$ 7,219,645	\$85,693	1.20%

2017-2018 Billable Flows Comparison

Customer Class	2017	2017	Difference (000 gal)	Percentage Change
Residential	913,020	868,330	(44,690)	-4.89%
Commercial and Multi-Family	741,830	711,220	(30,610)	-4.13%
Industrial	133,630	129,460	(4,170)	-3.12%
Public	71,550	73,000	1,450	2.03%
Septic Tank Waste	7,500	7,340	(160)	-2.13%
Holding Tank Waste	10,500	8,000	(2,500)	-23.81%
Total	1,878,030	1,797,350	(80,680)	-4.30%

Total Loadings all Customer Classes	2017	2017	Difference (lbs)	Percentage Change
BOD (Lbs)	4,807,895	4,963,014	155,119	3.23%
TSS (Lbs)	5,965,192	5,866,539	(98,653)	-1.65%
P (lbs)	144,337	137,451	(6,886)	-4.77%
TKN (lbs)	529,616	502,416	(27,200)	-5.14%

Avg. residential user ~ 48,000 gal/yr.

Table 5 - Wastewater Utility Assets and Depreciation

Estimated Asset Detail at 12/31/16

Description	Original Cost ⁽¹⁾	Accumulated Depreciation ⁽²⁾	Est. 2017	Est. 2018	Est. Accumulated Depreciation at 12/31/2018	Net Book Value
Land	\$31,107	\$0				
Land Improvements	\$7,631,962	\$292,838				
Buildings	\$75,528,445	\$23,018,824				
Building Improvements	\$1,261,025	\$542,849				
Audio/Visual Equipment	\$64,044	\$41,667				
Communications Equipment	\$21,013	\$21,013				
Computer Software	\$539,283	\$539,283				
Computer Hardware	\$9,938	\$1,001				
Machinery and Tools	\$23,896,238	\$6,371,268				
Lab/Science/Engineering	\$129,980	\$57,875				
Furniture and Accessories	\$9,306	\$8,779				
Grounds/Agricultural Equipment	\$3,500	\$3,500				
Contractor/Construction Equipment 1	\$1,215,777	\$673,115				
Utilities/Sewer/Water/Electric	\$8,041,567	\$1,602,964				
Underground Piping	\$36,730,898	\$12,362,164				
All Other Licensed Vehicles	\$713,673	\$613,447				
Subtotal	\$155,827,756	\$46,150,589	\$4,714,475	\$5,128,075	\$55,993,139	\$99,834,618
2017 Capital Projects ⁽³⁾	\$6,130,000		\$85,525	\$171,050	\$256,575	\$5,873,425
2018 Capital Projects ⁽³⁾	\$17,385,000		\$0	\$200,875	\$200,875	\$17,184,125
Total	\$179,342,756		\$4,800,000	\$5,500,000	\$56,450,589	\$122,892,168

Notes:

(1) From City of Waukesha 12/31/2016 Fixed Asset Master List.

(2) At 12/31/2016

(3) Source: City Finance Department.

Table 6 - Recovery of Depreciation and ROI

Return on Investment - City Customers

Asset Costs	\$179,342,756
Accumulated Depreciation	<u>\$56,450,589</u>
Estimated 2014 Net Investment Rate Base (NIRB)	\$122,892,168

Return on Investment (ROI) % 2.20%

ROI for test year \$2,703,628

Depreciation Expense for test year \$5,500,000

Total Capital Recovery \$8,203,628

Return on Investment - Extraterritorial Customers

Asset Costs	\$179,342,756
Accumulated Depreciation	<u>\$56,450,589</u>
Estimated 2014 Net Investment Rate Base (NIRB)	\$122,892,168

Return on Investment (ROI) % 8.20%

ROI for test year \$10,077,158

Depreciation Expense for test year \$5,500,000

Total Capital Recovery \$15,577,158

Table 7 - Rate Computation Worksheet

	City (Inside) Rates			Extraterritorial (Outside) Rates		
	Costs	Billable Units	City Rate	Costs	Billable Units	Extra. Rate
Fixed Charges						
Fixed Charge	1,044,660	20,279	\$51.51	1,044,660	20,279	\$51.51
Volumetric Charges						
Flow Charge per 1,000 gallons	5,390,404	1,822,410	\$2.96	8,491,600	1,818,580	\$4.67
BOD Charge per lb.	4,365,658	4,970,521	\$0.88	6,469,562	4,963,014	\$1.30
TSS Charge per lb.	2,652,417	5,877,400	\$0.45	3,930,674	5,866,539	\$0.67
P Charge per lb.	1,058,517	137,707	\$7.69	1,568,639	137,451	\$11.41
TKN Charge per lb.	788,616	503,374	\$1.57	1,168,668	502,416	\$2.33
BOD Charge per 1,000 gal			\$1.72			\$2.55
TSS Charge per 1,000 gal			\$1.28			\$1.90
P Charge per 1,000 gal			\$0.51			\$0.76
TKN Charge per 1,000 gal			\$0.39			\$0.58
Total Volumetric Rate per 1,000 gal			\$6.86			\$10.47
Wastehauler Charges						
Septic Charges						
Flow Charge per 1,000 gallons			\$2.96			\$4.67
BOD Charge per 1,000 gal			\$10.96			\$16.26
TSS Charge per 1,000 gal			\$22.94			\$34.06
P Charge per 1,000 gal			\$3.01			\$4.47
TKN Charge per 1,000 gal			\$2.61			\$3.88
Total			\$42.48			\$63.35
Holding Tank Charges						
Flow Charge per 1,000 gallons			\$2.96			\$4.67
BOD Charge per 1,000 gal			\$4.72			\$7.00
TSS Charge per 1,000 gal			\$3.44			\$5.11
P Charge per 1,000 gal			\$1.67			\$2.47
TKN Charge per 1,000 gal			\$1.23			\$1.82
Total			\$14.01			\$21.08
Chemical Toilet Waste Charges						
Flow Charge per 1,000 gallons			\$2.96			\$4.67
BOD Charge per 1,000 gal			\$60.52			\$89.82
TSS Charge per 1,000 gal			\$33.99			\$50.46
P Charge per 1,000 gal			\$16.28			\$24.18
TKN Charge per 1,000 gal			\$36.94			\$54.84
Total			\$150.69			\$223.97
Rate Summary						
Fixed charge per connection			City (Inside) \$51.51			Extraterritorial (Outside) \$51.51
Rate per 1,000 gallons			\$6.86			\$10.47
BOD rate per lb.			\$0.88			\$1.30
TSS rate per lb.			\$0.45			\$0.67
P rate per lb.			\$7.69			\$11.41
TKN rate per lb.			\$1.57			\$2.33

Table 8 - Rate Summary

		<u>COS</u>	<u>2018 Proposed</u>
City (Inside)	Fixed charge per connection (annual)	\$51.51	\$59.45
	Volumetric Rate per 1,000 gallons	\$6.86	\$6.62
	BOD rate per lb.	\$0.88	\$0.90
	TSS rate per lb.	\$0.45	\$0.46
	P rate per lb.	\$7.69	\$7.87
	TKN rate per lb.	\$1.57	\$1.60
	Unmetered quarterly flat charge	\$205.91	\$198.66
Extraterritorial (Outside)	Fixed charge per connection (annual)	\$51.51	\$59.45
	Volumetric Rate per 1,000 gallons	\$10.47	\$8.86
	BOD rate per lb.	\$1.30	\$1.30
	TSS rate per lb.	\$0.67	\$0.67
	P rate per lb.	\$11.41	\$11.41
	TKN rate per lb.	\$2.33	\$2.33
	Unmetered quarterly flat charge	\$314.03	\$265.72
Wastehauler	Septic Rate per 1,000 Gallons	\$63.35	\$54.18
	Chemical Toilet Rate per 1,000 Gallons	\$150.69	\$150.69
	Holding Tank Rate per 1,000 Gallons	\$21.08	\$17.91

Table 9 - Revenue Check (Based on COS)

		Units	Rate	Annual Total
Fixed Charge				
Residential	cust	17,859	\$51.51	\$919,995
Commercial and Multi-Family	cust	2,170	\$51.51	\$111,786
Industrial	cust	144	\$51.51	\$7,418
Public	cust	106	\$51.51	\$5,461
Subtotal		20,279		\$1,044,660
Volumetric Charges-Inside Customers				
Residential	Flow (000 gal)	868,330	\$6.86	\$5,960,012
Commercial & Multiple	Flow (000 gal)	711,220	\$6.86	\$4,881,646
Industrial	Flow (000 gal)	129,460	\$6.86	\$888,583
Public	Flow (000 gal)	73,000	\$6.86	\$501,055
Septic Waste Haulers	Flow (000 gal)	7,340	\$42.48	\$311,822
Chemical Toilet Waste Haulers	Flow (000 gal)	135	\$150.69	\$20,343
Holding Tank Waste Haulers	Flow (000 gal)	8,000	\$14.01	\$112,112
Subtotal		1,797,485		\$12,675,573
Industrial Excess BOD	Lbs	1,285,261	\$0.88	\$1,128,858
Industrial Excess TSS	Lbs	309,330	\$0.45	\$139,598
Industrial Excess P	Lbs	12,250	\$7.69	\$94,164
Industrial Excess TKN	Lbs	29,582	\$1.57	\$46,344
Subtotal		1,636,423		\$1,408,963
Unmetered Customers	cust	115	\$823.65	\$94,720
Volumetric Charges-Outside Customers				
Residential	Flow (000 gal)	2,637	\$10.47	\$27,601
Commercial & Multiple	Flow (000 gal)	4,519	\$10.47	\$47,299
Industrial	Flow (000 gal)	139	\$10.47	\$1,457
Subtotal				\$76,356
Total Revenues				\$15,300,272
Revenue Requirements				\$15,300,273
Difference				\$0

Table 10 - Revenue Summary

		Units	Rate	Annual Total
Fixed Charge				
Residential	cust	17,859	\$59.45	\$1,061,730
Commercial and Multi-Family	cust	2,170	\$59.45	\$129,008
Industrial	cust	144	\$59.45	\$8,561
Public	cust	106	\$59.45	\$6,302
Subtotal		20,279		\$1,205,600
Volumetric Charges - Inside Customers				
Residential	Flow (000 gal)	868,330	\$6.62	\$5,750,081
Commercial & Multiple	Flow (000 gal)	711,220	\$6.62	\$4,709,699
Industrial	Flow (000 gal)	129,460	\$6.62	\$857,284
Public	Flow (000 gal)	73,000	\$6.62	\$483,406
Septic Waste Haulers	Flow (000 gal)	7,340	\$54.18	\$397,688
Holding Tank Waste Haulers	Flow (000 gal)	8,000	\$17.91	\$143,260
Chemical Toilet Waste Haulers	Flow (000 gal)	135	\$150.69	\$20,343
Subtotal		1,797,350		\$12,361,761
Industrial Excess BOD	Lbs	1,285,261	\$0.90	\$1,156,735
Industrial Excess TSS	Lbs	309,330	\$0.46	\$142,292
Industrial Excess P	Lbs	12,250	\$7.87	\$96,409
Industrial Excess TKN	Lbs	29,582	\$1.60	\$47,330
Subtotal		1,636,423		\$1,442,766
Unmetered Customers	cust	115	\$794.64	\$91,384
Volumetric Charges - Outside Customers				
Residential	Flow (000 gal)	2,637	\$8.86	\$23,355
Commercial & Multiple	Flow (000 gal)	4,519	\$8.86	\$40,022
Industrial	Flow (000 gal)	139	\$8.86	\$1,233
Subtotal				\$64,610
Total Revenues				\$15,166,120
Revenue Requirements COS				\$15,300,273
Difference				(\$134,152)
Revenues as % of COS				99.1%

Table 11 - Test Year Cash Flow Analysis

	2018
Cash Sources	
Revenues from User Rates ⁽⁴⁾	\$15,166,120
Allowance for Unknowns (ie. Timing of billing, customer loss)	(\$530,814)
Other Income ⁽¹⁾	\$123,000
Investment Income on Unrestricted Cash ⁽²⁾	\$34,176
Other Fees ⁽³⁾	\$60,000
Total Cash Sources	\$14,852,482
Cash Uses	
O&M	\$7,219,645
Net Before Debt Service	\$7,632,837
Debt Service	
Pension State Trust Fund	\$26,982
2012 G.O. Promisary Note	\$345,000
2014 Sewer Revenue Bonds	\$549,475
2014 Clean Water Fund Loan	\$2,210,015
2015 Clean Water Fund Loan	\$969,164
2016 Sewer Revenue Bond	\$252,800
2017 Sewer Revenue Bond	\$456,025
2017 Bond Anticipation Note (Refinanced in 2018)	\$394,779
2018 Clean Water Fund Loan (Interceptor Project)	\$140,108
2018 Bond Anticipation Note (Refinanced in 2019)	\$0
Total Debt Service	\$5,344,348
Capital Outlay (non reserve) ⁽⁵⁾	\$1,000,000
Addition to Replacement Fund	\$50,000
Net Cash Flow	\$1,238,489
Unrestricted Cash Balances	
Estimated Beginning Year Balance	\$16,220,606
Net Additions	\$1,238,489
End of Year Balance	\$17,459,095
Replacement Fund Balances	
Beginning Year Balance	\$2,890,578
Additions from Rates	\$50,000
Fund Expenditures	(\$50,000)
Interest Income ⁽²⁾	\$6,556
End Year Replacement Fund Balance	\$2,897,134

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.
- (5) Links to Long Range Capital Improvement Plan.