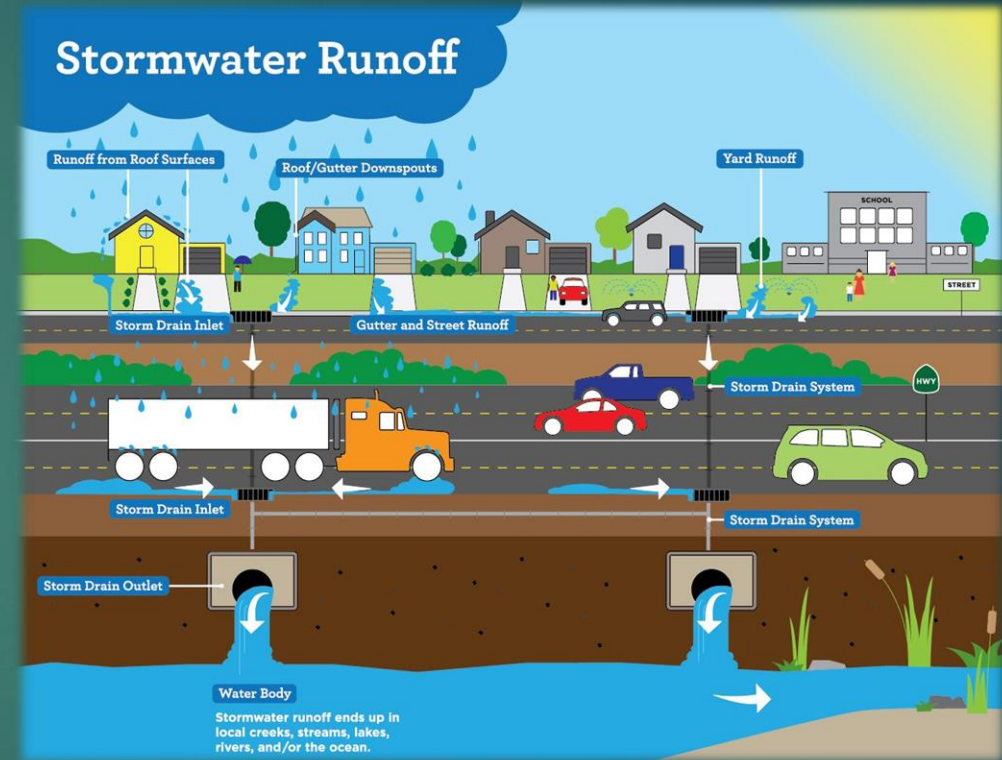


# Rehabilitating Our Waterways

# Stormwater Runoff

2

- ▶ Stormwater runoff occurs when precipitation from rain or snowmelt flows over the ground
- ▶ Pollutants, debris, and trash are carried off into waterways
- ▶ Stormwater runoff is the number one cause of stream impairment in urban areas



# Why is Stormwater Runoff a Problem?

3

## Pollution

- ▶ Stormwater runoff can pick-up debris, chemicals, dirt and other pollutants and flow into a storm sewer system or directly into a lake, stream, river, or wetland
- ▶ Anything that enters a storm sewer system is discharged, **untreated**, into the waterbodies we use for swimming, fishing, and drinking water

## Flooding

- ▶ Flooding increased as impervious surfaces replace natural vegetation, because water is unable to slowly filter into the landscape
- ▶ Stormwater deposits sediment into streams decreasing the natural depth of water ways, further contributing to flooding

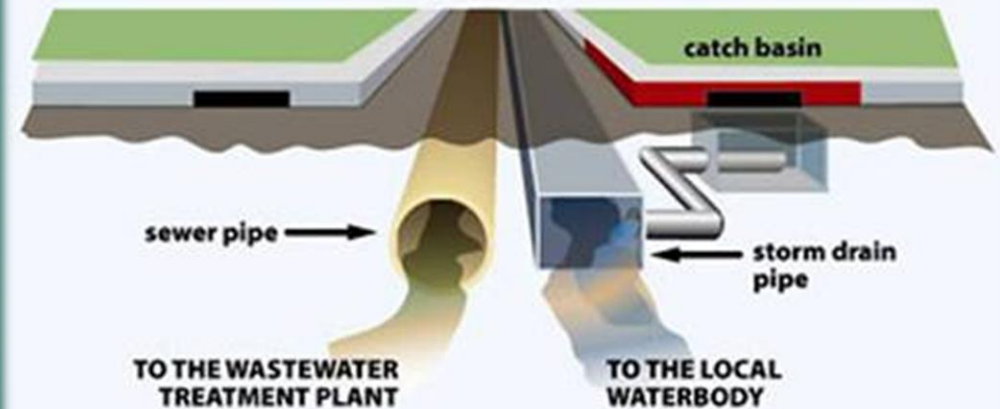
# What is MS4?

4

A Municipal Separate Storm Sewer System is a conveyance or system of conveyances that is:

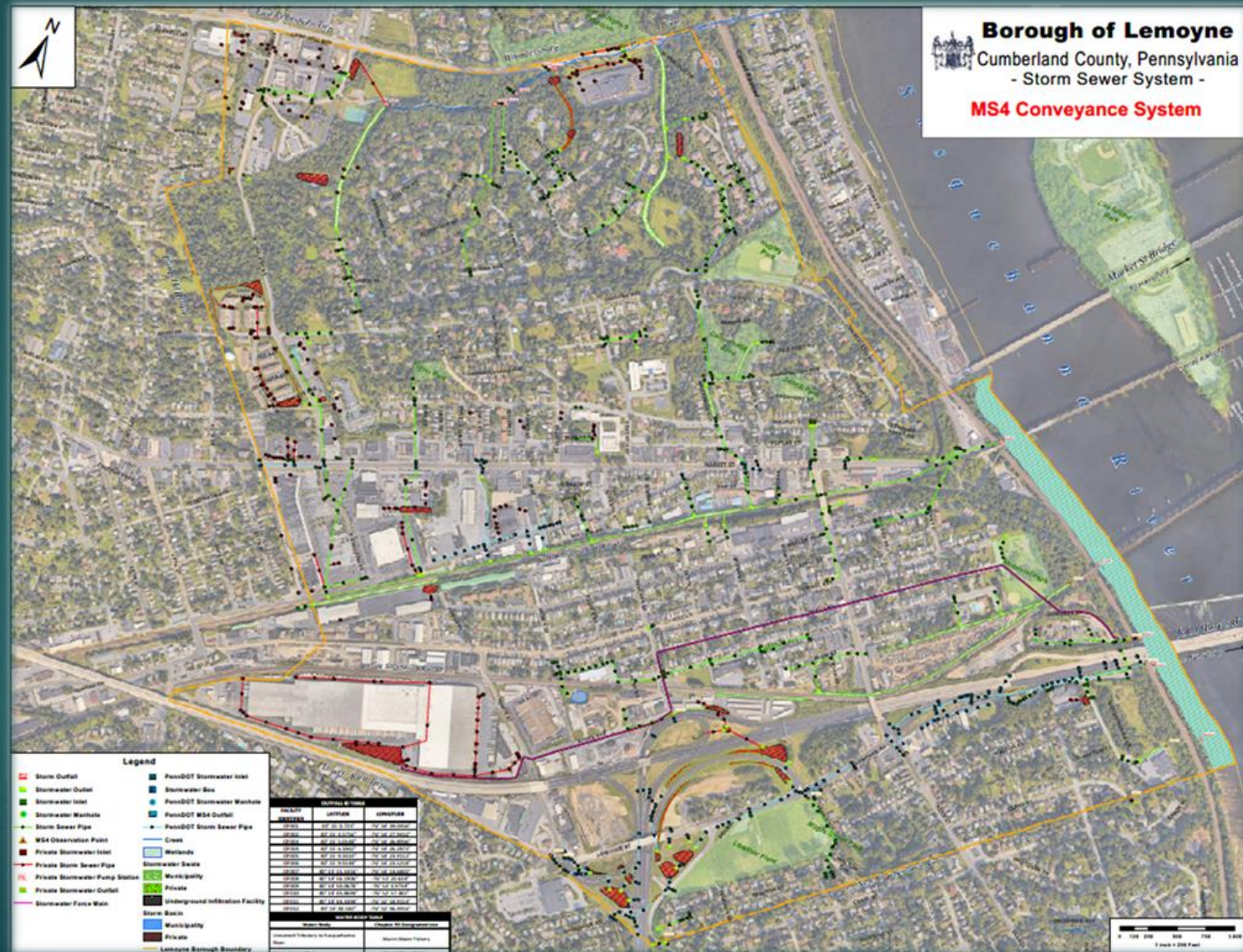
- ▶ Owned by a municipality
- ▶ Designed or used, to collect or convey stormwater
- ▶ Commonly discharged to local waterways, **untreated**

## Storm Drain Systems are Separate from Wastewater Systems



# Lemoyne Borough's MS4

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# Challenges in the Borough

6

## Localized Flooding

- ▶ 12<sup>th</sup> Street Plaza
- ▶ Farmers Market/Pizza Grill
- ▶ Norfolk Southern

## Regulatory Compliance

- ▶ Clean Water Act
- ▶ PA National Pollution Discharge Elimination System (NPDES)
- ▶ Municipal Separate Storm Sewer System (MS4)

## Public Engagement

- ▶ Partners
- ▶ Requirement of MS4

## Budgetary Constraints

- ▶ Existing Stormwater Fund
- ▶ General Fund
- ▶ Limited Grants

3500-PM-BCW0100d 5/2016  
Permit  
pennsylvania  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF CLEAN WATER

PAG-13  
AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
GENERAL PERMIT FOR STORMWATER DISCHARGES FROM  
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)  
APPROVAL OF COVERAGE  
NPDES PERMIT NO.

In compliance with the provisions of the Clean Water Act, 33 U.S.C. Section 1251 et seq. ("the Act") and Pennsylvania's Clean Streams Law, as amended, 35 P.S. Section 691.1 et seq.,

is authorized to discharge from a regulated small municipal separate storm sewer system (MS4) located in \_\_\_\_\_, \_\_\_\_\_ County to \_\_\_\_\_ in Watershed(s) \_\_\_\_\_ in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

FEDERAL WATER POLLUTION CONTROL ACT  
(33 U.S.C. 1251 et seq.)

AN ACT To provide for water pollution control activities in the Public Health Service of the Federal Security Agency and in the Federal Works Agency, and for other purposes.  
*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

TITLE I—RESEARCH AND RELATED PROGRAMS  
DECLARATION OF GOALS AND POLICY

SEC. 101. (a) The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act—

- (1) it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985;
- (2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;
- (3) it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited;
- (4) it is the national policy that Federal financial assistance be provided to construct publicly owned waste treatment works;
- (5) it is the national policy that areawide treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each State;
- (6) it is the national policy that a major research and demonstration effort be made to develop technology necessary to eliminate the discharge of pollutants into the navigable waters, waters of the contiguous zone and the oceans; and
- (7) it is the national policy that programs for the control of nonpoint sources of pollution be developed and implemented in an expeditious manner so as to enable the goals of this Act to be met through the control of both point and nonpoint sources of pollution.

APPROVAL OF COVERAGE TO DISCHARGE UNDER THE  
BEGINNING ON \_\_\_\_\_ WHEN THE GENERAL PERMIT  
FACILITY OR ACTIVITY COVERED BY THIS APPROVAL OF COVERAGE  
RENEWED, REISSUED OR MODIFIED GENERAL PERMIT NO. \_\_\_\_\_

The authority granted by coverage under this General Permit is:

1. The permittee shall comply with the effluent limitations of this Permit.
2. Following initial coverage under this General Permit, the permittee shall maintain continued coverage under the General Permit. The permittee shall not be required to renew, reissue or amend the General Permit. If the permittee is required to renew, reissue or amend the General Permit, the permittee must submit the renewal, reissue or amendment to the permittee within 90 days of publication of the final General Permit.
3. The NOI and its supporting documents are incorporated by reference into this General Permit. The terms, conditions, and conditions of this General Permit shall apply.
4. Failure to comply with the terms, conditions, or conditions of this General Permit shall constitute a violation of the Act, and shall constitute grounds for enforcement action, permit termination or revocation.

# Lemoyne Borough's Aging Infrastructure

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- ▶ 27,500 Linear foot of pipe (5.2 miles);
- ▶ 500 Inlets;
- ▶ 20 Manholes;
- ▶ 40 Endwalls;
- ▶ 19.88 Miles of Borough Roads; and
- ▶ 5.58 Miles of State roads.



# Localized Flooding

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- ▶ 12<sup>th</sup> Street Plaza
- ▶ Farmers Market/Pizza Grill
- ▶ Norfolk Southern



# Lemoyne Stormwater Management Plan

- ▶ Infrastructure construction, maintenance, and repair
- ▶ Stormwater quality improvement projects
- ▶ Flooding mitigation projects
- ▶ Permit Compliance
- ▶ Public education and Outreach
- ▶ Illicit Discharge Detection & Elimination

# What Have We Done So Far?

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## Market Street Rain Gardens

- ▶ The Market Street Streetscape project incorporated a series of rain gardens along the corridor. These rain gardens collect and treat polluted runoff from the road, preventing pollutants from being discharged to the Susquehanna River.

## Pollution Reduction Plan (PRP)

- ▶ The Borough developed a PRP as part of the 2017 PA DEP permit renewal process. The plan defines measurable goals of pollutant reduction over the next five years. As part of the planning process, the Borough applied for and received a grant from PA DEP for implementation of the stream restoration project identified in the plan.



# Why Are We Here?

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Currently, funds for operations and maintenance of the stormwater system and Stormwater Management Program come from the Stormwater Fund of the Operating Budget.

The Borough intends on implementing a Stormwater Assessment User Fee because the current funding strategy is no longer feasible because of:

- ▶ Increase in flooding and water quality issues
- ▶ **Unfunded** stormwater mandates from PADEP and EPA, including stormwater BMP projects
- ▶ Aging infrastructure
- ▶ Competition with other municipal services and needs



# What is an Assessment Fee?

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- ▶ A fee collected solely for the purposes of improving water quality, funding stormwater related projects, permits, infrastructure, and public education and outreach
- ▶ This fee provides the user with various stormwater related services, much like a sewer fee, trash collection fee, or water fee
- ▶ The collection of the fee is enabled by the Pennsylvania Borough Code
- ▶ **All money collected can only be used for stormwater management**

Summary of Parcels within the Borough	
Total Number of Parcels	1,902
Tax Exempt Parcels	47
Taxable Parcels	1,855

# Approximate Annual Expenses

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Determining expenses to provide an appropriate level of service

Description	2018	2018 Projected	2019	2020	2021	2022	2023
<b>Expenses:</b>							
Office							
Salary of Staff	\$ -	\$ -	\$ 61,000.00	\$ 63,440.00	\$ 66,612.00	\$ 69,942.60	\$ 73,439.73
MS4 Coordinator - Shared	\$ -	\$ -	\$ 60,000.00	\$ 61,800.00	\$ 63,654.00	\$ 65,563.62	\$ 67,530.53
Advertising	\$ -	\$ -	\$ 1,500.00	\$ 1,530.00	\$ 1,560.60	\$ 1,591.81	\$ 1,623.65
Printing	\$ -	\$ -	\$ 1,500.00	\$ 250.00	\$ 250.00	\$ 250.00	\$ 250.00
Engineering Fees-MS4	\$ 33,000.00	\$ 25,000.00	\$ 40,000.00	\$ 30,000.00	\$ 25,000.00	\$ 26,325.00	\$ 40,000.00
Engineering Fees-MS4 BMP Implementation	\$ 29,940.00	\$ 29,940.00	\$ 15,000.00	\$ 15,413.88	\$ 28,661.30		\$ 50,000.00
Engineering Fees - SWM System Replacement	\$ -	\$ -	\$ -	\$ -	\$ 25,000.00	\$ -	\$ 27,500.00
Other Services							
Right-of-way Rental	\$ -	\$ -	\$ -	\$ -	\$ 4,304.63	\$ 3,943.55	\$ -
Permits & Fees	\$ 500.00	\$ -	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00	\$ 500.00
Stormwater Management and Control							
Misc. Repairs	\$ 5,000.00	\$ -	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
Infrastructure Replacement	\$ 15,000.00	\$ -	\$ -	\$ -	\$ 175,000.00	\$ -	\$ 200,000.00
MS4 BMPs	\$ 160,000.00	\$ -	\$ 146,760.00	\$ -	\$ 86,092.50	\$ 78,871.00	\$ -
Minimum Control Measures	\$ 2,500.00	\$ -	\$ 5,000.00	\$ 5,250.00	\$ 5,512.50	\$ 5,788.13	\$ 6,077.53
Street Sweeping - Disposal			\$ 25,000.00	\$ 26,000.00	\$ 27,040.00	\$ 28,121.60	\$ 29,246.46
Street Sweeping - Water			\$ 15,000.00	\$ 15,600.00	\$ 16,224.00	\$ 16,872.96	\$ 17,547.88
Equipment							
Repairs			\$ 3,500.00	\$ 3,675.00	\$ 3,858.75	\$ 4,051.69	\$ 4,254.27
Purchase			\$ -	\$ -	\$ 35,000.00	\$ 35,000.00	\$ 35,000.00
Debt Service	\$ -						
Legal	\$ 1,000.00	\$ 500.00	\$ 3,500.00	\$ 5,500.00	\$ 3,100.00	\$ 3,400.00	\$ 1,000.00
IT Expenses			\$ 14,000.00	\$ 6,000.00	\$ 6,180.00	\$ 6,365.40	\$ 6,556.36
Billing			\$ 2,500.00	\$ 2,575.00	\$ 2,652.25	\$ 2,731.82	\$ 2,813.77
Misc. Expenditures	\$ -	\$ -	\$ 1,500.00	\$ 1,650.00	\$ 1,815.00	\$ 1,996.50	\$ 2,196.15
Transfer to General Fund	\$ -	\$ 19,740.00	\$ -				
Fund Transfer to Reserve	\$ -	\$ -	\$ 15,000.00	\$ 15,000.00	\$ 15,000.00	\$ 20,000.00	\$ 20,000.00
	\$ 246,940.00	\$ 75,180.00	\$ 421,260.00	\$ 264,183.88	\$ 603,017.53	\$ 381,315.67	\$ 595,536.34

# Equivalent Tenth of Acre Unit (ETU)

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- ▶ The total deeded acreage, divided by 0.1
- ▶ 1 ETU = \$7.70/month
- ▶ Based upon County parcel data
- ▶ All properties will be charged based upon the total number of ETUs for that parcel at a minimum of 1 ETU

## How did we determine the monthly ETU cost?

- ▶ The overall stormwater system costs were distributed over the total number of ETUs to come up with a fiscally responsible funding program

Single Family Residential ETUs	Adjusted Equivalent Tenth Unit for Billing	Monthly Bill
1	1	\$ 7.70
2 to < 5	2	\$ 15.40
5 to <10	3	\$ 23.10
10 to < 15	4	\$ 30.80
15 to < 20	5	\$ 38.50
20+	6	\$ 46.20

All Non-Single Family Residential properties will be charged based upon the total number of ETUs for that parcel at a minimum of 1 ETU

# ETU Fee Example – Residential #1

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## **505 OHIO AVENUE**

Deeded Acreage = 0.34 ac

Tenth of Acres = 3.4

Round down = 3

SFR adjusted ETU= 2 ETUs

**Stormwater Assessment User Fee =  
\$15.40/month, \$184.80/year**



# ETU Fee Example – Residential #2

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## 61 NORTH NINTH STREET

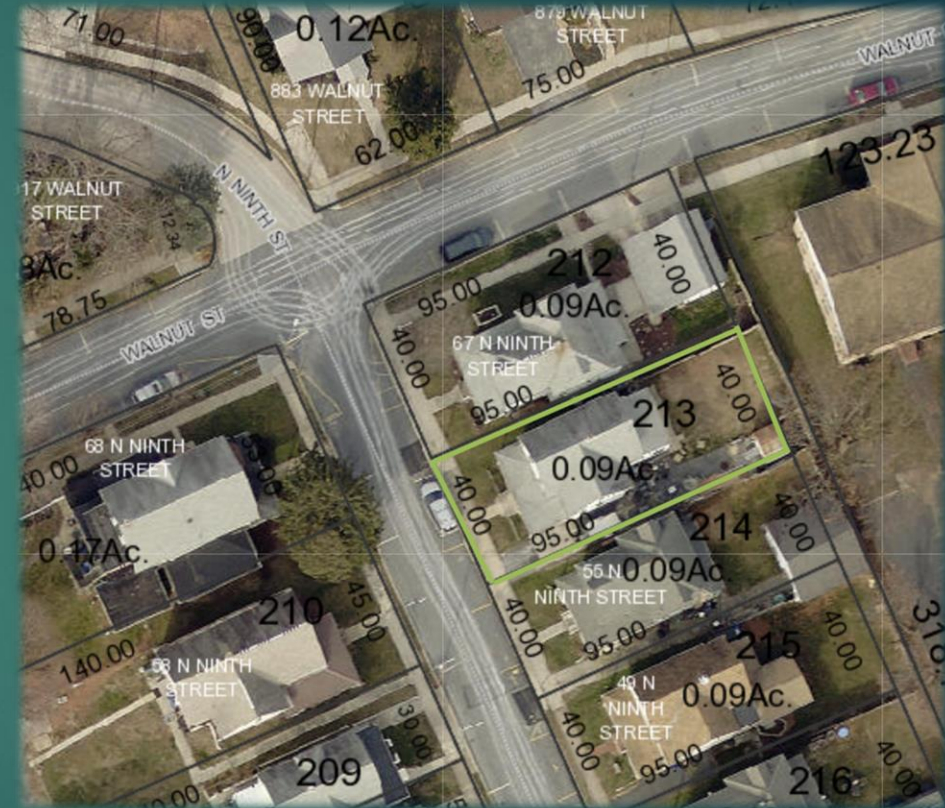
Deeded Acreage = 0.09 ac

Tenth of Acres = 0.9

Round down = 1

SFR adjusted ETU = 1 ETUs

**Stormwater Assessment User Fee =  
\$7.70/month, \$92.40/year**



# ETU Fee Example – Non-Residential #1

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## 271 Market Street

Deeded Acreage = 0.95 ac

Tenth of Acres = 9.5

Round Down = 9

Total ETUs= 9 ETUs

**Stormwater Assessment Fee =  
\$69.30/month, \$831.60/year**





# Existing SWM Facilities

19

- ▶ SWM Committee evaluated the impact of potential credits
- ▶ In the first two years to allow for establishment of the fund, stormwater credits will not be offered
- ▶ The Borough intends to establish a policy to allow for implementation of credits in the future



# Rehabilitating Our Waterways

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