

# Presentation

## City of Lock Haven **STORMWATER PROGRAM**

March 21, 2022



Presented by:  
Mark Glenn, P.E.  
Gwin, Dobson & Foreman, Inc.  
City Engineer Consultant

# November 2020 DPW Presentation

## CITY OF LOCK HAVEN STORMWATER FEE PROPOSAL



# City Street & Stormwater System

## City Inventory

- 45 miles - Streets & Alleys
- 50 miles – Curbs
- 26 Miles - Storm Sewers
- 1,300 Stormwater Inlets
- 300 Manholes

## Stormwater/Street Problems

- Potholes/Sinkholes
- Pavement Damage
- Missing/Damaged Curb
- Collapsed Pipe/Poor Inlets
- System 50-75+ Years Old



# Typical Drainage & Street Conditions



# System Needs - Fiscal Challenges

- **System-wide Needs**

- New curbs, storm sewers and new pavement
- Extent – 25 street miles
- Program – 30 to 40 years
- Annual Cost - \$0.75 to \$1.25 million (2022 dollars)
- Total Infrastructure Investment - \$30 - \$40 million (2022)
- Sanitary sewer & waterline renewals - coordination opportunity

- **Current Resources**

- Liquid Fuels Allocation – repaving, ramps, inlet repairs
- Annual Budget Allocations – maintenance of streets/storm sewers
- CDBG Funding – mostly parks, some paving projects
- PennDOT Funding – streetscape (curbs, sidewalks, lighting, repaving)
- Budgeted Capital Expenditures – “limited scope” street projects (<\$250,000)

# Typical Street Construction



# A New Option - Stormwater Program

PA municipalities are viewing stormwater control as a vital utility function on a par with water and sewer systems.

Unlike water and sewer utilities, reliable user charge revenues do not exist to rebuild stormwater/street systems at the required scale.

A Stormwater Program creates a separate entity that generates revenue and manages and applies resources. Can apply for grants and loans with borrowing/repayment ability.

Stormwater Program relies on an Equivalent Residential Unit (ERU) as the basic system charge for residential and other property users.

# Pennsylvania Stormwater Programs

- Clarion
- Chambersburg
- Gettysburg
- Camp Hill
- City of Harrisburg
- Ebensburg
- Many Townships

## Work To Be Done

Work on the stormwater system is needed all over the borough and there is a preliminary schedule to address the most pressing issues over the next five years. The total five-year cost is estimated at \$6 million. The tentative schedule for projects by outside contractors:

- Year One – Center Place.
- Year Two – Sunset Drive, Second Avenue Whitehill Place and Greenville Avenue.
- Year Three – East Wood Street; North Third and North Fifth avenues; and Toby Road at the boat launch.
- Year Four – Jefferson Place; Franklin Street; and Eighth Avenue at Church Road.
- Year Five – Grand Avenue, stream restoration of Trout Run.



The Clarion Borough Public Works crews will carry out smaller repair projects over five years at Grand Avenue Extension, South Sixth Avenue at Boundary Street, North Keatley Place, Wood Street at Veterans Drive, Frontier Way, Horizon Heights, Eastwood Drive, Fairview Avenue, and the end of Tippen Drive.

## The Clarion Borough Stormwater Authority

### Members of the Board

- Jason Noto, Chairman
- Ben Aaron, Vice Chairman
- Chuck Bartley, Treasurer
- Tom DiStefano, Secretary
- Bill Miller, Board Member

The Authority meets on the fourth Monday of the month at 7 p.m. in the Clarion Borough offices. The Authority was established by the Clarion Borough Council in 2016. Members of the board are appointed by the Council.

For more information on the Clarion Borough Stormwater Authority and Clarion's Plan for Stormwater, contact Todd Colosimo at [tcolosimo@clarionboro.org](mailto:tcolosimo@clarionboro.org) or 226-7707 ext 109.



One the web: [www.clarionboro.org](http://www.clarionboro.org)  
On Facebook: [Clarion Borough Stormwater Authority](#)

## CLARION'S PLAN FOR STORMWATER

Clarion Borough faces a major challenge as its aging stormwater system deteriorates: how to find the millions of dollars it will need for major renovations without overly burdening taxpayers. There's a solution.



**Everyone will pay their fair share** though the Clarion Borough Stormwater Authority's Stormwater Fee.

Much of the borough's stormwater flows from properties that are tax exempt – but no one will be exempt from the Stormwater Fee.

# Types of Programs

- **City Administration**
  - New Stormwater Department or City DPW (Stormwater Bureau)
  - Enabling Ordinances
  - Billing Coordination – Stormwater Fee Development
  - Interdepartmental – Engineering, GIS, DPW, Administration, Planning
- **Stormwater Authority**
  - Created by the City, Members Appointed by City
  - Establishes Rules and Regulations
  - Stand-Alone Operation – Above Functions
  - Financing & Contracting Authority
  - DPW Maintenance

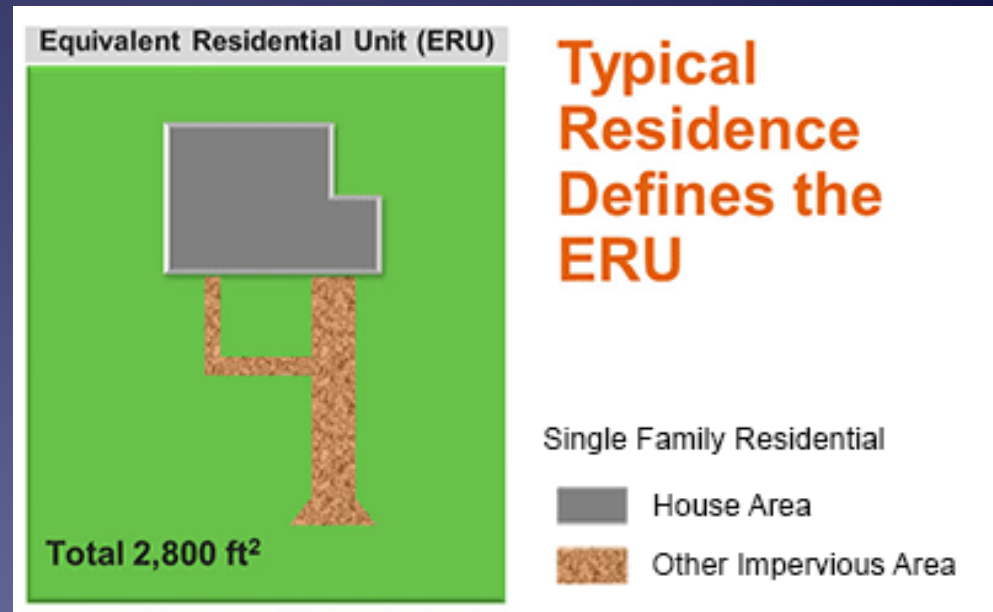
# ERU Fee Calculation

ERU based on stormwater generating potential of property measured by its impervious area.

Residential properties are measured and averaged to yield a common “ERU” of impervious area (in “sq ft”) – like a sewer “EDU” (in “gallons”).

Other properties (commercial, industrial, institutional) are individually measured and assessed in multiples of ERU’s

From GIS mapping, City/GDF measured each parcel (residential and others) which resulting in the following data...



ALL Residential Stormwater Fees are made on a FLAT RATE basis (monthly, quarterly or yearly) regardless of the lot size or amount of impervious area.

# ERU Calculation Results

- **Residential**

53.75% of all property area in the City

3,222 parcels (420 vacant), Total Impervious Area of City – 45.95%

Total Impervious Area – 8.7 million sq.ft.

ERU = **2,700 sq. ft.** Residential ERU's - 2,800

- **Non-Residential**

46.25% of all property area in the city

Total Impervious Area of the City – 54.05%

Total Impervious Area – 10.7 million sq.ft.

**FOR EACH PARCEL**, Total Impervious Area (SF) ÷ 2,700 SF = **# ERU'S**

Total Non-Residential ERU's - 4,528; Total City ERU's – 7,330

# ERU Fee Ranges

Anticipated Yearly Stormwater Project and Administrative Funding	<b>\$200,000</b>
Number of Equivalent Residential Units (ERUs) - See ERU Data Sheet	7,330
Anticipated Yearly ERU Fee (Item A. ÷ Item B.)	<b>\$27.29</b>

Anticipated Yearly Stormwater Project and Administrative Funding	<b>\$366,500</b>
Number of Equivalent Residential Units (ERUs) - See ERU Data Sheet	7,330
Anticipated Yearly ERU Fee (Item A. ÷ Item B.)	<b>\$50.00</b>

Anticipated Yearly Stormwater Project and Administrative Funding	<b>\$733,000</b>
Number of Equivalent Residential Units (ERUs) - See ERU Data Sheet	7,330
Anticipated Yearly ERU Fee (Item A. ÷ Item B.)	<b>\$100.00</b>

# Other Municipal Stormwater Program ERU Fees

<b>Municipality</b>	<b>2019 SWM Agency</b>	<b>2019 Population</b>	<b>MHI</b>	<b>Avg Annual Resid'tl. Charge</b>	<b>Est. Income Residential SW</b>
<b>City of Lock Haven</b>		9,083	\$34,293		
<b>Chambersburg Borough</b>	Borough	21,143	\$49,023	\$36.00	\$300,000
<b>Ebensburg Borough</b>	SWA	3,173	\$47,143	\$96.00	\$160,000
<b>Clarion Borough</b>	SWA	5,707	\$27,823	\$72.00	\$170,000
<b>Baldwin Borough</b>	Borough	19,554	\$65,420	\$96.00	\$700,000
<b>Gettysburg Borough</b>	SWA	7,724	\$43,349	\$100.00	\$240,000
<b>City of Harrisburg</b>	Capital Water	49,271	\$39,685	\$74.00	\$1,520,000
<b>City of Meadville</b>	City	12,655	\$36,793	\$90.00	\$500,000
<b>City of Hazleton</b>	City	24,794	\$40,467	\$25.00	\$230,000
<b>Borough of Highspire</b>	Borough	2,492	\$42,212	\$84.00	\$100,000
<b>Average (excludes Lock Haven)</b>		<b>16,279</b>	<b>\$43,546</b>	<b>\$74.78</b>	

# Supplemental Funding Programs

State - Pennvest, DCED, Commonwealth Financing Agency

Federal - Infrastructure Act (PennDOT/Pennvest administered)

## Clarion Borough - Center Place Storm Sewer

<b>County/Municipality:</b> Clarion/Clarion Borough	Center Place
<b>Loan Amount:</b> \$559,346.00	Clarion , PA 16214
<b>Grant Amount:</b> \$1,001,329.00	
<b>Interest Rate 1:</b> 1	
<b>Interest Rate 2:</b> 1	
<b>Term of Loan:</b> 240 months	
<b>Total Project Cost:</b> \$1,908,700.00	
<b>Approval Date:</b> 7/18/2018	
<b>Number of Households:</b> 0	
	<b>Green:</b> No
	<b>Status:</b> Interim
	<b>Source:</b> Federal
	<b>Type:</b> Storm Water
	<b>Program:</b> System



### **Description:**

The project proposes the installation of 22 storm water inlets, 2,835 feet of 48-inch diameter corrugated metal pipe and connection to 52-inch diameter storm water conveyance system located in Mike's Comet parking lot. The population impacted by this project has a household median income below the state median household income level. This is an existing storm water system that currently does not charge a separate storm water utility fee.

# Next Steps

## If City wishes to proceed with a Stormwater Program, next steps are...

- Institutional arrangements (City administration, municipal authority)
- Legal requirements (ordinances, rules & regulations)
- Project Engineering & Condition Assessment Report (proposed projects, costs, priorities)
- Finalize ERU calculations
- Public information and education
- Non-Residential property owners notification
- Initiate Stormwater Program activities (2023?)

# Questions - Comments

**GD&F**

GWIN  
DOBSON &  
FOREMAN

**ENGINEERS**