



Sanitary Sewer User Rates Study Update

For

The City of Waukesha



October, 2021

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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 1/1/2021	2022 Proposed Rates	\$ Change	% Change
<u>City (Inside) User Charges</u>				
Quarterly Fixed Charge	\$17.56	\$17.74	\$0.18	1.03%
Monthly Fixed Charge (If Switching to Monthly Billing)	\$5.85	\$5.91	\$0.06	1.03%
Volumetric Charge per 1,000 gallons	\$8.54	\$8.92	\$0.38	4.45%
Quarterly flat charge (unmetered users only)	\$256.20	\$274.34	\$18.14	7.08%
Surcharge Rate BOD /lb	\$1.09	\$1.14	\$0.05	4.59%
Surcharge Rate SS /lb	\$0.57	\$0.59	\$0.02	3.60%
Surcharge Rate P /lb	\$9.19	\$9.80	\$0.61	6.64%
Surcharge Rate TKN /lb	\$1.86	\$2.04	\$0.18	9.59%
<u>Extraterritorial (Outside) User Charges</u>				
Quarterly Fixed Charge	\$17.56	\$17.74	\$0.18	1.03%
Monthly Fixed Charge (If Switching to Monthly Billing)	\$5.85	\$5.91	\$0.06	1.03%
Volumetric Charge per 1,000 gallons	\$11.42	\$11.93	\$0.51	4.45%
Quarterly flat charge (unmetered users only)	\$342.68	\$357.92	\$15.25	4.45%
<u>Hauled Waste Charges</u>				
Septic Tank Rate per 1,000 gallons	\$71.82	\$78.89	\$7.07	9.85%
Holding Tank Rate per 1,000 gallons	\$23.74	\$26.08	\$2.34	9.85%
Chemical Toilet Waste Rate per 1,000 gallons	\$194.78	\$208.30	\$13.52	6.94%
Annual Cost for Average Residential User (48,000 gallons/year)	\$480.16	\$499.12	\$18.96	3.95%
Quarterly Cost	\$120.04	\$124.78	\$4.74	
Monthly Cost	\$40.01	\$41.59	\$1.58	

Table 2 - Projected WWTF Flows and Loadings

Total	Equiv Customers	Flow (1,000 Gal)	BOD (Lbs)	SS (Lbs)	P (Lbs)	TKN (Lbs)
Residential	18,194	935,000	1,832,507	2,651,286	62,383	233,937
Commercial and Multi-Family ⁽¹⁾	2,196	675,000	1,322,933	1,914,030	45,036	168,885
Industrial	148	96,000	188,150	272,218	6,405	24,019
Public	107	57,000	111,714	161,629	3,803	14,261
Subtotal City Billable	20,645	1,763,000	3,455,304	4,999,163	117,627	441,103
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			254,985	63,552	-	-
GE Medical Systems						
Excess Loadings			-	-	-	509
Waukesha Memorial Hospital						
Excess Loadings			-	-	-	1,408
SPX Transformer						
Excess Loadings			-	-	-	1,638
Lifeway Wisconsin, LLC						
Excess Loadings			255,747	62,115	1,909	8,155
DSM Food						
Excess Loadings			6,617	-	4,947	-
Midwest Finishing						
Excess Loadings			561	-	-	17
Gascoigne Co.						
Excess Loadings			-	-	1,866	-
Profile Finishing						
Excess Loadings			9	-	50	10
Eaton Lincoln						
Excess Loadings			-	-	280	-
Class 2 Industrial Hauled Excess Loadings			1,872	-	250	1,400
Subtotal High Strength Industrial Billable			519,791	125,667	9,302	13,137
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	20,739	1,793,562	4,127,494	5,497,088	132,006	480,311
I/I		1,298,786				
Total WTF		3,092,349				
Total For Rate Calcs	20,739	1,793,562	4,127,494	5,497,088	132,006	480,311

Notes:

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

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN		
	2022 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost	
			65.0%	35.0%							
Operating & Maintenance											
Sewer Maintenance (7384)											
110 Personal Services											
51110 Salaries	\$59,603	100.0%	\$38,742	\$20,861	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
51210 Wages Permanent	\$436,041	100.0%	\$283,427	\$152,614	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	\$39,503	100.0%	\$25,677	\$13,826	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
51520 Retirement	\$33,565	100.0%	\$21,817	\$11,748	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
51540 Health Insurance	\$127,582	100.0%	\$82,928	\$44,654	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
51550 Life Insurance	\$1,247	100.0%	\$811	\$436	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
51560 Dental Insurance	\$6,246	100.0%	\$4,060	\$2,186	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	\$4,700	100.0%	\$3,055	\$1,645	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
52220 Electric	\$131,285	100.0%	\$85,335	\$45,950	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
52240 Heat	\$830	100.0%	\$540	\$291	0.0%	\$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	\$0
52435 Conveyance Maintenance	\$125,000	100.0%	\$81,250	\$43,750	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.	\$20,000	100.0%	\$13,000	\$7,000	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
53940 Other (Manhole repairs, inspect)	\$75,000	100.0%	\$48,750	\$26,250	0.0%	\$0	0.0%	\$0	\$0	\$0	\$0
Subtotal Sewer Maintenance	\$1,231,335	100.0%	\$800,368	\$430,967	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	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0	5.0%
51180 Accrued Vacation	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0	5.0%
51190 Sick Leave Accrual	\$0	35.0%	\$0	\$0	30.0%	\$0	25.0%	\$0	5.0%	\$0	5.0%
51210 Wages Permanent	\$977,138	35.0%	\$222,299	\$119,699	30.0%	\$293,141	25.0%	\$244,285	5.0%	\$48,857	5.0%
51220 Overtime	\$80,000	35.0%	\$18,200	\$9,800	30.0%	\$24,000	25.0%	\$20,000	5.0%	\$4,000	5.0%
51250 Wages Temporary	\$21,840	35.0%	\$4,969	\$2,675	30.0%	\$6,552	25.0%	\$5,460	5.0%	\$1,092	5.0%
51510 Social Security	\$81,188	35.0%	\$18,470	\$9,946	30.0%	\$24,356	25.0%	\$20,297	5.0%	\$4,059	5.0%
51520 Retirement	\$68,680	35.0%	\$15,625	\$8,413	30.0%	\$20,604	25.0%	\$17,170	5.0%	\$3,434	5.0%
51540 Health Insurance	\$278,613	35.0%	\$63,384	\$34,130	30.0%	\$83,584	25.0%	\$69,653	5.0%	\$13,931	5.0%
51550 Life Insurance	\$2,548	35.0%	\$580	\$312	30.0%	\$764	25.0%	\$637	5.0%	\$127	5.0%
51560 Dental Insurance	\$13,656	35.0%	\$3,107	\$1,673	30.0%	\$4,097	25.0%	\$3,414	5.0%	\$683	5.0%
120 Contractual Services											
52190 Lab Testing	\$30,000	0.0%	\$0	\$0	30.0%	\$9,000	20.0%	\$6,000	27.5%	\$8,250	22.5%
52210 Water And Sewer	\$44,000	100.0%	\$28,600	\$15,400	0.0%	\$0	0.0%	\$0	0.0%	\$0	0.0%
52220 Electric	\$841,900	17.5%	\$95,766	\$51,566	57.5%	\$484,093	15.0%	\$126,285	5.0%	\$42,095	5.0%
52240 Heat	\$130,500	25.0%	\$21,206	\$11,419	25.0%	\$32,625	25.0%	\$32,625	12.5%	\$16,313	12.5%
52410 Vehicle Maintenance	\$35,000	25.0%	\$5,688	\$3,063	25.0%	\$8,750	25.0%	\$8,750	12.5%	\$4,375	12.5%
52430 Computer Hardware Maint	\$23,000	25.0%	\$3,738	\$2,013	25.0%	\$5,750	25.0%	\$5,750	12.5%	\$2,875	12.5%
52450 Grounds Maintenance & Improv	\$66,000	25.0%	\$10,725	\$5,775	25.0%	\$16,500	25.0%	\$16,500	12.5%	\$8,250	12.5%
52490 Equipment Maintenance	\$203,000	15.0%	\$19,793	\$10,658	30.0%	\$60,900	30.0%	\$60,900	12.5%	\$25,375	12.5%
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%
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%
53420 Chemistry/Lab/Medical Supplies	\$28,000	0.0%	\$0	\$0	25.0%	\$7,000	25.0%	\$7,000	25.0%	\$7,000	25.0%
53422 WWTP Processing Chemicals	\$390,500	0.0%	\$0	\$0	50.0%	\$195,250	25.0%	\$97,625	25.0%	\$97,625	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%
53460 Clothing And Uniforms	\$11,000	10.0%	\$715	\$385	25.0%	\$2,750	25.0%	\$2,750	20.0%	\$2,200	20.0%
53490 Other Operating Supplies	\$0	10.0%	\$0	\$0	25.0%	\$0	25.0%	\$0	20.0%	\$0	20.0%
53510 Gasoline, Oil, Grease Etc.	\$13,000	10.0%	\$845	\$455	25.0%	\$3,250	25.0%	\$3,250	20.0%	\$2,600	20.0%
53620 Consumable Tools	\$8,000	10.0%	\$520	\$280	25.0%	\$2,000	25.0%	\$2,000	20.0%	\$1,600	20.0%
53910 Sludge Disposal	\$165,000	0.0%	\$0	\$0	55.0%	\$90,750	40.0%	\$66,000	5.0%	\$8,250	0.0%
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	20.0%
Subtotal Sewer Plant Operations	\$3,620,563	23.3%	\$548,073	\$295,116	38.6%	\$1,398,966	23.2%	\$839,601	8.9%	\$323,091	6.0%

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN			
	2022 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost		
Pre-treatment Sampling (7381)												
110 Personal Services												
51110 Salaries	\$90,804	15.0%	\$8,853	\$4,767	25.0%	\$22,701	20.0%	\$18,161	20.0%	\$18,161	20.0%	\$18,161
51210 Wages Permanent	\$74,282	15.0%	\$7,242	\$3,900	25.0%	\$18,571	20.0%	\$14,856	20.0%	\$14,856	20.0%	\$14,856
51220 Overtime	\$450	15.0%	\$44	\$24	25.0%	\$113	20.0%	\$90	20.0%	\$90	20.0%	\$90
51510 Social Security	\$12,629	15.0%	\$1,231	\$663	25.0%	\$3,157	20.0%	\$2,526	20.0%	\$2,526	20.0%	\$2,526
51520 Retirement	\$10,731	15.0%	\$1,046	\$563	25.0%	\$2,683	20.0%	\$2,146	20.0%	\$2,146	20.0%	\$2,146
51540 Health Insurance	\$46,780	15.0%	\$4,561	\$2,456	25.0%	\$11,695	20.0%	\$9,356	20.0%	\$9,356	20.0%	\$9,356
51550 Life Insurance	\$1,014	15.0%	\$99	\$53	25.0%	\$254	20.0%	\$203	20.0%	\$203	20.0%	\$203
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	\$12,500	15.0%	\$1,219	\$656	25.0%	\$3,125	20.0%	\$2,500	20.0%	\$2,500	20.0%	\$2,500
52410 Vehicle Maintenance	\$1,500	15.0%	\$146	\$79	25.0%	\$375	20.0%	\$300	20.0%	\$300	20.0%	\$300
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.	\$1,200	15.0%	\$117	\$63	25.0%	\$300	20.0%	\$240	20.0%	\$240	20.0%	\$240
Subtotal Pretreatment Sampling	\$ 254,320.00	15.0%	\$24,796	\$13,352	25.0%	\$63,580	20.0%	\$50,864	20.0%	\$50,864	20.0%	\$50,864
Subtotal Collector and Treatment	\$ 5,106,218.00	41.4%	\$1,373,237	\$739,435	28.6%	\$1,462,546	17.4%	\$890,465	7.3%	\$373,955	5.2%	\$266,580
Sewer Administration (7380)												
110 Personal Services												
51110 Salaries	\$407,883	41.4%	\$109,694	\$59,066	28.6%	\$116,828	17.4%	\$71,130	7.3%	\$29,871	5.2%	\$21,294
51180 Accrued Vacation	\$0	41.4%	\$0	\$0	28.6%	\$0	17.4%	\$0	7.3%	\$0	5.2%	\$0
51190 Sick Leave Accrual	\$0	41.4%	\$0	\$0	28.6%	\$0	17.4%	\$0	7.3%	\$0	5.2%	\$0
51210 Wages Permanent	\$268,707	41.4%	\$72,265	\$38,912	28.6%	\$76,964	17.4%	\$46,859	7.3%	\$19,679	5.2%	\$14,028
51220 Overtime	\$3,000	41.4%	\$807	\$434	28.6%	\$859	17.4%	\$523	7.3%	\$220	5.2%	\$157
51510 Social Security	\$51,796	41.4%	\$13,930	\$7,501	28.6%	\$14,836	17.4%	\$9,033	7.3%	\$3,793	5.2%	\$2,704
51520 Retirement	\$44,004	41.4%	\$11,834	\$6,372	28.6%	\$12,604	17.4%	\$7,674	7.3%	\$3,223	5.2%	\$2,297
51525 Retirement-GASB 68	\$100,000	41.4%	\$26,893	\$14,481	28.6%	\$28,642	17.4%	\$17,439	7.3%	\$7,324	5.2%	\$5,221
51540 Health Insurance	\$151,194	41.4%	\$40,661	\$21,895	28.6%	\$43,306	17.4%	\$26,366	7.3%	\$11,073	5.2%	\$7,893
51550 Life Insurance	\$1,817	41.4%	\$489	\$263	28.6%	\$520	17.4%	\$317	7.3%	\$133	5.2%	\$95
51551 Life Insurance-GASB 75	\$20,000	41.4%	\$5,379	\$2,896	28.6%	\$5,728	17.4%	\$3,488	7.3%	\$1,465	5.2%	\$1,044
51560 Dental Insurance	\$7,383	41.4%	\$1,986	\$1,069	28.6%	\$2,115	17.4%	\$1,288	7.3%	\$541	5.2%	\$385
51570 OPEB Expense	\$50,000	41.4%	\$13,447	\$7,241	28.6%	\$14,321	17.4%	\$8,719	7.3%	\$3,662	5.2%	\$2,610
120 Contractual Services												
52130 Accounting And Auditing	\$111,358	41.4%	\$29,948	\$16,126	28.6%	\$31,896	17.4%	\$19,420	7.3%	\$8,155	5.2%	\$5,814
52131 Utility Billing	\$810,000	41.4%	\$217,837	\$117,297	28.6%	\$232,004	17.4%	\$141,255	7.3%	\$59,320	5.2%	\$42,288
52135 Consulting	\$100,000	41.4%	\$26,893	\$14,481	28.6%	\$28,642	17.4%	\$17,439	7.3%	\$7,324	5.2%	\$5,221
52180 Management Services	\$32,000	41.4%	\$8,606	\$4,634	28.6%	\$9,166	17.4%	\$5,580	7.3%	\$2,344	5.2%	\$1,671
52190 Other Other Professional Services	\$120,000	41.4%	\$32,272	\$17,377	28.6%	\$34,371	17.4%	\$20,927	7.3%	\$8,788	5.2%	\$6,265
52250 Telephone	\$20,000	41.4%	\$5,379	\$2,896	28.6%	\$5,728	17.4%	\$3,488	7.3%	\$1,465	5.2%	\$1,044
52270 Trunk Radio System Startup F	\$269	41.4%	\$72	\$39	28.6%	\$77	17.4%	\$47	7.3%	\$20	5.2%	\$14
52430 Computer Hardware Maint	\$4,000	41.4%	\$1,076	\$579	28.6%	\$1,146	17.4%	\$698	7.3%	\$293	5.2%	\$209
130 Supplies and Expenses												
53110 Postage and Box Rent	\$1,000	41.4%	\$269	\$145	28.6%	\$286	17.4%	\$174	7.3%	\$73	5.2%	\$52
53120 Office Supplies	\$2,400	41.4%	\$645	\$348	28.6%	\$687	17.4%	\$419	7.3%	\$176	5.2%	\$125
53130 Printing/Photocopying	\$6,000	41.4%	\$1,614	\$869	28.6%	\$1,719	17.4%	\$1,046	7.3%	\$439	5.2%	\$313
53135 Internal Printing	\$5,380	41.4%	\$1,447	\$779	28.6%	\$1,541	17.4%	\$938	7.3%	\$394	5.2%	\$281
53220 Subscriptions-Office	\$600	41.4%	\$161	\$87	28.6%	\$172	17.4%	\$105	7.3%	\$44	5.2%	\$31
53240 Membership Dues	\$3,500	41.4%	\$941	\$507	28.6%	\$1,002	17.4%	\$610	7.3%	\$256	5.2%	\$183
53250 Conference And Training	\$15,000	41.4%	\$4,034	\$2,172	28.6%	\$4,296	17.4%	\$2,616	7.3%	\$1,099	5.2%	\$783
53260 Advertising	\$3,000	41.4%	\$807	\$434	28.6%	\$859	17.4%	\$523	7.3%	\$220	5.2%	\$157
53940 Other Chg	\$1,000	41.4%	\$269	\$145	28.6%	\$286	17.4%	\$174	7.3%	\$73	5.2%	\$52
150 Fixed Charges												
55120 Auto And Fleet Insurance	\$8,000	41.4%	\$2,151	\$1,158	28.6%	\$2,291	17.4%	\$1,395	7.3%	\$586	5.2%	\$418
55160 Workman's Comp Insurance	\$50,984	41.4%	\$13,711	\$7,383	28.6%	\$14,603	17.4%	\$8,891	7.3%	\$3,734	5.2%	\$2,662
55190 General Liability Insurance	\$41,000	41.4%	\$11,026	\$5,937	28.6%	\$11,743	17.4%	\$7,150	7.3%	\$3,003	5.2%	\$2,140

Table 3 - Allocation of Costs to Function

	Flow		BOD		TSS		P		TKN			
	2022 Budget	%	Cost - User Charge	Cost - Customer	%	Cost	%	Cost	%	Cost		
184 Interdepartmental Charges												
78422 Data Processing-Allocated	\$275,347	41.4%	\$74,050	\$39,873	28.6%	\$78,866	17.4%	\$48,017	7.3%	\$20,165	5.2%	\$14,375
78650 Employee Safety Programs	\$14,000	41.4%	\$3,765	\$2,027	28.6%	\$4,010	17.4%	\$2,441	7.3%	\$1,025	5.2%	\$731
78690 Other Employee Benefits	\$0	41.4%	\$0	\$0	28.6%	\$0	17.4%	\$0	7.3%	\$0	5.2%	\$0
89280 TranSkivt	\$16,681	41.4%	\$4,486	\$2,416	28.6%	\$4,778	17.4%	\$2,909	7.3%	\$1,222	5.2%	\$871
Subtotal	\$ 2,747,303.00	41.4%	\$738,844	\$397,839	28.6%	\$786,895	17.4%	\$479,098	7.3%	\$201,199	5.2%	\$143,428
Total O & M	\$ 7,853,521.00	41.4%	\$2,112,081	\$1,137,274	28.6%	\$2,249,442	17.4%	\$1,369,562	7.3%	\$ 575,153.80	5.2%	\$ 410,007.74
Capital Costs												
Depreciation	\$5,757,822	41.4%	\$2,382,270	\$0	28.6%	\$1,649,182	17.4%	\$1,004,097	7.3%	\$421,675	5.2%	\$300,598
Return on Investment (ROI)	\$5,293,527	41.4%	\$2,190,171	\$0	28.6%	\$1,516,196	17.4%	\$923,129	7.3%	\$387,672	5.2%	\$276,358
Total Capital Costs	\$11,051,349		\$4,572,441	\$0		\$3,165,378		\$1,927,226		\$809,347		\$576,956
Subtotal Revenue Requirements	\$18,904,870		\$6,684,522	\$1,137,274		\$5,414,820		\$3,296,788		\$ 1,384,501.00		\$986,964
Other Income												
Delinquent Fees	(\$60,000)	41.4%	(\$16,136)	(\$8,689)	28.6%	(\$17,185)	17.4%	(\$10,463)	7.3%	(\$4,394)	5.2%	(\$3,132)
Pre-Treatment Charges - Public Charges	(\$56,500)	41.4%	(\$15,195)	(\$8,182)	28.6%	(\$16,183)	17.4%	(\$9,853)	7.3%	(\$4,138)	5.2%	(\$2,950)
Investment Income	\$0	41.4%	\$0	\$0	28.6%	\$0	17.4%	\$0	7.3%	\$0	5.2%	\$0
Total Other Income	(\$116,500)		(\$31,331)	(\$16,870)		(\$33,368)		(\$20,316)		(\$8,532)		(\$6,082)
Total Net Revenue Requirements	\$18,788,370		\$6,653,191	\$1,120,404		\$5,381,451		\$3,276,472		\$1,375,969		\$980,882
Summary												
Allocation of Costs to Function and Classification for City Rates												
			Flow	Fixed		BOD		SS		P		TKN
O&M and Replacement	\$7,853,521		\$2,112,081	\$1,137,274		\$2,249,442		\$1,369,562		\$575,154		\$410,008
Capital	\$11,051,349		\$4,572,441	\$0		\$3,165,378		\$1,927,226		\$809,347		\$576,956
Other Revenues	(\$116,500)		(\$31,331)	(\$16,870)		(\$33,368)		(\$20,316)		(\$8,532)		(\$6,082)
Total	18,788,370		6,653,191	1,120,404		5,381,451		3,276,472		1,375,969		980,882
Allocation of Costs to Function and Classification for Extraterritorial Rates												
			Flow	Fixed		BOD		SS		P		TKN
Total Allocation for City Rates	\$18,788,370		\$6,653,191	\$1,120,404		\$5,381,451		\$3,276,472		\$1,375,969		\$980,882
Deduct ROI for City	(\$5,293,527)		(\$2,190,171)	\$0		(\$1,516,196)		(\$923,129)		(\$387,672)		(\$276,358)
Add ROI for Computation of Extra Rates	\$13,763,169	41.4%	\$5,694,444	\$0	28.6%	\$3,942,110	17.4%	\$2,400,136	7.3%	\$1,007,948	5.2%	\$718,532
Total	27,258,012		10,157,464	1,120,404		7,807,365		4,753,479		1,996,245		1,423,055

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

2021-2022 Operating and Maintenance Comparison

Operating and Maintenance Category	2021	2022	Difference	Percentage Change
Sewer Maintenance	\$ 1,177,895	\$ 1,231,335	\$53,440	4.54%
Sewer Plant Operations	\$ 3,372,144	\$ 3,620,563	\$248,419	7.37%
Pre-treatment Sampling	\$ 252,517	\$ 253,870	\$1,353	0.54%
Subtotal Collection and Treatment	\$ 4,802,556	\$ 5,105,768	\$303,212	6.31%
Sewer Administration	\$ 2,653,284	\$ 2,727,303	\$74,019	2.79%
Total Operating and Maintenance Expenses	\$ 7,438,042	\$ 7,833,071	\$395,029	5.31%

2021-2022 Billable Flows Comparison

Customer Class	Billable Flow (1,000 Gal)		Difference (1,000 gal)	Percentage Change
	2021	2022		
Residential	884,000	935,000	51,000	5.77%
Commercial and Multi-Family	670,000	675,000	5,000	0.75%
Industrial	108,000	96,000	(12,000)	-11.11%
Public	64,000	57,000	(7,000)	-10.94%
Septic Tank Waste	4,941	4,941	-	0.00%
Holding Tank Waste	4,132	4,132	-	0.00%
Total	1,735,073	1,772,073	37,000	2.13%

Total Loadings all Customer Classes	2021	2022	Difference (Lbs)	Percentage Change
BOD (Lbs)	4,333,857	4,127,494	(206,363)	-4.76%
TSS (Lbs)	5,471,305	5,497,088	25,783	0.47%
P (Lbs)	131,799	132,006	207	0.16%
TKN (Lbs)	492,923	480,311	(12,612)	-2.56%

Table 5 - Wastewater Utility Assets and Depreciation

Estimated Asset Detail at 12/31/20

Description	Original Cost ⁽¹⁾	Accumulated Depreciation ⁽²⁾	Est. 2021	Est. 2022	Est. Accumulated Depreciation at 12/31/2022	Net Book Value
Subtotal	\$198,218,385	\$65,425,036	\$5,569,552	\$5,569,552	\$76,564,140	\$121,654,245
2021 Capital Projects ⁽³⁾	\$6,226,000		\$94,135	\$188,270	\$282,405	\$5,943,595
2022 Capital Projects ⁽³⁾	\$13,731,300		\$0	\$168,428	\$168,428	\$13,562,872
Total	\$218,175,685		\$5,663,687	\$5,757,822	\$77,014,973	\$141,160,712

Notes:
 (1) From City of Waukesha 12/31/2020 Fixed Asset Master List.
 (2) At 12/31/2020
 (3) Source: City Finance Department.

Table 6 - Recovery of Depreciation and ROI

Return on Investment - City Customers

Asset Costs	\$218,175,685
Accumulated Depreciation	\$77,014,973
Estimated Test Year Net Investment Rate Base (NIRB)	<u>\$141,160,712</u>

Return on Investment (ROI) % 3.75%

ROI for test year \$5,293,527

Depreciation Expense for test year \$5,757,822

Total Capital Recovery \$11,051,349

Return on Investment - Extraterritorial Customers

Asset Costs	\$218,175,685
Accumulated Depreciation	\$77,014,973
Estimated Test Year Net Investment Rate Base (NIRB)	<u>\$141,160,712</u>

Return on Investment (ROI) % 9.75%

ROI for test year \$13,763,169

Depreciation Expense for test year \$5,757,822

Total Capital Recovery \$19,520,991

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	1,120,404	20,645	\$54.27	1,120,404	20,645	\$54.27
Volumetric Charges						
Flow Charge per 1,000 gallons	6,653,191	1,797,095	\$3.70	10,157,464	1,793,562	\$5.66
BOD Charge per lb.	5,381,451	4,134,417	\$1.30	7,807,365	4,127,494	\$1.89
TSS Charge per lb.	3,276,472	5,507,104	\$0.59	4,753,479	5,497,088	\$0.86
P Charge per lb.	1,375,969	132,242	\$10.40	1,996,245	132,006	\$15.12
TKN Charge per lb.	980,882	481,195	\$2.04	1,423,055	480,311	\$2.96
BOD Charge per 1,000 gallons			\$2.55			\$3.71
TSS Charge per 1,000 gallons			\$1.69			\$2.45
P Charge per 1,000 gallons			\$0.69			\$1.01
TKN Charge per 1,000 gallons			\$0.51			\$0.74
Total Volumetric Rate per 1,000 gal			\$9.14			\$13.57
Wastehauler Charges						
Septic Charges						
Flow Charge per 1,000 gallons			\$3.70			\$5.66
BOD Charge per 1,000 gallons			\$16.24			\$23.60
TSS Charge per 1,000 gallons			\$30.24			\$43.96
P Charge per 1,000 gallons			\$4.08			\$5.93
TKN Charge per 1,000 gallons			\$3.40			\$4.94
Total			\$57.66			\$84.09
Holding Tank Charges						
Flow Charge per 1,000 gallons			\$3.70			\$5.66
BOD Charge per 1,000 gallons			\$6.99			\$10.16
TSS Charge per 1,000 gallons			\$4.54			\$6.60
P Charge per 1,000 gallons			\$2.26			\$3.28
TKN Charge per 1,000 gallons			\$1.60			\$2.32
Total			\$19.09			\$28.02
Chemical Toilet Waste Charges						
Flow Charge per 1,000 gallons			\$3.70			\$5.66
BOD Charge per 1,000 gallons			\$89.69			\$130.34
TSS Charge per 1,000 gallons			\$44.81			\$65.13
P Charge per 1,000 gallons			\$22.04			\$32.03
TKN Charge per 1,000 gallons			\$48.06			\$69.85
Total			\$208.30			\$303.02
Rate Summary						
		City (Inside)			Extraterritorial (Outside)	
Fixed charge per connection			\$54.27			\$54.27
Rate per 1,000 gallons			\$9.14			\$13.57
BOD rate per lb.			\$1.30			\$1.89
TSS rate per lb.			\$0.59			\$0.86
P rate per lb.			\$10.40			\$15.12
TKN rate per lb.			\$2.04			\$2.96

Table 8 - Rate Summary

		<u>COS</u>	<u>2022 Proposed</u>
City (Inside)	Fixed charge per connection (annual)	\$54.27	\$70.94
	Volumetric Rate per 1,000 Gallons	\$9.14	\$8.92
	BOD rate per lb.	\$1.30	\$1.14
	TSS rate per lb.	\$0.59	\$0.59
	P rate per lb.	\$10.40	\$9.80
	TKN rate per lb.	\$2.04	\$2.04
	Unmetered quarterly flat charge	\$274.34	\$274.34
Extraterritorial (Outside)	Fixed charge per connection (annual)	\$54.27	\$70.94
	Volumetric Rate per 1,000 Gallons	\$13.57	\$11.93
	BOD rate per lb.	\$1.89	\$1.89
	TSS rate per lb.	\$0.86	\$0.86
	P rate per lb.	\$15.12	\$15.12
	TKN rate per lb.	\$2.96	\$2.96
	Unmetered quarterly flat charge	\$407.18	\$357.92
Wastehauler	Septic Rate per 1,000 Gallons	\$84.09	\$78.89
	Chemical Toilet Rate per 1,000 Gallons	\$208.30	\$208.30
	Holding Tank Rate per 1,000 Gallons	\$28.02	\$26.08

Table 9 - Revenue Check (Based on COS)

		Units	Rate	Annual Total
Fixed Charge				
Residential	cust	18,194	\$54.27	\$987,388
Commercial and Multi-Family	cust	2,196	\$54.27	\$119,177
Industrial	cust	148	\$54.27	\$8,032
Public	cust	107	\$54.27	\$5,807
Subtotal		20,645		\$1,120,404
Volumetric Charges-Inside Customers				
Residential	Flow (000 gal)	935,000	\$9.14	\$8,550,133
Commercial & Multiple	Flow (000 gal)	675,000	\$9.14	\$6,172,556
Industrial	Flow (000 gal)	96,000	\$9.14	\$877,875
Public	Flow (000 gal)	57,000	\$9.14	\$521,238
Septic Waste Haulers	Flow (000 gal)	4,941	\$57.66	\$284,916
Chemical Toilet Waste Haulers	Flow (000 gal)	395	\$208.30	\$82,280
Holding Tank Waste Haulers	Flow (000 gal)	4,132	\$19.09	\$78,863
Subtotal		1,772,468		\$16,567,860
Industrial Excess BOD	Lbs	519,791	\$1.30	\$676,572
Industrial Excess TSS	Lbs	125,667	\$0.59	\$74,766
Industrial Excess P	Lbs	9,302	\$10.40	\$96,786
Industrial Excess TKN	Lbs	13,137	\$2.04	\$26,779
Subtotal		667,897		\$874,903
Unmetered Customers	cust	115	\$1,097.34	\$126,194
Volumetric Charges-Outside Customers				
Residential	Flow (000 gal)	2,637	\$13.57	\$35,789
Commercial & Multiple	Flow (000 gal)	4,519	\$13.57	\$61,330
Industrial	Flow (000 gal)	139	\$13.57	\$1,889
Subtotal				\$99,008
Total Revenues				\$18,788,370
Revenue Requirements				\$18,788,370
Difference				\$0

Table 10 - Revenue Summary

		Units	Rate	Annual Total
Fixed Charge				
Residential	cust	18,194	\$70.94	\$1,290,682
Commercial and Multi-Family	cust	2,196	\$70.94	\$155,784
Industrial	cust	148	\$70.94	\$10,499
Public	cust	107	\$70.94	\$7,591
Subtotal		20,645		\$1,464,556
Volumetric Charges - Inside Customers				
Residential	Flow (000 gal)	935,000	\$8.92	\$8,340,200
Commercial & Multiple	Flow (000 gal)	675,000	\$8.92	\$6,021,000
Industrial	Flow (000 gal)	96,000	\$8.92	\$856,320
Public	Flow (000 gal)	57,000	\$8.92	\$508,440
Septic Waste Haulers	Flow (000 gal)	4,941	\$78.89	\$389,795
Holding Tank Waste Haulers	Flow (000 gal)	4,132	\$26.08	\$107,753
Chemical Toilet Waste Haulers	Flow (000 gal)	395	\$208.30	\$82,279
Subtotal		1,772,073		\$16,305,787
Industrial Excess BOD	Lbs	519,791	\$1.14	\$592,562
Industrial Excess TSS	Lbs	125,667	\$0.59	\$74,144
Industrial Excess P	Lbs	9,302	\$9.80	\$91,159
Industrial Excess TKN	Lbs	13,137	\$2.04	\$26,799
Subtotal		667,897		\$784,664
Unmetered Customers	cust	115	\$1,097.34	\$126,194
Volumetric Charges - Outside Customers				
Residential	Flow (000 gal)	2,637	\$11.93	\$31,457
Commercial & Multiple	Flow (000 gal)	4,519	\$11.93	\$53,907
Industrial	Flow (000 gal)	139	\$11.93	\$1,661
Subtotal				\$87,025
Total Revenues				\$18,768,226
Revenue Requirements COS				\$18,788,370
Difference				(\$20,144)
Revenues as % of COS				99.9%

Table 11 - Test Year Cash Flow Analysis

	2022
Cash Sources	
Revenues from User Rates ⁽¹⁾	\$18,768,226
Allowance for Unknowns (ie. Timing of billing, customer loss)	(\$656,888)
Other Income ⁽²⁾	\$116,500
Investment Income on Unrestricted Cash ⁽³⁾	\$100,000
Other Fees ⁽⁴⁾	\$60,000
Total Cash Sources	\$18,387,838
Cash Uses	
O&M	\$7,853,521
Net Before Debt Service	\$10,534,317
Debt Service	
Pension State Trust Fund	\$27,071
2014 Sewer Revenue Bonds	\$547,425
2014 Clean Water Fund Loan	\$2,207,954
2015 Clean Water Fund Loan	\$933,969
2016 Sewer Revenue Bond	\$252,550
2017 Sewer Revenue Bond	\$456,025
2018 Sewer Revenue Bond	\$390,738
2018 Clean Water Fund Loan (Interceptor Project)	\$1,202,956
2019 Revenue Bond	\$202,794
2020 Revenue Bond	\$320,675
2020 Clean Water Fund Loan (Phosph Project)	\$183,199
2021 Revenue Bond	\$274,598
2021 Clean Water Fund Loan (West Side Pump Station)	\$484,779
2022 Revenue Bond	\$0
Total Debt Service	\$7,484,733
Capital Outlay (non reserve)	\$2,500,000
Addition to Replacement Fund	\$250,000
Net Cash Flow	\$299,584

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.