

Derry Township Municipal Authority

2022 Wastewater Fund Budget

ADOPTED

DTMA Board Resolution #2021-50

November 22, 2021



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TABLE 1
OPERATING FUND
Comparative Cash Budget (in thousands)

Category / Item	2022	2021	Δ\$	Δ%
Receipts (Refer to Table 2 for Detail)				
Direct Customers	8,306.0	7,985.0	321.0	4.0%
Municipal Customers	878.0	751.0	127.0	16.9%
Hauled Waste	1,480.0	1,430.0	50.0	3.5%
Other Routine	836.9	762.8	74.1	9.7%
Connection Related	724.3	545.5	178.8	32.8%
Interest-Operating Fund	5.7	4.3	1.4	32.6%
Interest-Trust and Restricted Funds	11.6	9.3	2.3	24.7%
Totals before Grants	12,242.5	11,487.9	754.6	6.6%
Transfers from Stormwater Fund	50.5	55.3	(4.8)	(8.7%)
Federal & State Grants	0.0	0.0	0.0	~
Totals	12,293.0	11,543.2	749.8	6.5%
Disbursements (Refer to Table 3 for Detail)				
Departmental Expenditures	7,333.7	6,821.4	512.4	7.5%
Projects and Capital Expenditures	254.6	417.8	(163.2)	(39.1%)
Bond Payments	4,436.8	3,867.8	569.0	14.7%
Capital Lease Payments	365.8	365.8	0.0	0.0%
Totals before Transfers	12,390.9	11,472.7	918.2	8.0%
Transfers to Resource Allocation Fund	277.5	250.0	27.5	~
Transfers to SW Resource Allocation Fund	296.1	290.0	6.1	~
Totals	12,964.5	12,012.7	951.8	7.9%
Net Cash				
Inc (Dec) before Grants/Transfers	(148.4)	15.2	(163.6)	(1077.9%)
Increase (Decrease)	(671.5)	(469.5)	(202.0)	43.0%
Beginning Cash	9,080.8			
Ending Cash Balance	8,409.3			

TABLE 2
OPERATING FUND
Receipt Detail (in thousands)

Category / Item	2022	2021	Δ\$	Δ%
1 - Municipal Customers				
Lower Swatara	163.0	167.0	(4.0)	(2.4%)
South Hanover	715.0	584.0	131.0	22.4%
Totals	878.0	751.0	127.0	16.9%
2 - Other Routine				
Late Payment Fees	52.4	46.4	6.0	12.9%
Surcharges	680.0	590.0	90.0	15.3%
Reimb for Developer Inspections	10.0	19.3	(9.3)	(48.2%)
Miscellaneous	94.5	107.1	(12.6)	(11.8%)
Totals	836.9	762.8	74.1	9.7%
3 - Connection Related Fees				
Inspection	6.5	6.1	0.4	6.6%
Lateral Install & Special Purpose	143.8	3.7	140.1	3786.5%
Installment Payments	0.6	1.3	(0.7)	~
Capacity - Derry	277.4	244.4	33.0	~
Capacity - Southwest	296.0	290.0	6.0	~
Totals	724.3	545.5	178.8	32.8%
4 - Interest-Operating Fund				
Checking	0.4	0.4	0.0	0.0%
Investments	5.3	3.9	1.4	35.9%
Totals	5.7	4.3	1.4	32.6%
5 - Interest-Trust and Restricted Funds				
Operating Reserve	1.2	0.8	0.4	50.0%
Flood Reserve	0.1	0.2	(0.1)	(50.0%)
Resource Allocation Funds	0.2	1.4	(1.2)	(85.7%)
Debt Service	0.0	0.0	0.0	~
Debt Service Reserve Fund	0.0	1.2	(1.2)	(100.0%)
BR&I Fund	0.1	0.5	(0.4)	(80.0%)
2018 Construction Fund	0.0	0.8	(0.8)	(100.0%)
2019 Capital Project Fund	0.0	2.3	(2.3)	(100.0%)
2020 Capital Project Fund	0.1	2.1	(2.0)	(95.2%)
2021 Capital Project Fund	6.6	0.0	6.6	~
2022 Capital Project Fund	3.3	0.0	3.3	~
Totals	11.6	9.3	2.3	24.7%

TABLE 3
OPERATING FUND
Disbursement Detail (in thousands)

Category / Item	2022	2021	Δ\$	Δ%
7 - Departmental Expenses				
Administration	3,277.6	3,210.8	66.8	2.1%
Collection System	672.9	662.1	10.8	1.6%
Operation	2,033.8	1,841.5	192.3	10.4%
Maintenance	835.0	771.6	63.4	8.2%
Technical Services	514.4	335.4	179.0	53.4%
Total Departmental	7,333.7	6,821.4	512.4	7.5%
8 - Bond Payments				
Authority Bond Issues				
2005	0.0	0.2	(0.2)	(100.0%)
2015	0.0	1,062.5	(1,062.5)	(100.0%)
2016	0.0	1,142.1	(1,142.1)	(100.0%)
2019	0.0	353.6	(353.6)	(100.0%)
2021 Series A	1,861.6	0.0	1,861.6	~
2021 Series B	345.7	0.0	345.7	~
2021 Series C	271.5	0.0	271.5	~
2022 New	218.8	0.0	218.8	~
Derry Township Subsidy Agreements				
2018	157.9	158.0	(0.1)	(0.1%)
2019	135.4	145.7	(10.3)	(7.1%)
2020	1,124.5	842.4	282.1	33.5%
2020 Series A	321.5	452.5	(131.1)	(29.0%)
2020A Capitalized Interest	0.0	(289.3)	289.3	(100.0%)
Totals	4,436.8	3,867.8	569.0	14.7%
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, 2022	Addition of Funds	Distribution of Funds	Balance as of Dec 31 2022	Fund Increase / (Decrease)
Operating Fund					
Checking and Investments	9,080,800	12,293,000	(12,964,500)	8,409,300	(671,500)
Trust & Restricted Funds					
Operating Reserve	1,050,000	1,200	(1,200)	1,050,000	-
Flood	200,000	100	(100)	200,000	-
WW Resource Allocation	1,294,500	277,500	(538,800)	1,033,200	(261,300)
SW Resourse Allociation	1,000,500	296,100	(441,700)	854,900	(145,600)
Debt Service	100	4,436,800	(4,436,800)	100	-
Bond Redemption & Improvement	537,600	100	-	537,700	100
2020 Capital Project	7,164,600	100	(7,164,700)	-	(7,164,600)
2021 Capital Project	9,710,400	6,600	(9,717,000)	-	(9,710,400)
2022 Capital Project	-	9,816,800	(3,202,200)	6,614,600	6,614,600
Total Trust & Restricted Funds	20,957,700	14,835,300	(25,502,500)	10,290,500	(10,667,200)

**TABLE 5
PROJECTS & CAPITAL EXPENDITURES**

No.	PROJECT NAME	MER	TOTAL COST	PAID Thru 12/31/2021	2022	2023	FUNDING SOURCE
1.	IT Projects	TBA	54,000	-	54,000		OFC & OFE
2.	Lucy Asset Mgt Software*	180009	75,075	70,075	5,000		OFC
3.	Clearwater Road & Plant Site Paving	TBA	75,000	-	75,000		OFE
4.	Plant Yard Hydrants Replacements	TBA	20,000	-	20,000		OFC
5.	Pump Station Gas Detectors	TBA	36,600	-	36,600		OFC
6.	Admin Building Office Renovations	TBA	10,000	-	10,000		OFC
7.	EQ Basin #1 Liner Repair	TBA	54,000	-	54,000		OFE
			-	-	-		
TOTAL PAID FROM OPERATING FUND					254,600		
No.	PROJECT NAME	MER	TOTAL COST	PAID Thru 12/31/2021	2022	2023	FUNDING SOURCE
8.	Clearwater WWTP Energy Enhancements	190015	16,674,500	8,328,042	8,346,457	-	CPF
9.	Raw Sewage Pump Replacement	190009	2,509,059	392,193	2,116,866	-	CPF
10.	Southwest WWTP Upgrade	190017	16,161,100	816,100	7,672,500	7,672,500	CPF
11.	Spring Creek Interceptor	210009	2,423,650	144,886	689,875	1,588,889	CPF
12.	CWR Ph 1 Facility Improvements - PRELIM	210013	330,000	330,000	-	-	CPF
13.	Power & Control Systems Flood Mitigation	200004	1,650,000	11,021	-	1,638,979	CPF
14.	Primary Sludge Pump Replacement	200014	253,629	125,346	128,283	-	CPF
15.	ESD Coating Replacement	210005	1,198,252	527,987	670,263	-	CPF
16.	2021 Sanitary Sewer Repairs & Rehab**	210021	153,802	12,075	141,727	-	CPF
17.	Highmeadow Pump Station Upgrade	210022	2,317,500	22,000	160,000	2,135,500	CPF
18.	Maintenance Building Expansion	TBA	1,200,000	-	150,000	1,050,000	CPF
TOTAL PAID FROM CAPITAL PROJECT FUNDS					20,075,971	14,085,868	
No.	PROJECT NAME	MER	TOTAL COST	PAID Thru 12/31/2021	2022	2023	FUNDING SOURCE
19.	Headworks Grit Removal System Improvements	TBA	1,325,000	-	508,333	816,667	WWRAF
20.	Maintenance Vehicle - Cargo Van	TBA	30,500	-	30,500		WWRAF
21.	Southwest Headworks Screening Replacement	TBA	1,125,000		441,667	683,333	SWRAF
TOTAL PAID FROM RESOURCE ALLOCATION FUNDS					980,500		
TOTAL PROJECTS & CAPITAL EXPENDITURES			47,676,666	10,779,725	21,311,071		

NOTES:

* 70 Wastewater / 30 Stormwater Cost share

** 65 Stormwater / 35 Wastewater Cost share

OFC Operating Fund - Capital

OFE Operating Fund - Expense

18CF 2018 Construction Fund

19 CPF 2019 Capital Projects Fund

20 CPF 2020 Capital Project Fund

WWRAF WW Resource Allocation Fund

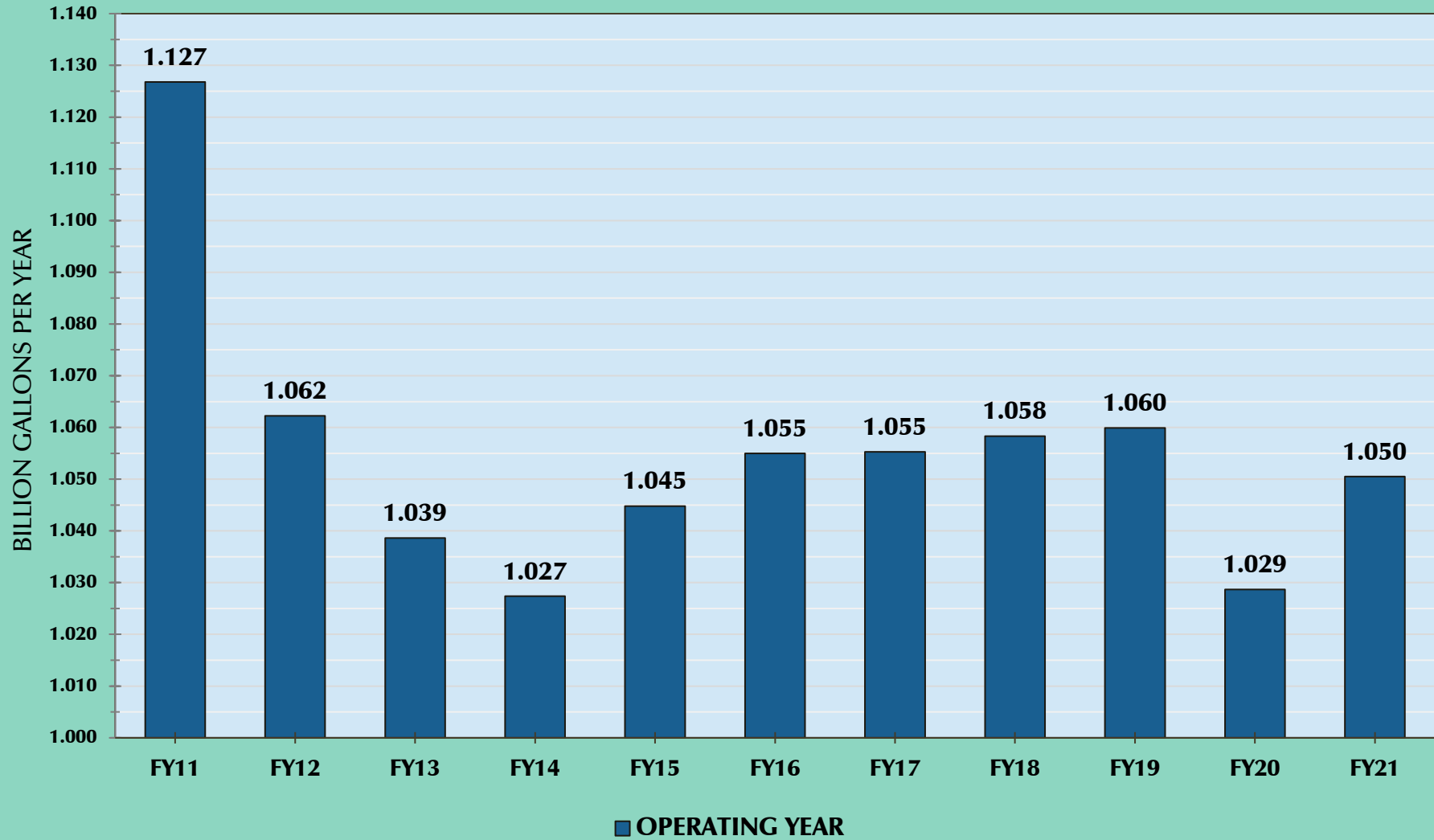
SWRAF Southwest Resource Allocation Fund

TBA To Be Assigned

ATTACHMENT A					
STATEMENT OF REVENUES AND EXPENSES					
Budget and Annual Comparison					
For the period from January 1, 2021 to October 31, 2021					
(displayed in \$1,000s)					
	2021 YTD	Budget YTD	Increase (Decrease)	Δ%	2021 Budget
Operating revenues:					
Sewer service:	\$6,683.6	\$6,656.9	\$26.7	0.4%	\$7,985.0
Municipal customers	766.2	625.8	140.4	22.4%	751.0
Hauled waste processing	1,145.3	1,191.6	(46.3)	(3.9%)	1,430.0
Surcharges	623.5	491.6	131.9	26.8%	590.0
Biosolids processing	0.0	0.0	0.0	-	0.0
Connection, related fees	38.8	24.9	13.9	55.7%	29.1
Other	117.5	106.2	11.3	10.6%	127.4
Total operating revenue	\$9,374.9	\$9,097.0	\$277.9	3.1%	\$10,912.5
Operating expenses:					
Administrative (incl. payroll taxes & benefits)	\$2,294.2	\$2,634.3	(340.1)	(12.9%)	\$3,210.8
Collection system	450.8	559.9	(109.1)	(19.5%)	662.1
Plant operations	1,487.8	1,450.5	37.3	2.6%	1,841.5
Maintenance	610.0	633.0	(23.0)	(3.6%)	771.6
Technical services	347.1	272.4	74.7	27.4%	335.4
Project expenses	107.6	180.9	(73.3)	(40.5%)	225.9
Total operating expenses	\$5,297.5	\$5,731.0	(\$433.5)	(7.6%)	\$7,047.3
Operating income before depreciation & amortization	\$4,077.4	\$3,366.0	\$711.4	21.1%	\$3,865.2
Depreciation & Amortization of PPE	(\$2,559.4)	(\$2,657.6)	98.2	(3.7%)	(\$3,185.5)
Operating income (loss)	\$1,518.0	\$708.4	\$809.6	114.3%	\$679.7
Nonoperating revenues:					
Interest income	\$7.3	\$13.5	(\$6.2)	(45.7%)	\$14.9
Government grants	0.0	0.0	0.0	-	0.0
Capacity fees	635.4	261.0	374.4	143.5%	534.4
Other	20.3	22.4	(2.1)	(9.2%)	26.1
Total nonoperating revenue	\$663.1	\$296.9	\$366.2	123.3%	\$575.4
Nonoperating expenses:					
Interest on:					
Capital Lease	(\$23.3)	(\$23.2)	(\$0.1)	0.3%	(\$27.5)
Bonds and Notes Payable	(\$1,379.5)	(\$1,327.9)	(\$51.6)	3.9%	(\$1,592.9)
Bond issuance costs	(443.2)	(320.0)	(123.2)	38.5%	(320.0)
Amortization of Bond Premium	229.1	187.4	41.7	22.2%	224.9
Other	0.0	0.0	0.0	-	0.0
Total nonoperating expenses	(1,616.9)	(1,483.7)	(\$133.2)	9.0%	(\$1,715.5)
Income (loss) before contributions	\$564.2	(\$478.4)	\$1,042.6		(\$460.4)
Contributed sewer extensions	\$0.0	\$0.0	0.0	-	\$0.0
Increase (decrease) in net position	\$564.2	(\$478.4)	\$1,042.6	-	(\$460.4)

ATTACHMENT B OPERATING FUND Change in Net Position - Detail				
Category / Item	2022 Budget	2021 Budget	Difference Amount	%
Operating Revenue				
Direct Customers	8,306.0	7,985.0	321.0	4.0%
Municipal Customers	878.0	751.0	127.0	16.9%
Hauled Waste	1,480.0	1,430.0	50.0	3.5%
Other Routine	802.4	717.4	85.0	11.8%
Connection Related	160.3	29.1	131.2	450.9%
Operating revenue	11,626.7	10,912.5	714.2	6.5%
Operating Expenses				
Administration	3,277.6	3,210.8	66.8	2.1%
Collection System	672.9	662.1	10.8	1.6%
Operation	2,033.8	1,841.5	192.3	10.4%
Maintenance	835.0	771.6	63.4	8.2%
Technical Services	514.4	335.4	179.0	53.4%
Projects	140.4	225.9	(85.5)	(37.8%)
Operating expenses	7,474.1	7,047.3	426.9	6.1%
Net Income (Loss)				
Earnings before depreciation & amortization	4,152.6	3,865.3	287.4	7.4%
Less: depreciation & amortization	2,553.6	3,185.5	(631.9)	(19.8%)
Net income (loss)	1,599.0	679.8	919.3	135.2%
Nonoperating Revenue				
Interest Income	17.9	14.9	3.0	20.1%
Capacity Fees	573.4	534.4	39.0	7.3%
Federal and State Grants	0.0	0.0	0.0	-
Miscellaneous	24.5	26.1	(1.6)	(6.1%)
Non-operating revenue	615.8	575.4	40.4	7.0%
Nonoperating Expense				
Interest on Debt				
Capital Lease	24.1	27.5	(3.4)	(12.4%)
Bonds and notes payable	2,026.8	1,592.9	433.9	27.2%
Bond Issue Costs	175.0	320.0	(145.0)	(45.3%)
Amortization of Bond Premium	(310.9)	(224.9)	(86.0)	38.2%
Other	0.0	0.0	0.0	-
Non-operating expense	1,915.0	1,715.5	199.5	11.6%
Increase (Decrease) in Net Position				
Change in net position	299.8	(460.4)	760.2	

ATTACHMENT C BILLABLE WASTEWATER



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 – Projects include the scheduled replacement of two (2) plant PC workstations and five (5) plant SCADA touch panel computers, replacement of two (2) large office printers, website refresh, and development of an intranet software to provide a private and secure portal for employee access and communication.
2. Lucity Asset Management Software [IN PROGRESS] – Central Square (formerly known as Lucity) is the asset management software that is currently being implemented and deployed. Implementation has been delayed as a result of Central Square’s recent acquisition of Lucity and multiple changes to their implementation team. We anticipated that the software will be fully implemented in 2022.
3. Clearwater Road & Plant Site Paving – This project includes asphalt paving improvements for a section of Clearwater Road (from Hersheypark Drive to the Plant Entrance Gate) as well as the Hauled Waste Receiving Lanes. The Authority plans to partner with the Township of Derry for the purposes of cost sharing on the Clearwater Road asphalt paving improvements.
4. Plant Yard Hydrants Replacements – Replacement of ten (10) post yard hydrants located at the Clearwater Road Plant.
5. Pump Station Gas Detectors – Replacement of the three (3) existing wet well gas detection systems located at the Highmeadow Pump Station, Mansion Road Pump Station, and Park Avenue Pump Station.
6. Admin & Control Building Office Renovations – This project includes soundproofing of select office spaces and the installation of a window in the atrium of the main lobby for the purposes of improved safety & security.
7. EQ Basin #1 Liner Repair – This project includes the repair of the existing EQ basin #1 liner to prevent further damage and to extend the useful life of the liner.

CAPITAL PROJECT FUNDS [CPF]

8. Clearwater WWTF Energy Enhancements [IN PROGRESS] – This project includes the construction of an upgraded biogas treatment system, new co-gen equipment and building, new secondary digester dual membrane cover, as well as new plant heating and heat recovery systems. Construction is anticipated to be complete by Fall 2022.

9. Raw Sewage Pump Replacement [IN PROGRESS] – This project includes replacement of the four (4) existing raw sewage pumps with dry pit submersible pumps as well as the relocation of VFDs and pump controls to the second floor of the Admin & Control Building. This project is planned as part of the flood resiliency program. Construction is anticipated to be complete by Summer 2022.
10. 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 2030. Construction is anticipated to begin by Spring 2022.
11. Spring Creek Interceptor [IN PROGRESS] – This project includes replacing and up-sizing a portion of the Spring Creek Interceptor (SCI) located directly downstream from Troegs Independent Brewing’s point of connection to our system. This section of the SCI has experienced surcharging as a result of a combination of increased flow from Troeg’s over the last several years and other increased development. Construction is anticipated to begin by Summer 2022.
12. Clearwater WWTF Phase 1 Facility Improvements [IN PROGRESS] – Staff have developed a decision-based roadmap to identify and prioritize facility upgrades to various solids treatment systems, energy recovery systems, and wastewater treatment systems at the Clearwater Road WWTP. This roadmap outlines anticipated future work in a phased approach with Phase 1 improvements being identified as “high priority” upgrades with regards to the Authority’s mission and goals. Phase 2 improvements are defined as those that have been established for further evaluation following the Phase 1 implementation. The scope of work completed in 2021 includes the facility planning and preliminary design evaluation for each of the following areas: Headworks Screening, Solids Dewatering and Handling, Class A Biosolids Drying and Business Case Evaluation, and Sidestream Treatment for Nutrient Reduction. The findings and recommendations developed from this task will be utilized for capital planning and implementation of various future improvement projects.
13. 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 currently on hold until further evaluation is completed on the best utilization of the space on the 2nd floor of the Sludge Building.
14. Primary Sludge Pump Replacement [IN PROGRESS] – The existing primary sludge pumps have reached the end of their useful life causing increased downtime and costly repairs. This project will replace the existing pumps with new style pumps that are more durable and easier to maintain for this application. The project will also include modifications to the suction and discharge piping to

include a mechanical flushing system for ease of flushing and cleaning the conveyance piping. Construction is anticipated to be complete by Spring 2022.

15. Egg-shaped Digester (ESD) Coating Replacement [IN PROGRESS] – The existing coatings system on the egg-shaped digester (ESD) was identified as an item of significant concern to be replaced in the near-term. There is concern that delaying action to repair the coating system will cause the sprayed foam insulation system beneath the exterior coating to become compromised, allowing moisture beneath the foam, and causing the metal panels of the ESD vessel to corrode. Replacing the existing ESD coatings system will therefore prevent further degradation and the potential for corrosion of the metal panels associated with the tank vessel. The installation of an aluminum cladding will provide the most cost-effective and long-term solution compared to the previous coatings system. Construction is anticipated to be complete by Spring 2022.
16. 2021 Sanitary Sewer Repairs [IN PROGRESS] – This external repair (dig-up) project continues our efforts to maintain and rehabilitate the sanitary sewer piping and manholes and extend the life and reliability of our underground assets. Construction contracts were awarded in November 2021.
17. 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. A feasibility study is underway and will be completed by the end of December 2021. It is anticipated that design will begin in early 2022 for the recommended structural alternative identified in this study to upgrade and expand the capacity of the HMPS.
18. Maintenance Building Expansion – 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) Vactor 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. Project design will include the development of a conceptual design layout and cost options for further consideration by the Board in 2022, prior to fully implementing.

WASTEWATER RESOURCE ALLOCATION FUND (WWRAF)

19. Headworks Grit Removal System Improvements – 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. It is anticipated that the project design will be completed by Fall 2022 with construction beginning near the end of 2022.

20. Maintenance Vehicle - Cargo Van – Purchase of a new cargo van to support the needs of the Maintenance Department Staff. As approved by the Board, Staff proceeded with the purchase of the new cargo van in October 2021 with an anticipated delivery in Summer 2022.

SOUTHWEST RESOURCE ALLOCATION FUND (SWRAF)

21. Southwest Headworks Screening Replacement – 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. At the time the Southwest Plant Upgrade and Expansion Study was completed, Hazen planned to include the Headworks improvements under a separate phase for implementation at a later date. This was due to cost considerations for the structural alternatives, as prepared by Hazen, which included the construction of a new and separate Headworks facility. This year, Staff have 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. It is anticipated that the project design will be completed by Fall 2022 with construction beginning near the end of 2022.