

STORM SEWER UTILITY

Town Council

October 14, 2024



Mission Statement

The Storm Sewer Utility is dedicated to improving health, safety and welfare in the Borough of Chambersburg by providing for the safe and efficient capture and conveyance of stormwater runoff resulting from development by enforcing the Borough's Stormwater Management Code, by maintaining compliance with the Borough's municipal separate storm sewer system (MS4) permit and through construction and maintenance of the Borough's storm sewer system according to sound financial resource and capital improvements management.



STORM SEWER UTILITY STAFF
Andy Stottlemeyer, Storm Sewer System Manager
Robert Nolan, Storm Sewer System Inspector
Penny Morrison, Utilities Secretary II
Phil Wolgemuth, Deputy Borough Manager

Storm Sewer System

The Borough storm sewer system is comprised of the following:

3,229 inlets (3,076 inlets and 153 catch basins)

139 outfalls to Conococheague Creek and Falling Spring Creek

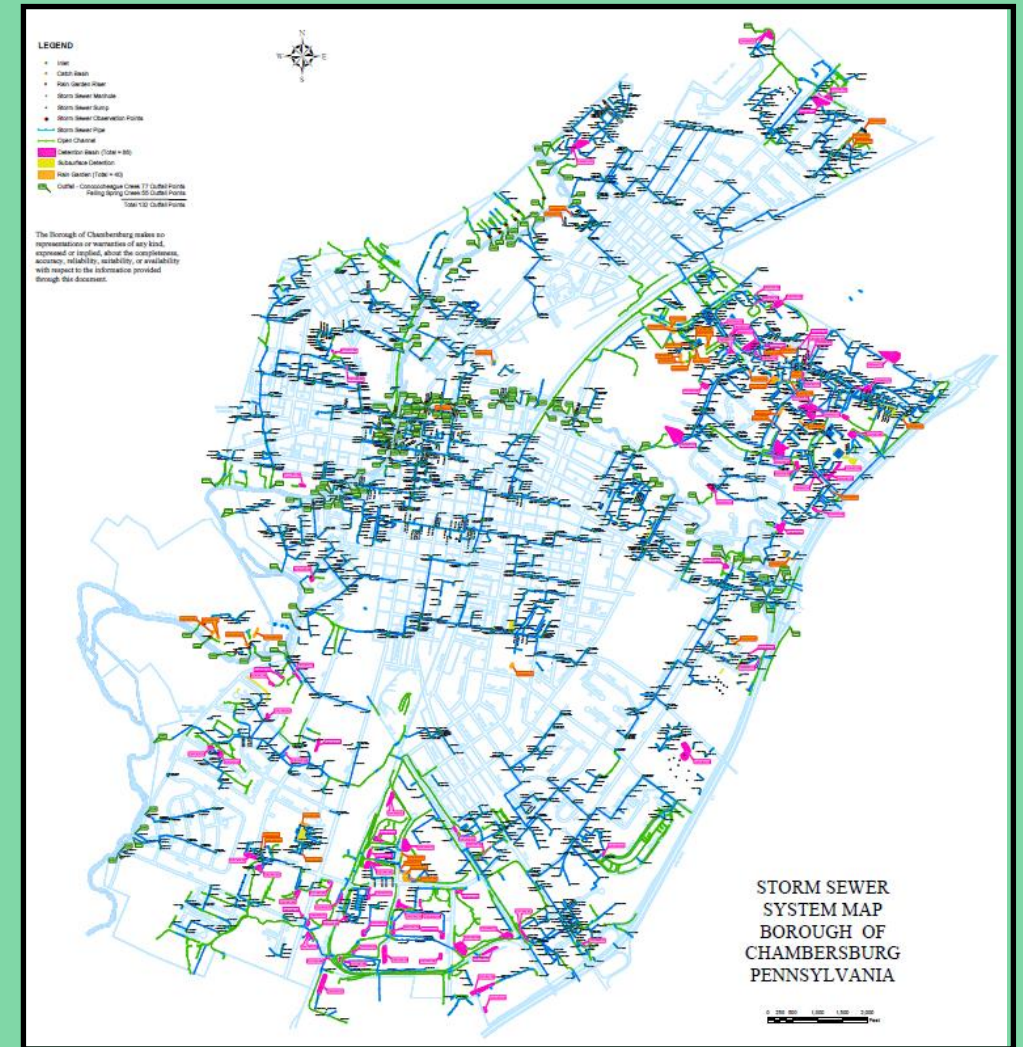
211 subsurface detention areas

107 detention basins

83.49 miles of pipe

57 rain gardens

32.05 miles of open channels



MS4 Permit



The Borough municipal separate storm sewer system (MS4) operates under Pennsylvania Department of Environmental Protection NPDES General Permit No. PAG 133704, of which coverage commenced on June 1, 2018 and will expire at midnight on March 15, 2025.

In 2018, a new NPDES General Permit, along with a Chesapeake Bay Pollutant Reduction Plan, was approved by the Pennsylvania Department of Environmental Protection (DEP). The Borough has until March 15, 2025 to achieve pollutant loading reductions for sediment, total nitrogen, and total phosphorous.

The MS4 Permit requires the Borough to operate a stormwater management program to address the following Minimum Control Measures:

- MCM 1. Public Education and Outreach on Stormwater Impacts
- MCM 2. Public Involvement and Participation
- MCM 3. Illicit Discharge Detection and Elimination
- MCM 4. Construction Site Stormwater Runoff Control
- MCM 5. Post-Construction Stormwater Management in New Development and Redevelopment
- MCM 6. Pollution Prevention and Good Housekeeping

Intergovernmental Cooperation Agreements

Town Council approved Intergovernmental Cooperation Agreements with Hamilton Township and St. Thomas Township to provide Stormwater Management Program Administrative Services for their MS4 Permits and Pollutant Reduction Plans that were approved by the Pennsylvania Department of Environmental Protection.

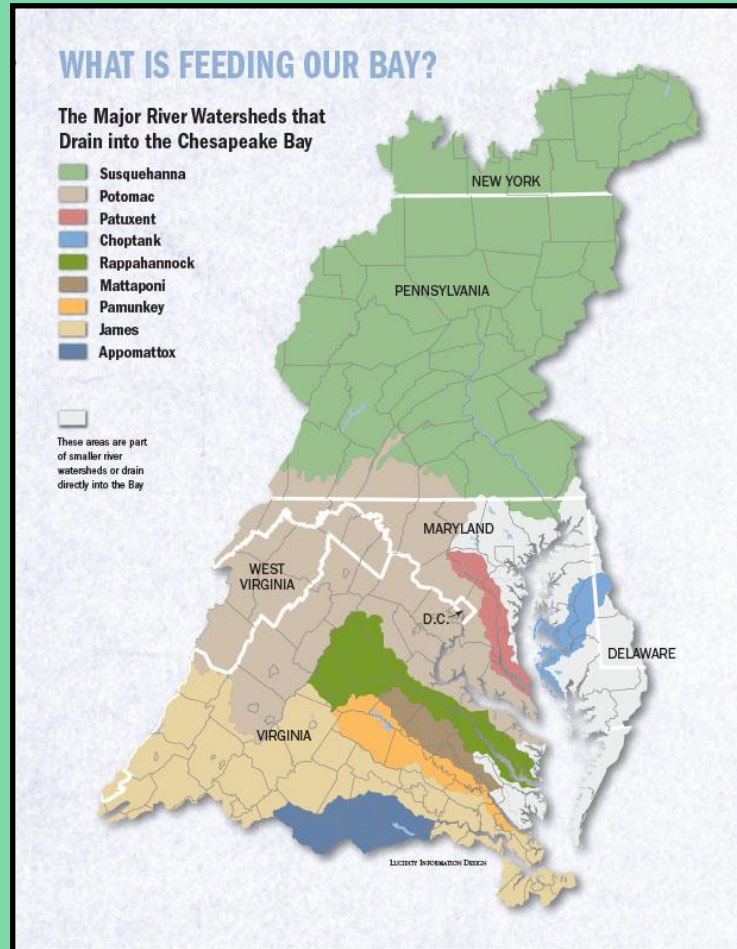
Services provided by the Storm Sewer Utility:

- Prepare MS4 Annual Report.
- Public education, outreach, involvement and participation.
- Code enforcement.
- Develop and implement operation and maintenance program for Township facilities.
- Develop and implement training program for Township employees to ensure prevention of pollutants from municipal operations to the MS4.

\$2,368.74 invoiced for services provided through September 30, 2024

\$2,851.00 received for services provided in 2023

Chesapeake Bay Pollutant Reduction Plan



Implement Best Management Practices (BMPs) to produce tangible improvements to the quality of stormwater discharges in the Chesapeake Bay Watershed.

Herbert, Roland, and Grubic, the Borough's storm sewer engineering consultant, prepared a Chesapeake Bay Pollutant Reduction Plan that was submitted to the Pennsylvania Department of Environmental Protection in 2017 for review along with the Borough's Notice of Intent for general MS4 Permit renewal coverage.



To date, completion of Best Management Practices projects approved through the plan have resulted in meeting 35% of the Borough's nutrient reduction goal of 417,247 pounds per year.

Chesapeake Bay Pollutant Reduction Plan

Best Management Practices projects were approved through the plan, which are intended to reduce the amount of nitrogen, phosphorous and sediment that are conveyed into the Falling Spring Creek and Conococheague Creek, which ultimately flows to the Chesapeake Bay via the Potomac River.

The Borough is responsible for funding these projects, with progress to be evaluated by DEP when our MS4 Permit expires on March 15, 2025.

Projects completed or in planning stages:

1. *Fifth Ave. Extension (complete)*
2. *Gilbert Avenue (complete)*
3. *Rhodes Drive (complete)*
4. *Central Avenue Parking Lot Rain Garden (complete)*
5. *Harrison Drive Inlet Filter (complete)*
6. *Fourth Street (complete)*
7. *South Main Street (complete)*
8. *Wolf Ave. Rail Trail (complete)*
9. *South Fourth Street (finance and construct 2025)*
10. *Water Street Infiltration Bed (complete)*

Table 6: Proposed BMPs

Site	BMP ID	BMP Type	Drainage Area (acres)	Length (ft)	Pollutant Load Reduction TSS (lbs/yr)
Rhodes Drive	BMP-1A	Bioswale	2.39	n/a	2,766
	BMP-1B	Pervious Pavement	0.31	n/a	81
Fifth Ave Extension	BMP-2	Subsurface Infiltration	6	600	3,879
Elder Street / W Commerce Street	BMP-3A	Subsurface Infiltration	9.2	n/a	5,047
	BMP-3B	Streambank Restoration	n/a	1,400	62,832
	BMP-3C	Subsurface Infiltration	9.18	n/a	5,036
	BMP-3D	Bioretention	4.35	n/a	3,580
Stevens Elementary	BMP-4A	Streambank Restoration	n/a	500	22,440
	BMP-4B	Riparian Buffer	12.38	n/a	6,670
Wilson College	BMP-5	Bioretention	103.5	n/a	100,368
Mill Creek Acres Park	BMP-6	Bioretention	100	n/a	96,974
Nitterhouse Park	BMP-7	Bioretention	7.2	n/a	5,925
Wolf Ave Rail Trail	BMP-8A	Bioretention Pocket	5.08	100	4,926
	BMP-8B	Bioretention Pocket	4.59	100	4,451
	BMP-8C	Bioretention Pocket	4.02	100	3,898
	BMP-8D	Bioretention Pocket	6.22	100	6,032
	BMP-8E	Bioretention Pocket	5.28	100	5,120
Fourth Street	BMP-9	Streambank Restoration	n/a	250	11,220
South Fourth Street	BMP-10	Subsurface Infiltration	29.3	n/a	16,074
Ludwig Ave Parking Lot	BMP-11	Subsurface Infiltration	2.52	100	1,383
South Main Street	BMP-12A	Stream Restoration	n/a	675	30,294
	BMP-12B	Riparian Buffer	7.06	675	3,804
Sheffler Drive	BMP-13	Riparian Buffer	31.6	n/a	14,447
Total					417,247

2024 Accomplishments

- Worked with Town Council to secure bond revenue totaling \$6,151,170 to fund Capital Improvements Projects for 2024, 2025 and 2026;
- Worked with GMS Funding Solutions, Urban Design Ventures and Dennis E. Black Engineering to prepare plans and compliance documents for the Southgate Shopping Center Stormwater Management Improvements Project, which is estimated to cost \$4,643,576, to be funded with \$3,300,000 grant from the United States Corps of Engineers and bond revenue;
- Hired JD Wagoner Excavating to complete the Chambersburg Rail Trail Stormwater Management Project for total cost of \$306,574.58, which was funded with \$220,000 from the Chesapeake Bay Trust Green Streets, Green Jobs, Green Towns grant program and Capital Reserve;
- Hired Utility Services Group to complete phases 1 and 2 of the Storm Sewer Cleaning and CCTV Project for total cost of \$142,477.65.00, which was funded from Operations;
- Hired Scott's Hauling and Excavating to complete the Pleasant Street Storm Sewer System Improvement Project for total cost of \$97,334.00, which was funded entirely with Franklin County Conservation District for a Dirt, Gravel and Low Volume Road Maintenance Program Grant;
- Worked with GMS Funding Solutions and PA Fish and Boat Commission Boating Facility Grant program to reallocate grant totaling \$58,500 for the Conococheague Creek Adaptive Canoe and Kayak Launch from the Chambersburg Rail Trail to Pine Woods Park, which will be matched with \$58,500 from Capital Reserve;
- Through September 30, 2024, spent \$123,000 on various storm sewer system maintenance projects and estimate spending \$50,000 more through December 31, 2024;
- Worked with Town Council, Solicitor and Intermunicipal Water, Wastewater, and Stormwater Liaison Committee to hire GHD as engineering consultant to provide capital improvement project design, cost estimate and management services and Herbert, Rowland & Grubic engineering consultant to provide stormwater management plan review services;

2024 Accomplishments

- Worked with Dennis E. Black Engineering, Inc. to prepare plans and bid specifications for the South Fifth Street Storm Sewer System Improvements Project, to be funded with bond revenue;
- Worked with Community and Economic Development Office and Engineering Office to complete the Meeting Place Greenway Project, funded with \$365,893 from CDBG-CV;
- Worked with Shelly, Witter & Fox to prepare plans and specifications for the Industrial Drive Storm Sewer System Improvements Project, to be funded with bond revenue;
- Hired FlockWorks to provide guided goat grazing to clear overgrown land along the banks of the Conococheague Creek adjacent to the Rail Trail;
- Worked with Town Council to eliminate the Storm Sewer Utility Rate Structure and Credit Program Advisory Committee and assign Storm Sewer Utility oversight to the Intermunicipal Water, Wastewater and Stormwater Liaison Committee;
- Provided public education to 103 Borough employees and 2 Town Council members through HSI training platform, 202 students at 7 fifth grade classes at 4 elementary schools and 23 single-family residential customers that attend the Stormwater Public Meeting on December 12, 2023;
- Issued 6 Stormwater Management Code violation notices;

Storm Sewer Pollution Control Fee and Credit Program

Storm Sewer Pollution Control Fees are classified in two ways; (1) as single-family residential, with those customers being charged one Equivalent Residential Unit (ERU) per month, and (2) as non-single-family residential (commercial, industrial and institutional), with those customers being charged based on the number of ERUs as a result of impervious area on their parcel. ERU is the average impervious area of all single-family residential properties in the Borough. One ERU equals 2,920 square feet. In essence, how many houses is a non-single-family residential parcel equivalent to in comparison to the average impervious surface of a single-family home.

There are currently 7,228 single-family residential and 744 non-single-family residential customers paying for 22,416 ERUs encompassing 65,454,720 square feet of impervious area. Of the 22,416 ERUs, 7,228 are for single-family residential customers and 15,188 are for non-single-family residential customers.

LAND USE	CUSTOMERS	SQUARE FEET	PERCENTAGE TOTAL
Single-family	7,228	21,105,760	32%
Non-single-family	744	44,348,960	68%
Total	7,972	65,454,720	

Storm Sewer Pollution Control Fee and Credit Program



Borough of Chambersburg
Storm Sewer Management Program Credit Policy Manual

As approved by Town Council on December 13, 2021

As revised by Town Council on December 12, 2022

As revised by Town Council on February 13, 2023

As revised by Town Council on September 25, 2023

As revised by Town Council on December 11, 2023

Three different credits are offered as means for customers to reduce monthly Storm Sewer Pollution Control Fees by implementing Best Management Practice (BMPs) activities to reduce the contribution of stormwater and pollutants to the storm sewer system and/or to aid in meeting MS4 permit obligations.

1. Single-family residential customers that attend Borough sponsored educational programs that comply with the MS4 Minimum Control Measure (MCM) for Public Education.
2. Non-single-family residential customers that install and maintain structural BMPs on their property that comply with the Borough's Stormwater Management Code.
3. Any customer that provides an easement for BMPs to be installed on their property to comply with the MS4 permit or Chesapeake Bay Pollutant Reduction Plan.

Storm Sewer Pollution Control Fee and Credit Program

PUBLIC EDUCATION CREDIT	Educational program to be offered in Council Chambers on Tuesday, December 17, 2024 at 7:00 p.m. Single-family residential customers that attend will receive reimbursement for one per ERU fee (\$5).
STRUCTURAL BMP CREDIT	<p>30% credit offered for structural BMPs that were installed on a customer's property after June 20, 2004 when Town Council first adopted Stormwater Management Code.</p> <p>15% credit offered for structural BMPs that were installed on a customer's property before June 20, 2004 when Town Council first adopted Stormwater Management Code.</p> <p>30% credit offered for customer properties where structural BMPs were installed before and after June 20, 2004 when Town Council first adopted Stormwater Management Code.</p> <p>40 of 744 non-single-family customers have structural BMPs with 30 customers approved for 30% credit and 10 approved for 15 % credit.</p>
EASEMENT CREDIT	No easement credits issued to date.
IMPERVIOUS AREA REDUCTION	No impervious area reductions approved to date.

Storm Sewer Pollution Control Fee and Credit Program

Town Council set the 2024 per month per ERU fee at \$5 with single-family residential customers charged one ERU (\$5 per month) and all other customers (non-single-family residential) charged ERUs based on the amount of impervious area on their property.

For 2025, staff recommends increasing the per month per ERU from \$5 to \$6, which will increase annual revenue by \$289,596, from \$1,324,356 to \$1,613,952.

2025 STORM SEWER POLLUTION CONTROL FEE			
Customers	Fee Amount	ERUs	Total Annual Revenue
Single-family	\$6 per month	7,228	\$520,416
Non-single-family with credit	\$6 per month	2,679	\$192,888
Non-single-family without credit	\$6 per month	12,509	\$900,648
Total		22,416	\$1,613,952

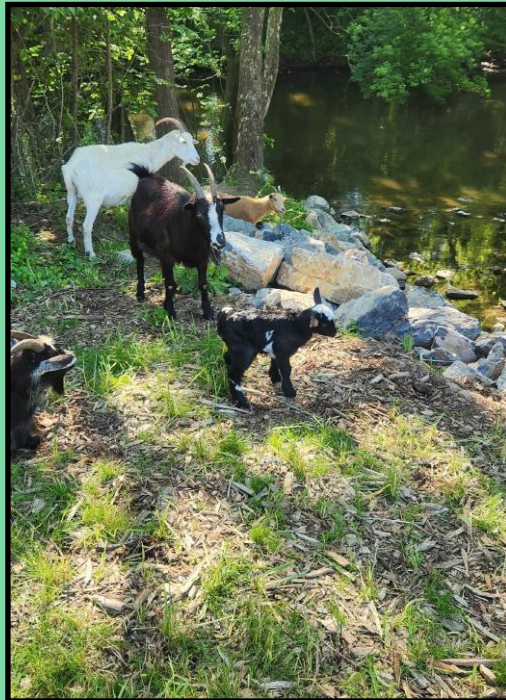
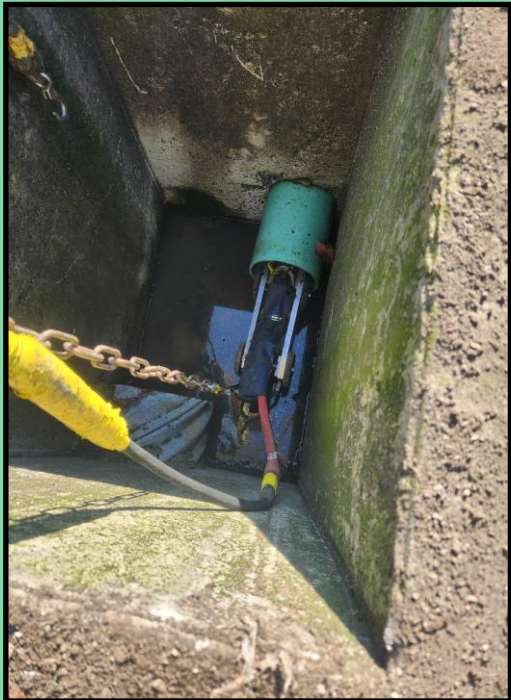
CUSTOMERS	IMPERVIOUS AREA	IMPERVIOUS AREA PERCENTAGE	REVENUE PERCENTAGE
Single-family	21,105,760 sf	32%	32%
Non-single-family	44,348,960 sf	68%	68%

2025 Goals and Recommendations

- Work with the Solicitor and GHD to prepare application to renew MS4 Permit and update the Stormwater Management Code;
- Hire contractor to complete the Southgate Shopping Center Stormwater Management Improvements Project, to be funded with \$3,300,000 grant from the United States Corps of Engineers and \$1,343,576 bond revenue;
- Hire contractor to complete the N. Fourth St. Storm Sewer System Improvements Project, to be funded with \$1,800,000 bond revenue;
- Hire contractor to complete the S. Fifth St. Storm Sewer System Improvements Project, to be funded with \$1,212,278 bond revenue;
- Hire contractor to complete the Industrial Dr. Storm Sewer Improvements Project, to be funded with \$550,000 bond revenue;
- Hire contractor to complete the Conococheague Creek Adaptive Canoe and Kayak Launch at Pine Woods Park, to be funded with \$58,500 grant from the PA Fish and Boat Commission and \$58,500 from Capital Reserve;
- Continue storm sewer system maintenance program, to be funded with \$300,000 from Operations;
- Hire contractor to complete phases 3 and 4 of the Storm Sewer Cleaning and CCTV Project, to be funded from Operations;
- Work with GHD to establish better capital improvements planning program by using data from CCTV Project;

2025 Goals and Recommendations

- Prepare and advertise bid specifications to hire contractor to complete storm sewer system improvements in conjunction with 2026 street improvements, to be funded from Capital Reserve;
- Prepare RFP to hire consultant for aerial photography and impervious coverage analysis, which was last completed in 2018;
- Establish a program to better inform property owners of maintenance requirements for BMPs on their property;
- Hire FlockWorks to provide guided goat grazing to clear overgrown land along the banks of the Conococheague Creek and other areas requiring maintenance.



Capital Improvements Projects Bond

2025		BOND	OTHER	TOTAL
1	Southgate Shopping Center Storm Sewer System Improvements Project	\$1,343,576	\$3,300,000	\$4,643,576
2	N. Fourth St. Storm Sewer System Improvements Project	\$1,800,000	\$0	\$1,800,000
3	S. Fifth St. Storm Sewer System Improvements Project	\$1,212,278	\$0	\$1,212,278
4	Industrial Dr. Storm Sewer Improvements	\$550,000	\$0	\$550,000
	TOTAL	\$4,905,854	\$3,300,000	\$8,205,854
2026				
1	Conococheague Creek Floodplain Mitigation Project Southgate Shopping Center	\$700,000	\$0	\$700,000
2	Fifth Ave. Drainage Conveyance Upgrades	\$272,658	\$0	\$272,658
3	Streambank Stabilization at Water Wheel	\$272,658	\$0	\$272,658
	TOTAL	\$1,245,316	\$0	\$1,245,316
2025/2026				
	TOTAL	\$6,151,170	\$3,300,000	\$9,451,170

Capital Improvements Projects Capital Reserve

2025		CAP RES	OTHER	TOTAL
1	Conococheague Creek Adaptive Canoe and Kayak Launch at Pine Woods Park	\$58,500	\$58,500	\$117,000
FUTURE PROJECTS				
1	Commerce St. Storm Sewer Upgrades (CBPRP BMP Project)	\$350,000	\$0	\$350,000
2	Fifth Ave. Drainage Conveyance Upgrades	\$275,000	\$0	\$275,000
3	Falling Spring Presbyterian Church Floodplain Restoration Project (CBPRP BMP Project)	\$260,000	\$0	\$260,000
4	Floodplain Restoration at Long John Silver's	\$200,000	\$0	\$200,000
5	Storm Sewer Upgrades at Lincoln Way East	\$150,000	\$0	\$150,000
6	S. Main St. Storm Sewer Upgrades	\$100,000	\$0	\$100,000
7	Stevens Elementary School (CBPRP BMP Project)	\$100,000	\$0	\$100,000
8	Wilson College (CBPRP BMP Project)	\$100,000	\$0	\$100,000
9	Grandview Ave. Storm Sewer Upgrades	\$100,000	\$0	\$100,000
10	Grant St. Storm Sewer System Improvements Project	\$100,000	\$0	\$100,000
11	King St. Storm Sewer System Improvements Project	\$100,000	\$0	\$100,000
12	Ludwig Ave. Parking Lot (CBPRP BMP Project)	\$100,000	\$0	\$100,000
13	Mill Creek Acres Park (CBPRP BMP Project)	\$100,000	\$0	\$100,000
14	Nitterhouse Park (CBPRP BMP Project)	\$100,000	\$0	\$100,000
15	Sheffler Dr. (CBPRP BMP Project)	\$100,000	\$0	\$100,000
	Total	\$2,235,000	\$0	\$2,235,000

2025 Revenue and Expenditure Recommendations

- Staff recommends increasing the per month per ERU from \$5 to \$6, which will increase annual revenue by \$289,596;
- As discussed with Town Council in 2023, staff recommends transferring \$100,000 from Storm Sewer Capital Reserve to General Capital Reserve to maintain alleys that serve as stormwater conveyance facilities;
- No personnel or vehicle changes recommended. Vehicle fleet includes 2020 Ford F Series Truck.

2025 REVENUE AND EXPENDITURES	
Storm Sewer Pollution Control Fee \$6 per ERU	\$1,613,952
Hamilton Township and St. Thomas Township	\$5,000
Other Revenue	\$5,000
Revenue Total	\$1,623,952
Operations	\$500,000
Transfer to Storm Sewer Capital Reserve	\$405,412
Bond Payment	\$318,540
Maintenance	\$300,000
Transfer to General Capital Reserve Alley Maintenance	\$100,000
Capital Reserve Balance September 30, 2024	\$8,328,163
NOTE: Excess cash balance end-of-year transfer from Operations to Storm Sewer Capital yet to be determined. Operations amount to be paid in 2025 for Public Works Campus yet to be determined.	