

Derry Township Municipal Authority

2017 Wastewater Fund Budget

Approved November 14, 2016

Resolution #2016-53



TABLE 1
OPERATING FUND
Comparative Cash Budget (in thousands)

Category / Item	2017	2016	Δ\$	Δ%
Receipts (Table 2)				
Direct Customers	7,719.8	7,644.1	75.7	1.0%
Municipal Customers ¹	632.0	634.0	(2.0)	(0.3%)
Hauled Waste	1,165.0	1,071.0	94.0	8.8%
Other Routine ²	416.8	309.0	107.8	34.9%
Connection Related ³	103.7	197.7	(94.0)	(47.5%)
Stormwater Program ⁴	194.9	0.0	194.9	~
Interest-Operating Fund ⁵	27.7	27.7	0.0	0.0%
Interest-Trust and Restricted Funds ⁶	22.0	14.1	7.9	56.0%
Totals before Grants	10,281.9	9,897.6	384.3	3.9%
Transfers from Stormwater Fund	310.0	0.0	310.0	~
Federal & State Grants	358.7	0.0	358.7	~
Totals	10,950.6	9,897.6	1,053.0	10.6%
Disbursements (Table 3)				
Departmental Expenditures ⁷	6,351.7	6,135.2	216.5	3.5%
Projects	176.0	55.4	120.6	217.7%
Capital Expenditures	197.0	193.0	4.0	2.1%
Debt Service Payments ⁸	3,023.5	2,947.3	76.2	2.6%
Capital Lease Payments ⁹	365.8	365.8	0.0	0.0%
Totals before Transfers	10,114.0	9,696.7	417.3	4.3%
Transfers to Operating Reserve Fund	100.0	150.0	(50.0)	(33.3%)
Transfers to Resource Allocation Fund	250.0	0.0	250.0	~
Transfers to 2015 Capital Projects Fund	358.7	0.0	358.7	~
Totals	10,822.7	9,846.7	976.0	9.9%
Net Cash				
Inc (Dec) before Grants/Transfers	167.9	200.9	(33.0)	(16.4%)
Increase (Decrease)	127.9	50.9	77.0	151.3%
Beginning Cash Balance	5,767.3			
Ending Cash Balance	5,895.2			

TABLE 2
OPERATING FUND
Receipt Detail (in thousands)

Category / Item	2017	2016	Δ\$	Δ%
Municipal Customers				
Londonderry	0.0	27.0	(27.0)	(100.0%)
Lower Swatara	164.0	158.0	6.0	3.8%
South Hanover	468.0	449.0	19.0	4.2%
Totals¹	632.0	634.0	(2.0)	(0.3%)
Other Routine				
Late Payment Fees	38.0	27.5	10.5	38.2%
Hershey Sludge Processing	83.0	92.0	(9.0)	(9.8%)
Surcharges	200.0	75.0	125.0	166.7%
Reimb for Developer Inspections	17.4	22.6	(5.2)	(23.0%)
Miscellaneous	78.4	91.9	(13.5)	(14.7%)
Totals²	416.8	309.0	107.8	34.9%
Connection Related Fees				
Inspection	4.6	2.9	1.7	58.6%
Lateral Install & Special Purpose	4.9	0.0	4.9	~
Installment Payments	3.2	5.5	(2.3)	(41.8%)
Capacity	91.0	189.3	(98.3)	(51.9%)
Totals³	103.7	197.7	(94.0)	(47.6%)
Stormwater Program				
Lease Revenue	21.2	0.0	21.2	~
Jobbing	173.7	0.0	173.7	~
Totals⁴	194.9	0.0	194.9	~
Interest-Operating Fund				
Checking	5.6	0.2	5.4	2700.0%
Investments	22.1	27.5	(5.4)	(19.6%)
Totals⁵	27.7	27.7	0.0	0.0%
Interest-Trust and Restricted Funds				
Operating Reserve	5.9	3.2	2.7	84.4%
Flood Reserve	1.3	0.7	0.6	85.7%
Debt Service Reserve	9.5	7.6	1.9	25.0%
BR&I Fund	3.3	1.2	2.1	175.0%
2015 Capital Projects Fund	2.0	1.4	0.6	42.9%
Totals⁶	22.0	14.1	5.2	36.9%

TABLE 3
OPERATING FUND
Disbursement Detail (in thousands)

Category / Item	2017	2016	Δ\$	Δ%
Operating Expenses				
Departmental				
Administration	2,878.1	2,700.8	177.3	6.6%
Collection System	616.4	617.6	(1.2)	(0.2%)
Operation & Maintenance	2,512.4	2,480.5	31.9	1.3%
Technical Services	344.8	336.3	8.5	2.5%
Total Departmental⁷	6,351.7	6,135.2	216.5	3.5%
Debt Service Payments				
Authority Bond Issues				
2005	0.2	0.2	0.0	0.0%
2009	0.0	1,152.8	(1,152.8)	(100.0%)
2015	901.9	904.1	(2.2)	(0.2%)
2016	1,137.8	0.0	1,137.8	~
Derry Township Subsidy Agreements				
2011	0.0	357.6	(357.6)	(100.0%)
2014	312.5	228.0	84.5	37.1%
2015	308.5	304.6	3.9	1.3%
2016 Note	362.6	0.0	362.6	~
Totals⁸	3,023.5	2,947.3	76.2	2.6%
Capital Lease Payments				
Conewago Phase I	159.6	159.6	0.0	0.0%
Conewago Phase II	206.2	206.2	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
(Cash Basis)**

Description	FUNDS								Restricted and Trust Totals
	Operating Checking and Investments	Restricted			Trust			2015 Capital Projects Fund	
		Operating Reserve	Flood Reserve	Resource Allocation Fund	Debt Service	Debt Service Reserve	BRIF		
Balances									
as of January 1, 2017	5,767,300	900,000	200,000	250,000	0	1,482,600	514,700	1,038,900	4,386,200
Add:									
Receipts	10,281,900								0
Interest Earnings		5,900	1,300			9,500	3,300	2,000	22,000
Transfer from Op Fund		100,000		250,000				358,700	708,700
Grants	358,700								0
Reimbursements-SWF	310,000								0
Deduct:									
Disbursements	10,114,000							622,000	622,000
Transfer to Res Alloc Fund	250,000								0
Transfer to Cap Proj Fund	358,700								0
Transfer to Op Res Fund	100,000								0
Interest Trans to Op Fund		5,900	1,300			25,000			32,200
Balances									
as of December 31, 2017	5,895,200	1,000,000	200,000	500,000	0	1,467,100	518,000	777,600	4,462,700
Change in Fund									
Increase (Decrease)	127,900	100,000	0	250,000	0	(15,500)	3,300	(261,300)	76,500

TABLE 5
OPERATING FUND
Projects and Capital Expenditures

Project	Total Project Cost	Amounts	
No. Name		Expensed	Capitalized
1. IT Projects	138,000	18,000	120,000
2. FloWAV Meters	15,000	0	15,000
3. Flush-Inspect SCMC to WWTP Trunk	110,000	110,000	0
4. Security Camera Upgrade & Installations	20,000	0	20,000
5. SWTP UV Transmissivity	10,000	0	10,000
6. Insulate Wet Well Drains	10,000	0	10,000
7. Loader Bucket Scale	12,000	0	12,000
8. Office Furniture and Equipment	8,000	8,000	0
9. Hach Primary Sludge TSS Meter	10,000	0	10,000
10. Contingency	40,000	40,000	0
Totals	373,000	176,000	197,000

TABLE 6
CAPITAL PROJECTS FUND
Projects and Capital Expenditures

Project	Total Project Cost	Costs Paid in Prior Years	2017 Amount	Remaining Costs
No. Name				
In Process				
1. Cell Lysis	619,500	369,500	0	250,000
2. Collection System Rehabilitation	280,500	280,500	0	0
3. SW and CWR Miscellaneous Projects	617,300	617,300	0	0
4. Cocoa Ave Resurfacing Project	32,800	32,800	0	0
5. Park Blvd Utility Relocation (PADOT)	98,700	98,700	0	0
6. Headworks Heating Lines Replacement	135,000	135,000	0	0
7. Virtual Server Network	63,500	63,500	0	0
8. Rt 322 Utility Relocation (PADOT)	12,000	12,000	0	0
Subtotal	1,859,300	1,609,300	0	250,000
Planned				
6. Infrastructure Protective Coatings	422,000	0	422,000	0
7. Manhole Raising	50,000	0	50,000	0
8. Primary Sludge Line Improvements	150,000	0	150,000	0
Subtotal	622,000	0	622,000	0
Totals	2,481,300	1,609,300	622,000	250,000

ATTACHMENT A
STATEMENT OF REVENUES AND EXPENSES
Budget and Annual Comparison
For the period from January 1, 2016 to October 31, 2016
 (displayed in \$1,000s)

	2016 YTD	Budget YTD	Increase (Decrease)	%Δ	2016 Budget	Budget Used (%)	2015 YTD	Increase (Decrease)	%Δ
Operating revenues:									
Sewer service:									
Direct customers	\$6,336.3	\$6,385.7	(\$49.4)	(0.8%)	\$7,644.1	82.9%	\$6,138.7	\$197.6	3.2%
Municipal customers	537.6	528.2	9.4	1.8%	634.0	84.8%	505.1	32.5	6.4%
Hauled waste processing	1,006.8	892.9	113.9	12.8%	1,071.0	94.0%	953.6	53.2	5.6%
Surcharges	65.0	62.2	2.8	4.5%	75.0	86.7%	45.5	19.5	42.8%
Biosolids processing	71.5	76.6	(5.1)	(6.7%)	92.0	77.7%	60.1	11.4	18.9%
Connection, related fees	46.4	20.5	25.9	126.4%	25.5	182.0%	24.4	22.0	89.9%
Other	65.6	76.0	(10.4)	(13.7%)	85.4	76.8%	86.4	(20.9)	(24.1%)
Stormwater program	23.9	0.0	23.9	-	0.0	-	0.0	23.9	-
Total operating revenue	8,153.0	8,042.1	110.9	1.4%	9,627.0	84.7%	7,813.8	339.2	4.3%
Operating expenses:									
Administrative (incl. payroll taxes & benefits)	2,089.9	2,256.0	(166.1)	(7.4%)	2,700.8	77.4%	1,909.7	180.2	9.4%
Collection system	399.4	532.1	(132.7)	(24.9%)	617.6	64.7%	405.2	(5.8)	(1.4%)
Plant operations & maintenance	1,849.1	2,020.0	(170.9)	(8.5%)	2,480.5	74.5%	1,796.7	52.4	2.9%
Technical services	230.6	275.2	(44.6)	(16.2%)	336.3	68.6%	260.9	(30.3)	(11.6%)
Project expenses	129.1	34.4		0.0%	55.4	233.1%	107.9	21.2	19.6%
Total operating expenses	4,698.2	5,117.7	(514.2)	(10.0%)	6,190.6	75.9%	4,480.4	217.7	4.9%
Operating income before depreciation & amortization									
	3,454.8	2,924.4	530.4	18.1%	3,436.4	100.5%	3,333.4	121.4	3.6%
Depreciation	2,641.4	2,682.3	(40.9)	(1.5%)	3,217.1	82.1%	2,655.4	(14.0)	(0.5%)
Operating income (loss)	813.4	242.1	571.3	236.0%	219.3	370.9%	678.0	135.5	20.0%
Nonoperating revenues:									
Interest income	52.4	25.4	27.0	106.4%	30.4	172.4%	20.0	32.4	161.5%
Government grants	3.5	0.0	3.5	-	0.0	-	2.1	1.5	69.9%
Capacity fees	178.6	187.6	(9.0)	(4.8%)	189.3	94.4%	104.1	74.5	71.6%
Other	162.5	29.6	132.9	449.1%	34.0	478.0%	33.0	129.5	392.8%
Total nonoperating revenue	397.1	242.6	154.5	63.7%	253.7	156.5%	159.2	237.9	149.5%
Nonoperating expenses:									
Interest on bonds, notes, & leases	773.5	950.3	(176.8)	(18.6%)	1,140.1	67.8%	1,029.5	(256.0)	(24.9%)
Amortization	(46.1)	(18.5)	(27.6)	149.4%	(22.1)	208.8%	(12.2)	(34.0)	279.5%
Bond issuance costs	199.2	60.0	139.2	232.0%	60.0	332.0%	112.0	87.2	77.9%
Other	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-
Total nonoperating expenses	926.5	991.8	(65.3)	(6.6%)	1,178.0	78.7%	1,129.3	(202.8)	(18.0%)
Income (loss) before contributions	284.0	(507.1)	791.1	(156.0%)	(705.0)	(40.3%)	(292.1)	576.1	(197.2%)
Sewer extensions contributed by developers									
	501.2	0	501.2	-	0	-	45.3	455.9	1006.6%
Increase (decrease) in net position	\$785.3	(\$507.1)	\$1,292.4	(254.9%)	(\$705.0)	(111.4%)	(\$246.8)	\$1,032.1	(418.2%)

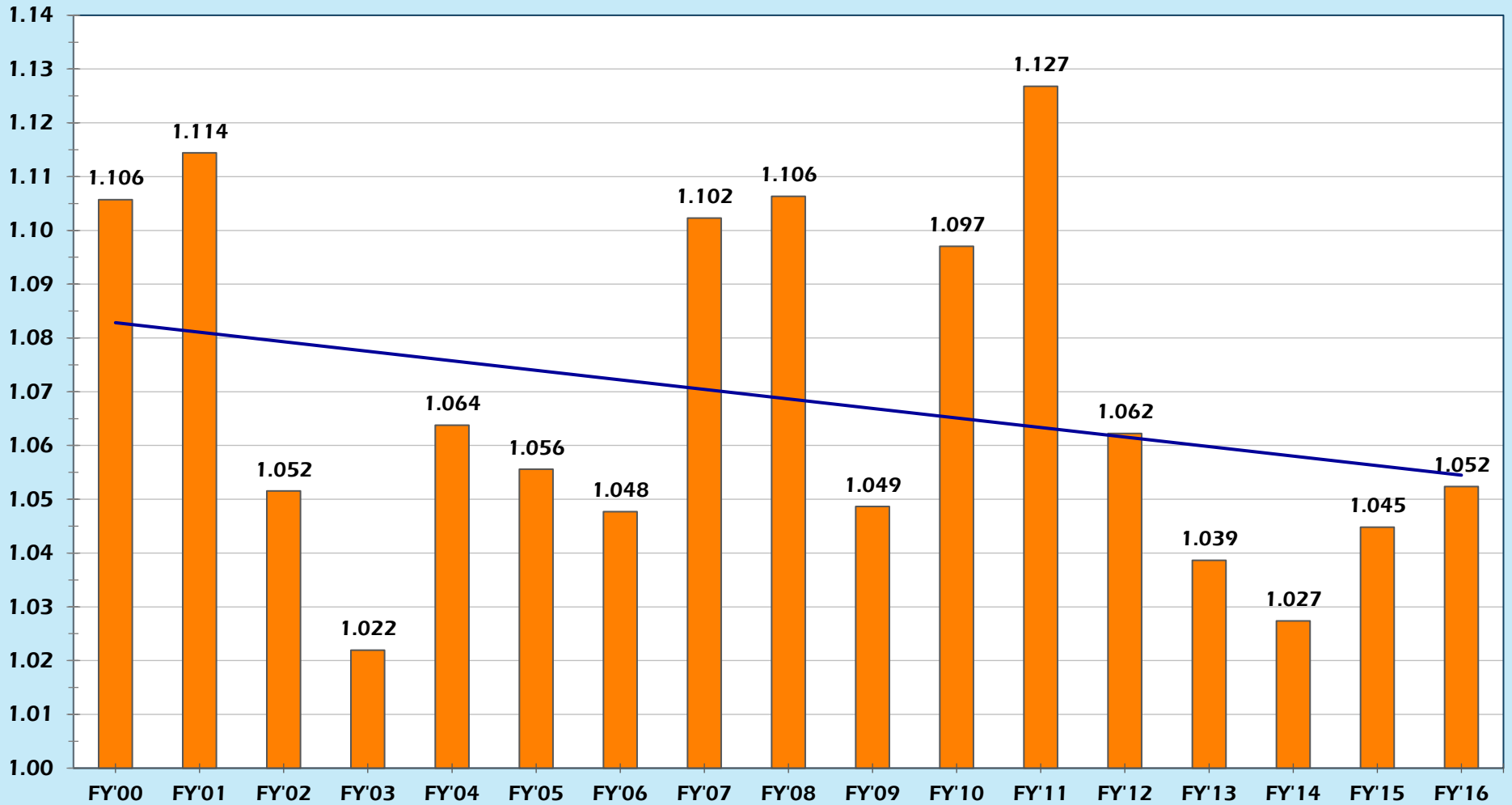
ATTACHMENT B
OPERATING FUND
Change in Net Position

Category / Item	2017 Budget	2016 Budget	Difference Amount	Difference %
Operating Revenue				
Direct Customers	7,719,800	7,644,100	75,700	0.99%
Municipal Customers	632,000	634,000	(2,000)	(0.32%)
Hauled Waste	1,165,000	1,071,000	94,000	8.78%
Other Routine	372,800	275,000	97,800	35.56%
Connection Related	26,900	2,900	24,000	827.6%
Stormwater Program Revenue	194,900	0	194,900	~
Operating revenue	10,111,400	9,627,000	484,400	5.0%
Operating Expenses				
Administration	2,878,100	2,700,800	177,300	6.6%
Collection System	616,400	617,600	-1,200	-0.2%
Operation & Maintenance	2,512,400	2,480,500	31,900	1.3%
Technical Services	344,800	336,300	8,500	2.5%
Projects	176,000	55,400	120,600	217.7%
Operating expenses	6,527,700	6,190,600	337,100	5.4%
Net Income (Loss)				
Earnings before depreciation & amortization	3,583,700	3,436,400	147,300	4.3%
Less: depreciation and amortization	3,128,200	3,195,000	(66,800)	(2.1%)
Net income (loss)	455,500	241,400	214,100	88.7%
Nonoperating Revenue				
Interest Income	56,200	30,400	25,800	84.9%
Capacity Fees	91,000	189,300	(98,300)	(51.9%)
Federal and State Grants	358,700	0	358,700	~
Miscellaneous	26,600	34,000	(7,400)	(21.8%)
Non-operating revenue	532,500	253,700	278,800	109.9%
Nonoperating Expense				
Interest on Debt	970,400	1,096,100	(125,700)	(11.5%)
Bond Issue Costs	0	60,000	(60,000)	(100.0%)
Capital Lease Interest	40,800	44,000	(3,200)	(7.3%)
Non-operating expense	1,011,200	1,200,100	(188,900)	(15.7%)
Increase (Decrease) in Net Position				
Change in net position	(23,200)	(705,000)	681,800	(96.7%)

ATTACHMENT C
OPERATING FUND
Consolidated Change in Net Position
(in thousands)

Category / Item	2017 Budget	2016 Budget	Difference Amount	%
Operating revenues	10,111.4	9,627.0	484.4	5.0%
Operating expenses	6,527.7	6,190.6	337.1	5.4%
Income before depreciation and amortization	3,583.7	3,436.4	147.3	4.3%
Depreciation and amortization	3,128.2	3,195.0	(66.8)	(2.1%)
Net income (loss)	455.5	241.4	214.1	88.7%
Non-operating revenues	532.5	253.7	278.8	109.9%
Non-operating expenses	1,011.2	1,200.1	(188.9)	(15.7%)
Change in net position	(23.2)	(705.0)	681.8	(96.7%)

ATTACHMENT D BILLABLE WASTEWATER (BILLION GALLONS PER YEAR)



■ BILLABLE...

SOLID BLUE LINE REPRESENTS A LINEAR REGRESSION PERFORMED ON THE BILLABLE WASTEWATER VOLUME DATA FROM 2000 THRU 2016

ATTACHMENT E

DESCRIPTION OF PROJECTS AND CAPITAL EXPENDITURES

The following headings and numbers correspond to those found on Tables 5 and 6 of the Budget.

OPERATING FUND [TABLE 5]

1. IT Projects – A number of IT projects are included in this item. They include the following: replacement of the Sludge Building Panel PC; migrating security, phone, SCADA, and HVAC systems to VMware; purchase of asset management and budget software; replacement of the existing servers; customization of the Visual Utility Billing (VUB) system software to accommodate miscellaneous billings; and replacement of the wide area copier (contingency).
2. FloWAV Meters – Purchase three (3) flow meters to be used by DTMA staff for monitoring wastewater flow in designated sewer basins throughout our system. This will more accurately calibrate our hydraulic modeling software for evaluating existing and future wastewater capacity needs in our system as community growth occurs.
3. Flush-Inspect SCMC to WWTP Trunk – All flow to the CwR WWTP is conveyed through an existing 48-inch diameter main trunk between the Spring Creek Meter Chamber (SCMC) along Hersheypark Drive and the CwR WWTP. Routine maintenance of this main trunk is vital for maintaining uninterrupted sewer service to our customers. This project will include cleaning and closed-circuit televising of approximately 2,000 linear feet of that sewer main.
4. Security Camera Upgrade & Installations – This project includes the installation of ten (10) security cameras at the CwR WWTP and two (2) security cameras at the SW WWTP for increased security around the exterior of our WWTP facilities and inside the lobby of the Administration Building.
5. SWTP UV Transmissivity – During a routine inspection by a representative of the PA Department of Protection (DEP) at our facilities in May 2016, it was requested that we begin continuously monitoring the UV transmissivity of the effluent from the UV disinfection system at the SW WWTP. This project includes installation of a UV-Transmittance monitor, mounting hardware, and control wiring for continuously data logging of the effluent.
6. Insulate Wet Well Drains – The ventilation system in the main influent wet well is typically shutdown during the winter season to avoid potential freezing of the exposed drain piping. Without positive wet well ventilation, odors build up in the wet well and enter the locker room located directly above. This project includes insulating and heat tracing exposed piping within the wet well to prevent freezing and will allow the continuous use of the wet well ventilation system during the winter season.
7. Loader Bucket Scale – The front end loader, which is used to load biosolids and SteadiGro from the storage pad into trucks, has an integral bucket scale required to accurately measure the quantities of material loaded. The current unit is past the projected life so this is a contingent item to replace that bucket scale in the event it fails and cannot be repaired.

8. Office Furniture and Equipment – Purchase new office furniture and PC for furnishing of an existing admin office on the first floor of the Administration Building.
9. Hach Primary Sludge TSS Meter – Purchase and install a TSS meter and controller on the primary sludge piping system for monitoring primary sludge percent total solids transferred from the primary clarifiers to the sludge thickener tank.
10. Contingency – Contingency estimate for unplanned expenses in 2017.

CAPITAL PROJECTS FUND – PLANNED [TABLE 6]

6. WWTP Infrastructure Protective Coatings – This project includes the protective coating and resurfacing of specific components at the CwR WWTP and the SW WWTP. At the CwR WWTP, protective coatings will be applied to the concrete wet well structure and the chlorine contact tanks. The exterior foam insulation of the egg-shaped digester will be resurfaced. At the SW WWTP, protective coatings will be applied to the concrete walls of the oxidation ditches and the final clarifiers. The oxidation ditch aerator covers will be resurfaced.

***NOTE:** We have applied for a \$358,700 grant to assist with the implementation of this project. In the event that the grant is not offered, Staff will review the project and develop an alternative implementation plan to fit the Budget.*

7. Manhole Frame and Cover Raising - This project includes the raising of twenty (20) existing manhole frames and covers located along Waltonville Road, Walton Avenue, and Bullfrog Valley Road.
8. Primary Sludge Line Improvements – The current method of grease acceptance and handling through the CwR WWTP results in significant accumulations and occasional blockages in the primary sludge and scum draw-off piping. This greatly reduces the pumping capacity and increases maintenance and repair of the existing rotary lobe pumps and piping system. This project includes the completion of a feasibility study to evaluate a new or improved primary sludge pumping system to help mitigate the grease accumulation in the piping system. This project also includes construction of the recommended primary sludge system improvements.