

Derry Township Municipal Authority

2024 Wastewater Fund Budget

ADOPTED

DTMA Board Resolution #2023-51

November 20, 2023



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TABLE 1 OPERATING FUND Comparative Cash Budget (in thousands)				
Category / Item	2024	2023	Δ\$	Δ%
Receipts (Refer to Table 2 for Detail)				
Direct Customers	8,990.0	8,379.0	611.0	7.3%
Municipal Customers	880.0	819.0	61.0	7.4%
Hauled Waste	1,600.0	1,430.0	170.0	11.9%
Other Routine	878.8	898.1	(19.3)	(2.1%)
Connection Related	683.6	593.7	89.9	15.1%
Interest-Operating Fund	383.7	153.4	230.3	150.1%
Interest-Trust and Restricted Funds	333.7	427.7	(94.0)	(22.0%)
Totals before Grants	13,749.8	12,700.9	1,048.9	8.3%
Transfers from Stormwater Fund	50.5	50.5	(0.0)	(0.1%)
Federal & State Grants	0.0	0.0	0.0	~
Totals	13,800.3	12,751.4	1,048.9	8.2%
Disbursements (Refer to Table 3 for Detail)				
Departmental Expenditures	7,898.6	7,933.8	(35.2)	(0.4%)
Projects and Capital Expenditures	229.3	181.0	48.3	26.7%
Bond & Note Payments	4,721.4	4,721.0	0.3	0.0%
Capital Lease Payments	365.8	365.8	0.0	0.0%
Totals before Transfers	13,215.1	13,201.6	13.4	0.1%
Transfers to Resource Allocation Fund	332.0	250.0	82.0	32.8%
Transfers to SW Resource Allocation Fund	512.4	296.0	216.4	73.1%
Totals	14,059.5	13,747.6	311.8	2.3%
Net Cash				
Inc (Dec) before Grants/Transfers	534.7	(500.7)	1,035.5	(206.8%)
Increase (Decrease)	(259.2)	(996.2)	737.0	(74.0%)
Beginning Cash	7,772.4			
Ending Cash Balance	7,513.2			

TABLE 2 OPERATING FUND Receipt Detail (in thousands)				
Category / Item	2024	2023	Δ\$	Δ%
1 - Municipal Customers				
Lower Swatara	180.0	164.0	16.0	9.8%
South Hanover	700.0	655.0	45.0	6.9%
Totals	880.0	819.0	61.0	7.5%
2 - Other Routine				
Late Payment Fees	61.6	52.9	8.7	16.5%
Surcharges	735.0	714.0	21.0	2.9%
Reimb for Developer Inspections	24.0	26.0	(2.0)	(7.7%)
Miscellaneous	58.2	105.2	(47.0)	~
Totals	878.8	898.1	(19.3)	(2.2%)
3 - Connection Related Fees				
Inspection	8.4	6.3	2.1	33.3%
Lateral Install & Special Purpose	3.8	45.8	(42.0)	(91.7%)
Installment Payments	1.2	1.2	0.0	0.0%
Capacity - Derry	184.8	244.4	(59.6)	(24.4%)
Capacity - Southwest	485.4	296.0	189.4	64.0%
Totals	683.6	593.7	89.9	15.1%
4 - Interest-Operating Fund				
Checking	45.0	20.0	25.0	125.0%
Investments	338.7	133.4	205.3	153.9%
Totals	383.7	153.4	230.3	150.1%
5 - Interest-Trust and Restricted Funds				
Operating Reserve	53.7	21.3	32.4	152.1%
Flood Reserve	6.1	6.4	(0.3)	(4.7%)
Resource Allocation Funds	109.0	64.1	44.9	70.1%
BR&I Fund	22.5	10.9	11.6	106.4%
2020 Capital Project Fund	0.0	0.0	0.0	~
2021 Capital Project Fund	20.5	56.0	(35.5)	(63.4%)
2022 Capital Project Fund	338.9	248.3	90.6	36.5%
2022 DCIB Note B (SCI) Fund	0.7	20.7	(20.0)	(96.6%)
Arbitrage Rebate Expense	(217.7)	0.0	(217.7)	~
Totals	333.7	427.7	(94.0)	(22.0%)

TABLE 3
OPERATING FUND
Disbursement Detail (in thousands)

Category / Item	2024	2023	Δ\$	Δ%
7 - Departmental Expenses				
Administration	3,487.4	3,513.6	(26.2)	(0.8%)
Collection System	820.7	796.2	24.5	3.1%
Operation	2,190.7	2,291.6	(100.9)	(4.4%)
Maintenance	991.8	821.5	170.3	20.7%
Technical Services	408.0	510.9	(102.9)	(20.1%)
Total Departmental	7,898.6	7,933.8	(35.2)	(0.4%)
8 - Bond & Note Payments				
Sewer Revenue Bond Issues				
2021 Series A	2,123.4	1,861.8	261.6	14.1%
2021 Series B	344.5	345.2	(0.6)	(0.2%)
2021 Series C	271.5	271.5	0.0	0.0%
2022	379.2	379.5	(0.3)	(0.1%)
Derry Township Subsidy Agreements				
2018	157.7	157.8	(0.1)	(0.1%)
2019	135.0	135.2	(0.2)	(0.1%)
2020	866.5	1,125.7	(259.2)	(23.0%)
2020 Series A	321.4	321.4	(0.0)	(0.0%)
Dauphin County Infrastructure Bank				
2022 Note Series B (SCI)	122.1	122.9	(0.8)	(0.7%)
Totals	4,721.4	4,721.0	0.3	0.0%
9 - Capital Lease Payments				
Conewago Twp Phase I	159.6	159.6	0.0	0.0%
Conewago MA Phase II	206.1	206.1	0.0	0.0%
Totals	365.8	365.8	0.0	0.0%

TABLE 4
WASTEWATER FUNDS SUMMARY
Projected Changes in Operating, Restricted and Trust Fund Balances

Description	Balance as of Jan 1, 2024	Addition of Funds	Distribution of Funds	Balance as of Dec 31 2024	Fund Increase / (Decrease)
Operating Fund					
Checking and Investments	7,772,400	13,800,300	(14,059,500)	7,513,200	(259,200)
Trust & Restricted Funds					
Operating Reserve	1,331,500	271,400	(58,300)	1,544,600	213,100
Flood	200,000	6,100	(6,100)	200,000	-
WW Resource Allocation	1,882,200	332,000	(1,280,500)	933,700	(948,500)
SW Resource Allocation	870,900	512,400	(848,500)	534,800	(336,100)
Bond Redemption & Improvement	567,000	22,500	-	589,500	22,500
2021 Capital Project	623,900	-	(623,900)	-	(623,900)
2022 Capital Project	9,785,000	-	(9,766,700)	18,300	(9,766,700)
Total Trust & Restricted Funds	15,260,500	1,144,400	(12,584,000)	3,820,900	(11,439,600)

**TABLE 5
PROJECTS & CAPITAL EXPENDITURES**

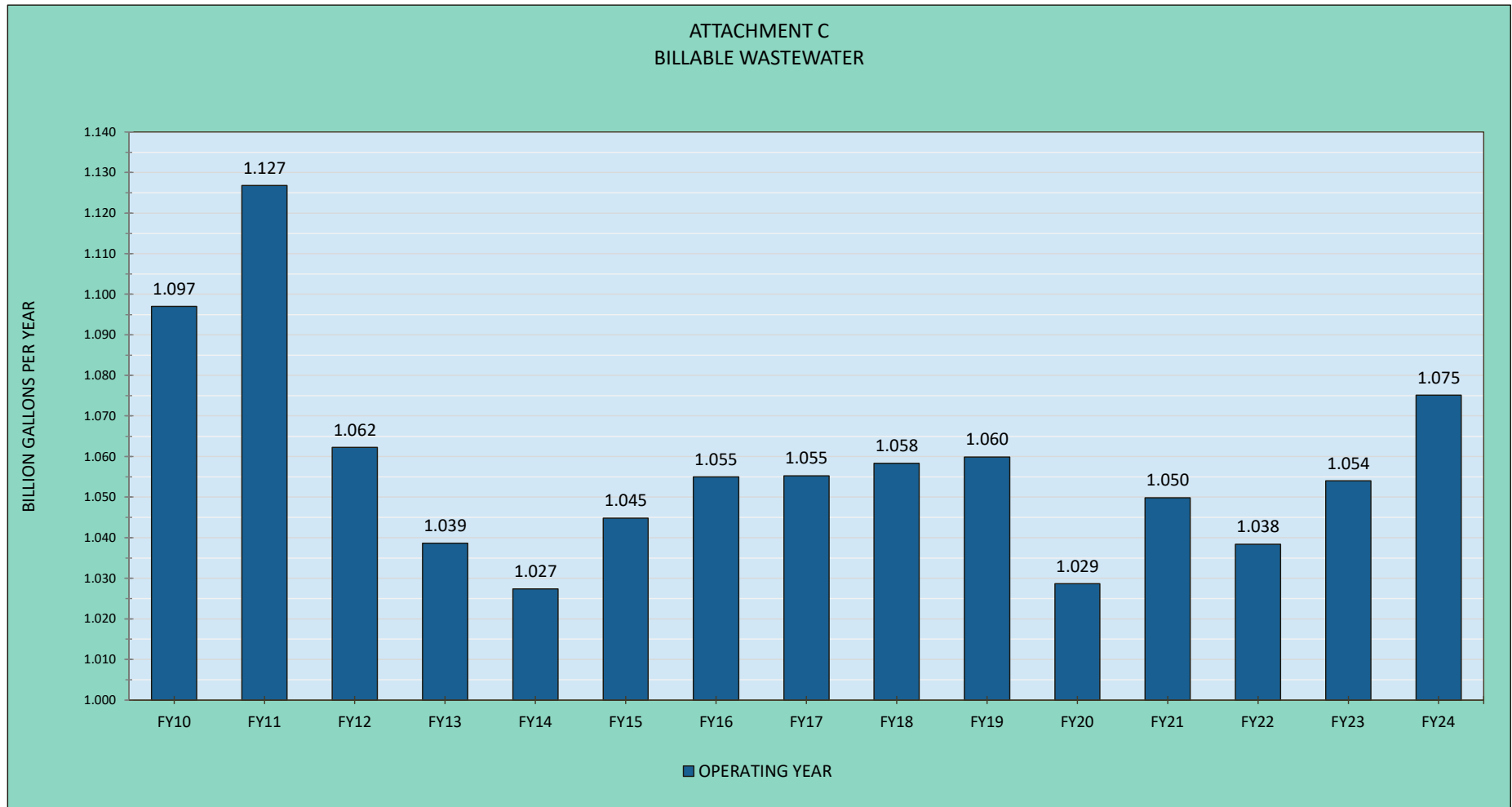
No.	PROJECT NAME	MER	TOTAL	COST	PAID Thru 12/31/2023	2024	2025 +	FUNDING SOURCE
1.	IT Projects	TBA		167,200	-	167,200		OFC & OFE
2.	Flush Truck Engine Braking	TBA		13,500	-	13,500		OFC
3.	Clearwater Plant Paving & Concrete Tank Repairs	TBA		48,600	-	48,600		OFE
TOTAL PAID FROM OPERATING FUND						229,300		
No.	PROJECT NAME	MER	TOTAL	COST	PAID Thru 12/31/2023	2024	2025 +	FUNDING SOURCE
4.	Southwest WWTP Upgrade *	190017		13,591,900	935,000	1,796,300	10,860,600	CPF
5.	Power & Control Systems Flood Mitigation	200004		1,650,000	17,700	73,300	1,559,000	CPF
6.	Highmeadow Pump Station Upgrade	210022		4,804,500	385,500	788,700	3,630,300	CPF
7.	Biosolids Drying and Gasification Project	220013		12,775,800	3,129,700	7,317,300	2,328,800	CPF
8.	Maintenance Building Expansion **	220010		1,679,600	89,600	115,000	1,475,000	CPF
9.	HSOW Offloading Station & Blend Tank Upgrades	230007		350,600	50,600	300,000	-	CPF
TOTAL PAID FROM CAPITAL PROJECT FUNDS						10,390,600	19,853,700	***
No.	PROJECT NAME	MER	TOTAL	COST	PAID Thru 12/31/2023	2024	2025 +	FUNDING SOURCE
10.	Headworks Grit Removal System Improvements	230009		1,325,000	38,500	900,500	386,000	WWRAF
11.	2024 Sanitary Sewer Rehab (IDIQ)	TBA		250,000	-	250,000	-	WWRAF
12.	Maintenance Electric Vehicle	230010		70,000	-	70,000	-	WWRAF
13.	Pump Station Emergency Generators	TBA		60,000	-	60,000	-	WWRAF
14.	Southwest Headworks Screening Replacement	220008		1,197,200	348,700	848,500	-	SWRAF
TOTAL PAID FROM RESOURCE ALLOCATION FUNDS						2,129,000		
TOTAL PROJECTS & CAPITAL EXPENDITURES			37,983,900	4,995,300	12,748,900			

NOTES:

- * Net of \$3.5M Federal Grant
- ** 60 Wastewater / 40 Stormwater Cost share
- *** \$6.65M of listed Capital Projects to be spent in 2026 & beyond
- OFC Operating Fund - Capital
- OFE Operating Fund - Expense
- CPF Capital Project Funds
- WWRAF WW Resource Allocation Fund
- SWRAF Southwest Resource Allocation Fund
- TBA To Be Assigned

ATTACHMENT A STATEMENT OF REVENUES AND EXPENSES Budget and Annual Comparison For the period from January 1, 2023 to October 31, 2023 (displayed in \$1,000s)					
	2023 YTD	Budget YTD	Increase (Decrease)	Δ%	2023 Budget
Operating revenues:					
Sewer service:	\$7,174.3	\$6,949.9	\$224.4	3.2%	\$8,379.0
Municipal customers	722.7	825.0	(102.3)	(12.4%)	819.0
Hauled waste processing	1,172.5	1,208.0	(35.5)	(2.9%)	1,430.0
Surcharges	519.6	587.8	(68.2)	(11.6%)	714.0
Biosolids processing	0.0	0.0	0.0	-	0.0
Connection, related fees	26.8	66.2	(39.4)	(59.5%)	78.1
Other	151.8	73.2	78.6	107.3%	133.9
Total operating revenue	\$9,767.6	\$9,710.1	\$57.5	0.6%	\$11,554.0
Operating expenses:					
Administrative (incl. payroll taxes & benefits)	\$2,591.2	\$2,913.4	(322.2)	(11.1%)	\$3,513.6
Collection system	564.5	662.6	(98.1)	(14.8%)	796.2
Plant operations	1,855.8	1,864.1	(8.3)	(0.4%)	2,291.6
Maintenance	617.6	641.1	(23.5)	(3.7%)	821.5
Technical services	373.3	418.0	(44.7)	(10.7%)	510.9
Project expenses	92.9	97.0	(4.1)	(4.3%)	116.1
Total operating expenses	\$6,095.2	\$6,596.2	(\$501.0)	(7.6%)	\$8,049.9
Operating income before Depreciation & Amortization	\$3,672.4	\$3,113.9	\$558.5	17.9%	\$3,504.1
Less Depreciation & Amortization	2,672.1	3,074.5	(402.4)	(13.1%)	3,699.5
Operating income (loss)	\$1,000.3	\$39.4	\$960.9	2438.8%	(195.4)
Nonoperating revenues:					
Interest income	\$1,202.4	\$484.7	\$717.7	148.1%	\$582.3
Government grants	0.0	750.0	(750.0)	(100.0%)	750.0
Capacity fees	210.7	436.5	(225.8)	(51.7%)	540.4
Other	15.0	20.1	(5.1)	(25.5%)	24.2
Total nonoperating revenue	\$1,428.1	\$1,691.3	(263.2)	(15.6%)	\$1,896.9
Nonoperating expenses:					
Interest on:					
Capital Lease	\$17.5	\$17.5	(\$0.0)	(0.2%)	\$20.7
Bonds and Notes Payable	\$1,620.7	\$1,620.0	\$0.7	0.0%	\$1,944.9
Debt issuance costs	0.0	0.0	0.0	-	0.0
Amortization of Bond Premium	(288.3)	(287.0)	(1.3)	0.4%	(345.9)
Arbitrage Rebate Expense	281.5	0.0	281.5	-	0.0
Other	0.0	0.0	0.0	-	0.0
Total nonoperating expenses	\$1,631.5	\$1,350.5	\$281.0	20.8%	\$1,619.7
Income (loss) before contributions	\$796.9	\$380.2	\$416.7	109.6%	\$81.8
Contributed sewer extensions	\$13,128.8	\$0.0	13,128.8	-	\$0.0
Increase (decrease) in net position	\$13,925.7	\$380.2	\$13,545.5	-	\$81.8

ATTACHMENT B OPERATING FUND Change in Net Position - Detail				
Category / Item	2024 Budget	2023 Budget	Difference Amount	%
Operating Revenue				
Direct Customers	8,990.0	8,379.0	611.0	7.3%
Municipal Customers	880.0	819.0	61.0	7.4%
Hauled Waste	1,600.0	1,430.0	170.0	11.9%
Other Routine	830.6	847.9	(17.3)	(2.0%)
Connection Related	36.2	78.1	(41.9)	(53.6%)
Operating revenue	12,336.8	11,554.0	782.8	6.8%
Operating Expenses				
Administration	3,487.4	3,513.6	(26.2)	(0.7%)
Collection System	820.7	796.2	24.5	3.1%
Operation	2,190.7	2,291.6	(100.9)	(4.4%)
Maintenance	991.8	821.5	170.3	20.7%
Technical Services	408.0	510.9	(102.9)	(20.1%)
Projects	72.5	116.1	(43.6)	(37.6%)
Operating expenses	7,971.1	8,049.9	(78.8)	(1.0%)
Net Income (Loss)				
Earnings before depreciation & amortization	4,365.7	3,504.1	861.6	24.6%
Less: depreciation & amortization	4,528.0	3,699.5	828.5	22.4%
Net income (loss)	(162.3)	(195.4)	33.1	(16.9%)
Nonoperating Revenue				
Interest Income	948.6	582.3	366.3	62.9%
Capacity Fees	670.2	540.4	129.8	24.0%
Federal and State Grants	534.7	750.0	(215.3)	(28.7%)
Miscellaneous	39.5	24.2	15.3	63.2%
Non-operating revenue	2,193.0	1,896.9	296.1	15.6%
Nonoperating Expense				
Interest on Debt				
Capital Lease	17.2	20.7	(3.5)	(16.9%)
Bonds and notes payable	1,851.6	1,944.9	(93.3)	(4.8%)
Debt Issue Costs	55.0	0.0	55.0	-
Amortization of Bond Premium	(345.9)	(345.9)	0.0	0.0%
Arbitrage Rebate Expense	217.7	0.0	217.7	-
Other	0.0	0.0	0.0	-
Non-operating expense	1,795.6	1,619.7	175.9	10.9%
Increase (Decrease) in Net Position				
Change in net position	235.1	81.8	153.3	



ATTACHMENT D

DESCRIPTION OF WASTEWATER PROJECTS AND CAPITAL EXPENDITURES

The following project numbers and fund headings correspond to those found in the Budget, TABLE 5 - PROJECTS & CAPITAL EXPENDITURES.

OPERATING FUND [OF]1. IT Projects

- a. Administrative “Side” Server Infrastructure Replacement – The current physical servers are seven years old, out of warranty, and not currently supported by the manufacturer. The new server will have a 5-year support warranty and allow for data expansion as needed into the future.
- b. Plant Facility “Side” Server Infrastructure Replacement – The current physical servers are six years old and will be out of warranty in March 2024. The new servers will have a 5-year support warranty to include on-site support by the manufacturer within 4-hour response time for physical repairs.
- c. Firewall Replacement – The current firewall was EOL (end of life) in August 2022 and the security update services are unable to be renewed or supported by the manufacturer. The new firewall will include a next-day replacement service warranty and can handle faster data speeds for improved network infrastructure capabilities.
- d. CUES GraniteNet Mobile Device Solution – Authority Staff currently utilizes the CUES GraniteNet software in the two (2) closed-circuit televisual (CCTV) trucks for purposes of sanitary sewer and storm sewer mainline inspection and condition assessment. The new software platform will allow Authority Staff to access real-time system mapping, inspection data, and assigned tasks in the field with a mobile device.
- e. Laserfiche Upgrade – Project includes upgrading the existing Laserfiche software and server migration support to the latest software version to include the PDF-A conversion process to meet the Commonwealth’s requirement for permanent records retention.

2. Flush Truck Engine Braking – The Vactor Flush Truck currently uses traditional friction brakes which have caused increased maintenance costs due to the wear and tear on the braking system. The engine braking will help take the pressure off the traditional braking system, reduce the wear and tear, and at the same time increase safety.

3. Clearwater Plant Paving & Concrete Tank Repairs – This project includes the repair and sealing of the asphalt paved surfaces around the perimeter of all the concrete tanks at the Clearwater Plant. This project also includes concrete sealing to repair various surface cracks in the Primary Clarifiers, Thickener, and Dissolved Air-Floatation (DAF) tanks.

CAPITAL PROJECT FUNDS [CPF]

4. Southwest WWTF Upgrade and Expansion [IN PROGRESS] – This project includes upgrades to the existing biological process for enhanced nutrient removal, addition of a final clarifier tank and sludge pumping equipment, replacement of the existing UV system, and improvements to the existing Influent and Drain Pump Stations. Upon completion of this project, the increased hydraulic and organic treatment capacity will provide sufficient capacity to meet the short- and long-term growth projections within the Authority’s current service area as well as Londonderry Township through 2033. The US EDA Grant approval requirements have delayed project implementation in 2023. Project will be bid in December 2023 with construction anticipated to begin in Spring 2024.
5. Power & Control Systems Flood Mitigation [IN PROGRESS] – This project includes the design and construction for the relocation and improved resilience of all 1st floor and below grade electrical panels, VFDs, and SCADA equipment to the 2nd floor of the Sludge Building. Once completed, these critical electrical systems will be protected from future flood events and less susceptible to loss of service. Design is anticipated to be complete in 2024.
6. Highmeadow Pump Station Upgrade [IN PROGRESS] – The High Meadow Pump Station (HMPS) is the second largest pump station within our sanitary sewer collection and conveyance system (system) with an average daily flow of 0.5 million gallons per day (MGD) and a design capacity of 2.3 MGD. During periods of significant wet weather, HMPS is highly susceptible to inflow and infiltration (I&I). Over the last four (4) years, two (2) wet weather events directly impacted the HMPS by causing an increase in the influent flow to the HMPS, as a result of I&I, exceeding its pumping capacity for a short duration. Furthermore, the pump station site is also susceptible to flooding due to its close proximity to the Swatara Creek. In consideration of the known sewer capacity issues, significant customer growth is also anticipated within the system tributary to the HMPS to include the development of the West End Project by the Hershey Trust. It is anticipated that design and permitting will be complete by Spring 2024 and construction anticipated to begin in Fall 2024.
7. Biosolids Drying and Gasification Project [IN PROGRESS] – With the completion of the Clearwater WWTF Phase 1 Facility Improvements planning and the risk register decision-making approach for biosolids management into the future, the Authority is implementing a biosolids drum dryer and gasification system to diversify end use options and to meet or exceed current regulatory challenges for land application. The project includes the procurement, delivery, and installation of the Ecoremedy, LLC drum dryer and gasification system, material handling, storage, and conveyance to include a dewatered cake receiving and transport system, and all electrical, structural support, and existing building modifications for a complete and operable system. Construction is anticipated to begin in Spring 2024.
8. Maintenance Building Expansion [IN PROGRESS] – Since the Stormwater Program was established in 2017, the number of staff in the Collection Systems Department has grown, as well as the vehicle fleet, in order to service both wastewater and storm water systems. In the next several years, we anticipate the need to hire additional staff in this Department with the expansion of our sanitary sewer service area into Londonderry Township. The current office space for the Collections Systems Department in the Admin & Control Building is very limited and will not provide functional working

space into the future. Additionally, the current Maintenance Garage is at full capacity for storing our most valuable vehicles such as the two (2) Vector truck and the two (2) Televisual inspection trucks. The proposed Maintenance Building Expansion project includes the addition of an open two (2) bay addition with a second floor office space to the existing Maintenance Garage. The second floor will extend over the existing taller two (2) bay section of the garage. Design is anticipated to be complete in 2024 with project bidding to occur in late 2024.

9. High Strength Organic Waste (HSOW) Offloading Station & Blend Tank Upgrades [IN PROGRESS] – Since 2017, the Authority accepts HSOW (or food waste) for the purposes of generating revenues and renewable energy to offset energy costs by fueling the combined heat and power (CHP) cogeneration system. HSOW is discharged directly to the Blend Tank where it is mixed with the thickened primary and secondary sludges and then pumped to the anaerobic digestion process. With the completion of the plant modifications under the Clearwater WWTF Energy Enhancements Project, the Authority will have sufficient capacity to accept additional gallons per day of HSOW. In order to accept and properly manage the additional HSOW, Staff investigated an alternate approach by utilizing the existing primary sludge thickener tank for equalization of the HSOW. This process approach provides consistent feed to the anaerobic digester and allows for greater hauling/unloading flexibility to ease capacity issues. This project includes installing a fiberglass cover on the tank for odor control and freeze protection. Project is anticipated to be complete in 2024.

WASTEWATER RESOURCE ALLOCATION FUND (WWRAF)

10. Headworks Grit Removal System Improvements [IN PROGRESS] – This project was recommended as part of the Clearwater WWTF Phase I Facility Improvements evaluation. The observed wear on process equipment and pumps at the Clearwater WWTF was determined to be caused by grit particles within the liquid and solids waste stream, which were not effectively being removed by the existing grit removal system located at the Headworks. The replacement of the existing grit removal system with an improved system will significantly enhance grit removal efficiency as well as particle size removal and protect the operation of the downstream equipment. The proposed grit removal system includes a stainless steel insert that fits directly into each of the existing grit cyclone spaces. The proposed system will also be installed with a grit concentrator and washer to improve cleaning and the ability to move grit out of the cyclones. The project has also been expanded to include the replacement of the two (2) existing cylindrical fine screens located at the Headworks due to recent maintenance concerns with the associated equipment which is approaching the end of its useful life. It is anticipated that the project design will be complete by Spring 2024 with construction beginning in Summer 2024.
11. 2024 Sanitary Sewer Repairs (IDIQ) – The Authority maintains an ongoing Inflow and Infiltration (I/I) Prevention and Reduction Program that includes CCTV inspection and cleaning of the sanitary sewer system each year to assess the condition of the pipes and to plan for necessary repairs and/or replacements. Based on a review of the annual CCTV inspection data collected by the Authority Staff, select portions of the sanitary sewer system require dig-up replacement and/or cured-in-place pipe (CIPP) lining repairs. All sanitary sewer work will be prepared as a Work Order, per the IDIQ Contract, and presented to the Board for approval prior to implementing.

12. Maintenance Electric Vehicle [IN PROGRESS] – Purchase of a new electric vehicle (EV) cargo van to support the needs of the Maintenance Department Staff. The cargo van was ordered in 2023; however, the build and delivery of the cargo van has been significantly delayed by the manufacturer. It is anticipated that the cargo van will now be delivered in early 2024.
13. Pump Station Emergency Generators – The emergency backup generators located at the Village of Innsbruck Pump Station and the Walton Springs #2 Pump Station need replaced as a result of increased maintenance and reliability issues due to the age of the generators. This project includes replacement of the existing backup generators, startup, testing, and training. Project is anticipated to be complete in 2024.

SOUTHWEST RESOURCE ALLOCATION FUND (SWRAF)

14. Southwest Headworks Screening Replacement [IN PROGRESS] – The existing fine screen and grit removal equipment located in the Headworks of the Southwest Plant was installed with the original plant construction in the early 1990's. The fine screen equipment model is obsolete making it difficult to find repair or replacement parts. The grit removal system has not functioned properly since it was installed and has been out of service since early 2000's. This has caused significant maintenance issues for the Operations and Maintenance Staff causing build-up of debris and grit in the bottom of the tanks, which is manually removed on an annual basis. Staff has developed a solution to cost effectively replace the existing equipment in-kind with new state-of-the-art equipment while still meeting the design flow conditions established as part of the upgrade project. The project was bid in October 2023. Construction will begin in early 2024.