



Sanitary Sewer User Rates Study Update

For

The City of Waukesha



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Sewer User Rate Study Update
Supporting Worksheets

City of Waukesha

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Table 1 - Comparison of Existing vs. Proposed Rates

	Current Rates Effective 1/1/2020	2021 Proposed Rates	\$ Change	% Change
<u>City (Inside) User Charges</u>				
Quarterly Fixed Charge	\$17.43	\$17.56	\$0.13	0.75%
Monthly Fixed Charge (If Switching to Monthly Billing)	\$5.81	\$5.85	\$0.04	0.75%
Volumetric Charge per 1,000 gallons	\$7.90	\$8.54	\$0.64	8.05%
Quarterly flat charge (unmetered users only)	\$237.11	\$256.20	\$19.09	8.05%
Surcharge Rate BOD /lb	\$1.00	\$1.09	\$0.09	8.52%
Surcharge Rate SS /lb	\$0.53	\$0.57	\$0.04	7.90%
Surcharge Rate P /lb	\$8.48	\$9.19	\$0.71	8.37%
Surcharge Rate TKN /lb	\$1.72	\$1.86	\$0.14	8.14%
<u>Extraterritorial (Outside) User Charges</u>				
Quarterly Fixed Charge	\$17.43	\$17.56	\$0.13	0.75%
Monthly Fixed Charge (If Switching to Monthly Billing)	\$5.81	\$5.85	\$0.04	0.75%
Volumetric Charge per 1,000 gallons	\$10.57	\$11.42	\$0.85	8.05%
Quarterly flat charge (unmetered users only)	\$317.15	\$342.68	\$25.53	8.05%
<u>Hauled Waste Charges</u>				
Septic Tank Rate per 1,000 gallons	\$65.38	\$71.82	\$6.44	9.85%
Holding Tank Rate per 1,000 gallons	\$21.61	\$23.74	\$2.13	9.85%
Chemical Toilet Waste Rate per 1,000 gallons	\$176.20	\$194.78	\$18.58	10.54%
Annual Cost for Average Residential User (48,000 gallons/year)	\$449.10	\$480.16	\$31.06	6.92%
Quarterly Cost	\$112.27	\$120.04	\$7.77	
Monthly Cost	\$37.42	\$40.01	\$2.59	

Table 2 - Projected WWTF Flows and Loadings

Total	Equiv Customers	Flow (1,000 Gal)	BOD (Lbs)	SS (Lbs)	P (Lbs)	TKN (Lbs)
Residential	18,125	884,000	1,732,552	2,506,670	58,980	221,177
Commercial and Multi-Family ⁽¹⁾	2,191	670,000	1,313,133	1,899,852	44,702	167,634
Industrial	148	108,000	211,669	306,245	7,206	27,022
Public	108	64,000	125,434	181,478	4,270	16,013
Subtotal City Billable	20,572	1,726,000	3,382,787	4,894,246	115,159	431,845
Unmetered Customers	115	13,800	27,047	39,131	921	3,453
Outside Customers						
Residential	71	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	94	7,295	14,297	20,685	487	1,825
High Strength Industrial						
Ventura Foods						
Excess Loadings			276,832	87,064	271	452
GE Medical Systems						
Excess Loadings			10,520	7,437	231	3,905
Waukesha Memorial Hospital						
Excess Loadings			29,948	-	-	7,246
Innio (GE/Waukesha Engine)						
Excess Loadings			20,546	-	1,303	7,743
SPX Transformer						
Excess Loadings			3,163	-	78	2,039
Lifeway Wisconsin, LLC						
Excess Loadings			446,750	97,307	3,515	11,824
DSM Food						
Excess Loadings			8,244	12,993	3,385	273
Midwest Finishing						
Excess Loadings			786	-	-	114
Gascoigne Co.						
Excess Loadings			-	-	1,399	-
Profile Finishing						
Excess Loadings			9	-	50	10
Eaton Badger						
Excess Loadings			-	-	274	-
Eaton Lincoln						
Excess Loadings			-	-	807	-
Class 2 Industrial Hauled Excess Loadings			1,872	-	250	1,400
Subtotal High Strength Industrial Billable			798,670	204,801	11,564	35,006
Septic Tank Waste		4,941	61,647	251,162	1,937	8,242
Chemical Toilet Waste		395	27,218	29,751	837	9,313
Holding Tank Waste		4,132	22,191	31,529	896	3,239
Subtotal Wastehaulers		9,468	111,055	312,442	3,669	20,794
Total Billable	20,666	1,756,562	4,333,857	5,471,305	131,799	492,923
I/I		1,271,993				
Total WTF		3,028,556				
Total For Rate Calcs	20,666	1,756,562	4,333,857	5,471,305	131,799	492,923

Notes:

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

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN	
	2021 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost
Operating & Maintenance			65.0%	35.0%						
Sewer Maintenance (7384)										
110 Personal Services										
51110 Salaries	\$58,434	100.0%	\$37,982	\$20,452	0.0%	\$0	0.0%	\$0	\$0	\$0
51210 Wages Permanent	\$430,674	100.0%	\$279,938	\$150,736	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
51250 Wages Temporary	\$0	100.0%	\$0	\$0	0.0%	\$0	0.0%	\$0	\$0	\$0
51510 Social Security	\$39,003	100.0%	\$25,352	\$13,651	0.0%	\$0	0.0%	\$0	\$0	\$0
51520 Retirement	\$34,414	100.0%	\$22,369	\$12,045	0.0%	\$0	0.0%	\$0	\$0	\$0
51540 Health Insurance	\$121,862	100.0%	\$79,210	\$42,652	0.0%	\$0	0.0%	\$0	\$0	\$0
51550 Life Insurance	\$1,230	100.0%	\$800	\$431	0.0%	\$0	0.0%	\$0	\$0	\$0
51560 Dental Insurance	\$6,265	100.0%	\$4,072	\$2,193	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
52210 Water And Sewer	\$9,450	100.0%	\$6,143	\$3,308	0.0%	\$0	0.0%	\$0	\$0	\$0
52220 Electric	\$140,000	100.0%	\$91,000	\$49,000	0.0%	\$0	0.0%	\$0	\$0	\$0
52240 Heat	\$830	100.0%	\$540	\$291	0.0%	\$0	0.0%	\$0	\$0	\$0
52410 Vehicle Maintenance	\$50,000	100.0%	\$32,500	\$17,500	0.0%	\$0	0.0%	\$0	\$0	\$0
52435 Conveyance Maintenance	\$80,000	100.0%	\$52,000	\$28,000	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
130 Supplies and Expenses										
53510 Gasoline, Oil, Grease Etc.	\$20,000	100.0%	\$13,000	\$7,000	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
Subtotal Sewer Maintenance	\$1,177,895	100.0%	\$765,632	\$412,263	0.0%	\$0	0.0%	\$0	0.0%	\$0
Sewer Plant Operations (7388)										
110 Personal Services										
51170 Accrued Compensatory time	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0
51180 Accrued Vacation	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0
51190 Sick Leave Accrual	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0
51210 Wages Permanent	\$951,832	35.0%	\$216,542	\$116,599	30.0%	\$285,550	25.0%	\$237,958	5.0%	\$47,592
51220 Overtime	\$80,000	35.0%	\$18,200	\$9,800	30.0%	\$24,000	25.0%	\$20,000	5.0%	\$4,000
51250 Wages Temporary	\$20,160	35.0%	\$4,586	\$2,470	30.0%	\$6,048	25.0%	\$5,040	5.0%	\$1,008
51510 Social Security	\$79,227	35.0%	\$18,024	\$9,705	30.0%	\$23,668	25.0%	\$19,807	5.0%	\$3,961
51520 Retirement	\$69,578	35.0%	\$15,829	\$8,523	30.0%	\$20,873	25.0%	\$17,395	5.0%	\$3,479
51540 Health Insurance	\$243,102	35.0%	\$55,306	\$29,780	30.0%	\$72,931	25.0%	\$60,776	5.0%	\$12,155
51550 Life Insurance	\$2,497	35.0%	\$568	\$306	30.0%	\$749	25.0%	\$624	5.0%	\$125
51560 Dental Insurance	\$11,748	35.0%	\$2,673	\$1,439	30.0%	\$3,524	25.0%	\$2,937	5.0%	\$587
120 Contractual Services										
52190 Lab Testing	\$30,000	0.0%	\$0	\$0	30.0%	\$9,000	20.0%	\$6,000	27.5%	\$8,250
52210 Water And Sewer	\$30,000	100.0%	\$19,500	\$10,500	0.0%	\$0	0.0%	\$0	0.0%	\$0
52220 Electric	\$775,000	17.5%	\$88,156	\$47,469	57.5%	\$445,625	15.0%	\$116,250	5.0%	\$38,750
52240 Heat	\$102,000	25.0%	\$16,575	\$8,925	25.0%	\$25,500	25.0%	\$25,500	12.5%	\$12,750
52410 Vehicle Maintenance	\$35,000	25.0%	\$5,688	\$3,063	25.0%	\$8,750	25.0%	\$8,750	12.5%	\$4,375
52430 Computer Hardware Maint	\$22,000	25.0%	\$3,575	\$1,925	25.0%	\$5,500	25.0%	\$5,500	12.5%	\$2,750
52450 Grounds Maintenance & Improv	\$60,000	25.0%	\$9,750	\$5,250	25.0%	\$15,000	25.0%	\$15,000	12.5%	\$7,500
52490 Equipment Maintenance	\$185,000	15.0%	\$18,038	\$9,713	30.0%	\$55,500	30.0%	\$55,500	12.5%	\$23,125
52990 Environmental Permit Fee	\$15,000	25.0%	\$2,438	\$1,313	25.0%	\$3,750	25.0%	\$3,750	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
53420 Chemistry/Lab/Medical Supplies	\$28,000	0.0%	\$0	\$0	25.0%	\$7,000	25.0%	\$7,000	25.0%	\$7,000
53422 WWTP Processing Chemicals	\$343,000	0.0%	\$0	\$0	50.0%	\$171,500	25.0%	\$85,750	25.0%	\$85,750
53440 Janitorial Supplies	\$8,000	10.0%	\$520	\$280	25.0%	\$2,000	25.0%	\$2,000	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
53490 Other Operating Supplies	\$0	10.0%	\$0	\$0	25.0%	\$0	25.0%	\$0	20.0%	\$0
53510 Gasoline, Oil, Grease Etc.	\$13,000	10.0%	\$845	\$455	25.0%	\$3,250	25.0%	\$3,250	20.0%	\$2,600
53620 Consumable Tools	\$8,000	10.0%	\$520	\$280	25.0%	\$2,000	25.0%	\$2,000	20.0%	\$1,600
53910 Sludge Disposal	\$165,000	0.0%	\$0	\$0	55.0%	\$90,750	40.0%	\$66,000	5.0%	\$8,250
150 Fixed Charges										
55110 Property/Boiler Ins. & Expense	\$80,000	20.0%	\$10,400	\$5,600	20.0%	\$16,000	20.0%	\$16,000	20.0%	\$16,000
Subtotal Sewer Plant Operations	\$3,372,144	23.2%	\$508,869	\$274,006	38.6%	\$1,302,568	23.3%	\$786,786	8.8%	\$297,707

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN		
	2021 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost	
Pre-treatment Sampling (7381)											
110 Personal Services											
51110 Salaries	\$91,026	15.0%	\$8,875	\$4,779	25.0%	\$22,757	20.0%	\$18,205	20.0%	\$18,205	20.0%
51210 Wages Permanent	\$74,464	15.0%	\$7,260	\$3,909	25.0%	\$18,616	20.0%	\$14,893	20.0%	\$14,893	20.0%
51510 Social Security	\$12,660	15.0%	\$1,234	\$665	25.0%	\$3,165	20.0%	\$2,532	20.0%	\$2,532	20.0%
51520 Retirement	\$11,171	15.0%	\$1,089	\$586	25.0%	\$2,793	20.0%	\$2,234	20.0%	\$2,234	20.0%
51540 Health Insurance	\$44,552	15.0%	\$4,344	\$2,339	25.0%	\$11,138	20.0%	\$8,910	20.0%	\$8,910	20.0%
51550 Life Insurance	\$1,014	15.0%	\$99	\$53	25.0%	\$254	20.0%	\$203	20.0%	\$203	20.0%
51560 Dental Insurance	\$2,280	15.0%	\$222	\$120	25.0%	\$570	20.0%	\$456	20.0%	\$456	20.0%
120 Contractual Services											
52190 Pre-Treatment Sampling	\$12,500	15.0%	\$1,219	\$656	25.0%	\$3,125	20.0%	\$2,500	20.0%	\$2,500	20.0%
52410 Vehicle Maintenance	\$1,500	15.0%	\$146	\$79	25.0%	\$375	20.0%	\$300	20.0%	\$300	20.0%
52430 Computer Hardware Maint	\$0	15.0%	\$0	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0	20.0%
130 Supplies and Expenses											
53120 Office Supplies	\$100	15.0%	\$10	\$5	25.0%	\$25	20.0%	\$20	20.0%	\$20	20.0%
53220 Subscriptions-Office	\$0	15.0%	\$0	\$0	25.0%	\$0	20.0%	\$0	20.0%	\$0	20.0%
53260 Advertising	\$50	15.0%	\$5	\$3	25.0%	\$13	20.0%	\$10	20.0%	\$10	20.0%
53510 Gasoline, Oil, Grease Etc.	\$1,200	15.0%	\$117	\$63	25.0%	\$300	20.0%	\$240	20.0%	\$240	20.0%
Subtotal Pretreatment Sampling	\$ 252,517.00	15.0%	\$24,620	\$13,257	25.0%	\$63,129	20.0%	\$50,503	20.0%	\$50,503	20.0%
Subtotal Collector and Treatment	\$ 4,802,556.00	41.6%	\$1,299,121	\$699,527	28.4%	\$1,365,697	17.4%	\$837,289	7.3%	\$348,211	5.3%
Sewer Administration (7380)											
110 Personal Services											
51110 Salaries	\$400,379	41.6%	\$108,305	\$58,318	28.4%	\$113,855	17.4%	\$69,803	7.3%	\$29,030	5.3%
51180 Accrued Vacation	\$0	41.6%	\$0	\$0	28.4%	\$0	17.4%	\$0	7.3%	\$0	5.3%
51190 Sick Leave Accrual	\$0	41.6%	\$0	\$0	28.4%	\$0	17.4%	\$0	7.3%	\$0	5.3%
51210 Wages Permanent	\$265,038	41.6%	\$71,694	\$38,605	28.4%	\$75,369	17.4%	\$46,207	7.3%	\$19,217	5.3%
51220 Overtime	\$3,000	41.6%	\$812	\$437	28.4%	\$853	17.4%	\$523	7.3%	\$218	5.3%
51510 Social Security	\$50,941	41.6%	\$13,780	\$7,420	28.4%	\$14,486	17.4%	\$8,881	7.3%	\$3,693	5.3%
51520 Retirement	\$44,943	41.6%	\$12,157	\$6,546	28.4%	\$12,780	17.4%	\$7,835	7.3%	\$3,259	5.3%
51525 Retirement-GASB 68	\$100,000	41.6%	\$27,051	\$14,566	28.4%	\$28,437	17.4%	\$17,434	7.3%	\$7,251	5.3%
51540 Health Insurance	\$141,721	41.6%	\$38,336	\$20,643	28.4%	\$40,301	17.4%	\$24,708	7.3%	\$10,276	5.3%
51550 Life Insurance	\$1,786	41.6%	\$483	\$260	28.4%	\$508	17.4%	\$311	7.3%	\$129	5.3%
51551 Life Insurance-GASB 75	\$20,000	41.6%	\$5,410	\$2,913	28.4%	\$5,687	17.4%	\$3,487	7.3%	\$1,450	5.3%
51560 Dental Insurance	\$7,268	41.6%	\$1,966	\$1,059	28.4%	\$2,067	17.4%	\$1,267	7.3%	\$527	5.3%
51570 OPEB Expense	\$50,000	41.6%	\$13,525	\$7,283	28.4%	\$14,218	17.4%	\$8,717	7.3%	\$3,625	5.3%
120 Contractual Services											
52130 Accounting And Auditing	\$94,616	41.6%	\$25,594	\$13,782	28.4%	\$26,906	17.4%	\$16,496	7.3%	\$6,860	5.3%
52131 Utility Billing	\$784,000	41.6%	\$212,077	\$114,195	28.4%	\$222,945	17.4%	\$136,684	7.3%	\$56,844	5.3%
52135 Consulting	\$100,000	41.6%	\$27,051	\$14,566	28.4%	\$28,437	17.4%	\$17,434	7.3%	\$7,251	5.3%
52180 Management Services	\$15,500	41.6%	\$4,193	\$2,258	28.4%	\$4,408	17.4%	\$2,702	7.3%	\$1,124	5.3%
52190 Other Other Professional Services	\$120,000	41.6%	\$32,461	\$17,479	28.4%	\$34,124	17.4%	\$20,921	7.3%	\$8,701	5.3%
52250 Telephone	\$20,000	41.6%	\$5,410	\$2,913	28.4%	\$5,687	17.4%	\$3,487	7.3%	\$1,450	5.3%
52270 Trunk Radio System Startup F	\$253	41.6%	\$68	\$37	28.4%	\$72	17.4%	\$44	7.3%	\$18	5.3%
52430 Computer Hardware Maint	\$4,000	41.6%	\$1,082	\$583	28.4%	\$1,137	17.4%	\$697	7.3%	\$290	5.3%
130 Supplies and Expenses											
53110 Postage and Box Rent	\$1,000	41.6%	\$271	\$146	28.4%	\$284	17.4%	\$174	7.3%	\$73	5.3%
53120 Office Supplies	\$2,400	41.6%	\$649	\$350	28.4%	\$682	17.4%	\$418	7.3%	\$174	5.3%
53130 Printing/Photocopying	\$6,000	41.6%	\$1,623	\$874	28.4%	\$1,706	17.4%	\$1,046	7.3%	\$435	5.3%
53135 Internal Printing	\$5,380	41.6%	\$1,455	\$784	28.4%	\$1,530	17.4%	\$938	7.3%	\$390	5.3%
53220 Subscriptions-Office	\$600	41.6%	\$162	\$87	28.4%	\$171	17.4%	\$105	7.3%	\$44	5.3%
53240 Membership Dues	\$3,500	41.6%	\$947	\$510	28.4%	\$995	17.4%	\$610	7.3%	\$254	5.3%
53250 Conference And Training	\$15,000	41.6%	\$4,058	\$2,185	28.4%	\$4,266	17.4%	\$2,615	7.3%	\$1,088	5.3%
53260 Advertising	\$3,000	41.6%	\$812	\$437	28.4%	\$853	17.4%	\$523	7.3%	\$218	5.3%
53940 Other Chg	\$1,000	41.6%	\$271	\$146	28.4%	\$284	17.4%	\$174	7.3%	\$73	5.3%
150 Fixed Charges											
55120 Auto And Fleet Insurance	\$8,000	41.6%	\$2,164	\$1,165	28.4%	\$2,275	17.4%	\$1,395	7.3%	\$580	5.3%
55160 Workman's Comp Insurance	\$48,959	41.6%	\$13,244	\$7,131	28.4%	\$13,922	17.4%	\$8,536	7.3%	\$3,550	5.3%
55190 General Liability Insurance	\$41,000	41.6%	\$11,091	\$5,972	28.4%	\$11,659	17.4%	\$7,148	7.3%	\$2,973	5.3%
184 Interdepartmental Charges											
78422 Data Processing-Allocated	\$280,000	41.6%	\$75,742	\$40,784	28.4%	\$79,623	17.4%	\$48,816	7.3%	\$20,301	5.3%

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN			
	2021 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost		
	78650 Employee Safety Programs	\$14,000	41.6%	\$3,787	\$2,039	28.4%	\$3,981	17.4%	\$2,441	7.3%	\$1,015	5.3%
78690 Other Employee Benefits	\$0	41.6%	\$0	\$0	28.4%	\$0	17.4%	\$0	7.3%	\$0	5.3%	\$0
89280 TranSkivt	\$20,000	41.6%	\$5,410	\$2,913	28.4%	\$5,687	17.4%	\$3,487	7.3%	\$1,450	5.3%	\$1,052
Subtotal	\$ 2,673,284.00	41.6%	\$723,140	\$389,383	28.4%	\$760,199	17.4%	\$466,067	7.3%	\$193,827	5.3%	\$140,668
Total O & M	\$ 7,475,840.00	41.6%	\$2,022,261	\$1,088,910	28.4%	\$2,125,896	17.4%	\$1,303,356	7.3%	\$ 542,037.77	5.3%	\$ 393,378.86
Capital Costs												
Depreciation	\$5,494,283	41.6%	\$2,286,519	\$0	28.4%	\$1,562,403	17.4%	\$957,887	7.3%	\$398,364	5.3%	\$289,109
Return on Investment (ROI)	\$5,203,265	41.6%	\$2,165,408	\$0	28.4%	\$1,479,647	17.4%	\$907,150	7.3%	\$377,264	5.3%	\$273,796
Total Capital Costs	\$10,697,548		\$4,451,928	\$0		\$3,042,050		\$1,865,037		\$775,629		\$562,905
Subtotal Revenue Requirements	\$18,173,388		\$6,474,189	\$1,088,910		\$5,167,946		\$3,168,393		\$ 1,317,666.33		\$956,284
Other Income												
Delinquent Fees	(\$60,000)	41.6%	(\$16,230)	(\$8,739)	28.4%	(\$17,062)	17.4%	(\$10,461)	7.3%	(\$4,350)	5.3%	(\$3,157)
Pre-Treatment Charges - Public Charges	(\$55,000)	41.6%	(\$14,878)	(\$8,011)	28.4%	(\$15,640)	17.4%	(\$9,589)	7.3%	(\$3,988)	5.3%	(\$2,894)
Investment Income	\$0	41.6%	\$0	\$0	28.4%	\$0	17.4%	\$0	7.3%	\$0	5.3%	\$0
Total Other Income	(\$115,000)		(\$31,108)	(\$16,751)		(\$32,702)		(\$20,049)		(\$8,338)		(\$6,051)
Total Net Revenue Requirements	\$18,058,388		\$6,443,081	\$1,072,159		\$5,135,244		\$3,148,344		\$1,309,328		\$950,233
Summary												
Allocation of Costs to Function and Classification for City Rates												
			Flow	Fixed		BOD		SS		P		TKN
O&M and Replacement	\$7,475,840		\$2,022,261	\$1,088,910		\$2,125,896		\$1,303,356		\$542,038		\$393,379
Capital	\$10,697,548		\$4,451,928	\$0		\$3,042,050		\$1,865,037		\$775,629		\$562,905
Other Revenues	(\$115,000)		(\$31,108)	(\$16,751)		(\$32,702)		(\$20,049)		(\$8,338)		(\$6,051)
Total	18,058,388		6,443,081	1,072,159		5,135,244		3,148,344		1,309,328		950,233
Allocation of Costs to Function and Classification for Extraterritorial Rates												
			Flow	Fixed		BOD		SS		P		TKN
Total Allocation for City Rates	\$18,058,388		\$6,443,081	\$1,072,159		\$5,135,244		\$3,148,344		\$1,309,328		\$950,233
Deduct ROI for City	(\$5,203,265)		(\$2,165,408)	\$0		(\$1,479,647)		(\$907,150)		(\$377,264)		(\$273,796)
Add ROI for Computation of Extra Rates	\$14,123,148	41.6%	\$5,877,537	\$0	28.4%	\$4,016,184	17.4%	\$2,462,264	7.3%	\$1,024,003	5.3%	\$743,160
Total	26,978,271		10,155,209	1,072,159		7,671,781		4,703,458		1,956,067		1,419,597

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

2020-2021 Operating and Maintenance Comparison

Operating and Maintenance Category	2020	2021	Difference	Percentage Change
Sewer Maintenance	\$ 1,169,514	\$ 1,177,895	\$8,381	0.72%
Sewer Plant Operations	\$ 3,375,657	\$ 3,372,144	(\$3,513)	-0.10%
Pre-treatment Sampling	\$ 242,414	\$ 252,517	\$10,103	4.17%
Subtotal Collection and Treatment	\$ 4,787,585	\$ 4,802,556	\$14,971	0.31%
Sewer Administration	\$ 2,650,457	\$ 2,653,284	\$2,827	0.11%
Total Operating and Maintenance Expenses	\$ 7,438,042	\$ 7,455,840	\$17,798	0.24%

2020-2021 Billable Flows Comparison

Customer Class	Billable Flow (1,000 Gal)		Difference (1,000 gal)	Percentage Change
	2020	2021		
Residential	880,880	884,000	3,120	0.35%
Commercial and Multi-Family	690,000	670,000	(20,000)	-2.90%
Industrial	120,000	108,000	(12,000)	-10.00%
Public	65,000	64,000	(1,000)	-1.54%
Septic Tank Waste	5,389	4,941	(448)	-8.31%
Holding Tank Waste	7,638	4,132	(3,506)	-45.91%
Total	1,768,906	1,735,073	(33,834)	-1.91%

Total Loadings all Customer Classes	2020	2021	Difference (Lbs)	Percentage Change
BOD (Lbs)	4,957,144	4,333,857	(623,288)	-12.57%
TSS (Lbs)	5,766,039	5,471,305	(294,734)	-5.11%
P (Lbs)	134,112	131,799	(2,313)	-1.72%
TKN (Lbs)	505,570	492,923	(12,647)	-2.50%

Table 5 - Wastewater Utility Assets and Depreciation

Estimated Asset Detail at 12/31/19

Description	Original Cost ⁽¹⁾	Accumulated Depreciation ⁽²⁾	Est. 2020	Est. 2021	Est. Accumulated Depreciation at 12/31/2021	Net Book Value
Subtotal	\$189,178,264	\$59,873,767	\$4,805,717	\$4,805,717	\$69,485,201	\$119,693,063
2020 Capital Projects ⁽³⁾	\$23,872,640		\$344,283	\$688,566	\$1,032,849	\$22,839,791
2021 Capital Projects ⁽³⁾	\$6,226,000		\$0	\$94,135	\$94,135	\$6,131,865
Total	\$219,276,904		\$5,150,000	\$5,494,283	\$70,612,185	\$148,664,719

Notes:
 (1) From City of Waukesha 12/31/2019 Fixed Asset Master List.
 (2) At 12/31/2019
 (3) Source: City Finance Department.

Table 6 - Recovery of Depreciation and ROI

Return on Investment - City Customers

Asset Costs	\$219,276,904
Accumulated Depreciation	<u>\$70,612,185</u>
Estimated Test Year Net Investment Rate Base (NIRB)	\$148,664,719

Return on Investment (ROI) % 3.50%

ROI for test year \$5,203,265

Depreciation Expense for test year \$5,494,283

Total Capital Recovery \$10,697,548

Return on Investment - Extraterritorial Customers

Asset Costs	\$219,276,904
Accumulated Depreciation	<u>\$70,612,185</u>
Estimated Test Year Net Investment Rate Base (NIRB)	\$148,664,719

Return on Investment (ROI) % 9.50%

ROI for test year \$14,123,148

Depreciation Expense for test year \$5,494,283

Total Capital Recovery \$19,617,431

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	1,072,159	20,572	\$52.12	1,072,159	20,572	\$52.12
Volumetric Charges						
Flow Charge per 1,000 gallons	6,443,081	1,760,439	\$3.66	10,155,209	1,756,562	\$5.78
BOD Charge per lb.	5,135,244	4,341,454	\$1.18	7,671,781	4,333,857	\$1.77
TSS Charge per lb.	3,148,344	5,482,297	\$0.57	4,703,458	5,471,305	\$0.86
P Charge per lb.	1,309,328	132,058	\$9.91	1,956,067	131,799	\$14.84
TKN Charge per lb.	950,233	493,893	\$1.92	1,419,597	492,923	\$2.88
BOD Charge per 1,000 gallons			\$2.32			\$3.47
TSS Charge per 1,000 gallons			\$1.63			\$2.44
P Charge per 1,000 gallons			\$0.66			\$0.99
TKN Charge per 1,000 gallons			\$0.48			\$0.72
Total Volumetric Rate per 1,000 gal			\$8.75			\$13.40
Wastehauler Charges						
Septic Charges						
Flow Charge per 1,000 gallons			\$3.66			\$5.78
BOD Charge per 1,000 gallons			\$14.76			\$22.09
TSS Charge per 1,000 gallons			\$29.19			\$43.70
P Charge per 1,000 gallons			\$3.89			\$5.82
TKN Charge per 1,000 gallons			\$3.21			\$4.80
Total			\$54.71			\$82.19
Holding Tank Charges						
Flow Charge per 1,000 gallons			\$3.66			\$5.78
BOD Charge per 1,000 gallons			\$6.35			\$9.51
TSS Charge per 1,000 gallons			\$4.38			\$6.56
P Charge per 1,000 gallons			\$2.15			\$3.22
TKN Charge per 1,000 gallons			\$1.51			\$2.26
Total			\$18.05			\$27.33
Chemical Toilet Waste Charges						
Flow Charge per 1,000 gallons			\$3.66			\$5.78
BOD Charge per 1,000 gallons			\$81.50			\$121.98
TSS Charge per 1,000 gallons			\$43.25			\$64.75
P Charge per 1,000 gallons			\$21.00			\$31.44
TKN Charge per 1,000 gallons			\$45.36			\$67.90
Total			\$194.78			\$291.85
Rate Summary						
Fixed charge per connection			City (Inside) \$52.12			Extraterritorial (Outside) \$52.12
Rate per 1,000 gallons			\$8.75			\$13.40
BOD rate per lb.			\$1.18			\$1.77
TSS rate per lb.			\$0.57			\$0.86
P rate per lb.			\$9.91			\$14.84
TKN rate per lb.			\$1.92			\$2.88

Table 8 - Rate Summary

		<u>COS</u>	<u>2021 Proposed</u>
City (Inside)	Fixed charge per connection (annual)	\$52.12	\$70.25
	Volumetric Rate per 1,000 Gallons	\$8.75	\$8.54
	BOD rate per lb.	\$1.18	\$1.09
	TSS rate per lb.	\$0.57	\$0.57
	P rate per lb.	\$9.91	\$9.19
	TKN rate per lb.	\$1.92	\$1.86
	Unmetered quarterly flat charge	\$262.48	\$256.20
Extraterritorial (Outside)			
	Fixed charge per connection (annual)	\$52.12	\$70.25
	Volumetric Rate per 1,000 Gallons	\$13.40	\$11.42
	BOD rate per lb.	\$1.77	\$1.77
	TSS rate per lb.	\$0.86	\$0.86
	P rate per lb.	\$14.84	\$14.84
	TKN rate per lb.	\$2.88	\$2.88
	Unmetered quarterly flat charge	\$401.97	\$342.68
Wastehauler	Septic Rate per 1,000 Gallons	\$82.19	\$71.82
	Chemical Toilet Rate per 1,000 Gallons	\$194.78	\$194.78
	Holding Tank Rate per 1,000 Gallons	\$27.33	\$23.74

Table 9 - Revenue Check (Based on COS)

		Units	Rate	Annual Total
Fixed Charge				
Residential	cust	18,125	\$52.12	\$944,628
Commercial and Multi-Family	cust	2,191	\$52.12	\$114,189
Industrial	cust	148	\$52.12	\$7,713
Public	cust	108	\$52.12	\$5,629
Subtotal		20,572		\$1,072,159
Volumetric Charges-Inside Customers				
Residential	Flow (000 gal)	884,000	\$8.75	\$7,734,540
Commercial & Multiple	Flow (000 gal)	670,000	\$8.75	\$5,862,151
Industrial	Flow (000 gal)	108,000	\$8.75	\$944,944
Public	Flow (000 gal)	64,000	\$8.75	\$559,967
Septic Waste Haulers	Flow (000 gal)	4,941	\$54.71	\$270,298
Chemical Toilet Waste Haulers	Flow (000 gal)	395	\$194.78	\$76,939
Holding Tank Waste Haulers	Flow (000 gal)	4,132	\$18.05	\$74,590
Subtotal		1,735,468		\$15,523,429
Industrial Excess BOD	Lbs	798,670	\$1.18	\$944,699
Industrial Excess TSS	Lbs	204,801	\$0.57	\$117,612
Industrial Excess P	Lbs	11,564	\$9.91	\$114,653
Industrial Excess TKN	Lbs	35,006	\$1.92	\$67,351
Subtotal		1,050,042		\$1,244,315
Unmetered Customers	cust	115	\$1,049.94	\$120,743
Volumetric Charges-Outside Customers				
Residential	Flow (000 gal)	2,637	\$13.40	\$35,331
Commercial & Multiple	Flow (000 gal)	4,519	\$13.40	\$60,545
Industrial	Flow (000 gal)	139	\$13.40	\$1,865
Subtotal				\$97,741
Total Revenues				\$18,058,388
Revenue Requirements				\$18,058,388
Difference				\$0

Table 10 - Revenue Summary

		Units	Rate	Annual Total
Fixed Charge				
Residential	cust	18,125	\$70.25	\$1,273,281
Commercial and Multi-Family	cust	2,191	\$70.25	\$153,918
Industrial	cust	148	\$70.25	\$10,397
Public	cust	108	\$70.25	\$7,587
Subtotal		20,572		\$1,445,183
Volumetric Charges - Inside Customers				
Residential	Flow (000 gal)	884,000	\$8.54	\$7,549,360
Commercial & Multiple	Flow (000 gal)	670,000	\$8.54	\$5,721,800
Industrial	Flow (000 gal)	108,000	\$8.54	\$922,320
Public	Flow (000 gal)	64,000	\$8.54	\$546,560
Septic Waste Haulers	Flow (000 gal)	4,941	\$71.82	\$354,863
Holding Tank Waste Haulers	Flow (000 gal)	4,132	\$23.74	\$98,085
Chemical Toilet Waste Haulers	Flow (000 gal)	395	\$194.78	\$76,938
Subtotal		1,735,073		\$15,269,926
Industrial Excess BOD	Lbs	798,670	\$1.09	\$870,551
Industrial Excess TSS	Lbs	204,801	\$0.57	\$116,737
Industrial Excess P	Lbs	11,564	\$9.19	\$106,272
Industrial Excess TKN	Lbs	35,006	\$1.86	\$65,112
Subtotal		1,050,042		\$1,158,671
Unmetered Customers	cust	115	\$1,024.80	\$117,852
Volumetric Charges - Outside Customers				
Residential	Flow (000 gal)	2,637	\$11.42	\$30,112
Commercial & Multiple	Flow (000 gal)	4,519	\$11.42	\$51,602
Industrial	Flow (000 gal)	139	\$11.42	\$1,590
Subtotal				\$83,304
Total Revenues				\$18,074,936
Revenue Requirements COS				\$18,058,388
Difference				\$16,548
Revenues as % of COS				100.1%

Table 11 - Test Year Cash Flow Analysis

	2021
Cash Sources	
Revenues from User Rates ⁽¹⁾	\$18,074,936
Allowance for Unknowns (ie. Timing of billing, customer loss)	(\$632,623)
Other Income ⁽²⁾	\$115,000
Investment Income on Unrestricted Cash ⁽³⁾	\$54,577
Other Fees ⁽⁴⁾	\$40,550
Total Cash Sources	\$17,652,440
Cash Uses	
O&M	\$7,475,840
Net Before Debt Service	\$10,176,600
Debt Service	
Pension State Trust Fund	\$27,133
2012 G.O. Promisary Note	\$343,200
2014 Sewer Revenue Bonds	\$550,425
2014 Clean Water Fund Loan	\$2,208,488
2015 Clean Water Fund Loan	\$968,654
2016 Sewer Revenue Bond	\$257,050
2017 Sewer Revenue Bond	\$458,450
2018 Sewer Revenue Bond	\$392,113
2018 Clean Water Fund Loan (Interceptor Project)	\$1,264,648
2019 Revenue Bond	\$206,094
2020 Revenue Bond	\$311,000
2020 Clean Water Fund Loan (Phosph Project)	\$183,199
2021 Revenue Bond	\$494,347
Total Debt Service	\$7,664,801
Capital Outlay (non reserve)	\$1,500,000
Addition to Replacement Fund	\$250,000
Subdivder Fees Received	\$0
Net Cash Flow	\$761,799

Notes:

- (1) Estimated user rate projections assume that user rates are taking effect 1/1.
- (2) Subtotal delinquent fees plus pre-treatment sampling fees.
- (3) Estimate of investment income assuming an interest rate of 1.5%.
- (4) Other charges includes connection fees, impact fees and special assessments.