

GETTYSBURG BOROUGH STORMWATER AUTHORITY (GBSWA)

3 PART SERIES ON PUBLIC EDUCATION AND OUTREACH

PART 3: HOW MUCH DOES MS4 COST? FEES?

PRESENTED BY:

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Excellence in Civil Engineering

RECAP OF PART ONE HOW DID WE GET HERE?

- **Federal EPA expanded the CWA in 1972**
 - **NPDES**
- **PA DEP - Pennsylvania Clean Streams Law**
 - **PAG-13 - Authorization to discharge under the NPDES General Permit for Stormwater Discharges from Small MS4**
 - **2018–2023 MS4 General Permit**

RECAP OF PART 1 CONTINUED

➤ Consequences:

- Clean Water
- Increased Flooding
- Jeopardize Funding
- Fines

➤ Aging Conveyance:

- No easements
- Under/Through Homes and Buildings
- Causing Sink Holes
- Borough has funded repairs through loans



RECAP OF PART 1 CONTINUED

- **Borough Code doesn't allow for Boroughs to conduct the necessary Stormwater Management Related Services**
 - **House Bill 914 could change that but has yet to be enacted and has other limitations**
- **Gettysburg Council opted to create an Authority under the Municipal Authorities Act 53**
 - **Gives the GBSWA such purposes and powers as set forth in the Authorities Act including, but not limited to, the administration and assessment of related fees in connection with the construction, operation, maintenance and repairs necessary for the implementation and operation of the Borough's municipal separate storm sewer system and any other lawful purpose**

RECAP OF PART 2 HOW DOES MS4 WORK?

2018-2023 GENERAL PERMIT REQUIREMENTS:

- **Notice of Intent (NOI)**
- **Annual Reporting**
- **Six (6) Minimum Control Measures (MCMs)**
 - **MCM #1 - Public Education and Outreach on Stormwater Impacts**
 - **MCM #2 - Public Involvement/Participation**
 - **MCM #3 - Illicit Discharge Detection and Elimination (IDD&E)**
 - **MCM #4 - Construction Site Stormwater Runoff Control**
 - **MCM #5 - Post-Construction Stormwater Management (PCSM) in New and Redevelopment Activities**
 - **MCM #6 - Pollution Prevention/Good Housekeeping for Municipal Operations**

RECAP OF PART 2 CONTINUED

➤ **Pollutants of Concern:**

- Total Nitrogen (TN), Total Phosphorus (TP), and Total Suspended Solids (TSS) – Sediment

➤ **Three (3) Impaired Streams in the Borough:**

- Rock Creek
- Steven's Run
- Unnamed Tributary to Rock Creek

RECAP OF PART 2 CONTINUED

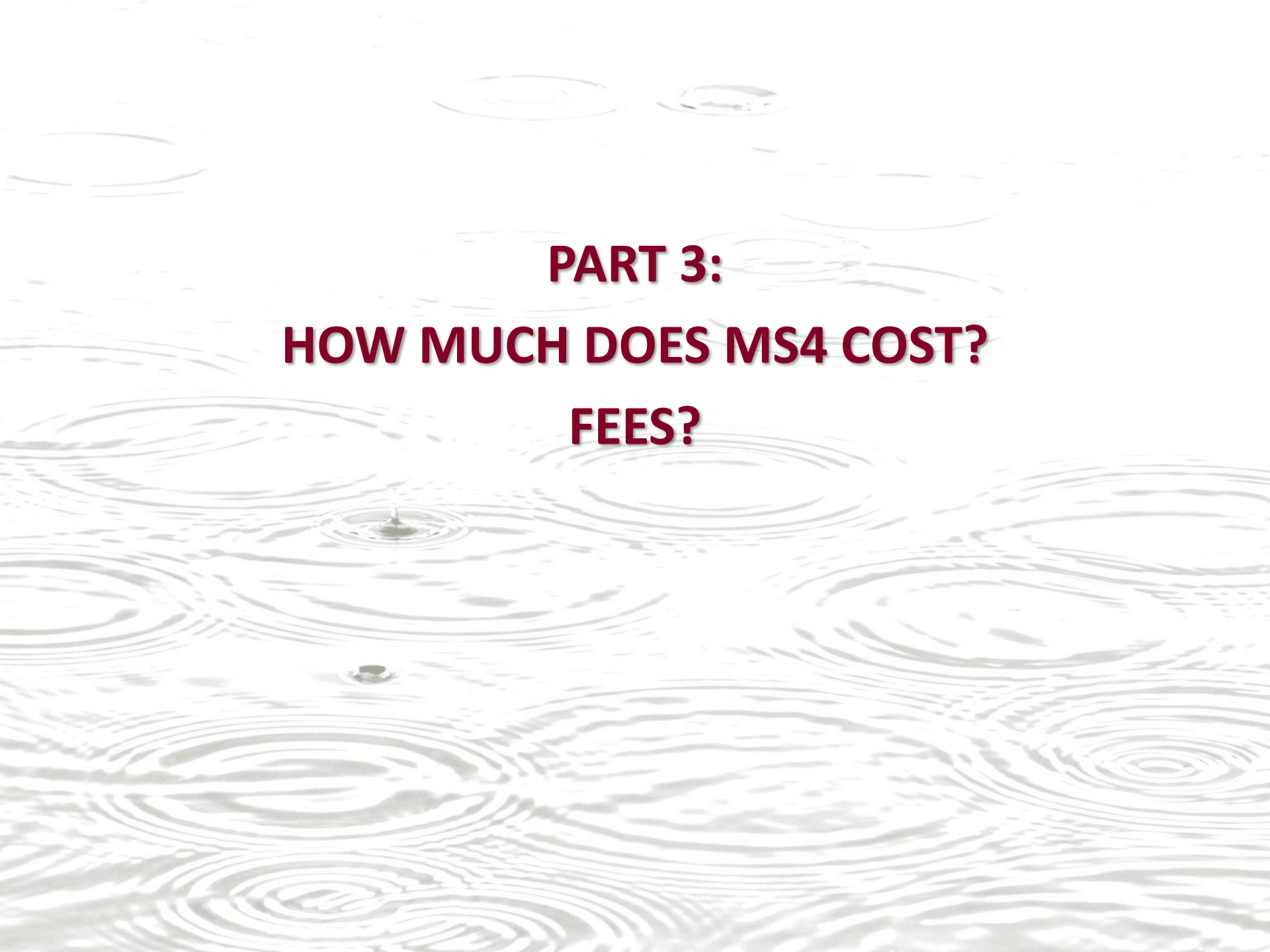
BASELINE LOADING USING DEP SIMPLIFIED METHOD

Land Cover	Area (ac)	TN lbs/yr	TP lbs/yr	TSS lbs/yr
Impervious Area	458	15,319	962	640,979
Non-Impervious Area	444	10,219	356	92,306
Total	903	25,538	1,318	733,285
Areas to be Parsed Out				
	Area (ac)			
Impervious Area	60			
Non-Impervious Area	54			
Land Cover (After Parsing)	Area (ac)	TN lbs/yr	TP lbs/yr	TSS lbs/yr
Impervious Area	399	13,324	837	557,513
Non-Impervious Area	390	8,968	312	81,012
Total	789	22,293	1,149	638,525
Existing BMP Reduction Credits		416	17	43,345
Adjusted Totals		21,877	1,132	595,180
Required Reductions		TN lbs (3%) 656	TP lbs (5%) 57	TSS lbs (10%) 59,518

RECAP OF PART 2 CONTINUED

BMPs TO ACHIEVE REQUIRED REDUCTIONS

Project No.	Project Name	BMP Type	Reduction Achieved (lbs. of sediment per year)
1	Gettysburg Inner Loop Segment A	Stream Restoration	7,630
2	Gettysburg Area Recreational Authority Parking Lot Improvements	Dry Extended Detention Basins	295
3	Gettysburg Area Recreational Authority Parking Lot D Improvements	Bioretention-Rain Garden (A/B Soils w/ Underdrain)	543
4	Mayor Alley Stream Restoration UNT to Rock Creek	Stream Restoration	1,122
5	Stream Bank Restoration UNT to Rock Creek (Culp's Farm)	Stream Restoration	44,880
6	Gettysburg Rec. Park Stream Bank Restoration & Rain Gardens	Bioretention-Rain Garden (A/B Soils w/ Underdrain) and Stream Restoration	N/A 22,607
7	E. Broadway Street Improvements	Bioretention-Rain Garden (A/B Soils w/ Underdrain)	3,125
8	Race Horse Alley Green Street Project	Permeable Pavement and Bioretention-Rain Garden (A/B Soils w/ Underdrain)	2,007
9	Borough Garage Rain Garden	Bioretention-Rain Garden (A/B Soils w/ Underdrain)	1,346
Total Reductions:			60,948



PART 3:
HOW MUCH DOES MS4 COST?
FEES?

GBSWA ANTICIPATED OPERATING COSTS

Operating Supplies	\$2,000.00
Computer/Copier Parts	\$2,000.00
Administrative Expenses	\$75,000.00
Accounting and Auditing	\$10,000.00
Engineering Services	\$15,000.00
Legal Expenses	\$5,000.00
Computer Software Fees	\$40,000.00
Legal Advertising	\$1,000.00
Repairs and Maintenance Storm Sewers	\$25,000.00
Capital Improvements Storm Sewers	<u>\$75,000.00</u>
Total Expenditures for 6-month Period	\$250,000.00
Annual Expenditures	\$500,000.00

STORMWATER FEE BACKGROUND

- **Borough Council discussed options for the best way to establish fee structures to fund the MS4 program.**
- **Borough Staff with the assistance of C.S. Davidson visited neighboring municipalities to collect examples and options for funding the program.**
- **Borough Council determined that the fairest way to assess a fee would be based on impervious coverage.**

IMPERVIOUS COVERAGE AND ERU ESTABLISHMENT

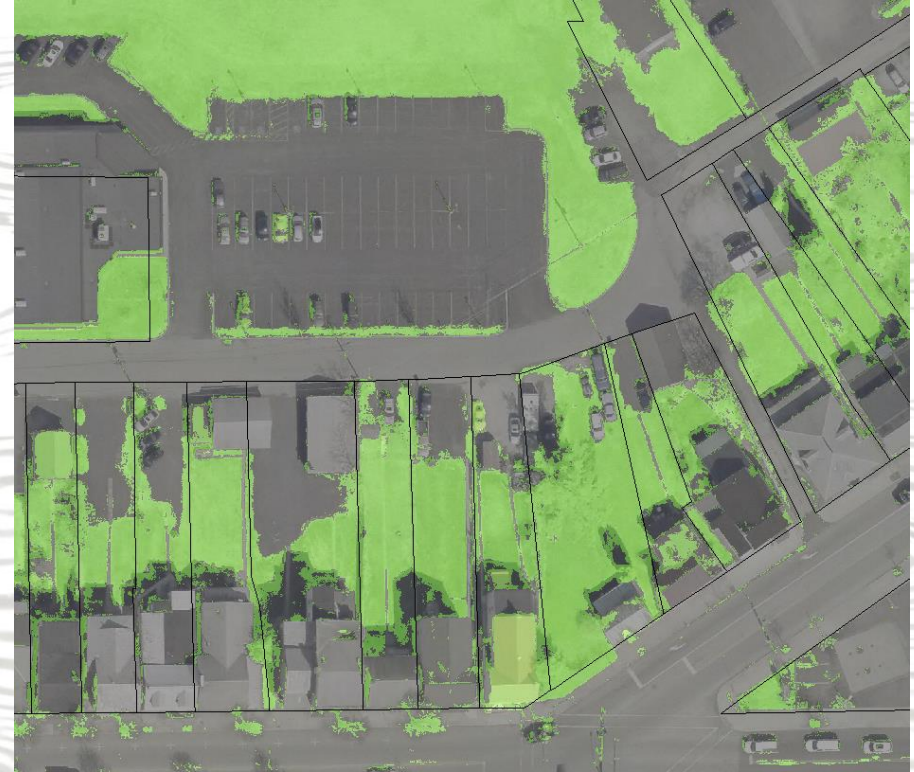
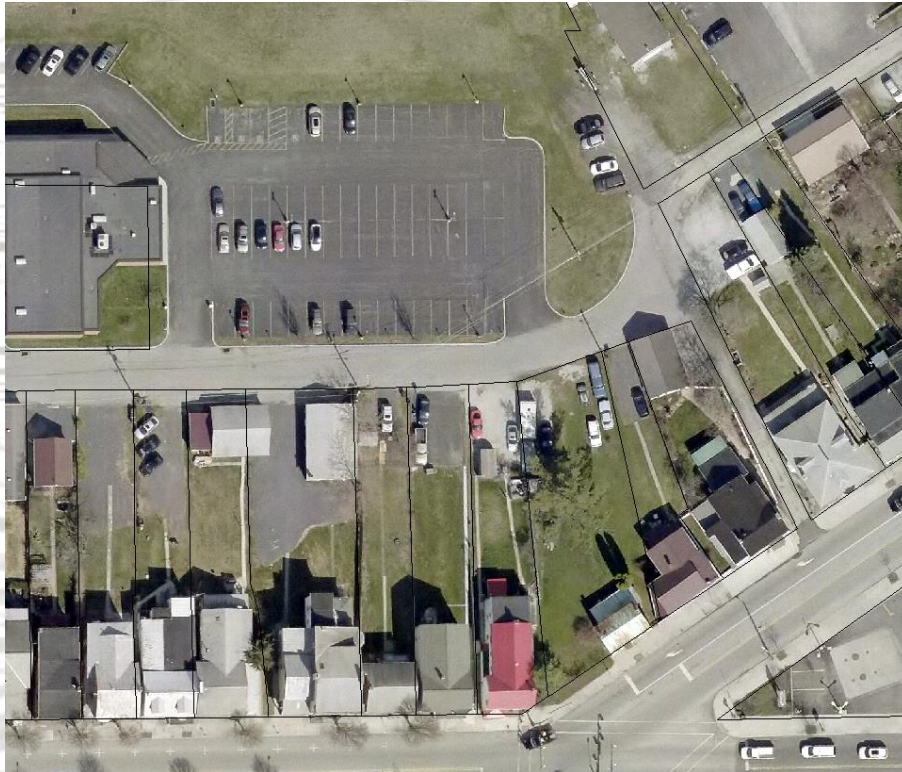
- “Equivalent Residential Unit (ERU)” Fee Structure selected as most applicable to the Borough.
- ERU Fee Structure bills an amount proportional to the impervious area on a parcel, regardless of the parcel’s total area.
- The average amount of impervious area for 1 ERU was calculated to be 2,500 square feet, i.e.,

$$1 \text{ ERU} = 2,500 \text{ sq.ft.}$$

- The 2,500 sq.ft. was calculated by averaging the total amount of impervious area for all Residential “R” parcels based on County designation.
- Recommended that parcels with less than or equal to 1,249 sq.ft. of total impervious area be charged 0.5 ERU

DATA COLLECTION AND FEE ESTABLISHMENT

- Total amount of impervious area per parcel was determined by calculating impervious surfaces from aerial imagery
- Borough roads, State roads, and public sidewalks were removed from land cover data to present a more accurate representation of the impervious area per parcel



ERU FEE STRUCTURE

➤ $Cost\ per\ ERU = \frac{Estimated\ Annual\ Operating\ Cost}{Total\ No.\ of\ ERUs} = \$/year$

Cost per ERU = $\frac{\$500,000.00}{5,000\ ERUs} = \$100.00/year$

Tier	ERU	Impervious Range (sq.ft.)	Estimated Annual Fee	Estimated No. of Parcels in ERU Range
1	0.5 ERU	0 - 1,249	\$50.00	246
2	1 ERU	1,250 - 3,749	\$100.00	1,076
3	Per ERU	Greater than or equal to 3,750	\$150.00 to \$65,900.00	580

ERU FEE STRUCTURE

Property Type Breakdown	ERUs	Revenue Contribution	Percentage
Commercial / Institutional	3,250	\$ 326,355.16	65%
Residential	1,400	\$ 142,218.77	28%
Industrial	200	\$ 19,234.51	4%
Other (Vacant, Utility, etc.)	150	\$ 12,191.57	3%
	5,000	\$ 500,000.00	100%

Residential Parcels	
ERU	Count
0.5	188
1	795
2	139
3	17
4	2
5	3
Total	1,144

FEE ROLLOUT

- **Authority is developing the RRR**
- **Annual Bill**
 - **First Billing – July of 2019**
 - **Payment in 30 days at 2% discount**
 - **Fourth Quarter Payments at Face Value**
 - **10% penalty for late payments**
- **Credit Program for BMP's**

QUESTIONS?



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