

Derry Township Municipal Authority

2019 Wastewater Fund Budget

APPROVED

DTMA Board Resolution #2018-51

November 19, 2018



TABLE 1
OPERATING FUND
Comparative Cash Budget (in thousands)

Category / Item	2019	2018	Δ\$	Δ%
Receipts (Refer to Table 2 for Detail)				
Direct Customers	8,053.0	7,831.7	221.3	2.8%
Municipal Customers ¹	640.0	613.0	27.0	4.4%
Hauled Waste	1,150.0	1,139.0	11.0	1.0%
Other Routine ²	496.1	505.0	(8.9)	(1.8%)
Connection Related ³	182.3	117.7	64.6	54.9%
Stormwater Program ⁴	0.0	0.0	0.0	~
Interest-Operating Fund ⁵	33.2	49.5	(16.3)	(32.9%)
Interest-Trust and Restricted Funds ⁶	49.9	54.1	(4.2)	(7.8%)
Totals before Grants	10,604.5	10,310.0	294.5	2.9%
Transfers from Stormwater Fund	55.4	44.7	10.7	23.9%
Transfers from Operating Reserve Fund	0.0	150.0	(150.0)	~
Federal & State Grants	0.0	0.0	0.0	~
Totals	10,659.8	10,504.7	155.2	1.5%
Disbursements (Refer to Table 3 for Detail)				
Departmental Expenditures ⁷	6,495.3	6,577.0	(81.7)	(1.2%)
Projects and Capital Expenditures	292.3	382.7	(90.4)	(23.6%)
Debt Service Payments ⁸	3,306.5	3,238.7	67.8	2.1%
Capital Lease Payments ⁹	365.8	365.8	0.0	0.0%
Totals before Transfers	10,459.9	10,564.2	(104.3)	(1.0%)
Transfers to Operating Reserve Fund	0.0	0.0	0.0	~
Transfers to Resource Allocation Fund	250.0	250.0	0.0	~
Transfers to 2015 Capital Projects Fund	0.0	0.0	0.0	~
Totals	10,709.9	10,814.2	(104.3)	(1.0%)
Net Cash				
Inc (Dec) before Grants/Transfers	144.5	(254.2)	398.7	(156.9%)
Increase (Decrease)	(50.1)	(309.5)	259.4	(83.8%)
Beginning Cash Balance	5,938.3			
Ending Cash Balance	5,888.2			

TABLE 2
OPERATING FUND
Receipt Detail (in thousands)

Category / Item	2019	2018	Δ\$	Δ%
1 - Municipal Customers				
Lower Swatara	140.0	138.0	2.0	1.5%
South Hanover	500.0	475.0	25.0	5.3%
Totals¹	640.0	613.0	27.0	4.4%
2 - Other Routine				
Late Payment Fees	43.5	43.5	0.0	0.0%
Hershey Sludge Processing	99.0	94.0	5.0	5.3%
Surcharges	250.0	250.0	0.0	0.0%
Reimb for Developer Inspections	16.5	16.5	0.0	0.0%
Miscellaneous	87.1	101.0	(13.9)	(13.8%)
Totals²	496.1	505.0	(8.9)	(1.8%)
3 - Connection Related Fees				
Inspection	3.0	4.9	(1.9)	(38.8%)
Lateral Install & Special Purpose	7.7	7.7	0.0	0.0%
Installment Payments	1.8	1.8	(0.0)	(1.9%)
Capacity	169.8	103.3	66.5	64.4%
Totals³	182.3	117.7	64.6	54.9%
4 - Stormwater Program				
Lease Revenue	0.0	0.0	0.0	~
Jobbing	0.0	0.0	0.0	~
Totals⁴	0.0	0.0	0.0	~
5 - Interest-Operating Fund				
Checking	10.6	13.4	(2.8)	(20.9%)
Investments	22.6	36.1	(13.5)	(37.4%)
Totals⁵	33.2	49.5	(16.3)	(32.9%)
6 - Interest-Trust and Restricted Funds				
Operating Reserve	14.1	14.0	0.1	0.7%
Flood Reserve	2.3	3.0	(0.7)	(23.3%)
Resource Allocation Fund	9.8	6.0	3.8	63.3%
Debt Service Reserve	17.7	22.0	(4.3)	(19.6%)
BR&I Fund	6.0	7.7	(1.7)	(22.1%)
2015 Capital Projects Fund	0.0	1.4	(1.4)	(100.0%)
2018 Construction Fund	30.7	0.0	30.7	~
Totals⁶	49.9	54.1	(1.1)	(2.0%)

TABLE 3
OPERATING FUND
Disbursement Detail (in thousands)

Category / Item	2019	2018	Δ\$	Δ%
7 - Departmental Expenses				
Administration	3,028.7	3,018.7	10.0	0.3%
Collection System	666.8	646.1	20.7	3.2%
Operation	1,817.0	1,861.9	(44.9)	(2.4%)
Maintenance	640.7	691.1	(50.4)	(7.3%)
Technical Services	342.2	359.2	(17.0)	(4.7%)
Total Departmental⁷	6,495.3	6,577.0	(81.7)	(1.2%)
8 - Debt Service Payments				
Authority Bond Issues				
2005	0.2	0.2	0.0	0.0%
2015	1,069.3	1,057.3	12.0	1.1%
2016	874.5	854.3	20.2	2.4%
Derry Township Subsidy Agreements				
2014	323.8	315.7	8.2	2.6%
2015	584.4	582.3	2.1	0.4%
2016 Note	296.2	301.3	(5.2)	(1.7%)
2018	158.2	127.7	30.5	23.9%
Totals⁸	3,306.5	3,238.7	67.8	2.1%
9 - Capital Lease Payments				
Conewago Phase I	159.6	159.6	0.0	0.0%
Conewago Phase II	206.1	206.1	0.0	0.0%
Totals⁹	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, 2019	Addition of Funds	Deletion of Funds	Balance as of Dec. 31, 2019	Fund Increase / (Decrease)
Cash & Cash Equivalents					
Cash & Investments	5,938,337	10,604,466	(10,709,933)	5,832,870	(105,467)
Trust & Restricted Funds					
Operating Reserve	1,025,155	13,482	-	1,038,637	13,482
Debt Service Reserve	1,476,856	19,107	-	1,495,963	19,107
Flood	203,628	2,553	(2,553)	203,628	-
WW Resource Allocation	569,851	256,800	(166,500)	660,151	90,300
Authority Debt Service	-	-	-	-	-
Subsidy Agr Debt Service	-	-	-	-	-
Bond Redemption & Improvement	523,494	6,568		530,062	6,568
2015 Capital Projects	309,885	4,315	(275,150)	39,050	(270,835)
2018 Capital Projects	4,439,036	4	(1,099,800)	3,339,240	(1,099,796)
Total Trust & Restricted Funds	8,547,905	302,829	(1,544,003)	7,306,731	(1,241,174)

**TABLE 5
PROJECTS & CAPITAL EXPENDITURES**

No.	PROJECT NAME	TOTAL COST	PAID in 2018	2019	FUNDING SOURCE
1.	IT Projects	52,300	-	52,300	OF
2.	Computer Hardware	33,200	-	33,200	OF
3.	SALDO / Permitting Software*	28,000	-	22,400	OF
4.	Navision Software*	73,000	-	58,400	OF
5.	Lucity Asset Mgt Software**	107,250	-	75,075	OF
6.	HW Billing Software	21,936	9,968	11,968	OF
7.	WWTP Utility Vehicle	13,000	-	13,000	OF
8.	Pump Station Flood Access	12,000	-	12,000	OF
9.	WW Flowmeters	14,000	-	14,000	OF
SUBTOTAL OPERATING FUND				292,343	
10.	SW WWTP Sludge Thickening	367,500	225,550	141,950	15CPF
11.	Wet Well & Scum Pit Coatings	133,200		133,200	15CPF
SUBTOTAL 2015 CAPITAL PROJECTS FUND				275,150	
12.	Manhole Adjustments & Paving	75,200	65,200	10,000	18CF
13.	Cocoa Townes Sanitary Sewer Relocation	66,000	-	66,000	18CF
14.	Sanitary Sewer Pipe Repair & Rehab	150,000	-	150,000	18CF
15.	Pump Station SCADA Communication Upgrade	100,000	-	100,000	18CF
16.	Centrifuge Rotating Assembly	310,000	149,500	160,500	18CF
17.	WWTP Security Cameras	26,100	800	25,300	18CF
18.	Relocation of PC 2 (Engineering Design)	80,000	-	80,000	18CF
19.	Flood Doors	75,000	-	75,000	18CF
20.	Relocate Electrical Panels	200,000	-	200,000	18CF
21.	Refit Existing TV Truck	130,000	-	130,000	18CF
22.	Computer Room waterless fire protection	103,000	-	103,000	18CF
SUBTOTAL 2018 CONSTRUCTION FUND				1,099,800	
23.	Underground Heating Line Replacement	145,000	-	145,000	WWRAF
24.	EQ Basin #2 Liner Repair	21,500	-	21,500	WWRAF
SUBTOTAL WASTEWATER RESOURCE ALLOCATION FUND				166,500	
TOTAL PROJECTS & CAPITAL EXPENDITURES		2,337,186	451,018	1,833,793	

NOTES:

* 80/20 Cost share with Stormwater

** 70/30 Cost share with Stormwater

ATTACHMENT A
STATEMENT OF REVENUES AND EXPENSES
Budget and Annual Comparison
For the period from January 1, 2018 to October 31, 2018
(displayed in \$1,000s)

	2018 YTD	Budget YTD	Increase (Decrease)	%Δ	2018 Budget
Operating revenues:					
Sewer service:					
Direct customers	\$6,562.3	\$6,526.5	\$35.8	0.5%	\$7,831.7
Municipal customers	\$772.4	\$510.9	261.6	51.2%	\$613.0
Hauled waste processing	\$900.0	\$949.2	(49.1)	(5.2%)	\$1,139.0
Surcharges	\$567.3	\$208.4	358.9	172.3%	\$250.0
Biosolids processing	\$69.3	\$78.4	(9.0)	(11.5%)	\$94.0
Connection, related fees	\$35.1	\$24.3	10.8	44.6%	\$29.1
Other	\$58.6	\$98.8	(40.1)	(40.7%)	\$118.5
Total operating revenue	8,965.0	8,396.2	568.8	6.8%	10,075.3
Operating expenses:					
(incl. payroll taxes & benefits)	\$2,386.1	\$2,478.0	(91.9)	(3.7%)	\$3,018.7
Collection system	\$516.3	\$538.5	(22.2)	(4.1%)	\$646.1
Plant operations & maintenance	\$2,068.8	\$2,127.9	(59.1)	(2.8%)	\$2,553.0
Technical services	\$254.5	\$299.4	(44.9)	(15.0%)	\$359.2
Project expenses	\$9.2	\$192.1	(182.9)	(95.2%)	\$230.5
Total operating expenses	5,234.9	5,635.9	(401.0)	(7.1%)	6,807.5
Operating income before					
depreciation & amortization	3,730.1	2,760.3	969.8	35.1%	3,267.8
depreciation & amortization	\$2,546.8	\$2,640.6	(93.8)	(3.6%)	\$3,168.6
Operating income (loss)	1,183.3	119.7	1,063.6	888.7%	99.2
Nonoperating revenues:					
Interest income	\$1,098.5	\$87.8	1,010.7	1151.1%	\$105.4
Government grants	\$0.0	\$0.3	(0.3)	(100.0%)	\$0.0
Capacity fees	\$387.6	\$85.8	301.8	351.7%	\$103.3
Other	\$21.7	\$21.7	(0.0)	(0.1%)	\$26.0
Total nonoperating revenue	1,507.8	195.6	1,312.2	670.9%	234.7
Nonoperating expenses:					
Interest on bonds, notes, & leases	\$866.8	\$850.0	16.8	2.0%	\$1,019.8
Bond issuance costs	\$38.7	\$63.0	(24.3)	(38.6%)	\$75.6
Other	\$0.0	\$0.0	0.0	-	\$0.0
Total nonoperating expenses	905.5	913.0	(7.5)	(0.8%)	1,095.4
Income (loss) before contributions	1,785.6	(597.7)	2,383.3		(761.5)
Sewer extensions contributed					
by developers	\$14.0	\$0.0	14.0	-	\$0.0
Increase (decrease) in net position	\$1,799.6	(\$597.7)	\$2,397.3	-	(\$761.5)

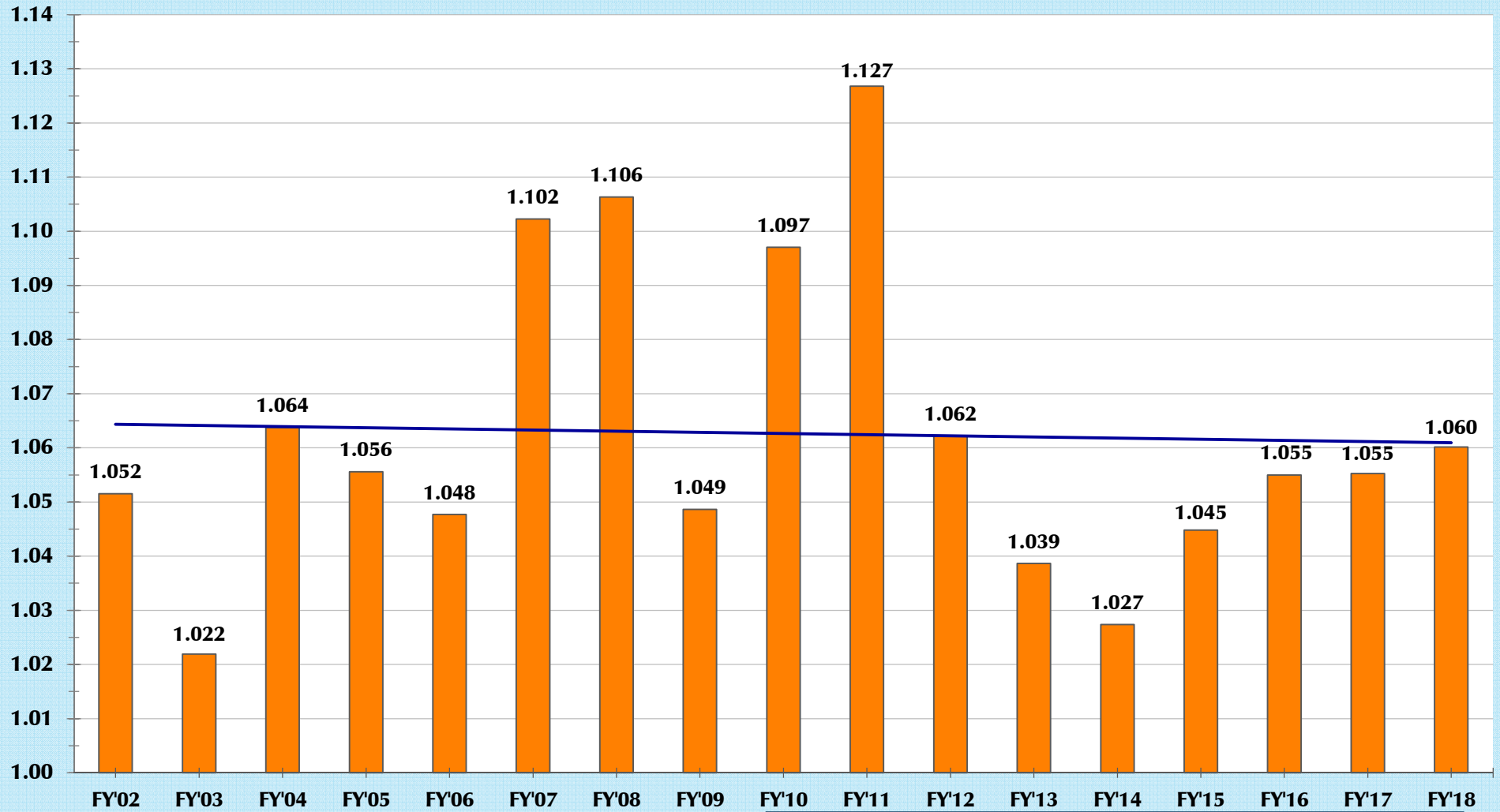
**ATTACHMENT B
OPERATING FUND
Consolidated Change in Net Position
(in thousands)**

Category / Item	2019 Budget	2018 Budget	Difference Amount	%
Operating revenues	10,323.7	10,075.3	248.4	2.5%
Operating expenses	6,787.6	6,807.5	(19.9)	(0.3%)
Income before depreciation and amortization	3,536.1	3,267.8	268.3	8.2%
Depreciation and amortization	3,055.4	3,168.6	(113.2)	(3.6%)
Net income (loss)	480.7	99.2	381.5	384.6%
Non-operating revenues	311.6	234.7	76.9	32.8%
Non-operating expenses	1,110.7	1,095.4	15.3	1.4%
Change in net position	(318.5)	(761.5)	443.0	

ATTACHMENT C
OPERATING FUND
Change in Net Position - Detail

Category / Item	2019 Budget	2018 Budget	Difference Amount	%
Operating Revenue				
Direct Customers	8,053.0	7,831.7	221.3	2.8%
Municipal Customers	640.0	613.0	27.0	4.4%
Hauled Waste	1,150.0	1,139.0	11.0	1.0%
Other Routine	453.5	462.5	(9.0)	(1.9%)
Connection Related	27.2	29.1	(1.9)	(6.5%)
Operating revenue	10,323.7	10,075.3	248.4	2.5%
Operating Expenses				
Administration	3,028.7	3,018.7	10.0	0.3%
Collection System	666.8	646.1	20.7	3.2%
Operation	1,817.0	1,861.9	(44.9)	(2.4%)
Maintenance	640.7	691.1	(50.4)	(7.3%)
Technical Services	342.2	359.2	(17.0)	(4.7%)
Projects	292.3	230.5	61.8	26.8%
Operating expenses	6,787.6	6,807.5	(19.9)	(0.3%)
Net Income (Loss)				
Earnings before depreciation & amortization	3,536.1	3,267.8	268.3	8.2%
Less: depreciation & amortization	3,055.4	3,168.6	(113.2)	(3.6%)
Net income (loss)	480.7	99.2	381.5	384.6%
Nonoperating Revenue				
Interest Income	115.7	105.4	10.3	9.7%
Capacity Fees	169.8	103.3	66.5	64.4%
Federal and State Grants	0.0	0.0	0.0	-
Miscellaneous	26.1	26.0	0.1	0.4%
Non-operating revenue	311.6	234.7	76.9	32.8%
Nonoperating Expense				
Interest on Debt	999.0	1,019.8	(20.8)	(2.0%)
Bond Issue Costs	111.7	75.6	36.1	47.8%
Other	0.0	0.0	0.0	-
Non-operating expense	1,110.7	1,095.4	15.3	1.4%
Increase (Decrease) in Net Position				
Change in net position	(318.5)	(761.5)	443.0	

ATTACHMENT D BILLABLE WASTEWATER (BILLION GALLONS PER YEAR)



■ BILLABLE WASTEWATER

SOLID BLUE LINE REPRESENTS A LINEAR REGRESSION PERFORMED ON THE BILLABLE WASTEWATER VOLUME DATA FROM 2002 THRU 2018

ATTACHMENT E**DESCRIPTION OF WASTEWATER PROJECTS AND CAPITAL EXPENDITURES**

The following heading and numbers correspond to those found in Tables 5 of the Budget.

WASTEWATER OPERATING FUND [OF]

1. IT Projects – This project includes a number of enhancements for improved back-up and recovery and security enhancements for our computer networks.
2. Computer Hardware – This item includes the scheduled purchase of replacements for desktop PCs, laptops, and tablets.
3. SALDO Permitting Software [IN PROGRESS] – This software will provide for the issuing and tracking of sewer connection permits and managing the tasks associated with the SALDO reviews.
4. NAVISION Software [IN PROGRESS] – This is an upgrade to the current version of our accounting software.
5. Lucy Asset Management Software [IN PROGRESS] – Lucy is the asset management software that is currently being implemented
6. Hauled Wastewater Billing Software [IN PROGRESS] – We are in the process of converting our hauled wastewater billing to a Navision based platform.
7. WWTP Utility Vehicle [IN PROGRESS] – A new “gator” in plant vehicle has been ordered and will be delivered in January 2019.
8. Pump Station Flood Access – Throughout the July flood event Mansion Road & High Meadow pumping station operated continuously, however access to the interior of the stations which is accessed by stairs up and over the roof, was impeded because the water levels blocked the entrance doors. Staff entry was made by boat and extension ladder to the roof. It is proposed that permanently mounted, lockable emergency access ladders be installed to provide safe access via boat.
9. Portable Flowmeters – This is for the purchase of three additional portable flow meters. These meters are used to monitor flows and to assist in the calibration of our sewer system model.

WASTEWATER – 2015 CAPITAL PROJECTS FUND [15CPF]

10. Southwest Plant Sludge Thickening [IN PROGRESS] – Project includes the installation of a volute sludge thickener at the Southwest Plant to thicken the waste activated sludge (WAS) to significantly increase the WAS solids concentration and reduce the number of truckloads of WAS hauled to the Clearwater WWTP.

11. Wet Well & Scum Pit Coatings [IN PROGRESS] – The influent wet well and the clarifier scum pits require the application of a coating to protect the concrete from deterioration. Work is expected to be completed by the end of 2018.

WASTEWATER - 2018 CONSTRUCTION FUND [18CF]

12. Manhole Grade Adjustments & Paving [IN PROGRESS] - This project included the raising of twenty-nine (29) existing manhole frames and covers located along Waltonville Road, Walton Avenue, and Bullfrog Valley Road. Final paving and restoration is scheduled for spring 2019.
13. Cocoa Townes Sanitary Sewer Improvement – This project includes replacement of the sanitary sewer line and manhole identified to be impacted by the Cocoa Townes HOA stormwater swale as well as stabilization and improvements of the stormwater system in proximity to our sewer line to prevent future failure and loss of service.
14. Sanitary Sewer & Manhole Rehab – After reviewing the ongoing 2018 assessment work, a project will be developed to continue the rehabilitation of our sanitary sewer piping and manholes.
15. Pump Station SCADA Upgrade - We currently have an antiquated and mishmash of SCADA communications in our pumping stations. This project will update the pumping station PLCs and utilize the latest wireless communication. This update will enhance the monitoring of our stations and also prepare us to undertake a second component in 2020 to develop the ability to perform remote station control and ultimately reduce operator call-ins.
16. Centrifuge Rotating Assembly [IN PROGRESS] – The centrifuge is our primary dewatering equipment and the most critical and expensive component is the rotating assembly. These assemblies last 5-7 years and then require a complete rebuild and balancing. With the installation of this new assembly, we will budget for the rebuild of the original in 2020. With the rebuilt assembly, future machine maintenance downtime will be limited to a maximum of several days.
17. WWTP Security Cameras [IN PROGRESS] – This project addresses one of notable vulnerabilities identified in our Homeland Security assessment.
18. Relocation of Power Center #2 (Engineering Design) [IN PROGRESS] - In early, 2018, the Board authorized the design and implementation to relocate power center (PC) #2 out of the existing flood prone area. Included with this design was the relocation of the switches inside the Sludge building to the second floor. The relocation of PC#2 was moved into the GESA project so this item is strictly for the engineering design work.
19. Flood Doors - The July 2018 flood event provided us information on the impact of manageable Swatara Creek flood levels on our facility. Using this information, we have determined that

with low level (1.5' - 2') flood stops at the various doors, it is possible that the vulnerable control building and sludge building basements area can be provided with protection. Additionally, relocation of PC#2 will enable us to maintain power thru a flood event and provide power to designated basement sump pumps to further protect our basement assets and provide faster dewatering capabilities.

20. Relocate Sludge Building Electrical Panels – This is another flood mitigation project to relocate the first floor sludge building motor control centers to the second floor. We intend to continue our flood mitigation efforts in 2020 with the relocation of the basement variable frequency motor drives and SCADA panels to higher elevations.
21. Refit Existing TV Truck Camera System - In 2018, we purchased a second TV truck. This project is to refurbish our existing TV truck with a new matching camera system that is compatible with the new unit and with the Lucity software modules.
22. Computer Room Waterless Fire Suppression System - Another vulnerability identified in the Homeland Security assessment is the fire protection for our three sensitive rooms containing computers, SCADA, and motor control centers. This project will provide for the installation of a clean fire suppression system in those rooms to improve the protection of those critical assets.

WASTEWATER RESOURCE ALLOCATION FUND PROJECTS PLANNED [WWRAF]

23. Underground Heating Line Replacement [IN PROGRESS] – This project will renew the building heating system asset by replacing the underground hot water supply and return lines.
24. EQ Basin #2 Repair - This project will extend the life of EQ Basin #2 by repairing the basin liner.