

# WASTEWATER UTILITY



**WASTEWATER UTILITY (SEWER)  
FUND 401**

**DEPARTMENT:** Public Works

**DIVISION:** Wastewater Utility

**PROGRAM MANAGER:** Facilities Manager – Fox River Water Pollution Control Center

**PROGRAM DESCRIPTION:**

On a daily basis, the Wastewater Utility provides the labor, materials and equipment to operate and maintain the sanitary sewer collection system and the wastewater treatment plant. The Utility also executes the Industrial Pretreatment Program that is intended to protect both the plant and collection system from hazardous materials that are dangerous to employees, and may upset the operations of the plant, causing treatment processes to be ineffective. The Utility's goal is to provide residents with a trouble free collection system, and meet the Wisconsin Pollution Discharge Elimination System (WPDES) discharge permit obligations in a cost-effective manner.

**SERVICES:**

**Collection System**

- Clean the City's sanitary sewer system on a 4 to 5 year cycle and maintain a collection system-cleaning log.
- Identify problem sewer lines or excessive inflow and infiltration (I & I) through various techniques including televising, flow monitoring, manhole inspections and private property sources, and collaborate with the Engineering Division to effect timely repairs.
- Maintain four conventional and two emergency lift stations.
- Deploy emergency pumps during extreme wet weather events to protect lives.
- Respond to sewer back-ups or any other sanitary sewer-related complaints.

**Treatment Plant**

- Operate and maintain a 12.5 million gallons/day (MGD) Regional Activated Sludge Tertiary Treatment Plant, to meet WPDES permit requirements.
- Contract for disposal of 5 million gallons of biosolids annually.
- Execute the Industrial Pre-Treatment Program.
- Perform over 17,000 laboratory analyses on wastewater samples for process control, permit compliance, Quality Assurance/Quality Control (QA/QC), industrial monitoring, and coordination of an additional 1,000-contract laboratory analyses related to plant permit compliance and industrial user wastewater discharge compliance.

**STAFFING:**

Position (FTE)	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Budget
WPCC Manager	1.00	1.00	1.00	1.00	1.00
WPCC Operations and Maintenance Supervisor	1.00	1.00	1.00	1.00	1.00
WPCC Maintenance Supervisor	1.00	1.00	1.00	1.00	0.00
Pretreatment Lab Supervisor	1.00	1.00	1.00	1.00	1.00
Process Control Operations Specialist	0.00	0.00	0.00	0.00	1.00
Chemist	3.00	2.50	2.50	2.50	2.50
Lead WPCC Operator	2.00	2.00	2.00	2.00	2.00
WPCC Operator II	4.00	5.00	6.00	6.00	6.00
WPCC Operator in Training	2.00	1.00	0.00	0.00	0.00
WPCC Maintenance Specialist II	0.00	0.00	0.00	0.00	1.00
WPCC Maintenance Specialist I	4.00	4.00	4.00	4.00	3.00
Office Services Assistant	0.50	0.75	0.75	0.75	0.75
Seasonal Laborer/Operator	1.00	1.00	1.00	1.00	1.00
<b>Total</b>	<b>20.50</b>	<b>20.25</b>	<b>20.25</b>	<b>20.25</b>	<b>20.25</b>

Note: In addition to the above, costs of 4.48 FTE are allocated to the Sewer Utility for support services received from the Finance, Human Resources, Information Technology and Engineering Departments. Costs equal to 0.38 FTE are allocated from the City Hall maintenance staff for Facility Maintenance Services.

**ACTIVITY MEASURES:**

ACTIVITY	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Budget
Annual inches of precipitation <sup>1</sup>	48.36	39.07	34.13	25.68	32.26
Overflow events	1	-	2	-	-
Total overflow locations	1	-	2	-	-
Basement backups	-	-	2	-	-
Miles of sewer cleaned/ Gallons H2O used (thousands)	52/ 277	72/ 382	58/ 308	52/ 273	72/ 380
Avg. MGD treated	9.710	10.668	9.427	8.991	9.699
Kwh/MG <sup>2</sup>	1,968	1,491	1,610	-	-
Electricity \$/MG <sup>2</sup>	\$167	\$127	\$137	-	-
\$/MG to treat Operate and Maintain (O & M)	\$1,162	\$953	\$1,174	\$1,167	
MG Biosolids land applied	4.742	4.098	6.757	5.400	6.000
Cost for application	\$198,883	\$305,231	\$410,187 <sup>4</sup>	\$357,161	\$372,000
Overtime hours	1,205	1,354	1,104	995	1,165
Average residential charges per Household <sup>3</sup>	\$484.56	\$478.31	\$491.39	\$484.70	\$484.40

<sup>1</sup> Average annual precipitation is 32.26 inches.

<sup>2</sup> Significant drop in Kwh usage due to energy savings improvement projects at the WPCC.

<sup>3</sup> Based on total revenue from residential customers/number of residential units.

<sup>4</sup> Both sludge storage tanks were essentially emptied in spring 2020.

## **OBJECTIVES ACCOMPLISHED IN 2021:**

\* Indicates if associated with one of the City's Comprehensive Plan short-term focus initiatives.

1. Oversee completion and start-up of the low-level phosphorous removal system.
  - Started up chemical conditioning tank structure, chemical feed system and disc-filtration equipment in April 2021.
  - Began 30-day system performance demonstration in June. Filtered effluent during performance testing meets the new 6-month average compliance limit.
  - Project punch list to be completed by year-end.
2. Repair 24 outlet valves in deep bed filter building after low-level phosphorus removal system is operational.
  - Replaced twenty-four 14-inch valves and operating stems, and rehabilitated all valve actuators plus floor stands in August 2021.
3. Implement relocation of anaerobic digester biogas waste flares to comply with DNR code. Optimize function of biogas regulators, pressure relief valves and moisture condensate pots.
  - Project development and process design started April 2021. Final design and bidding scheduled September 2021 with construction beginning October 2021. Project includes removal of existing burners from digester roofs, installation of one new central burner relocated to ground level south of digesters and new regulators with automatic controls, new biogas condensate system for moisture removal, and rehabilitation of existing pressure relief valves.
4. Collaborate with engineering consultant to implement best alternative to replace the failed anaerobic digester mixing system and develop plans and specifications for bidding in 2022.
  - Staff working with the engineering consultant to evaluate alternatives for anaerobic digester mixing to execute the best and most cost effective process technology to improve anaerobic digester performance. Construction expected in 2022.

## **OBJECTIVES TO BE ACCOMPLISHED IN 2022:**

\* Indicates if associated with one of the City's Comprehensive Plan short-term focus initiatives.

1. Fine-tune disc filtration process to achieve low-level phosphorus removal. The first 6-month compliance period is April 1, 2022 where the average phosphorus concentration must be 0.075 mg/L or less.
2. Oversee completion and start-up of anaerobic digester biogas waste burner project.
3. Work with consulting engineer and general contractor during construction phase of anaerobic digester mixing system.
4. Collaborate with engineering consultant to develop best approach to rehabilitate final clarifiers #3, #4 and #5 including weir tough covers for algae control. Project construction scheduled for 2023.

5. Collaborate with engineering consultant to develop best alternative to replace four influent splitter structure manually operated slide gates. Project construction scheduled for 2023.
6. Oversee repairs to biogas cogeneration engine and associated controls, operate system in conjunction with anaerobic digester mixing project and make recommendations for long-term operation strategy.

#### **BUDGET SUMMARY:**

- 1). The 2022 revenue budget for sales and services reflect a slight downward trend of residential water usage as consumer product innovations and more mindful water usage reduce average consumption. The 2022 budget reflects the sewer rates that have been in effect since the beginning of 2015, plus an anticipated rate increase to be implemented in mid-2022.
- 2). Operating revenues for the contract communities reflect the WPCCC treatment plant cost, in which the contract communities share approximately 49.5% based on average flows. Budgeted 2022 shared cost for the operations and maintenance of the plant is anticipated to increase by 0.4%. In addition to the operating and maintenance charges, the contract communities are expected to pay their pro-rata share of capital improvement projects at the treatment plant (\$1,070,000 reflected as capital contributions) and funding the DNR mandated Equipment Replacement Fund (\$103,500), of which there are three (3) projects scheduled for 2022 (see wastewater capital improvement schedules later in this section).
- 3). Salary budgets include estimated salary adjustments for non-represented staff based on the 3.0% salary adjustment factor established by the Finance Committee as part of the 2022 budget parameters and the salary ordinance expected to be adopted by the Human Resources and Public Safety Committee. Actual salary amounts for individual employees and the impact on department salary budgets depend on the position in salary grades, including the impact of step increases for eligible employees, and determination of satisfactory performance. Total sewer utility salaries are budgeted to increase approximately \$118,500, or 5.1% above the 2021 budget.
- 4). The change in the pension budget includes the impact of employer pension contribution rates from the Wisconsin Retirement System (WRS) applied to budgeted wages for eligible employees, reflecting a slight decrease in the contribution rate for general and elected employees as established by WRS. Changes in contribution rates are shared between the City and all employees.
- 5). Group insurance – health reflects a 5% change from the premium contribution charges in the 2021 budget. 2022 estimated rates have been derived based on preliminary projections from the City's insurance consultant reflecting recent health claims experience, projection of health care cost trend, and the reserves built up in the City's health insurance fund. Budgets also reflect any changes in plan coverage elections for staff assigned to this department.
- 6). Maintenance of collection system (826000) includes the City's share of anticipated costs for protecting the Underwood Creek sewer interceptor in Elm Grove from the effects of continual erosion of the land around the creek.

- 7). Estimated I & I rehab expenses (836000) for 2022 are approximately 22% lower than the budgeted amount from 2021. 2022 budgeted costs include \$1,250,000 for manhole and lateral rehabilitation. Repairs related to private properties will be assessed to property owners in 2022, which is reflected in the Miscellaneous Revenue account (460635). Any reimbursable costs from MMSD will be recorded as a grant. I & I detection (837000) budget was decreased by \$25,000, which correlates with the overall decrease in projections of the amount of work budgeted from 2021 to this year.
- 8). Milwaukee Metro Sewerage District (MMSD) charge (822801) is the cost from MMSD to treat sewage from City properties that are located inside the district. The 2022 budget is expected to remain similar to the same amount as 2021 according to analysis from the MMSD. The total estimated charges are budgeted to decrease by 0.7%, and the per-household residential charges are projected to increase by 5.8%.
- 9). Natural gas and electricity budgets have been developed using a model that considers historical consumption and current rates per WE Energies billings. The WE Energies forecasting tool utilized in prior years was not available due to billing software changes by WE Energies that rendered the forecast tool unusable. Based on that model, total natural gas and electricity expenses are expected to increase by \$80,928, or 13.7%.
- 10). Sludge hauling expense is expected increase marginally based on the projected number of gallons to be disposed at the current contracted rate per gallon. The budget for 2022 is \$372,000 for sludge hauling versus \$360,000 in 2021.
- 11). Maintenance of plant equipment (825000) is expected to decrease approximately 46.0% (or \$273,000), as there are more capital improvements being performed at the plant (see CIP schedule at the end of this section) rather than the large maintenance projects done in the recent past. There is \$50,000 budgeted for rebuilding multiple wet-well pumps and \$40,000 repairing several hoists in the treatment plant, as well as \$230,000 for general maintenance in 2022.
- 12). Non-operating expense – Milwaukee Metro Capital Charges (849000) represents the capital costs billed to the City by the MMSD on a property value basis per Public Service Commission (PSC) decision. Costs can vary from year to year based on projects undertaken by MMSD, including storm water drainage improvements. The decrease in budgeted costs from 2021 to 2022 is reflects a rate decrease from \$1.58 to \$1.49 per \$1,000 of equalized property value. The decrease in the rate is due to both an increase in the MMSD member tax rate of 3% in comparison to an increase in equalized value of 9.1% from last year. Actual costs billed and estimates of future costs based upon information from the MMSD are as follows:

<b>Year</b>	<b>Capital Charge</b>
<b>2017 (actual)</b>	\$3,966,335
<b>2018 (actual)</b>	\$3,767,023
<b>2019 (actual)</b>	\$3,442,187
<b>2020 (actual)</b>	\$3,354,918
<b>2021 (projected)</b>	\$3,318,255
<b>2022 (projected)</b>	\$2,878,568
<b>2023 (projected)</b>	\$3,200,000

**INSPECTION/SURVEY DIVISION  
401-850**

**DEPARTMENT:** Public Works

**DIVISION:** Engineering (Survey/Inspection)

**PROGRAM MANAGER:** City Engineer

**PROGRAM DESCRIPTION:**

The Public Works Department is divided into four (4) divisions, as follows: Engineering, Highway, Water and Wastewater. The Inspection/Survey Division has a separate budget, and is overseen by the City Engineer in the Engineering Division. For accounting purposes, the Inspection/Survey division is included in the Wastewater Utility Fund; however, staff costs for City projects are allocated to other funds/activities as appropriate. The cost of Inspection/Survey services related to development is charged to outside entities and recorded as revenue in the Wastewater Utility Fund.

The Inspection/Survey Division provides the resources to plan, construct, inspect and rehabilitate the public infrastructure which includes such items as the City street system, wastewater collection system (e.g., sanitary sewers and pump stations), water distribution system, storm water management system (e.g., storm sewers, retention ponds and ditches), bicycle and pedestrian pathways, street lighting and traffic signals. It also provides the horizontal and vertical control for all public and private infrastructure improvements and marks City-owned utilities for the Digger’s Hotline system.

In order to provide control over the public infrastructure, the Inspections/Survey Division staff issues numerous permits and approvals for excavation permits and inspects the construction of dedicated public improvements. In addition, the Division produces items such as plats of survey, easement documents and right-of-way plats.

**SERVICES:**

- Provide survey related support services to various City divisions and departments.
- Marking of City utilities in support of the Digger’s Hotline system.
- Project oversight of all public infrastructure installation including public works construction projects, private developments and subdivisions.
- Respond to citizen inquiries and concerns regarding development construction and public construction.
- Maintain official maps and records, including water, sanitary sewer and storm sewer system plans, inspector’s records, as-built drawings and other official maps.

**STAFFING:**

Positions (FTE)	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Budget
<b>Survey Supervisor</b>	1.00	1.00	1.00	1.00	1.00
<b>Engineering Technician III</b>	1.00	1.00	1.00	1.00	1.00

Positions (FTE)	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Budget
Engineering Technician II	3.00	3.00	3.00	3.00	3.00
Public Works Inspector	1.00	1.00	1.00	1.00	1.00
GIS Technician II	0.00	0.00	0.50	0.50	0.50
Utility Location Technician	0.00	0.66	0.66	0.66	0.66
Survey Assistant	0.26	0.00	0.00	0.00	0.00
Engineering Intern	0.40	0.00	0.00	0.00	0.00
<b>Total</b>	<b>6.66</b>	<b>6.66</b>	<b>7.16</b>	<b>7.16</b>	<b>7.16</b>

#### ACTIVITY MEASURES:

Activity	2018 Actual	2019 Actual	2020 Actual	2021 Projected	2022 Budgeted
Diggers Hotline Requests	7,609	8,389	12,095	10,000	10,000
Street permits issued	281	313	253	250	250
Private Construction Projects	9	8	6	6	5
Public Construction Projects	24	19	12	15	11
Planned Developments	-	-	2	3	2

#### OBJECTIVES ACCOMPLISHED IN 2021:

\* Indicates if associated with one of the City's Comprehensive Plan short-term focus initiatives.

1. Train on how to use new sewer televising truck and equipment.
  - The new sewer televising truck and equipment was delivered in late summer of 2021. This objective will continue into 2022.

#### OBJECTIVES TO BE ACCOMPLISHED IN 2022:

\* Indicates if associated with one of the City's Comprehensive Plan short-term focus initiatives.

1. Train on how to use the new sewer televising truck and equipment.
2. Develop electronic construction inspection reporting forms to integrate directly with the City's GIS system.

#### BUDGET SUMMARY:

- 1). Salary budgets include estimated salary adjustments for non-represented staff based on the 3.0% salary adjustment factor established by the Finance Committee as part of the 2022 budget parameters and the salary ordinance expected to be adopted by the Human Resources and Public Safety Committee. Actual salary amounts for individual employees and the impact on department salary budgets depend on the



position in salary grades, including the impact of step or merit increases for eligible employees, and determination of satisfactory performance.

- 2). The change in the pension budget includes the impact of employer pension contribution rates from the Wisconsin Retirement System (WRS) applied to budgeted wages for eligible employees, reflecting a slight decrease in the contribution rate for general and elected employees as established by WRS. Changes in contribution rates are shared between the City and all employees.
- 3). Group insurance – health reflects a 5% change from the premium contribution charges in the 2021 budget. 2022 estimated rates have been derived based on preliminary projections from the City's insurance consultant reflecting recent health claims experience, projection of health care cost trend, and the reserves built up in the City's health insurance fund. Budgets also reflect any changes in plan coverage elections for staff assigned to this division.
- 4). Operating supplies (822000) includes funding for sewer camera software maintenance costs for the sewer televising truck acquired in 2021.

**CITY OF BROOKFIELD**  
**2022 Wastewater Utility Summary Budget**

WASTEWATER UTILITY FUND - 401				2020 Actual	2021 Adopted	YTD 09/15/21	2021 Estimated	2022 Adopted	Percent Change
<b>OPERATING REVENUES</b>									
SALES AND SERVICES	100			\$ 8,834,532	\$ 9,022,559	\$ 4,459,335	\$ 9,023,725	\$ 9,385,158	
REVENUES FROM OTHER MUNICIPALITIES	100			1,549,567	1,713,196	855,267	1,945,377	1,894,635	
REVENUES FROM INDUSTRIAL SURCHARGES	100			204,032	279,595	93,401	189,163	261,895	
REVENUES FROM INSPECTION/SURVEY	100			590,689	737,260	309,556	740,539	785,836	
OTHER INCOME	100			58,240	280,868	47,724	101,302	192,428	
<b>TOTAL OPERATING REVENUE</b>				<b>11,237,060</b>	<b>12,033,478</b>	<b>5,765,283</b>	<b>12,000,106</b>	<b>12,519,952</b>	<b>4.0%</b>
<b>OPERATING EXPENSES</b>									
COLLECTION SYSTEM	810			1,126,186	2,466,258	701,939	1,482,034	2,077,230	
CUSTOMER ACCOUNTS/GENERAL	820			1,504,720	1,635,645	821,651	1,631,048	1,657,418	
FRWPCC - TREATMENT PLANT	830			3,656,295	4,092,947	2,590,581	4,148,521	4,109,616	
INSPECTION/SURVEY	850			701,521	745,859	505,923	750,520	785,836	
Sub-total Operations and Maintenance				6,988,722	8,940,709	4,620,094	8,012,123	8,630,100	-3.5%
DEPRECIATION/TAXES	840			3,427,829	4,319,278	2,159,642	4,119,996	4,269,625	
<b>TOTAL OPERATING EXPENSES</b>				<b>10,416,551</b>	<b>13,259,987</b>	<b>6,779,736</b>	<b>12,132,119</b>	<b>12,899,725</b>	<b>-2.7%</b>
<b>NET OPERATING INCOME</b>				<b>820,509</b>	<b>(1,226,509)</b>	<b>(1,014,453)</b>	<b>(132,013)</b>	<b>(379,773)</b>	<b>-69.0%</b>
<b>NON- OPERATING REVENUE/EXPENSES:</b>									
PLUS - INTEREST INCOME	100			473,660	128,917	102,076	231,555	179,038	
GENERAL PROPERTY TAXES	100			1,900,000	-	-	-	-	
INTERGOVERNMENTAL GRANTS	100			53,813	-	-	-	300,000	
LESS - INTEREST EXPENSE	840			189,324	275,326	137,664	250,065	201,434	
MMSD CAPITAL CHARGES &	840			3,354,918	2,931,772	1,465,886	3,318,255	2,878,568	
<b>WASTEWATER UTILITY NET INCOME (LOSS)</b>				<b>(296,260)</b>	<b>(4,304,690)</b>	<b>(2,515,927)</b>	<b>(3,468,778)</b>	<b>(2,980,737)</b>	<b>-30.8%</b>
SPECIAL ASSESSMENTS/CAPITAL CONTRIBUTIONS	00401461	499500		4,151,879	975,000	1,006,947	1,715,222	1,173,500	
<b>TOTAL NET POSITION, JANUARY 1</b>				<b>95,497,961</b>	<b>99,353,580</b>		<b>99,353,580</b>	<b>97,600,024</b>	
<b>TOTAL NET POSITION, DECEMBER 31</b>				<b>99,353,580</b>	<b>96,023,890</b>		<b>97,600,024</b>	<b>95,792,787</b>	
<b>CASH FLOW ADJUSTMENTS</b>									
PLUS:									
DEPRECIATION				3,399,673	4,289,753		4,087,563	4,237,242	
AMORTIZATION OF EXPENSES				1,727	8,917		8,917	8,917	
ASSESSMENTS COLLECTED				29,676	125,000		17,239	35,424	
CAPITAL CONTRIBUTIONS RECEIVED				4,151,879	975,000		1,715,222	1,173,500	
LESS:									
EQUIPMENT REPLACEMENT FUND CAPITAL OUTLAY				170,567	520,000		262,701	390,000	
NON-BONDED CAPITAL OUTLAY				2,080,452	345,500		465,632	2,457,683	
CAPITAL CONTRIBUTIONS - DEDICATIONS							65,022		
DEBT REDUCTION:									
CLEAN WATER FUND - OTHER				515,477	515,477		278,769	256,614	
COLLECTION SYSTEM				590,000	465,000		465,000	465,000	
<b>NET CHANGE IN CASH</b>				<b>3,930,199</b>	<b>(751,997)</b>		<b>823,039</b>	<b>(1,094,951)</b>	

WASTEWATER UTILITY FUND - 401				2020 Actual	2021 Adopted	YTD 09/15/21	2021 Estimated	2022 Adopted	Percent Change
<b>OPERATING REVENUES - 100</b>									
<b>SALES AND SERVICES</b>									
RESIDENTIAL	401459	460621	6,476,458	6,394,757	3,215,829	6,395,186	6,627,290		
COMMERCIAL	401459	460622	2,278,185	2,508,815	1,202,042	2,520,869	2,644,505		
INDUSTRIAL	401459	460623	23,312	28,707	11,270	26,493	27,878		
PUBLIC AUTHORITY	401459	460624	56,577	90,280	30,194	81,177	85,485		
Total Sales and Services			8,834,532	9,022,559	4,459,335	9,023,725	9,385,158	4.0%	
<b>OTHER OPERATING INCOME</b>									
FRWPCC CHGS TO OTHER MUNICIPALITIES	401459	460627	1,549,567	1,713,196	855,267	1,945,377	1,894,635		
FRWPCC INDUSTRIAL SURCHARGES	401459	460628	170,340	225,500	71,950	145,814	224,300		
FRWPCC LAB & PERMIT FEES	401459	460629	33,597	54,000	21,403	43,254	37,500		
MMSD INDUSTRIAL SURCHARGES	401459	460631	95	95	48	95	95		
LATE PAYMENTS	401459	460632	45,995	89,000	35,143	86,884	88,000		
MISCELLANEOUS	401459	460635/40	12,245	191,868	12,581	14,418	104,428		
Total Other Income			1,811,839	2,273,659	996,392	2,235,842	2,348,958	3.3%	
<b>TOTAL OPERATING REVENUE</b>			<b>10,646,371</b>	<b>11,296,218</b>	<b>5,455,727</b>	<b>11,259,567</b>	<b>11,734,116</b>	<b>3.9%</b>	
<b>OPERATING EXPENSES</b>									
<b>COLLECTION SYSTEM EXPENSE - 810</b>									
<b>SALARIES</b>									
SUPERVISION AND LABOR	40181030	821000	173,227	170,297	106,590	175,943	190,696		
VACATION, HOLIDAY & SICK PAY	40181030	835000	25,001	18,273	7,387	18,127	23,788		
Sub-total			198,228	188,570	113,977	194,070	214,484	13.7%	
<b>FRINGE BENEFITS</b>									
PENSION	40181031	835100	13,623	12,611	7,657	17,725	13,514		
GROUP INSURANCE-OTHER	40181031	835200	3,838	2,404	1,572	4,203	2,767		
FICA TAX	40181031	835300	14,950	14,163	8,612	14,007	15,867		
RHS PAYMENTS	40181031	835400	8,041	7,058	4,484	7,394	7,658		
GROUP INSURANCE-HEALTH	40181031	835700	37,141	35,481	22,852	45,641	39,831		
Sub-total			77,593	71,717	45,177	88,970	79,637	11.0%	
<b>OPERATING EXPENSES</b>									
OPERATIONS SUPPLIES	40181032	822000	5,069	5,180	1,381	6,003	7,380		
NATURAL GAS	40181032	822001	909	993	847	1,059	1,039		
ELECTRICITY	40181032	822002	11,870	12,713	5,782	13,149	13,345		
TELEPHONE	40181032	822003	879	1,752	475	879	1,248		
SAFETY EQUIPMENT	40181032	822009	1,247	1,000	27	1,000	1,000		
TRANSPORTATION	40181032	823000	25,800	18,428	14,399	27,609	23,669		
MAINTENANCE BUILDING & GROUNDS	40181032	824000	1,410	1,600	1,200	1,450	1,900		
MAINTENANCE COLLECTION SYSTEMS	40181032	826000	46,258	230,000	(8,829)	175,540	156,800		
OTHER	40181032	832000	29,231	24,305	22,936	32,305	26,728		
Sub-total			122,673	295,971	38,218	258,994	233,109	-21.2%	
<b>REHAB EXPENSES</b>									
INFLOW/INFILTRATION REHAB	40181033	836000	481,879	1,600,000	459,014	675,000	1,250,000		
INFLOW/INFILTRATION DETECTION	40181033	837000	215,622	300,000	41,714	250,000	275,000		
CONSULTING	40181033	838000	30,191	10,000	3,839	15,000	25,000		
Sub-total			727,692	1,910,000	504,567	940,000	1,550,000	-18.8%	
<b>TOTAL COLLECTION SYSTEM</b>			<b>1,126,186</b>	<b>2,466,258</b>	<b>701,939</b>	<b>1,482,034</b>	<b>2,077,230</b>	<b>-15.8%</b>	

WASTEWATER UTILITY FUND - 401				2020 Actual	2021 Adopted	YTD 09/15/21	2021 Estimated	2022 Adopted	Percent Change
<b>CUSTOMER ACCOUNT/GEN. EXPENSE - 820</b>									
OPERATING SALARIES									
METER READING SALARIES	40182030	827100	29,825	45,752	10,893	17,000	44,487		
GENERAL OFFICE SALARIES	40182030	829000	144,123	157,145	103,305	154,469	163,740		
Sub-total			173,948	202,897	114,198	171,469	208,227		2.6%
FRINGE BENEFITS									
PENSION	40182031	835100	12,269	13,695	7,857	15,212	13,537		
GROUP INSURANCE-OTHER	40182031	835200	3,084	2,432	1,711	4,135	2,606		
FICA TAX	40182031	835300	13,039	15,522	8,462	11,446	15,048		
RHS PAYMENTS	40182031	835400	5,990	6,535	4,009	5,697	5,792		
GROUP INSURANCE-HEALTH	40182031	835700	28,451	28,380	23,044	34,773	37,178		
Sub-total			62,833	66,564	45,083	71,263	74,161		11.4%
OPERATING EXPENSES									
MILWAUKEE METRO SEWERAGE CHARGE	40182032	822801	1,166,221	1,262,838	592,173	1,262,838	1,254,611		
ACCOUNTING & COLLECTING	40182032	827000	39,104	39,080	30,365	49,775	47,970		
COMPUTER	40182032	827001	8,183	10,519	10,500	10,501	10,039		
METER READING	40182032	827003	54,123	53,747	28,278	64,147	60,410		
UNCOLLECTIBLE ACCOUNTS	40182032	827009	308	-	1,054	1,055	2,000		
Sub-total			1,267,939	1,366,184	662,370	1,388,316	1,375,030		0.6%
TOTAL CUSTOMER ACCOUNT/GEN. EXPENSE			1,504,720	1,635,645	821,651	1,631,048	1,657,418		1.3%
<b>FRWPCC - TREATMENT PLANT - 830</b>									
SALARIES									
SUPERVISION AND LABOR	40183030	821000	695,390	683,080	522,226	797,982	753,596		
MAINT. BUILDING & GROUNDS - LABOR	40183030	824100	324,733	397,694	234,554	319,430	410,219		
GENERAL OFFICE SALARIES	40183030	829000	63,949	63,419	43,118	63,439	66,297		
VACATION, HOLIDAY & SICK PAY	40183030	835000	154,433	136,203	85,778	109,878	140,046		
Sub-total			1,238,505	1,280,396	885,676	1,290,729	1,370,158		7.0%
FRINGE BENEFITS									
PENSION	40183031	835100	86,863	84,804	59,579	113,069	86,142		
GROUP INSURANCE-OTHER	40183031	835200	24,085	17,211	13,056	28,861	18,889		
FICA TAX	40183031	835300	92,734	95,235	67,150	91,576	101,367		
RHS PAYMENTS	40183031	835400	52,019	52,042	36,060	48,637	51,748		
GROUP INSURANCE-HEALTH	40183031	835700	234,421	251,866	173,905	257,208	258,053		
Sub-total			490,122	501,158	349,750	539,351	516,199		3.0%
OPERATING EXPENSES									
OPERATIONS SUPPLIES	40183032	822000	42,858	36,300	17,917	38,466	49,500		
NATURAL GAS	40183032	822001	80,801	103,408	91,725	151,663	148,753		
ELECTRICITY	40183032	822002	460,299	474,130	259,039	501,561	509,035		
TELEPHONE	40183032	822003	15,287	14,456	8,404	10,681	15,515		
CHEMICALS	40183032	822005	110,041	322,000	125,607	257,486	378,500		
LABORATORY	40183032	822006	35,151	48,500	28,164	47,308	49,500		
SLUDGE HAULING	40183032	822007	410,187	360,000	194,791	357,161	372,000		
FEES & PERMITS	40183032	822008	41,431	51,590	39,541	46,541	50,610		
SAFETY EQUIPMENT	40183032	822009	13,180	10,000	6,144	11,114	11,900		
TRANSPORTATION	40183032	823000	26,106	18,848	13,547	27,609	23,669		
MAINTENANCE BUILDING & GROUNDS	40183032	824000	84,171	96,500	37,404	87,191	92,000		
MAINTENANCE PLANT EQUIPMENT	40183032	825000	464,090	593,000	411,015	604,428	320,000		
GENERAL OFFICE SUPPLIES	40183032	830000	5,084	5,547	2,407	4,334	5,347		
COMPUTER SOFTWARE MAINTENANCE	40183032	830001	32,016	61,929	35,398	51,413	71,908		
EDUCATIONAL TRAINING & TRAVEL	40183032	830002	1,349	5,125	1,489	5,557	5,225		
OTHER	40183032	832000	105,617	110,060	82,563	115,928	119,797		
Sub-total			1,927,668	2,311,393	1,355,155	2,318,441	2,223,259		-3.8%
TOTAL FRWPCC - TREATMENT PLANT			3,656,295	4,092,947	2,590,581	4,148,521	4,109,616		0.4%

WASTEWATER UTILITY FUND - 401				2020 Actual	2021 Adopted	YTD 09/15/21	2021 Estimated	2022 Adopted	Percent Change
<b>OTHER EXPENSES - 840</b>									
OTHER EXPENSES									
DEPRECIATION	40184036	843000	3,399,673	4,289,753	2,144,880	4,087,563	4,237,242		
TAXES	40184036	852000	28,156	29,525	14,762	32,433	32,383		
Sub-total			3,427,829	4,319,278	2,159,642	4,119,996	4,269,625		-1.1%
TOTAL OTHER EXPENSES			3,427,829	4,319,278	2,159,642	4,119,996	4,269,625		-1.1%
<b>TOTAL OPERATING EXPENSES</b>									
			<b>9,715,030</b>	<b>12,514,128</b>	<b>6,273,813</b>	<b>11,381,599</b>	<b>12,113,889</b>		<b>-3.2%</b>
<b>NET OPERATING INCOME (LOSS)</b>									
			<b>931,341</b>	<b>(1,217,910)</b>	<b>(818,086)</b>	<b>(122,032)</b>	<b>(379,773)</b>		<b>-68.8%</b>
<b>NON- OPERATING REVENUE/EXPENSES:</b>									
<b>OTHER INCOME - 000</b>									
MMSD GRANT	401402	408300	53,478	-	-	-	300,000		
OTHER GRANTS	401402	408400	335	-	-	-	-		
INTEREST INCOME ON ASSESSMENTS	401460	466500	5,135	3,897	38	3,535	5,950		
INTEREST INCOME ON INVESTMENTS	401460	466000	455,221	113,000	95,290	216,000	160,000		
INTEREST INCOME OTHER	401460	466700	13,304	12,020	6,748	12,020	13,088		
GENERAL PROPERTY TAXES	401460	401000	1,900,000	-	-	-	-		
Sub-total			2,427,473	128,917	102,076	231,555	479,038		271.6%
<b>NON-OPERATING EXPENSES - 840</b>									
INTEREST ON REVENUE BONDS	40184036	844000	45,418	150,346	75,174	113,857	86,504		
INTEREST ON GENERAL OBLIGATION BONDS	40184036	845000	145,633	133,897	66,948	145,125	123,847		
AMORTIZATION OF DEBT EXPENSE	40184036	848000	8,250	-	-	-	-		
AMORTIZATION OF PREMIUM ON DEBT	40184036	944500	(9,977)	(8,917)	(4,458)	(8,917)	(8,917)		
MILWAUKEE METRO CAPITAL CHARGES	40184036	849000	3,354,918	2,931,772	1,465,886	3,318,255	2,878,568		
Sub-total			3,544,242	3,207,098	1,603,550	3,568,320	3,080,002		-4.0%
<b>WASTEWATER UTILITY NET INCOME (LOSS)</b>									
			<b>(185,428)</b>	<b>(4,296,091)</b>	<b>(2,319,560)</b>	<b>(3,458,797)</b>	<b>(2,980,737)</b>		<b>-30.6%</b>

**CITY OF BROOKFIELD**  
**2022 Sewer Utility PW-Inspection/Survey Expenditure Budget**

WASTEWATER UTILITY FUND 401			2020 Actual	2021 Adopted	YTD 09/15/21	2021 Estimated	2022 Adopted	Percent Change
<b>INSPECTION/SURVEY - 850</b>								
<b>OPERATING REVENUES</b>								
TRANSFERS								
INSPECTION CHARGES - CITY	40185039	890000	129,370	200,186	144,961	201,076	219,546	
INSPECTION CHARGES - WATER PROJECT:	40185039	890001	266,546	295,846	50,505	297,162	311,940	
INSPECTION CHARGES - SEWER PROJECT:	40185039	890002	109,802	104,969	86,246	105,436	110,679	
INSPECTION CHARGES - DEVELOPERS	40185039	890003	48,651	83,127	4,156	83,497	87,649	
INSPECTION CHARGES - PERMIT FEES	40185039	890004	36,320	53,132	23,688	53,368	56,022	
<b>TOTAL OPERATING REVENUE</b>			<b>590,689</b>	<b>737,260</b>	<b>309,556</b>	<b>740,539</b>	<b>785,836</b>	<b>6.6%</b>
<b>OPERATING EXPENSES</b>								
SALARIES/BENEFITS								
SALARIES	40185001	501000	509,382	529,581	359,274	532,642	563,790	
RHS PAYMENTS	40185001	501400	18,918	19,435	13,455	19,435	19,435	
FICA TAX	40185001	502000	39,399	39,777	27,727	39,688	42,346	
PENSION	40185001	502100	34,730	35,748	24,776	35,607	36,646	
GROUP INSURANCE-OTHER	40185001	502200	4,935	5,684	3,985	5,811	5,794	
GROUP INSURANCE-HEALTH	40185001	502700	43,633	56,737	40,555	57,562	61,062	
Sub-total			650,997	686,962	469,772	690,745	729,073	<b>6.1%</b>
OPERATING EXPENSES								
OPERATING SUPPLIES	40185004	822000	9,355	10,270	8,333	10,270	15,503	
TELEPHONE	40185004	822003	1,581	2,197	952	2,197	2,197	
TRANSPORTATION	40185004	823000	12,714	13,783	10,537	15,611	14,080	
OTHER GENERAL	40185004	832000	14,589	22,555	11,283	22,555	18,607	
CONSULTING	40185004	838000	-	-	-	-	-	
Sub-total			38,239	48,805	31,105	50,633	50,387	<b>3.2%</b>
DEPRECIATION	40185036	843000	12,285	10,092	5,046	9,142	6,376	
Sub-total			12,285	10,092	5,046	9,142	6,376	<b>-36.8%</b>
<b>TOTAL EXPENSES</b>			<b>701,521</b>	<b>745,859</b>	<b>505,923</b>	<b>750,520</b>	<b>785,836</b>	<b>5.4%</b>
<b>NET INSPECTIONS/SURVEY</b>			<b>(110,832)</b>	<b>(8,599)</b>	<b>(196,367)</b>	<b>(9,981)</b>	<b>-</b>	<b>-100.0%</b>

City of Brookfield, WI  
*Capital Improvement Program*  
 2022 thru 2026

**FUNDING SOURCE SUMMARY**

<b>Source</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>Total</b>
Contract communities contribution	1,070,000	840,000	50,000	50,000		2,010,000
Sewer equipment replacement fund	390,000					390,000
Sewer fund balance	1,387,683	1,490,000	89,000	310,000	42,000	3,318,683
Sewer special assessments				140,000		140,000
<b>GRAND TOTAL</b>	2,847,683	2,330,000	139,000	500,000	42,000	5,858,683

City of Brookfield, WI  
*Capital Improvement Program*  
 2022 thru 2026

**PROJECTS BY CATEGORY AND DEPARTMENT**

Department		2022	2023	2024	2025	2026	Total
<b>Sanitary Sewer / Wastewater</b>							
<b><i>Sewer collection system const</i></b>							
Sanitary sewer upgrade to serve Ruby apartments	SA-22-01	180,000					180,000
Extend Sanitary Sewer north of Gumina Road	SA-22-02		350,000		400,000		750,000
158th and Brentwood sanitary sewer upgrade	SA-23-01		300,000				300,000
	<b>Sub-Total</b>	<b>180,000</b>	<b>650,000</b>		<b>400,000</b>		<b>1,230,000</b>
<b><i>Vehicles</i></b>							
Sewer vehicles/equipment	WW-01-01	137,683		39,000		42,000	218,683
	<b>Sub-Total</b>	<b>137,683</b>		<b>39,000</b>		<b>42,000</b>	<b>218,683</b>
<b><i>Wastewater Treatment Plant</i></b>							
Treatment plant building rehab	WW-16-03			100,000	100,000		200,000
Replace Digester mixing systems	WW-22-01	1,850,000					1,850,000
Treatment plant pump replacements	WW-22-02	390,000					390,000
Biogas co-generation engine	WW-22-03	110,000					110,000
Rehab Final clarifiers 3, 4 and 5	WW-23-01	150,000	1,400,000				1,550,000
Replace influent splitter gates	WW-23-02	30,000	280,000				310,000
	<b>Sub-Total</b>	<b>2,530,000</b>	<b>1,680,000</b>	<b>100,000</b>	<b>100,000</b>		<b>4,410,000</b>
	<b>Department Total:</b>	<b>2,847,683</b>	<b>2,330,000</b>	<b>139,000</b>	<b>500,000</b>	<b>42,000</b>	<b>5,858,683</b>
	<b>GRAND TOTAL</b>	<b>2,847,683</b>	<b>2,330,000</b>	<b>139,000</b>	<b>500,000</b>	<b>42,000</b>	<b>5,858,683</b>



**CITY OF BROOKFIELD**  
**Wastewater Utility Fund**  
**CIP Project Descriptions**

<u>Project Name/Funding Source</u>	<u>Project Description</u>
<b>Sewer collection system construction</b>	
Sanitary sewer upgrade to serve Ruby apartments (utility fund balance)	Upgrade local sanitary sewer south of the Brookfield Conference Center and west of the Sheraton Hotel to serve new Ruby apartment complex.
Extend Sanitary Sewer north of Gumina Road (utility fund balance)	2023 – Extend sanitary sewer service to areas north of Gumina Road for future development.  2025 – Extension of sanitary sewer along Gumina Road from terminus of service at Northbook Commerce Center. Amount included in CIP as a placeholder pending future development. Majority of costs expected to be ultimately reimbursed or funded via special assessments to benefitted property owners.
158 <sup>th</sup> and Brentwood sanitary sewer upgrade (utility fund balance)	Upgrade sanitary sewer on N 158 <sup>th</sup> Street from Elderlawn Parkway to Brentwood Avenue and on Brentwood Avenue from N 158 <sup>th</sup> Street to Pilgrim Road from an 8-inch diameter pipe to a 10-inch diameter pipe to address capacity issues.
<b>Vehicles/Equipment</b>	
Sewer vehicles/equipment (utility fund balance)	Estimated cost of ongoing vehicle and other large equipment replacements. 2022 includes funding for replacement of swap loader with one-ton dump truck with plow/spreader, and replacement of forklift with skid steer.
<b>Wastewater Treatment Plant</b>	
Treatment plant building rehabilitation (utility fund balance and contract communities contribution)	Replace roofs at various buildings.
Replace Digester mixing systems (utility fund balance and contract communities contribution)	Replace failing digester mixing systems. Existing air lance technology is obsolete, equipment has failed, and parts are unavailable. Mixing continues with feed pumps, but that is an inadequate option to sustain long-term and still meet permit limits.

**CITY OF BROOKFIELD**  
**Wastewater Utility Fund**  
**CIP Project Descriptions**

<u>Project Name/Funding Source</u>	<u>Project Description</u>
Treatment plant pump and equipment replacements (equipment replacement fund)	Replacement of failing pumps – two return activated sludge pumps, three recycle pumps, biosolids storage, and digester grinder pump. In addition, funding is included for replacement of the biogas co-generation engine.
Rehabilitate final clarifiers 3, 4 and 5 (utility fund balance and contract communities contribution)	Clarifiers are aging, rusting and corroding and framework and skimmer arms be replaced, repaired and repainted. In addition, troughs may be need to be moved to allow for covers to be installed to prevent algae growth which can plug up low level phosphorous removal disc filters.
Replace influent splitter gates (utility fund balance and contract communities contribution)	Replace splitter gate on influent flow channels. These gates leak, are difficult to operate and are generally failing similar to the primary effluent splitter structure gates that were recently replaced. They need to be removed and replaced with newer technology.