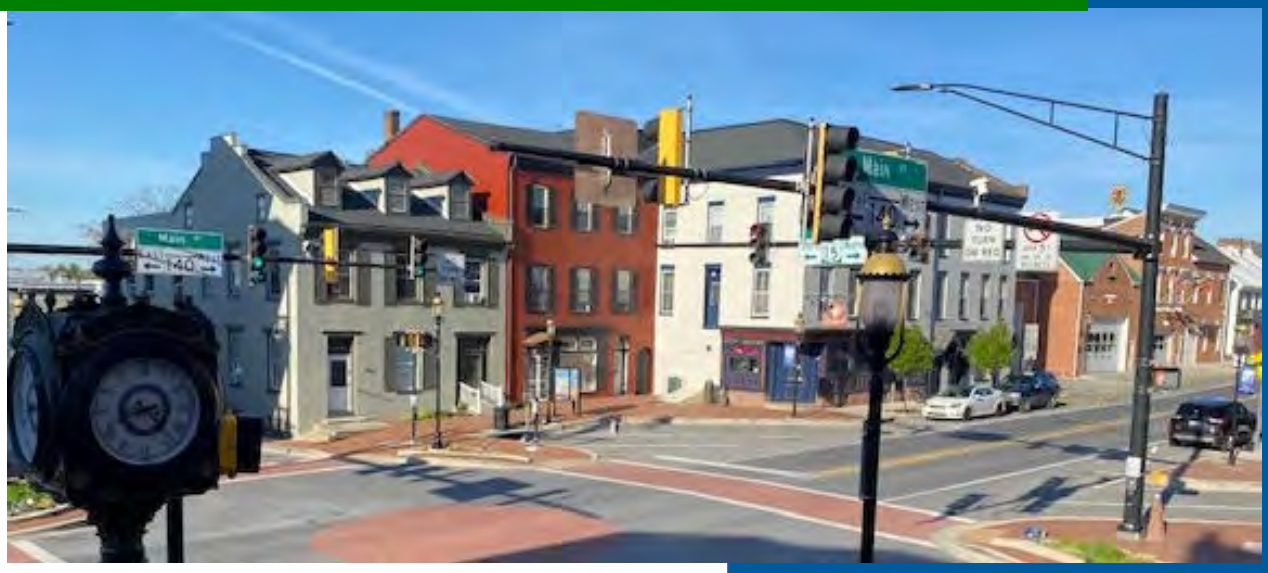
April 2022

Town of Emmitsburg
Stormwater Utility Feasibility Study



Prepared by:

Environmental Finance Center
University of Maryland

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Acknowledgements

The University of Maryland, Environmental Finance Center (EFC) would like to thank the Town of Emmitsburg staff their time and support of this project. EFC would also like to thank the members of the Stormwater Utility Feasibility Advisory Committee for their participation and candid conversation regarding the development of a stormwater utility fee. This project would not have been possible without their time and willingness to discuss the relevant issues.

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* Rachel Esses moved out of Town part way through the process and therefore had to resign from the Committee

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ENVIRONMENTAL FINANCE CENTER

Executive Summary

The Town of Emmitsburg is currently mid-way through its first MS4 Permit cycle (10/31/18 - 10/30/23). To date, most of the Town's effort has been focused on meeting the MCM requirements, leaving the more costly impervious restoration requirements for the later portion of the permit cycle. Additionally, the Maryland Department of the Environment (MDE) has informed the Town that there are certain activities that will need to be increased (such as the frequency of street sweeping) for the next permit cycle. These changes will add additional costs to the Town's limited stormwater management budget. Realizing their inability to afford the costs associated with stormwater management without additional funds, the Town contracted with the University of Maryland, Environmental Finance Center (EFC) to conduct a Stormwater Utility Feasibility Study.

Over the period of six months (October 2021-March 2022), EFC conducted a comprehensive Stormwater Utility Feasibility Study for the Town. This study included reviewing and analyzing the Town's existing stormwater program and future needs, conducting a Level of Service Analysis, reviewing the Town's budget and annual reports for the past three years, and conducting four meetings with the Stormwater Utility Feasibility Advisory Committee (the Committee). As part of this process, EFC also reviewed the fee structures, credit systems, appeals processes, and ordinances from a variety of regional jurisdictions.

Information from the aforementioned activities was used to explore and propose potential stormwater fee rate structures. Based on feedback from the Committee, EFC focused on preparing funding scenarios that were structured as a tiered system that was based on the Equivalent Residential Unit (ERU). Utilizing information from the annual reports, budgets, and Level of Service Analysis, EFC developed four detailed scenarios for the Committee's review. These scenarios included a bare-bones, $20 annual fee per ERU, a $26 per ERU per year fee to meet the Town's Impervious Restoration costs, a $32 per ERU per year fee to meet the Town's current level of service needs, and a $47 per ERU per year fee to meet the recommended level of service needs. In addition to preparing various cost scenarios, EFC also provided recommendations on a credit system structure and provided examples of appeals processes and ordinances that would serve as good guides for the Town.

EFC recommends the Town establish a stormwater fee with the following criteria:

- The fee should be billed quarterly as a separate line item on the existing water and sewer bill.
- The fee should be set at: $47 annually for Tier 2 properties.
- The fee should be set at $23.50 annually for Tier 1 properties.
- The annual fee for Tier 3 properties should be calculated using the actual impervious are for the parcel.
- A credit system for non-residential properties be established. This system should take into consideration the type of practice and associated reductions and should not exceed a 20% maximum credit.

The study findings and EFC's recommendations were presented to the Board of Commissioners at the Town Meeting on March 7, 2022.

Introduction

The Clean Water Act (1972) established the basic structure for regulating water pollution and allows the Environmental Protection Agency (EPA) to implement pollution control programs across the country. These programs include Total Maximum Daily Loads (TMDL). A TMDL is essentially a "pollution diet", meaning the amount of a specific pollutant that can enter a waterway in a given day is regulated. Because of poor water quality, the EPA has issued TMDLs for nitrogen, phosphorus, and sediment for every water within the Chesapeake Bay watershed. Local governments also have the ability to set local TMDLs for issues specific to the area. For example, the Upper Monocacy River has a Bacteria TMDL, and the Anacostia River has a TMDL for trash. Most importantly, it is important to remember that what is good for water quality in the Bay is also good for local water quality.

Stormwater runoff is water that flows over the land as a result of rain, snow, and ice melt. As it flows over yards, rooftops, roads, and other hard surfaces, it picks up chemicals, oil, sediment, and other pollutants before entering storm drains. In most cases, these storm drains empty directly into water bodies. This is one of the reasons that regulating, minimizing, and treating stormwater runoff is paramount to water quality. The primary tool used to regulate stormwater is the Municipal Separate Storm Sewer System (MS4) Permit. These permits, which are designed to regulate pollution from storm drains, are federally mandated and issued by the State.

MS4 permits require the implementation of six Minimum Control Measures (MCMs):

1. Public Outreach & Education
2. Public Involvement & Participation
3. Illicit Discharge Detection & Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post Construction Stormwater Management
6. Pollution Prevention & Good Housekeeping

MS4 permits also require Impervious Surface Restoration, in other words, completing Best Management Practices (BMPs) in order to capture and treat stormwater, allowing it to soak into the ground or be reused in order to minimize the amount of stormwater that is entering the storm sewer system. While the MCMs are the same for all permittees, the required amount of impervious surface restoration is specific to each permittee.

MS4 permits are reissued every five years, *in perpetuity*. If a permittee fails to meet the requirements of their permit, significant fines will be levied by the State. In addition to fines, improper management of stormwater can also lead to failing infrastructure, emergency repairs, increased treatment costs, water quality and habitat degradation, and public health and safety issues.

Meeting the requirements of a MS4 permit is costly, and most jurisdictions cannot pay for these expenses out of existing funds. For this reason, it is becoming more and more common for jurisdictions to implement Stormwater Utility Fees to help pay for the costs associated with stormwater management. In Frederick County, there are eight municipalities with MS4 permits, including Emmitsburg. The only one of the jurisdictions with a Stormwater Utility Fee is the City of Frederick.

Section 1: Background

The Town of Emmitsburg is currently mid-way through its first MS4 Permit[1] cycle (10/31/18 - 10/30/23). To date, most of the Town's effort has been focused on meeting the MCM requirements, leaving the more costly impervious restoration requirements for the later portion of the permit cycle. Additionally, the Maryland Department of the Environment (MDE) has informed the Town that there are certain activities that will need to be increased (such as the frequency of street sweeping) for the next permit cycle. These changes will add additional costs to the Town's limited stormwater management budget. Realizing their inability to afford the costs associated with stormwater management without additional funds, the Town contracted with the University of Maryland, Environmental Finance Center (EFC) to conduct a Stormwater Utility Feasibility Study.

Project Goals and Approach

- The purpose of the Stormwater Utility Feasibility Study was to assist the Town in evaluating the establishment of a stormwater utility. This process included:
    - Existing and future program review
    - Analyzing the current stormwater management system, practices, and plans
    - Conducting a Level of Service Analysis (LoS)
    - Reviewing the Town's budget and annual reports
    - Considering future needs
- Meeting with the Stormwater Utility Feasibility Advisory Committee
    - Reviewing stormwater impacts and regulation
    - Discussing stormwater funding and financing strategies
- Exploring and proposing rate structures
    - Based on existing and future needs as well as the Committee's recommendations
    - Developing recommendations for a credit system
- Developing Public Outreach & Education materials
- Researching options for an appeals procedure
- Drafting a Storm Water Ordinance

In the fall of 2021, the Town Council appointed a ten-member Stormwater Utility Feasibility Advisory Committee (the Committee) with members representing a variety of constituents including nonprofit organizations, residents, houses of worship, local businesses, Frederick County Public Schools, Frederick County, and the Emmitsburg Board of Commissioners. The Committee membership list can be found in Appendix A. EFC met with the Committee four times, monthly, between November 2021 and February 2022. The meetings were advertised and open to the public and were recorded and posted on the Town's YouTube channel. Citizens could also submit questions via email after the conclusion of the meeting. No comments were received. Following each meeting, EFC generated a summary flyer that was distributed by the Town. EFC's final meeting was the Town Meeting on March 7, 2022. At that meeting, EFC presented the study findings to the Board of Commissioners.

[1] https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/NPDES%20PII%20FINAL/Muni%20PII%20permit%20final%20042018.pdf

Summary of Stormwater Advisory Committee Meetings and Recommendations

Each of the Committee meetings was dedicated to a specific topic designed to expand the Committee's understanding of stormwater regulation and management, inform them about funding and financing options, and elucidate their opinions regarding establishing a utility. A brief description of each meeting is provided below and the slide decks from each meeting can be found in Appendix B. The summary flyers for each meeting can be found in Appendix C.

Meeting 1 – November 18, 2021

- Project background introduced the EFC and the anticipated process of the study.
- Stormwater 101 explained what stormwater is, its impacts to local water quality, how stormwater is regulated, and what activities the permit requires.
- A brief comparison to other permitted Frederick County jurisdictions touched on how they are addressing these needs.
- A cost of doing nothing discussion highlighted the potentially dangerous and costly impacts of choosing not to address stormwater.

Meeting 2 – December 16, 2021

- EFC's Level of Service Analysis detailed the current effort involved in stormwater management, existing programs and practices, planned projects, associated operations and maintenance, and gaps and future needs.
- Potential financing options explored ways to reduce program costs, the revenue streams communities often turn to for implementation and maintenance, and methods for engaging private property owners in taking action.

Meeting 3 – January 20, 2022

- An overview of stormwater fees nationwide and regionally described the geographic and financial spread of these programs.
- Potential fee systems considered the different structures they can take and how Equivalent Residential Units (ERUs) are generally calculated, as well as EFC's initial thoughts on considerations for the Town specifically.

Meeting 4 – February 24, 2022

- Stormwater Utility Fee recommendations that emerged from Committee Meeting 3 discussion, including how fees would be tiered based on Town parcel data and how residential and nonresidential parcels would be similarly treated, were explained.
- How the specific ERU for the Town was calculated was detailed.
- Four fee scenarios described the level of revenue to be generated based on Town parcel data and the programmatic responsibilities they could support.

Town Meeting – March 7, 2022

- Overview of stormwater regulation and the Town's MS4 permit
- Overview of stormwater fees nationally and regionally
- How the ERU for the Town was calculated and how the tiers were developed was detailed.
- Four fee scenarios described the level of revenue to be generated based on Town parcel data and the programmatic responsibilities they could support.

Section 2: Emmitsburg's Current Stormwater Management Program

Program Overview
Emmitsburg's Stormwater Management Program and MS4 related activities are currently overseen by the Town Planner/Zoning Administrator. According to the Town Planner/Zoning Administrator, managing these activities comprises approximately 40% of their current workload and at the time of this study, there was not a need for a full time MS4 Coordinator.

To date, the Town's emphasis has been on meeting the MCM requirements of the MS4 permit, deferring the impervious restoration requirements to the later portion of the permit cycle. The Town manages most of the MCM requirements in-house, with Frederick County and the Frederick County Soil Conservation District overseeing the MCMs associated with construction site stormwater runoff inspection and control (MCMs 4 and 5).

Most of the Town's stormwater management activities are paid for through the General Fund. The Town has also been very successful bringing in grant funds to help supplement stormwater management costs. However, as the Town shifts focus toward completing the impervious restoration requirements, the amount of grant funding needed to offset these costs will increase dramatically.

The Town's current funding sources and personnel requirements were taken into consideration when completing the Level of Service Analysis and in the building out of fee scenarios.

Level of Service Analysis
The purpose of a Level of Service Analysis is to assess the current state of stormwater management activities in the Town alongside any required or desired stormwater management objectives, and then determine what improvements may be needed to meet the Town's objectives. This analysis began with a thorough literature review of the following Town documents:

- NPDES General Permit for Discharges from Small MS4s
- 2019, 2020, and 2021 Annual MS4 Reports to MDE
- FY 2020, 2021, and 2022 Budgets
- Draft CIP Budget FY 2022-2027
- Capital Projects Schedule
- June 2021 NPDES Baseline Impervious Assessment
- Impervious Area (IA) Work Plan

During the literature review, EFC developed a list of questions for Town staff where either clarification was needed, or a more robust discussion would be helpful to determine Town goals. A discussion between EFC's project team and the Town Planner, Town Manager, and the Public Works Director took place on January 10, 2022. In addition to gaining a better understanding of Emmitsburg's current stormwater management program, this discussion helped determine what the Town's goals for its next permit cycle are. Cost estimates were developed based on past activities and projected needs for the next five years. This feedback was incorporated into the Annual Cost Scenarios in the next section of this report.

The level of service analysis, which includes a summary of the January 10th discussion, can be found in Appendix D of this report.

Section 3: Financing Options

Revenue Streams

Municipalities with successful stormwater financing strategies root their approach in local values and community context and employ a diverse mix of elements that connect various program needs with appropriate financing mechanisms. This diversity reduces risks to the program in the face of a changing regulatory landscape and the shifting priorities of both public and private sector funders. These mechanisms tend to fall into three broad categories: (1) cost savings approaches; (2) revenue and cash flow management; and (3) engagement of the private sector.

There are a number of ways that communities look to reduce the overall cost of stormwater programming. These include efforts in planning, regulation, asset management, coordination with other community priorities, and collaboration.

Once opportunities to reduce costs have been explored, municipalities look to a collection of revenue and cash flow management options available to pay for stormwater program needs. These range from general funds and grants, to bonds and loan programs, to dedicated revenue streams such as taxes and fee systems, each option having with their own strengths and weaknesses. Table 1 summarizes a variety of potential revenue streams.

Table 1: Potential revenue streams and the strengths and weaknesses of each.

Source	Cost Coverage		Strengths	Weaknesses
	Capital	O&M		
General Fund	Yes	Yes	Can be used to support all program costs	Competes with other community priorities, changed from year to year, less equitably spreads costs across payers
Grants	Yes	No	Good source for "shovel ready" project implementation, demonstration projects, and initial program staff	Not guaranteed, highly competitive, suitable for demonstration projects, not sustainable in the long-term
SRF & Loan Programs	Yes	No	Can offer up-front capital for larger projects	Not guaranteed fund source, highly competitive, must repay – often with interest
Bond Financing	Yes	No	Can be used for large, long-term expenditures	Dependent on fiscal capacity, must repay with interest, cost of securing bond may be high
Permit, Development & Inspection Fees	Yes	No	Offers nexus to system and program expansion needs	May not sufficiently cover program costs, may deter development
Stormwater Utility Fee	Yes	Yes	Can generate sufficient revenue, sustainable, dependable, equitable depending on design, supports all program costs	Requires significant public dialogue, can create administrative challenges
Tax Districts	Yes	Yes	Can generate sufficient revenue, sustainable, dependable	Necessitates enabling statute, can have equity problems sue to property value basis

Engaging Private Landowners

Finally, recognizing that relying on municipal or public properties alone will not likely be enough to achieve community goals or regulatory compliance, private property owner engagement in the installation and maintenance of stormwater practices becomes critical. Rebates, credit systems, and tax incentives have all been used by communities to encourage private property owner action. Whether in the presence or absence of a regulatory driver, the role of education and outreach is key to private property owner engagement and participation – private property owners are not going to invest in something they do not understand the value of. The ability to speak to the benefits of good stormwater management and flood mitigation as they relate to local priorities is integral to a successful program.

Section 4: Stormwater Fee

National and Regional Stormwater Fees

According to the 2021 Western Kentucky University Stormwater Utility Survey,[2] there are currently 1,851 stormwater utilities nationwide including MD (17), VA (30), PA (58), and the District of Columbia. Data also shows that implementation of stormwater of utilities is not governed by politics or size, with utilities occurring frequently in both liberal and conservative areas, as well as in large and small cities and towns.

Nationwide, fees range from $0 - $45/month with the average, single-family residential fee being $5.94/month and a median fee of $4.88. As seen in Table 2, in Maryland, fees range from $1.67 to $11.22, and the most common fee type is one based on an ERU. It is important to note that due to varying types of fees and billing cycles, a direct comparison cannot be made between these fees.

Table 2: A list of all the jurisdictions in Maryland that currently have stormwater fees.

Community	Fee Type	ERU (sq ft)	Fee	Year Created	Population
Annapolis	T		$3.33	2003	35,838
Anne Arundel County	T			2013	544,403
Baltimore	E	1,050	$5.00	2013	619,493
Berlin	D		$4.16	2013	4,491
Centreville	E	3,200	$2.50	2013	4,334
Charles County	F		$5.08		120,546
City of Frederick	E	1,000	$1.25	2013	
Gaithersburg	IA		$11.22	2015	
Hagerstown	E	1,000	$2.67	2020	
Harford County	D		$7.00	2013	246,849
Howard County	E	3,000	$7.50	2013	293,142
Montgomery County	E	2,406	$8.69	2002	873,341
Prince George's County	E	2,465	$3.46	2013	871,233
Rockville	E	2,330	$11.00	2007	47,388
Salisbury	E	3,344	$1.67	2014	31,507
Takoma Park	E	1,228	$7.67	1996	17,299

[2] https://digitalcommons.wku.edu/cgi/viewcontent.cgi?article=1003&context=seas_faculty_pubs

EFC evaluated the three most common fee structures (ERU, tiered, and flat fee) before developing recommendations for Emmitsburg. Table 3 summarizes the fee systems that are utilized by the City of Frederick and the Town of Berlin, MD and Gettysburg, PA. The City of Frederick and Gettysburg were chosen for comparison because of their proximity to Emmitsburg. Berlin was chosen because it is similar in size to Emmitsburg and also located in Maryland. Collectively, they also represent the three most common fee structures.

Table 3: The three primary fee systems that were used for comparison when considering options for Emmitsburg.

	City of Frederick, MD	Gettysburg, PA	Berlin, MD
Structure	Percent Impervious Factor (PIF)	Tiered (residential and nonresidential)	Flat Fee (residential) IA ERU (non-residential)
PIF / ERU	30% - single family 55% - townhouse & Downtown district	1 ERU = 2,500 sq ft	1 ERU = 2,100 sq ft
Rate	$21.97 / 1,000 sq ft of IA	$100 / ERU Tier 1 = $50/year Tier 2 = $100/year* Tier 3 = $100/ERU	Flat fee of $50 / year for single family and townhomes $25 / ERU for non-residential
Billing Structure	Line item on water & sewer bill (quarterly)	Billed separately on July 1 Can pay in full and receive 2% discount or can pay quarterly at full rate	Line item on utility bill (monthly)
Exemptions	None	None	None
Credit System	Commercial only – varies depending on age & standards met	Any property 0.5 ERU or larger – up to 20% of total fee	Commercial and NGO only – up to 20% of total fee
Sample Fee Commercial 54,450 sq ft IA	Yearly fee = $1,196.27 Max credit = $717.76*	Yearly fee = $2,200 If paid in full = $2,156 Max credit = $440	Yearly fee = $650 Max credit = $130

Based on input from the Committee, EFC focused on a tiered fee structure that was based on an ERU and did not differentiate between residential and non-residential parcels.

Calculation of the Equivalent Residential Unit (ERU) and Equitable Tiers

Before developing potential cost scenarios, the ERU must be calculated. The first step in this process is measuring the IA (pavement and buildings) for all Town parcels except those classified as Right-of-Way (ROW). This analysis was completed using GIS software and the resulting data was exported and analyzed in Excel (See Appendix E for a detailed methodology). Once the IA was measured, the ERU was calculated by determining the average IA of all single-family residential properties. The ERU was then used to develop a fee structure.

In the case of Emmitsburg, residential parcels were those zoned as R-1, R-2, R-3, and certain parcels within the Village Zone (VZ). A list of the VZ parcels and their classification can be found in Appendix F. As seen in the box to the right, the ERU for Emmitsburg was determined to be 2,932 sq ft.

ERU Calculation for Emmitsburg

Total residential lot IA = 2,594,387 sq ft

Total residential units = 885

2,594,387 / 885 = 2,932

1 ERU = 2,932 sq ft

Once the ERU was calculated, it was used to determine an equitable tier system. This was done by evaluating the amount of IA on all the Town's residential parcels and breaking them down into subsets so that the majority of the parcels fall into a tier that would be assessed a fee for 1 ERU. It was determined that a three-tier system makes the most sense for Emmitsburg. As seen in Table 4, in this scenario, 69% of all residential parcels fall into Tier 2, meaning they will be assessed a fee associated with 1 ERU and the 20% of the parcels in Tier 1 will pay a fee associated with 0.5 ERU. Residential parcels with an ERU greater than 4,398 sq ft, the largest residential parcels, are classified as Tier 3 and will pay a fee that is calculated according to the actual amount of IA on the property. This is done by taking the total IA on the property, dividing it by the ERU and then multiplying it by the fee.

Table 4: The breakdown of residential parcels in each tier.

Residential	Tier	ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	173	20%
Sq Ft > 1,466 and <= 4,398	2	1	616	69%
Sq Ft > 4,398	3	Calculated	96	11%

After determining the tiers for residential properties, the same system was applied to the non-residential parcels. As seen in Table 5 below, in this scenario, the majority of the non-residential properties (72%) fall into Tier 3, meaning that their fees will be calculated based on the actual amount of IA on the parcel. This result is to be expected given the fact that non-residential or commercial properties typically have a larger impervious footprint due to the size of the building and parking areas.

Table 5: The breakdown of non-residential parcels in each tier.

Residential	Tier	ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	11	16%
Sq Ft > 1,466 and <= 4,398	2	1	8	12%
Sq Ft > 4,398	3	Calculated	49	72%

Annual Cost Scenarios

After determining the ERU and equitable tiers, the project team developed a series of fee scenarios. These scenarios were based on a combination of information from the Town's past three years of annual reports and the Level of Service Analysis. The detailed cost scenario information can be found in Appendix G. Each scenario is summarized below and based on the following assumptions:

- A 3-Tied system as described in Section 4
- An ERU of 2,932 sq ft
- No differentiation between residential and non-residential parcels

Scenario A - $20 a Year / $5 a Quarter

In an attempt to address the financial hardship concerns expressed by several of the Committee members, a bare-bones $20 per ERU per year scenario was considered. **Charging all properties $20 per ERU per year will generate a total revenue of $34,851.80 annually.** It would then be up to the Town to determine how to best allocate those funds. The breakdown of how fees would be allocated for all Tier 1 and Tier 2 residential and non-residential properties is shown in Tables 6 and 7. The calculated fees for Tier 3 properties, along with a sample calculation can be found in Appendix H.

Table 6: The breakdown of residential fees per tier at a rate of $20/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$2.50	$10.00	$1,730.00
2	$5.00	$20.00	$12,320.00
3	calculated	calculated	$5,117.45
		Total Revenue	**$19,167.45**

Table 7: The breakdown of non-residential fees per tier at a rate of $20/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$2.50	$10.00	$110.00
2	$5.00	$20.00	$160.00
3	calculated	calculated	$15,414.35
		Total Revenue	**$15,684.35**

Scenario B - Just Impervious Restoration Costs; $26 a Year/ERU

This scenario would look to generate sufficient revenue to address the costs of meeting the Town's impervious restoration requirements, including:

- Arbor Day tree plantings
- Developing the Impervious Area Restoration Work Plan and updating it as needed
- Town owned BMP maintenance
- Silo Hill project costs
- Operations and Maintenance (O&M) costs for the two BMPs that are currently in the design phase
- Inlet repairs
- Outfall stabilization

This scenario also introduces the idea of building a reserve fund for stormwater management. These dollars would be put aside to address unexpected expenses, legal fees, and grant proposal match requirements. It is generally recommended to aim for a reserve fund that is 10% to 20% of total system costs, inclusive of green infrastructure. In the absence of an Asset Management program that defines total system costs for the Town's stormwater system, **EFC is suggesting starting with $25,000 annually**.

Using the Town's last three Annual MS4 Reports as guidance, **EFC projected these costs to be approximately $45,000 a year, which would equate to an annual fee of $26 per ERU.** The breakdown of how fees would be allocated for residential and non-residential properties is shown in Tables 8 and 9. The calculated fees for Tier 3 properties, can be found in Appendix H.

Table 8: The breakdown of residential fees per tier at a rate of $26/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$3.25	$13.00	$2,249.00
2	$6.50	$26.00	$16,016.00
3	calculated	calculated	$6,652.68
		Total Revenue	**$24,917.68**

Table 9: The breakdown of non-residential fees per tier at a rate of $26/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$3.25	$13.00	$143.00
2	$6.50	$26.00	$208.00
3	calculated	calculated	$20,038.66
		Total Revenue	**$20,389.66**

Scenario C - Current Level of Service; $32 a Year/ERU

This scenario was calculated using the Town's last three Annual MS4 Reports to determine necessary activities and associated costs, as well as the costs associated with comments from MDE regarding additional practices needed to maintain the current level of BMP credits. These costs included all the items from Scenario B, except the reserve fund, as well as:

- Inspection and compliance costs
- Increased street sweeping costs
- Catch basin cleaning costs
- Annual training costs

EFC projected these costs to be approximately $59,000 a year, which equates to an annual fee of $32 per ERU. The breakdown of how fees would be allocated for residential and non-residential properties is shown in Tables 10 and 11. The calculated fees for Tier 3 properties, can be found in Appendix H.

Table 10: The breakdown of residential fees per tier at a rate of $32/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$4.00	$13.00	$2,768.00
2	$8.00	$32.00	$19,712.00
3	calculated	calculated	$8,187.92
		Total Revenue	**$30,667.92**

Table 11: The breakdown of non-residential fees per tier at a rate of $32/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$4.00	$13.00	$176.00
2	$8.00	$32.00	$256.00
3	calculated	calculated	$24,662.96
		Total Revenue	**$25,094.96**

Scenario D - Recommended Level of Service; $47 a Year/ERU

This scenario was also calculated using the last three Annual MS4 Reports, the additional requirements per MDE, and added the O&M costs for two BMPs currently in the design phase.

More specifically, costs included in this scenario were all the items from Scenario B, as well as:

- O&M for two BMPs currently in the design phase.
- Contributing $25,000 per year to a reserve fund.

EFC projected these costs to be approximately $85,000 a year, which equates to an annual fee of $47 per ERU. The breakdown of how fees would be allocated for residential and non-residential properties is shown in Tables 12 and 13. The calculated fees for Tier 3 properties, can be found in Appendix H.

Table 12: The breakdown of residential fees per tier at a rate of $47/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$5.89	$23.50	$4,065.50
2	$11.75	$47.00	$28,952.000
3	calculated	calculated	$12,026.00
		Total Revenue	**$45,043.50**

Table 13: The breakdown of non-residential fees per tier at a rate of $47/ERU

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$5.89	$23.50	$258.00
2	$11.75	$47.00	$376.00
3	calculated	calculated	$36,223.73
		Total Revenue	**$36,858.23**

Town Parcels

Town parcels were excluded before the ERU was calculated and they were not included in any of the scenario calculations. There are a total of nine Town parcels. Two of the parcels fall into Tier 1 and the remaining seven fall into Tier 2. Table 14 shows the total fee that would be assessed on Town parcels, should the decision be made to include them.

Table 14: The total fee that would be assessed to Town parcels in each scenario.

Scenario	Total Fee
1	$3,525.47
2	$4,583.11
3	$5,640.75
4	$8,284.85

Stormwater Fee Findings

After reviewing the Town's current and future stormwater management needs and existing budgets and conducting a Level of Service analysis, EFC recommends the Town establish a stormwater fee with the following criteria in order to provide enough revenue for the Town to meet these existing needs, while also accounting for future O&M costs and establishing a reserve fund. The proposed rates also take into consideration the fact that, as learned from other jurisdictions, it is much easier to lower a fee in the future than it is to increase one:

- ***The fee should be billed quarterly as a separate line item on the existing water and sewer bill.***
- ***The annual fee should be set at: $47 annually ($11.75/quarter) for Tier 2 properties*** (see page 14 for more details).
- ***The annual fee should be set at $23.50/year for Tier 1 properties***. This works out to be a nominal fee of $5.89/quarter (see page 14 for more details).
- ***The annual fee for Tier 3 properties should be calculated using the actual IA for the parcel.*** Details on this calculation can be found in Appendix H.
- ***A credit system for non-residential properties be established.*** More details on this recommendation are discussed in the following section.

To offer context regarding the scale of these potential fee scenarios, EFC also considered what a comparable tax increase to cover these expenses might look like. The Town currently taxes property at a rate of 0.3464 per $100 assessed. There are $205,148,120 worth of assets in the total assessment, meaning that the Town currently receives $710,633.09 in annual property taxes. To pay for the current level of service (Scenario C), the Town would need to fill a $14,251.60 deficit with tax revenue, increasing the property tax rate to 0.3533 per $100 assessed. To pay for the recommended level of service (Scenario D), the Town would have to fill a $39,540.13 gap with tax revenue which would increase the property tax rate 0.3657 per $100 assessed. Calculations can be found in Appendix I of this report.

Stormwater Fee Credit Systems

A credit system provides a way for property owners to recover a portion of their stormwater fee by installing and maintaining stormwater Best Management Practices (BMPs). Credit systems are not without complication, the least of which is the potentially significant administrative burden required to manage the program. For this reason, they are most beneficial when designed to be equally beneficial to both the property owner and the jurisdiction.

Typically, this means credit systems are often limited to non-residential properties. These properties (large businesses, schools, hospitals, houses of worship, etc.) often have a significant amount of IA due to large rooftops and parking areas. However, they are also more likely to have the amount of space required to install a substantially sized BMP as well as the funds required to install the project. Any BMP installed through a credit system must be designed to help the jurisdiction meet their permit requirements. This not only means that the project must be designed and permitted appropriately, but it also means that the jurisdiction must perform routine inspections to ensure the project is meeting performance standards.

Credit systems are common, but the intricacies of them vary dramatically, and are often determined by the amount of administrative burden the jurisdiction is able and willing to accept. While EFC works with many communities that have credit systems, for the purposes of this study EFC specifically looked at the systems currently utilized by the Cities of Frederick and Takoma Park, the Town of Berlin, Prince George's County, MD, and Gettysburg, PA.

The key components of all credit systems are largely the same. The differences between systems are found in how these components are structured, particularly what types of properties and BMPs are eligible for credits, and how much credit is available. For example, the City of Frederick limits their program to commercial properties, whereas Gettysburg's program is open to any property that is 0.5 ERU in size or larger, and Berlin's program is limited to commercial properties and NGOs.

Despite having differing requirements for the *types* of properties eligible, they all require every project to meet specific design standards. In most cases, BMPs installed through credit programs are required to meet the same design standards as those required for jurisdictional projects. Most, but not all, programs assign different credit values to different types of projects. For example, bioretention projects typically qualify for a higher credit value than rainwater harvesting projects because they provide both water quality improvements and water quantity reductions whereas rainwater harvesting only provides water quantity reduction. The City of Frederick has taken this process a step further and said that the amount of credit available for a practice also depends on the year it was installed and the corresponding design requirements. One component that most programs agree upon is that the maximum credit available is 20% of the property's stormwater fee.

The bottom line is that a credit system can be designed to be as simple or complicated as a jurisdiction wants it to be. Decisions about program structure need to take the following into consideration:

- Administrative burden – How much time will be required to manage the program, including inspection requirements?
- ROI – How much benefit will a project type provide in terms of helping the Town meet its permit requirements vs how much effort is required on the Town's part to make sure the property owner properly maintains the BMP?
- What property and project types are eligible?

- Will all project types be considered equal, or will the available credit be based on the project type?
- How much revenue could potentially be lost through the credit program? If the requirements are too lenient, there is the potential to lose significant income

Given the presence of large, stewardship-minded private property owners in the Town, as well as the limited existing public space for new BMPs, the Town may also want to consider an alternative compliance program. This would open the door to voluntary partnerships between the Town and qualified organizations. Throughout the Chesapeake Bay watershed, many local jurisdictions are partnering with qualified tax-exempt, faith-based organizations or other 501(c)(3) nonprofit organizations to improve local water quality by engaging them in efforts to treat and reduce polluted stormwater runoff in exchange for a reduction of a portion of their stormwater utility fee.

For example, in Prince George's County, Maryland's Alternative Compliance Program, an organization can agree to the following options:

1. Provide Easement (50% Fee Reduction): The property owner agrees to provide to the County a Temporary Right-of-Entry Agreement and Temporary Construction Easement for the County to install stormwater best management practices (BMPs) on the property owned by the organization.
2. Outreach & Education (25% Fee Reduction): The property owner agrees to take part in the County's education and outreach campaign to encourage other property owners as well as members of their organization to participate in the County's Rain Check Rebate Program to contribute toward the restoration and protection of county watersheds.
3. Green Care & Good Housekeeping (25% Fee Reduction): The property owner agrees to use lawn and landscaping companies that are certified in the proper use and application of fertilizers in connection with their landscaping and lawns.

Stormwater Fee Credit Findings

In an effort to balance engaging private property owners in addressing stormwater management needs with the administrative burden of a fee credit system, EFC recommends a credit system for the Town with the following criteria:

- Credits should only be made available to non-residential properties. Operating a credit system at this scale minimizes the managerial burden on Town staff.
- Credit amounts should be determined by the type of practice and the reductions achieved by each practice. BMPs that deliver more should qualify for more, for example a practice that provides water quality improvement as well as water quantity reduction would receive greater credit.
- The cumulative credit available should not exceed 20%.
- BMPs must be designed/installed in accordance with the *2000 Maryland Stormwater Design Manual.*
- BMPs must be permitted through the Town and Frederick County.
- BMPs must be in accordance with the Town's MS4 permit.
- Consider whether there would be value in adding an Alternative Compliance Program to the credit system.

Also, for the purposes of this study, EFC examined the enabling ordinances and appeals programs for stormwater fee systems currently in place in the Cities of Frederick and Takoma Park, the Town of Berlin, Prince George's County, MD, and Gettysburg, PA. Because Gettysburg elected to establish a formal stormwater authority, this is likely not the best model for Emmitsburg. Berlin and Takoma Park are communities of a similar scale with similar priorities and could be good models, although Berlin is not a regulated municipality. The City of Frederick is larger in scale but may be an appropriate given they are located in the same county. The specific parameters of each of these programmatic elements can be found in Appendix J.

Section 5: Summary of Recommendations

Cost Reducing Mechanisms
Town leadership should consider what combination of these options make sense for the Level of Service they desire from their stormwater program.

- **Consider developing a formal Asset Management program.** Communities with successful stormwater programs have realized that small investments in O&M now can help avoid significant expenses in the face of catastrophic system failure or emergency response and repair that can have impacts that ripple through the local economy. Understanding the location, condition, and capacity of the existing stormwater system, and having a plan and budget for repair and replacement of system components helps to keep costs steady and predictable. A sample scope of work and cost estimate for developing an Asset Management Plan can be found in Appendix K.

- **Take a Dig Once approach to all projects.** The Dig Once concept suggests looking at capital improvement (CIP), transportation, parks and recreation, and other existing planning documents to identify ways to achieve stormwater benefits within other types of projects already planned for implementation. This approach can result in cost efficiencies and yield multiple community benefits beyond the primary intent of the project.

- **Leverage other community priorities.** Considering how investments in stormwater can be leveraged to address other community priorities can also create efficiencies and improve return on investment. This has made green infrastructure, with its ability to deliver multiple co-benefits, an increasingly popular method for managing stormwater. In addition to green infrastructure's ability to reduce the volume and improve the quality of stormwater runoff, its holistic approach also offers ancillary community benefits such as reduced energy consumption, increased property values, expanded recreation opportunities, and enhanced public health.

- **Identify opportunities for collaboration.** In places like Frederick County, where numerous smaller municipalities are struggling to meet their regulatory requirements independently, working collectively has proven extremely beneficial in helping address stormwater goals. This makes a great deal of sense from a natural resource perspective, given that watersheds are not bound by jurisdictional borders. It also makes sense from a financing perspective because working with neighboring communities will create efficiencies that make stormwater program implementation less expensive than going it alone. These regional approaches take many forms, from informal but routine peer-to-peer exchange, to cooperative purchasing and shared equipment and personnel, to codified intergovernmental agreements for the implementation of

shared pollution reduction plans and financing streams. The Town should explore where collaborative opportunities with the County's six other small MS4 communities might exist.

Funding Streams

For Emmitsburg, it appears that a combination of general funds, grants, and a dedicated fee system will likely work best.

- **Continue to pursue grants, when possible, for project implementation**. The Town of Emmitsburg has a strong track record of obtaining grants for pilot projects that demonstrate practices, engage citizens and elected officials, and build momentum for stormwater programs, as well as for various phases of project implementation. These efforts should continue, presuming the administrative burden to Town staff remains manageable.

- **Supplement stormwater finance needs with general funds as appropriate.** The Town has been relying heavily on general funds for stormwater programming. These funds can offer a flexibility that some other funding sources do not and can be applied to both capital needs and operations and maintenance costs. However, because these funds are not assigned to any particular municipal purpose, community priorities dictate how they are spent, leaving stormwater needs to compete with other critical local needs. In addition, the significant capital and timing necessary to complete NPDES permit projects may deplete the general fund significantly, if no other sources are available to implement the stormwater projects.

- **Establish a stormwater fee.** Stormwater fees create a dedicated revenue stream that can more predictably and equitably support all aspects of a municipal stormwater program. The EFC recommends a three-tiered, ERU-based fee set at $47 per ERU annually, $23.50 per half-ERU annually, and calculated based on IA for all properties over one ERU billed quarterly on the existing water and sewer bill.

The Committee was split in its recommendations to Town Commissioners. Approximately half recommended $20/ERU/year and the other half recommended $47/ERU/year. Upon discussion at the March 7th Town Meeting, a motion was made to approve the development of a $20/ERU/year Stormwater Utility Fee. This motion passed unanimously will all five Commissioners voting in favor.

Engaging Private Property Owners

The Town has successfully begun work to engage private property owners in their stormwater management efforts, establishing a solid foundation to build upon. Should the Town decide to establish a stormwater fee, the education and outreach process will need to expand to explain why the fee is necessary and how it will be implemented.

- **Continue outreach and community education efforts.** Many people do not understand the far-reaching impacts of stormwater, including the impacts on water quality and human health. This issue is magnified by the fact that while the impacts of a flood are highly visible, the degradation and subsequent improvement of water quality is challenging for people to "see" and therefore understand. For these reasons, it is essential to help people understand these impacts, the role that individuals and property owners play in stormwater creation and management, and the benefits of good stormwater management. Building this understanding and helping people understand their own connections to water quality can build broader support for investing in stormwater management. Expanding the current initiatives to build an understanding of why a stormwater fee is necessary, how the fee is calculated and collected, how the money from the

fee will be spent, and ways that non-residential property owners can off-set a portion of their fee will be paramount to the success of the program.

- **Establish a credit system for non-residential properties.** A credit system provides a way for a municipality to engage private property owners in managing runoff from their parcels, reducing the overall burden to the town. EFC recommends a fee credit program that is only made available to non-residential properties, offers credits based on the type of practice and the reductions achieved, limits cumulative credits to 20% maximum, requires that practices are installed in accordance with the 2000 Maryland Stormwater Design Manual, permitted through the Town and Frederick County, and are aligned with the Town's MS4 permit.

- **Continue the rain barrel give-away program.** EFC does not recommend implementing a residential credit program given the heavy administrative and inspection burden required to manage such a program. However, there is value in continuing to support and promote the use of rain barrels in the residential sector. In addition to providing some stormwater quantity reduction, rain barrels often serve as the gateway to larger stormwater management projects on the residential scale. Supporting a program that educates homeowners about the stormwater that comes from their properties, as well as ways that they can capture and reuse that water, which also reduces the need for metered water use, is a win-win for the Town and for homeowners.

- **Consider an alternative compliance program.** Should the Town's ability to meet permit requirements on existing public parcels become limited, an alternative compliance program could open the door to voluntary partnerships between the Town and local faith-based institutions and nonprofit organizations to implement stormwater projects onto private properties.

Section 6: Next Steps and Conclusion

The Town of Emmitsburg is well on its way to having all the necessary pieces in place to establish a stormwater fee. However, there are some pieces that would benefit from further examination through a Phase 2 Study. Additionally, the Town is currently in the late phases of a water and sewer fee study. Several Commissioners as well as several members of the Committee expressed concerns over implementing a stormwater fee before that study is finalized and it is known if/how much the water and sewer fees will be increasing. EFC recommends using this time, while the water and sewer study is being completed to complete the recommendations below.

- **Clean and verify existing data.** There are parcels in the dataset that have missing or incomplete data, including Tax ID numbers. Based on communication with Frederick County, it sounds as if the process of verifying information for these parcels could take some time. It also appears that there may be parcels that do not actually have Tax ID numbers. In this case, the Town will need to figure out if it is possible to assess a fee on a parcel with no Tax ID. One option in this scenario may be to use the "PIN", which is unique to each parcel.

- **Investigate budgets to identify any additional costs that are being absorbed by the Town and are unaccounted for.** One example of such costs may be a portion of the work associated with

meeting the MCM requirements. Due to the nature of this work, which largely focuses on public education, it is possible that much of that work is just happening as part of part of people's daily activities and not being accounted for. Although many of these costs, and associated personnel time, are small, collectively they may account for a significant cost that should be accounted for in the fee.

- **Consider the fee in the context of any revisions to water and sewer rates.** Given the concerns raised regarding implementing a stormwater fee in conjunction with possible water and sewer rate increases, the study findings need to be considered when determining the final fee and when it will be enacted. EFC also recommends implementing all fee changes at the same time, if possible.

- **Develop policies and procedures for the non-residential credit system.** This document provides recommendations for a non-residential credit system. However, the final details need to be decided, as do decisions and procedures for how and when the system is rolled out. These decisions include, but are not limited to, determining who is responsible for overseeing the program and developing a tracking system.

- **Consider development of a policy on alternative compliance option for NGOs/faith-based organizations.** Concerns were raised by the Committee regarding whether or not NGOs and faith-based organizations should be exempted from the fee. While most places do not exempt such entities, many do offer these property owners the opportunity to participate in an alternative compliance program to help off-set some of their fees. EFC has provided information about alternative compliance programs in this report. The Town needs to determine whether or not implementing such a program would be beneficial.

- **Develop billing procedures to include policies how appeals, hardships, and delinquent payments will be managed and enforced.** EFC has provided examples of the appeals process from several communities and the Town already has a hardships policy in place for other fees. The Town needs to decide whether the hardship policy would also carry over to the stormwater fee and determine the final details of the appeals process. The Town also needs to decide what happens if the fee is not paid, including whether or not a late fee will be assessed.

- **Develop policies, procedures, and a draft ordinance for the administration of the stormwater fee system.** Example ordinances have been provided with this document. However, before an ordinance can be written, decisions about the fee, credit system, alternative compliance, billing, appeals, and delinquency need to be finalized so that that they can be detailed in the ordinance.

- **Develop a plan for public outreach, including public meetings and outreach materials, in order to engage the public in the process.** Inevitably, there is going to be public push-back on the introduction of a stormwater fee. Having a comprehensive plan in place for introducing the public to the idea and providing opportunities for active engagement in the process will be paramount to the program's success.

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Appendices

Appendix A – Stormwater Utility Feasibility Advisory Committee Member List
Appendix B – Stormwater Advisory Committee Meeting Presentations
Appendix C – Outreach Materials
Appendix D – Level of Service Document
Appendix E – Impervious Surface Analysis Methodology
Appendix F – Village Zone Parcel Categorization
Appendix G – Annual Cost Estimates
Appendix H – Tier 3 Calculation Tables
Appendix I – Tax Increase Calculations
Appendix J – Ordinance and Appeals Procedures Examples
Appendix K – Sample Asset Management Plan Scope of Work and Cost Estimate

Appendix A

Stormwater Utility Feasibility Advisory Committee

Appendix A: Stormwater Utility Feasibility Advisory Committee Members

Member	Constituents Represented
George Brenton	Daughters of Charity, nonprofit representative
TJ Burns	Board of Commissioner's representative
Frank Davis	Board of Commissioner's representative
Rachel Esses*	Resident representative
Jon Greenstone	Council of Churches, nonprofit representative
Mark Long	Resident representative
Shannon Moore	Frederick County representative
Shital Patel	Dunkin' owner, business representative
Travis Tracey	Frederick County Public Schools representative
Steve Trout	Jubilee owner, business representative

* Rachel Esses moved out of Town part way through the process and therefore had to resign from the Committee

Appendix B

Stormwater Advisory Committee Meeting Presentations

Stormwater Utility Feasibility Advisory Committee Meeting

November 18, 2021

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Your hosts . . .

Zach Gulden
Town of Emmitsburg

ENVIRONMENTAL FINANCE CENTER

Jen Cotting
Director
Environmental Finance Center

Michelle Kokolis
Program Manager
Environmental Finance Center

1

Agenda

- Welcome and Introduction
- Project Background
- Stormwater 101
- Comparison to Other Frederick County Jurisdictions
- The cost of doing nothing
- Open Discussion about the Committee's Stormwater Concerns
- Next Steps
- Public Comment and Questions

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Project Background

- Who is the Environmental Finance Center?
- What is the Stormwater Finance and Outreach Unit?
- What does a financing strategy look like?

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What Is Stormwater Runoff?

- Water generated from rain and snow/ice melt events
- Flows over land, roofs, or other impervious (hard) surfaces
- Does not soak into the ground
- Carries pollutants into local waterways

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4

What Is In Stormwater Runoff?

- **Nonpoint Source Pollution:** Pollution that comes off the land, not from a specific source

- Fertilizer, chemicals, sediment, bacteria from animal waste and sewage, trash
- Managed through the MS4 permit

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Stormwater and Water Quality

- **Decreases** water quality
- **Decreases** aesthetics
- Contaminates drinking water
- Increases nutrient and bacteria levels
- Harmful to aquatic life
- Harmful to humans and pets

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Other Stormwater Impacts

7

Regulating Stormwater

- Clean Water Act - 1972
  - Established basic structure for regulating water pollution
  - Allows EPA to implement pollution control programs
- Total Maximum Daily Loads (TMDL)
  - "Pollution Diet"
  - Bay-wide and local
- Municipal Separate Storm Sewer Permits (MS4)
  - Federally mandated, issued by the state
  - Regulate pollution from storm drains

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MS4 Permits

Require the implementation of 6 Minimum Control Measures (MCMs)

1. Public Education & Outreach
   - Develop and distribute E/O materials describing the impacts of stormwater, why stormwater management is important, and what can people can do
2. Public Involvement & Participation
   - Promote and hold events such as stream cleanups, tree plantings, Earth Day events, etc.
   - Allow public access to MS4 progress reports and include substantive public comments into program improvements

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MCMs Continued

3. Illicit Discharge Detection and Elimination
   - Develop (or update), implement, and maintain a program to identify and eliminate illicit storm drain system connections and non-stormwater discharges
   - Develop a system for the public to report illegal dumping and spills
4. Construction Site Stormwater Runoff Control
   - Adopt an MDE approved erosion and sediment control ordinance

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MCMs Continued

5. Post Construction Stormwater Management
   - Adopt an MDE approved stormwater management ordinance that ensures proper construction and maintenance of best management practices (BMPs)
6. Pollution Prevention and Good Housekeeping
   - Develop and implement pollution prevention plans at all facilities that describe procedures to detect and correct any pollutant discharge, release, leak, or spill on site
   - Track and quantify efforts to reduce the use of fertilizers, pesticides, and de-icing materials

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Frederick County MS4 Permittees

- Eight municipalities with MS4 permits
  - Brunswick
  - Emmitsburg
  - Frederick
  - Middletown
  - Mount Airy
  - Myersville
  - Thurmont
  - Walkersville
- Range in population from 1,924 (Myersville) to 9,397 (Mount Airy) to 72,244 (Frederick).
- The only jurisdiction that currently has a stormwater fee is Frederick

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MS4 Permittee Comparison

Jurisdiction	Population (2019)	Annual Budget (FY22)	Number of Staff	Impervious Area Restoration Requirement
Emmitsburg	3,098	$1,907,806	11	20.452 acres
Myersville	1,924	$1,546,806	7	15.14 acres
Middletown	4,609	$3,497,974	19	29.5 acres
Thurmont	6,638	$4,480,309	34	83.29 acres

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The Cost of Doing Nothing

- Fines
- Emergency repairs
- Failing infrastructure
- Increased treatment costs
- Water quality and habitat degradation
- Local economies
- Public health and safety

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14

Committee Discussion About Stormwater Management Questions and Concerns

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Next Steps…

- EFC will continue reviewing budget information and completing a level of service analysis
- EFC will begin developing outreach materials
- Next meeting – Thursday, December 16 at 7:00PM
  - Results of the level of service analysis
  - Options for completing stormwater management projects

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16

Public Comment Period

- Share your thoughts or questions live, in the chat or email to zgulden@emmitsburgmd.gov
- In the interest of transparency, all questions will be collected and reviewed, and responses will be made publicly available in advance of the December meeting.

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Stormwater Utility Feasibility Advisory Committee Meeting

December 16, 2021

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Your hosts . . .

Zach Gulden
Town of Emmitsburg

ENVIRONMENTAL FINANCE CENTER

Jen Cotting
Director
Environmental Finance Center

Michelle Kokolis
Program Manager
Environmental Finance Center

1

Agenda

- Welcome
- Recap from the last meeting
- Level of Service Analysis
  - What is Emmitsburg currently doing and at what cost?
  - Is there anything missing?
- Potential Financing Options
  - Cost reducing mechanisms, funding streams, engaging private landowners
- Open Discussion Next Steps
- Public Comment and Questions
- Next meeting

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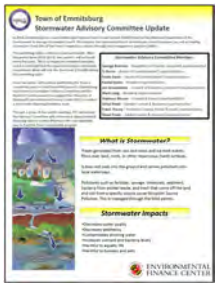
2

Last Meeting

- Stormwater 101 and why stormwater management matters
- What is the MS4 permit
  - Control pollution from stormwater runoff
  - Federally mandated and will be reissued every five years
- The cost of doing nothing
  - Fines, failing infrastructure, increased water treatment costs, public health & safety impacts



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3

Level of Service Analysis

- What is Emmitsburg currently doing?
  - Zach spends about 40% of his time on MS4 related activities
  - A fulltime MS4 coordinator is not currently needed
  - To date, the emphasis has been on meeting the MCM requirements
    - The Town is managing outreach and education
    - The County is oversees construction inspection
    - Outfall inspection – 9/year

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Level of Service Analysis Cont.

- What are the current costs?
  - MS4 expenses to date for this permit cycle = $107,553
  - Outstanding costs for this cycle = $750,000
  - The majority of the outstanding costs are associated with the impervious restoration requirement
    - Tree planting
    - Silo Hill
    - Septic connections to WWTP

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Level of Service Analysis Cont.

- What is missing/in need of expansion?
  - Expand street sweeping, possibly through a contractor
  - Expand the rain barrel program/modify to be a rebate program
  - Develop an Asset Management Plan for stormwater BMPs
  - Increase funds for BMP Operations & Maintenance
  - Develop budgets/line items for things that don't have them in order to increase transparency

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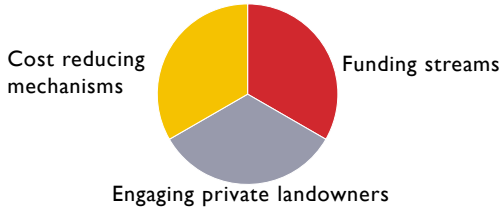
Financing Options



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Cost Reducing Mechanisms

- Asset Management
- Dig Once
- Leveraging other community priorities
- Collaboration

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Funding Streams

Source	Cost Coverage		Strengths	Weakness
	Capital	O&M		
General Fund	Yes	Yes	Can be used to support all program costs	Competes with other community priorities, changed from year to year, less equitably spreads costs across payers
Grants	Yes	No	Good source for "shovel ready" project implementation, demonstration projects, and initial program staff	Not guaranteed, highly competitive, suitable for demonstration projects, not sustainable in the long-term
SRF & Loan Programs	Yes	No	Can offer up-front capital for larger projects	Not guaranteed fund source, highly competitive, must repay – often with interest
Bond Financing	Yes	No	Can be used for large, long-term expenditures	Dependent on fiscal capacity, must repay with interest, cost of securing bond may be high
Permit, Development & Inspection Fees	Yes	No	Offers nexus to system and program expansion needs	May not sufficiently cover program costs, may deter development
Stormwater Utility Fee	Yes	Yes	Can generate sufficient revenue, sustainable, dependable, equitable depending on design, supports all program costs	Requires significant public dialogue, can create administrative challenges
Tax Districts	Yes	Yes	Can generate sufficient revenue, sustainable, dependable	Necessitates enabling statute, can have equity problems sue to property value basis

9

Financing Options

Engaging private landowners

- Businesses, churches, hospitals, schools and residences
- Installation of Stormwater Best Management Practices (BMPs)
  - Tree plantings
  - Rain gardens
  - Rainwater harvesting

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Committee Discussion About Level of Service Analysis and Financing Options

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Next Steps…

- EFC will continue reviewing budget information and completing a level of service analysis
- EFC will develop outreach materials based on this meeting
- Next meeting – Thursday, January 20 at 7:00PM
  - Blended Financing Models

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Public Comment Period

- Share your thoughts or questions live, in the chat or email to zgulden@emmitsburgmd.gov
- In the interest of transparency, all questions will be collected and reviewed, and responses will be made publicly available in advance of the January meeting.

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13

Stormwater Utility Feasibility Advisory Committee Meeting

January 20, 2022

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Your hosts . . .

Zach Gulden
Town of Emmitsburg

ENVIRONMENTAL FINANCE CENTER

Jen Cotting
Director
Environmental Finance Center

Michelle Kokolis
Program Manager
Environmental Finance Center

1

Agenda

- Welcome
- Recap from the last meeting
- Update on the Level of Service Analysis
- Fee Structures
  - Parts of a fee – Equivalent Residential Units (ERU), tiers, exemptions, etc.
  - What is working in other communities
  - EFC's initial thoughts for Emmitsburg
  - Group discussion and Advisory Committee input
  - Considerations moving forward
- Public Comment and Questions
- Next Steps

Next Meeting
February 17 at 7:00

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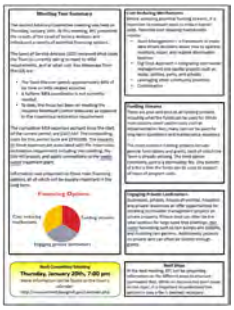
2

Last Meeting

- Level of Service Analysis
  - What is Emmitsburg currently doing, and at what cost?
  - Is there anything missing?
- Potential Financing Options
  - Cost reducing mechanisms such as asset management, dig once, and collaboration
  - Funding streams including grants and fee systems
  - Engaging private landowners through outreach and incentives



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3

Stormwater Utility Fees

- Fees are not mandated by states
- According to the 2021 Western Kentucky University Stormwater Utility Survey:
  - There are currently 1,851 stormwater utilities nationwide including MD (17), VA, PA, and DC
  - Nationwide, the average, single-family residential fee is $5.94/month and the median fee is $4.88
  - Other countries, including Canada, Australia, France, and Germany also have stormwater fees

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4

Stormwater Utility Fees

- Data shows implementation is not governed by politics
- States have both large and small fees
  - Fees ranged from $0 - $45/month, dictated largely by stormwater needs
- There are 7 states with 100+ established utilities

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Community	Fee Type	ERU (sq ft)	Fee	Year Created	Population
Annapolis	T		$3.33	2003	35,838
Anne Arundel County	T			2013	544,403
Baltimore	E	1,050	$5.00	2013	619,493
Berlin	D		$4.16	2013	4,491
Centreville	E	3,200	$2.50	2013	4,334
Charles County	F		$5.08		120,546
City of Frederick	E	1,000	$1.25	2013	
Frederick County	F		$0.01	2013	236,745
Gaithersburg	IA		$11.22	2015	
Hagerstown	E	1,000	$2.67	2020	
Harford County	D		$7.00	2013	246,849
Howard County	E	3,000	$7.50	2013	293,142
Montgomery County	E	2,406	$8.69	2002	873,341
Prince George's County	E	2,465	$3.46	2013	871,233
Rockville	E	2,330	$11.00	2007	47,388
Salisbury	E	3,344	$1.67	2014	31,507
Takoma Park	E	1,228	$7.67	1996	17,299

6

Fee Structures

- Most, but not all, fee structures can be implemented fairly.
- Most fees are based on the total amount of impervious cover on a property.
  - Includes roofs, driveways, patios, and parking lots
  - Does NOT include public sidewalks, roadways, and structures that are in the public Right-of-Way
  - larger impervious surface = larger fee
- The most common structure is the Equivalent Residential Unit (ERU), followed by tiered systems and flat fees.

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Equivalent Residential Unit (ERU)

- The average impervious area (IA) on a single-family, residential parcel.
  - ERU = total IA for residential properties divided by the total number of residential properties
  - Average ERU in the WKU study was 3,072 sq ft
- Find a balance between your financing needs and ERU's to determine what your fee should be.

Gettysburg, PA

Total residential lot IA = 2,880,652 sq ft

Total residential units = 1,144

2,880,652 / 1,144 = 2,518

1 ERU = 2,500 sq ft

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Tiered Systems

- Tiered systems often result in small businesses being overcharged and large ones paying to little.
  - Fee is based on where the property's IA falls in a series of ranges
- Can be fair if structured properly.

Gettysburg, PA

1 ERU = 2,500 sq ft = $100
All properties viewed the same way
Tier 1 = 1,250 sq ft or less = 0.5 ERU = $50
Tier 2 = 1,251 – 3,750 sq ft = 1 ERU = $100
Tier 3 = above 3,750 sq ft
Tier 3 ERU = total IA/2,500 and rounded to the nearest whole number
Tier 3 fee = $100 times the number of ERUs

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Flat Fee Systems

- Everyone pays the same fee.
- Can NOT be structured fairly because you are not taking the amount of IA per parcel into consideration.
  - A big box store pays the same fee as a single-family home
- In some instances, flat fees have been implemented temporarily in order to raise funds to complete a study in order to determine what the best/fairest structure for a jurisdiction is.

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	City of Frederick, MD	Gettysburg, PA	Berlin, MD
Structure	Percent Impervious Factor (PIF)	Tiered (residential and nonresidential)	Flat Fee (residential) IA ERU (non-residential)
PIF / ERU	30% - single family 55% - townhouse & Downtown district	1 ERU = 2,500 sq ft	1 ERU = 2,100 sq ft
Rate	$21.97 / 1,000 sq ft of IA	$100 / ERU Tier 1 = $50/year Tier 2 = $100/year* Tier 3 = $100/ERU	Flat fee of $50 / year for single family and townhomes $25 / ERU for non-residential
Billing Structure	Line item on water & sewer bill (quarterly)	Billed separately on July 1 Can pay in full and receive 2% discount or can pay quarterly at full rate	Line item on utility bill (monthly)
Exemptions	None	None	None
Credit System	Commercial only – varies depending on age & standards met	Any property 0.5 ERU or larger – up to 20% of total fee	Commercial and NGO only – up to 20% of total fee
Sample Fee Commercial 54,450 sq ft IA	Yearly fee = $1,196.27 Max credit = $717.76*	Yearly fee = $2,200 If paid in full = $2,156 Max credit = $440	Yearly fee = $650 Max credit = $130

11

Initial Thoughts for Emmitsburg

Should the Town of Emmitsburg choose to pursue a fee system:

- A fee to cover at least part of the predicted costs would **reduce the burden to the general fund**.
- The fee should be an ERU based or tiered system tied to impervious surface but in the interest of administration and transparency, **keep it simple**.
- Fee should **apply to all** "real property" or all properties that "use, are served by, or benefitted by the stormwater management system." This includes but is not limited to Town property, not-for-profits, schools, houses of worship, fire departments, and hospitals.
- Adding a fee while other fees are being evaluated and adjusted is efficient and transparent.
- Managing a **credit system can be time consuming**, consider a paid-in-full discount as an alternative or phasing a credit system in over time.

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Committee Discussion About Fees and Potential Structures

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Next Steps…

- EFC will finalize recommendations about a fee structure, taking into consideration the input from tonight's meeting.
- EFC will develop outreach materials based on this meeting.
- Next meeting – Thursday, February 17, at 7:00PM.
  - Final recommendations

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14

Public Comment Period

- Share your thoughts or questions live, in the chat or email to zgulden@emmitsburgmd.gov
- In the interest of transparency, all questions will be collected and reviewed, and responses will be made publicly available in advance of the February meeting.

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Stormwater Utility Feasibility Advisory Committee Meeting

February 24, 2022

0

Your hosts . . .

Zach Gulden
Town of Emmitsburg

ENVIRONMENTAL FINANCE CENTER

Jen Cotting
Director
Environmental Finance Center

Michelle Kokolis
Program Manager
Environmental Finance Center

1

Agenda

- Welcome
- Recap from the last meeting
- Stormwater Utility Fee Recommendations
  - What we considered
  - Calculating the ERU
  - Fee scenarios
- Committee Discussion
- Public Comment and Questions
- Next Steps

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Last Meeting

- Overview of common fee scenarios
  - Equivalent Residential Units (ERU)
  - Tiered Systems
  - Flat Fee Systems
- Example calculations using the common fee scenarios
- Discussion about which approach makes sense for Emmitsburg
  - The Committee agreed upon a tiered system with no differentiation between residential and non-residential parcels, similar to the system used in Gettysburg.

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Stormwater Utility Fee Considerations

- Four funding scenarios
  - Max fee of $20/year;
  - Funding just to cover the impervious area restoration;
  - Funding for the current level of service; and
  - Funding for the recommended level of service
- The distribution of IA over residential parcels
- The number of tiers needed to make the system equitable
- Whether to categorize using Zoning Code or Land Use Classification

All data presented are estimations. There are things in the dataset and budget that warrant further examination and discussion before finalizing any fee.

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Calculating the ERU

- There are 885 residential parcels in the Town
  - R-1, R-2, R-3, and certain parcels in the VZ
  - Town parcels were not included in any calculations

ERU Calculation

Total residential lot IA = 2,594,387 sq ft

Total residential units = 885

2,594,387 / 885 = 2,932

1 ERU = 2,932 sq ft

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Determining the Number of Tiers

Residential	Tier	Equivalent ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	173	20%
Sq Ft >1,466 and <= 4,398	2	1	616	69%
Sq Ft > 4,398	3	Calculated*	96	11%

Commercial	Tier	Equivalent ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	11	16%
Sq Ft >1,466 and <= 4,398	2	1	8	12%
Sq Ft > 4,398	3	Calculated*	49	72%

*(Total IA / 2,932) x Fee

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Fee Scenario 1

$5 max/quarter; $20 max/year

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$2.50	$10.00	$1,730.00
2	$5.00	$20.00	$12,320.00
3	calculated	calculated	$5,117.45
		Total	**$19,167.45**

Commercial

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$2.50	$10.00	$110.00
2	$5.00	$20.00	$160.00
3	calculated	calculated	$15,414.35
		Total	**$15,684.35**

Total Revenue = $34,851.80

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Fee Scenario 2

$26/year; Just the Impervious Restoration Costs

- Calculated using the last 3 annual reports

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$3.25	$13.00	$2,249.00
2	$6.50	$26.00	$16,016.00
3	calculated	calculated	$6,652.68
		Total	**$24,917.68**

Commercial

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$3.25	$13.00	$143.00
2	$6.50	$26.00	$208.00
3	calculated	calculated	$20,038.66
		Total	**$20,389.66**

Total Revenue = $45,307.34

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Fee Scenario 3

$32/year; Current Level of Service

- Calculated using the last 3 annual reports plus additional requirements per MDE

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$4.00	$16.00	$2,768.00
2	$8.00	$32.00	$19,712.00
3	calculated	calculated	$8,187.92
		Total	**$30,667.92**

Commercial

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$4.00	$16.00	$176.00
2	$8.00	$32.00	$256.00
3	calculated	calculated	$24,662.96
		Total	**$25,094.96**

Total Revenue = $55,762.88

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Fee Scenario 4

$47/year; Recommended Level of Service

- Calculated using the last 3 annual reports and additional requirements per MDE, plus O&M for 2 projects in the design phase and building a reserve fund

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$5.89	$23.50	$4,065.50
2	$11.75	$47.00	$28,952.00
3	calculated	calculated	$12,026.00
		Total	**$45,043.50**

Commercial

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$5.89	$23.50	$258.00
2	$11.75	$47.00	$376.00
3	calculated	calculated	$36,223.73
		Total	**$36,858.23**

Total Revenue = $81,901.73

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Town Parcels

- Town parcels we not included in any of the calculations
- 9 parcels
  - 2 in Tier 1
  - 7 in Tier 2

Scenario	Total Fee
1	$3,525.47
2	$4,583.11
3	$5,640.75
4	$8,284.85

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BMP Credit System

- Only available for non-residential properties
- Maximum credit of 20%
  - BMPs must be designed/installed in accordance with the *2000 Maryland Stormwater Design Manual, Volumes I & II*
  - BMPs must be permitted through the Town and County
  - BMPs must be in accordance with the MS4 permit

Scenario	Commercial Revenue	20% Credit Loss
1	$15,684.35	$3,136.87
2	$20,389.66	$4,077.93
3	$25,094.96	$5,018.99
4	$36,858.23	$7,371.65

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Potential Tax Increase

- Current tax rate is 0.3464 per $100 assessed
- Total Assessed = $205,148,120
- Current Annual Tax Revenue = $710,633.09

Scenario	Estimated Cost	Difference to Make Up in Taxes	Amount Needed	New Rate
Just Impervious	$44,654.67	-	-	-
Current LoS	$54,406.27	$9,751.60	$720,384.68	0.3512
Recommended LoS	$79,694.80	$35,040.13	$745,673.22	0.3635

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Committee Discussion About Fees and Potential Structures

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Next Steps…

- EFC will finalize recommendations about a fee structure and rate, taking into consideration the input from tonight's meeting.
- EFC will develop outreach materials based on this meeting.
- Recommendations will be presented at the March 7 Council meeting and a final report will be submitted to the Town.

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15

Public Comment Period

- Share your thoughts or questions live, in the chat or email to zgulden@emmitsburgmd.gov
- In the interest of transparency, all questions will be collected and reviewed, and responses will be made publicly available in advance of the February meeting.

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Emmitsburg Town Meeting
Stormwater Utility Feasibility Study

March 7, 2022

University of Maryland,
Environmental Finance Center
Jen Cotting, Director
Michelle Kokolis, Program Manager

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The Environmental Finance Center (EFC)

- One of 10 Centers in the US
- Based out of the University of Maryland
- Serve all of EPA Region 3

Capacity Building & Training
- Local Government Leadership Training
- On-line and Virtual Workshops
- Municipal Online Stormwater Training (MOST) Center

Policy Analysis & Financial Assessment
- Policy Review
- Financing Strategies
- Budget Analysis
- Program Evaluation

Community Outreach & Facilitation
- Designing outreach campaigns
- Facilitating stakeholder engagement
- Conducting focus groups
- Managing community surveys and interviews

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Purpose of this Study

- Existing and future program review
  - Analyze current stormwater management system, practices, and plans
  - Level of Service Analysis
  - Budget and Annual Report review
  - Consider future needs
- Meet with a Stormwater Utility Feasibility Advisory Committee
- Discuss different stormwater financing strategies
- Explore a proposed rate structure
  - Based on existing and future needs
  - Present multiple structures for the Committee to consider
  - Include recommendations for a credit system
- Public outreach & education
  - Develop outreach materials related to the different phases of the study

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Regulating Stormwater

- Clean Water Act - 1972
  - Established basic structure for regulating water pollution
  - Allows EPA to implement pollution control programs
- Total Maximum Daily Loads (TMDL)
  - "Pollution Diet"
  - Bay-wide and local
  - ***What's good for the Bay is also good for local water quality***
- Municipal Separate Storm Sewer Permits (MS4)
  - Federally mandated, issued by the state
  - Regulate pollution from storm drains

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Emmitsburg's MS4 Permit

- Re-issued every 5 years in perpetuity
- Current permit period is 10/31/2018 – 10/30/2023
- Requires meeting 6 minimum control measures (MCMs) as well as impervious surface restoration (stormwater best management practices - BMPs)
  - To date, most effort has been put into MCMs
  - Need to focus on the impervious restoration requirement – installing BMPs
- The cost of doing nothing
  - Fines
  - Emergency repairs
  - Failing infrastructure
  - Increased treatment costs
  - Water quality and habitat degradation

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Stormwater Utility Feasibility Advisory Committee

- 10 members that were approved by Council
  - Met 4 times Nov. 21 – Feb. 22
  - Meetings were advertised and open to the public
  - No public comments were received
  - Summary flyer produced after each meeting

George Brenton	Daughters of Charity; nonprofit representative
TJ Burns	Board of Commissioner's representative
Frank Davis	Board of Commissioner's representative
Rachel Esses*	Resident representative
Jon Greenstone	Council of Churches; nonprofit representative
Mark Long	Resident representative
Shannon Moore	Frederick County representative
Shital Patel	Dunkin' owner; Business representative
Travis Tracey	Frederick County Public Schools representative
Steve Trout	Jubilee owner; Business representative

*Moved outside the Town boundary and resigned from the committee

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Stormwater Utility Fees

- Fees are not mandated by states
- According to the 2021 Western Kentucky University Stormwater Utility Survey:
  - There are currently 1,851 stormwater utilities nationwide including MD (17), VA, PA, and DC
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Stormwater Utility Fees

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- There are 7 states with 100+ established utilities

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Community	Fee Type	ERU (sq ft)	Fee	Year Created	Population
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Salisbury	E	3,344	$1.67	2014	31,507
Takoma Park	E	1,228	$7.67	1996	17,299

8

Fee Structures

- Most fees are based on the total amount of impervious cover on a property.
  - Includes roofs, driveways, patios, and parking lots
  - Does NOT include public sidewalks, roadways, and structures that are in the public Right-of-Way
  - Larger impervious surface = larger fee
- The most common structure is the Equivalent Residential Unit (ERU)
- EFC presented the systems used in Gettysburg (PA), Berlin (MD) and the City of Frederick (MD) as examples
- The committee unanimously agreed on a structure similar to Gettysburg's
  - Tiered, ERU system, no differentiation between residential and non-residential properties
  - Billed quarterly
  - ERU = 2,500 sq ft = $100

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Equivalent Residential Unit (ERU)

- The average impervious area (IA) on a single-family, residential parcel.
  - ERU = total IA for residential properties divided by the total number of residential properties
  - Average ERU in the WKU study was 3,072 sq ft
- There are 885 residential parcels in the Town
  - R-1, R-2, R-3, and certain parcels in the VZ
  - Town parcels were not included in any calculations

Emmitsburg

Total residential lot IA = 2,594,387 sq ft

Total residential units = 885

2,594,387 / 885 = 2,932

1 ERU = 2,932 sq ft

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10

Stormwater Utility Fee Considerations

- Four funding scenarios
  - Max fee of $20/year;
  - Funding just to cover the impervious area restoration;
  - Funding for the current level of service; and
  - Funding for the recommended level of service
- The distribution of IA over residential parcels
- The number of tiers needed to make the system equitable
- Whether to categorize using Zoning Code or Land Use Classification
- Assumed that the Town continues to use grants for project implementation

All data presented are estimations. There are things in the dataset and budget that warrant further examination and discussion before finalizing any fee.

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Determining the Number of Tiers

Residential	Tier	Equivalent ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	173	20%
Sq Ft >1,466 and <= 4,398	2	1	616	69%
Sq Ft > 4,398	3	Calculated*	96	11%

Non-residential	Tier	Equivalent ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	11	16%
Sq Ft >1,466 and <= 4,398	2	1	8	12%
Sq Ft > 4,398	3	Calculated*	49	72%

*(Total IA / 2,932) x Fee

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Fee Scenario 1

$5 max/quarter; $20 max/year

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$2.50	$10.00	$1,730.00
2	$5.00	$20.00	$12,320.00
3	calculated	calculated	$5,117.45
		Total	$19,167.45
Average Tier 3 Fee/year			$50.71

Non-residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$2.50	$10.00	$110.00
2	$5.00	$20.00	$160.00
3	calculated	calculated	$15,414.35
		Total	$15,684.35
Average Tier 3 Fee/year			$113.91

Total Revenue = $34,851.80

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13

Fee Scenario 2

$26/year; Just the Impervious Restoration Costs

- Calculated using the last 3 annual reports

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$3.25	$13.00	$2,249.00
2	$6.50	$26.00	$16,016.00
3	calculated	calculated	$6,652.68
		Total	$24,917.68
Average Tier 3 Fee/year			$65.92

Non-residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$3.25	$13.00	$143.00
2	$6.50	$26.00	$208.00
3	calculated	calculated	$20,038.66
		Total	$20,389.66
Average Tier 3 Fee/year			$148.08

Total Revenue = $45,307.34

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Fee Scenario 3

$32/year; Current Level of Service

- Calculated using the last 3 annual reports plus additional requirements per MDE

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$4.00	$16.00	$2,768.00
2	$8.00	$32.00	$19,712.00
3	calculated	calculated	$8,187.92
		Total	$30,667.92
Average Tier 3 Fee/year			$81.13

Non-residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$4.00	$16.00	$176.00
2	$8.00	$32.00	$256.00
3	calculated	calculated	$24,662.96
		Total	$25,094.96
Average Tier 3 Fee/year			$182.25

Total Revenue = $55,762.88

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Fee Scenario 4

$47/year; Recommended Level of Service

- Calculated using the last 3 annual reports and additional requirements per MDE, plus O&M for 2 projects in the design phase and building a reserve fund

Residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$5.89	$23.50	$4,065.50
2	$11.75	$47.00	$28,952.00
3	calculated	calculated	$12,026.00
		Total	$45,043.50
Average Tier 3 Fee/year			$119.16

Non-residential

Tier	Fee per Quarter	Fee per Year	Total Revenue
1	$5.89	$23.50	$258.00
2	$11.75	$47.00	$376.00
3	calculated	calculated	$36,223.73
		Total	$36,858.23
Average Tier 3 Fee/year			$267.68

Total Revenue = $81,901.73

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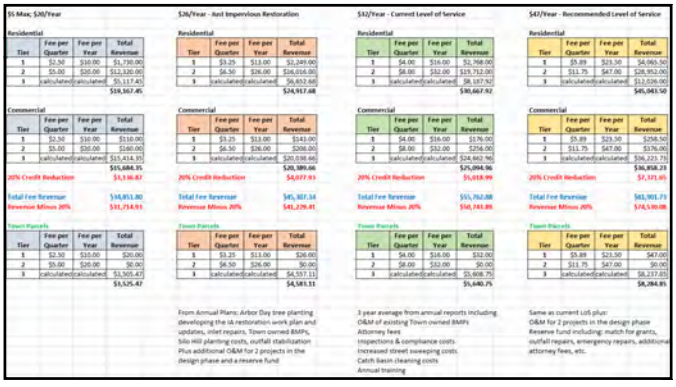

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Committee Recommendations

- 7 of the 9 members voted
  - 2 voted for $20
  - 1 voted for $32
  - 3 voted for $47
  - 1 abstained
  - 1 undetermined
- Committee members that stand to pay the most voted for the highest fees
- Committee agreed on a credit system for non-residential properties with a maximum credit of 20%

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BMP Credit System

- Only available for non-residential properties
- Maximum credit of 20%
  - BMPs must be designed/installed in accordance with the *2000 Maryland Stormwater Design Manual, Volumes I & II*
  - BMPs must be permitted through the Town and County
  - BMPs must be in accordance with the MS4 permit

Scenario	Non-residential Revenue	20% Credit Loss
1	$15,684.35	$3,136.87
2	$20,389.66	$4,077.93
3	$25,094.96	$5,018.99
4	$36,858.23	$7,371.65

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Questions?

For additional information contact:

Jen Cotting
jcotting@umd.edu

Michelle Kokolis
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ENVIRONMENTAL FINANCE CENTER

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Appendix C

Outreach Materials

Town of Emmitsburg
Stormwater Advisory Committee Update

In 2018, Emmitsburg was issued a Municipal Separate Storm Sewer System (MS4) Permit by the Maryland Department of the Environment to manage stormwater runoff. This requires the implementation of six minimum control measures, as well as treating stormwater from 20% of the Town's impervious surfaces through best management practices (BMPs).

The permitting cycle is continuous and permanent. After this permit term (2018-2023), new permits will be issued every five years. This is an expensive unfunded mandate, and it is estimated that the impervious surface restoration requirement alone will cost the Town over $700,000 during this permitting cycle.

Since the permit will continue indefinitely, the Town is considering ways to fund future MS4 projects. Emmitsburg has formed a Stormwater Advisory Committee and the Board of Commissioners has engaged the University of Maryland's Environmental Finance Center (EFC) to conduct a stormwater financing feasibility study.

Through a series of four public meetings, EFC will present the Advisory Committee with information about potential financing options to help determine the most equitable way to fund the Town's stormwater program.

Stormwater Advisory Committee Members

George Brenton – Daughters of Charity, nonprofit representative
TJ Burns – Board of Commissioner's representative
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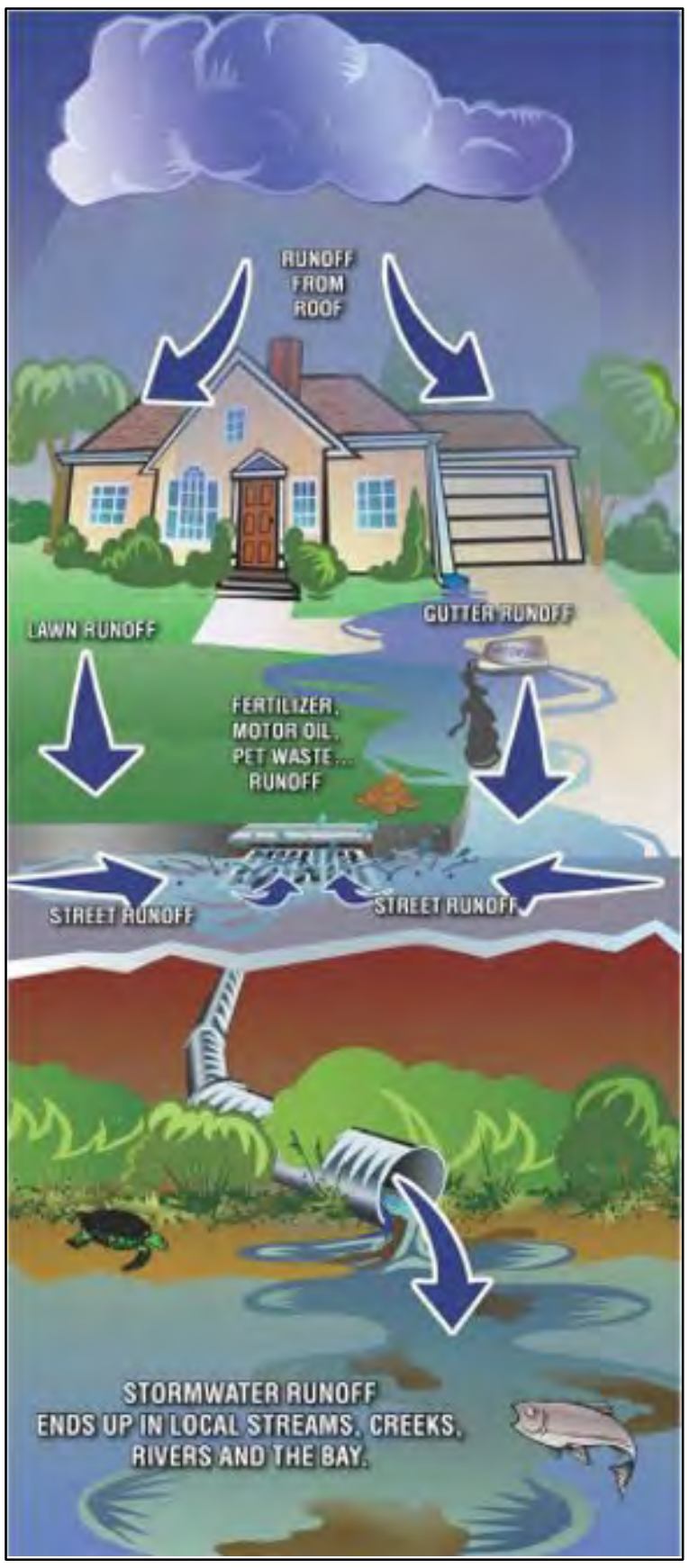

What is Stormwater?

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It does not soak into the ground and carries pollutants into local waterways.

Pollutants such as fertilizer, sewage, chemicals, sediment, bacteria from animal waste, and trash that come off the land and not from a specific source cause Nonpoint Source Pollution. This is managed through the MS4 permit.

Stormwater Impacts

- Decreases water quality
- Decreases aesthetics
- Contaminates drinking water
- Increases nutrient and bacteria levels
- Harmful to aquatic life
- Harmful to humans and pets

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The Role of the Environmental Finance Center

The EFC will present Emmitsburg with financing options to determine the most equitable way to fund the Town's stormwater program. This process will include:

- Reviewing the Town's budget
- Completing a Level of Service analysis
- Developing outreach materials
- Presenting options for completing required projects and the pros and cons of each option
- Sharing case stories from other municipalities across the Chesapeake Bay watershed to inform decision making

Good work is already underway!

Did you know that Emmitsburg is already implementing stormwater management projects?

- A large-scale reforestation on land adjacent to Tom's Creek. 8,100 native trees and shrubs will be planted on 27 acres over the next 2 years.
- A residential rain barrel program for Town residents to purchase discounted rain barrels.
- A design to upgrade an existing detention basin at Silo Hill into a vegetated infiltration basin / bioretention.
- A design to create a high-performing green street at North Seton Avenue and prevent storm water from causing further stream bank erosion.

Next Committee Meeting

Thursday, December 16th, 7:00 pm

More information can be found on the town's calendar:
http://www.emmitsburgmd.gov/calendar.php

Meeting One Summary

The first Advisory Committee meeting was held on Thursday, November 18th. At this meeting, EFC presented *Stormwater 101*, explaining what stormwater is, the impacts of unmanaged stormwater, why the MS4 permit system exists, and why it is important to meet the goals set forth in the MS4 permit.

MS4 permits are designed to control the pollution that is found in stormwater runoff. Emmitsburg's required reductions are based on a portion of Maryland's total reductions. While the projects the Town will need to implement in order to meet permit requirements are expensive, it is important to remember that if approached from the right perspective, stormwater management projects can also provide a lot of *co-benefits* including:

- Increased tree canopy, green space, and wildlife habitat
- Reduced heat island impacts
- Reduced flooding

The cost of ignoring or not meeting permit requirements can exceed the cost of project implementation. The MS4 permit is federally mandated. If requirements are not met, Emmitsburg could incur daily fines. In addition to the fines, there are countless other tangible impacts, many of which are also costly, including:

- Failing infrastructure and emergency repairs
- Increased water treatment costs
- Decreased water quality and habitat degradation
- Public health and safety impacts
- Impacts to local economies

At the next meeting, EFC will be presenting information from a Level of Service analysis that examined what steps Emmitsburg is already taking, and at what cost, as well as what practices are missing. This will be followed by a discussion about cost reducing mechanisms (asset management, Dig Once), potential funding streams (grants and fee systems), and engaging private landowners through engagement and incentives.

Town of Emmitsburg
Stormwater Advisory Committee Update

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Since the permit will continue indefinitely, the Town is considering ways to fund future MS4 projects. Emmitsburg has formed a Stormwater Advisory Committee and the Board of Commissioners has engaged the University of Maryland's Environmental Finance Center (EFC) to conduct a stormwater financing feasibility study.

Through a series of four public meetings, EFC will present the Advisory Committee with information about potential financing options to help determine the most equitable way to fund the Town's stormwater program.

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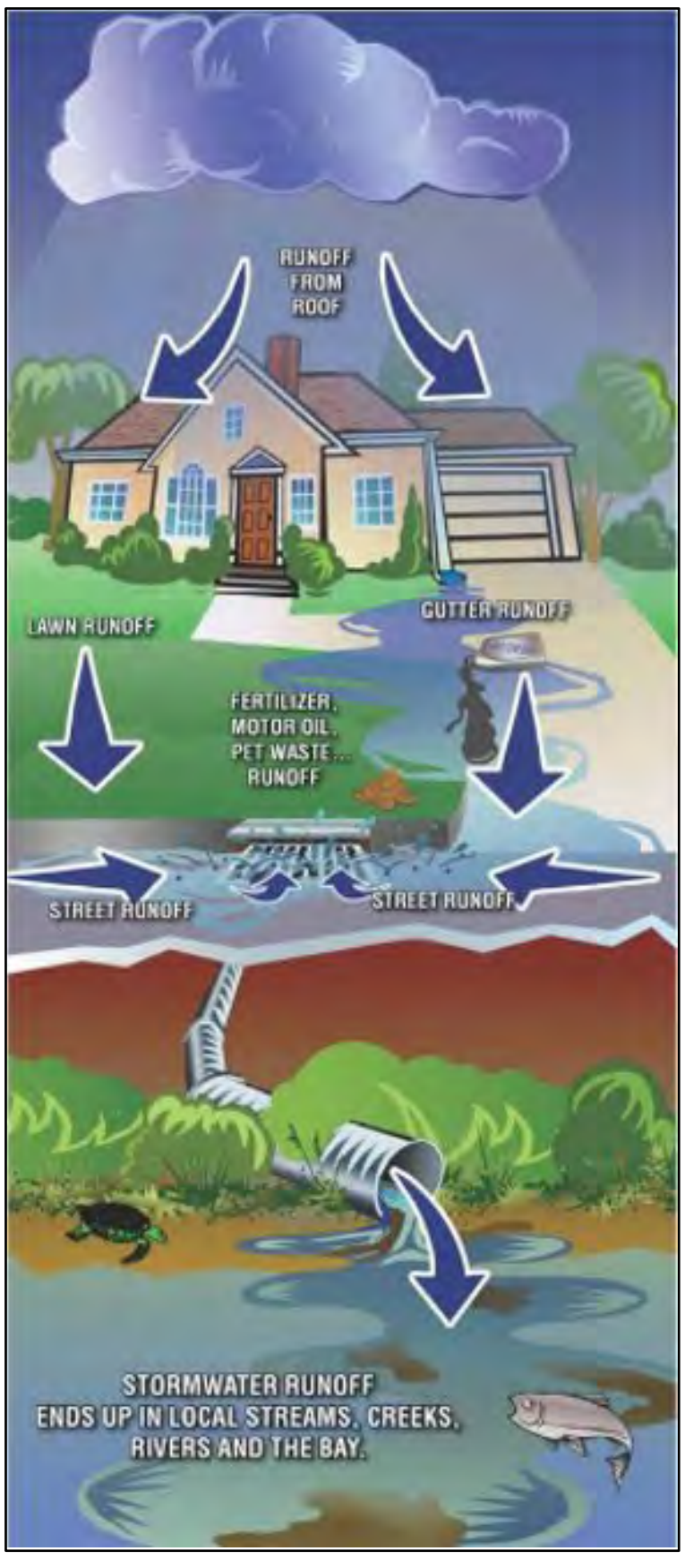

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Meeting Two Summary

The second Advisory Committee meeting was held on Thursday, January 16th. At this meeting, EFC presented the results of the Level of Service Analysis and introduced a variety of potential financing options.

The Level of Service Analysis (LOS) reviewed what steps the Town is currently taking to meet its MS4 requirements, and at what cost. Key takeaways from the LOS are:

- The Town Planner spends approximately 40% of his time on MS4 related activities
- A fulltime MS4 coordinator is not currently needed
- To date, the focus has been on meeting the required Minimum Control Measures as opposed to the impervious restoration requirement

The cumulative MS4 expenses accrued since the start of the current permit are $107,533. The outstanding costs for this permit cycle are $750,000. The majority of these expenses are associated with the impervious restoration requirement including tree planting, the Silo Hill project, and septic connections to the waste water treatment plant.

Information was presented on three main financing options, all of which will be equally important in the long term.

Cost Reducing Mechanisms

Before assessing potential funding streams, it is important to evaluate ways to reduce overall costs. Potential cost reducing mechanisms include:

- Asset Management – A framework to make data-driven decisions about how to operate, maintain, repair, and replace stormwater facilities
- Dig Once Approach – Integrating stormwater management into capital projects such as roads, utilities, parks, and schools
- Leveraging other community priorities
- Collaboration

Funding Streams

There are pros and cons to all funding streams including what the funds can be used for. While most options cover capital costs such as implementation fees, many can not be used for long-term operations and maintenance expenses.

The most common funding streams include general fund dollars and grants, both of which the Town is already utilizing. The third option commonly used is a stormwater fee. One benefit of a fee is that the funds can be used to support all types of program costs.

Engaging Private Landowners

Businesses, schools, houses of worship, hospitals and private residences all offer opportunities for installing stormwater management projects on private property. Private land can often be the ideal location for large-scale tree plantings, rain water harvesting such as rain barrels and cisterns, and installing rain gardens. Additionally, projects on private land can often be funded through grants.

Next Committee Meeting

Thursday, January 20th, 7:00 pm

More information can be found on the town's calendar:
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Next Steps

At the next meeting, EFC will be presenting information on the different ways to structure stormwater fees. While no decision has been made on this topic, it is important to understand the options in case a fee is deemed necessary.

Town of Emmitsburg
Stormwater Advisory Committee Update

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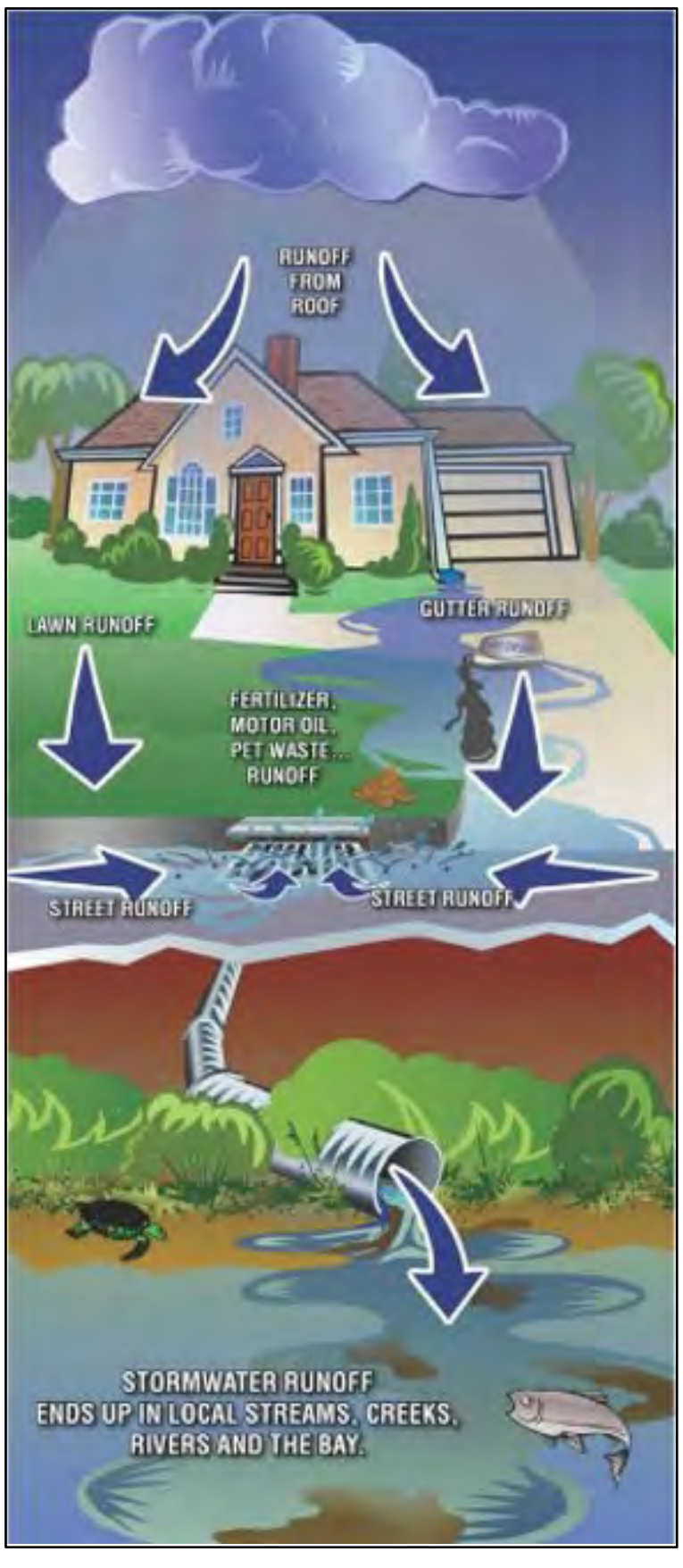

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Meeting Three Summary

The third Advisory Committee meeting was held on Thursday, January 20th. At this meeting, EFC presented an overview of the most common structures for Stormwater Utility Fees, provided an example of what different fee structures could mean for a local property, and provided some preliminary considerations should the Town decide to pursue a fee.

It is important to note that stormwater utility fees are NOT mandated by states or the Federal government – they are optional. Most fees are based on the total amount of impervious cover (roofs, driveways, etc.) on a property, and it is possible to structure fees equitably. The most common structures are the Equivalent Residential Unit, Tiered Systems, and Flat Fees.

A 2021 study by the Western Kentucky University identified 1,851 stormwater utilities nationwide, with an average single-family residential fee of $5.49/month. This includes 17 in MD, 30 in VA, and 58 in PA, with 7 states having over 100 established utilities. As seen in the map below, the location of municipalities with fees is not governed by politics. WA, WI, and MN, all of which lean Democratic all have over 100 utilities. The same is true with conservative leaning TX, OH, and FL. Likewise, utilities are found in communities of all sizes. The smallest municipality with a utility is a town in Florida with a population of 88 and the largest is the City of Las Angeles with a population of 4 million.

Next Committee Meeting

Thursday, February 17th, 7:00 pm

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Equivalent Residential Units (ERU)

ERUs are the most common way to structure a stormwater utility fee. The idea behind an ERU system is simple: the larger the property, the more stormwater runoff, ergo, the larger the fee.

ERUs are based on the average amount of impervious area (IA) on a single-family, residential property. This typically includes roofs, driveways, patios, and parking areas. It does NOT include public sidewalks, roads, and structures in the public Right-of-Way. Once you determine the average IA, you can find a balance between your financing needs and ERUs to determine what your fee should be.

Tiered Systems

Tiered systems typically start with determining an ERU. After that, the key difference is that rather than determining a fee strictly on the amount of IA on the property, fees are determined based on ranges that are defined by the ERU. For example, a town might decide that any property with less than 1,250 sq ft of IA pays $50/year, any property with 1,250-3,750 sq ft IA pays $100/year, and any property with over 3,750 sq ft IA pays $200/year.

The most common problem with tiered systems is that small properties are often overcharged while large ones pay too little. That said, it is possible to create an equitable tiered system.

Flat Fee Systems

Unlike an ERU or tied system in which the fee is based on the type of property and the amount of IA, flat fee systems are exactly what the name implies: every property pays the same fee regardless of the type of property and the amount of IA. In other words, a big box store pays the same fee as a single-family residence. Due to the nature of this system, it is not possible to have a flat fee system that is equitable.

Next Steps

Taking into consideration the input from the Stormwater Advisory Committee, EFC will develop recommendations about the most appropriate fee structure for the Town, as well as recommendations as to fee amounts and the role a fee would play in a larger, overarching stormwater financing strategy.

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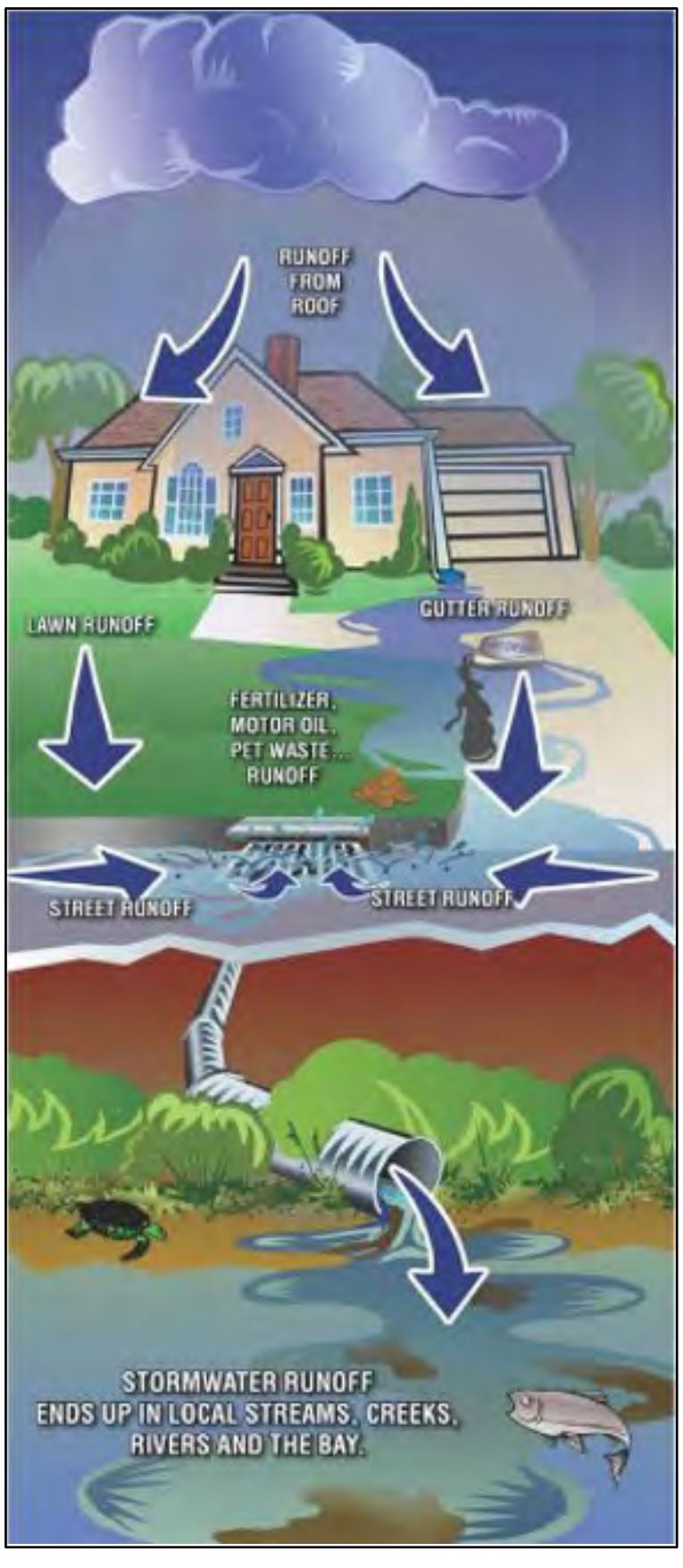

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Meeting Four Summary

The fourth Advisory Committee meeting was held on Thursday, February 24th. Based on the outcome of the previous meeting, a tiered system with no differentiation between residential and non-residential parcels was developed. EFC presented four funding scenarios for a stormwater utility fee. The scenarios were:

1. A maximum fee of $20/year (per ERU);
2. Enough funding to cover just the permit's impervious area restoration requirements;
3. Funding for the Town's current level of service; and
4. Funding for the Town's recommended level of service

Calculating the Equivalent Residential Unit (ERU)

ERUs are based on the average amount of impervious area (IA) on a single-family, residential property. Using the Town's Zoning Code, it was determined that there are 885 residential parcels which are in the R-1, R-2, R-3, and VZ zones. Therefore, the ERU was calculated to be 2,932 square feet.

Total residential lot IA = 2,594,387 sq ft
Total residential units = 885
2,594,387 / 885 = 2,932
1 ERU = 2,932 sq ft

Determining the Tiers

Given that 1,466 is half of an ERU and 4,398 is 1.5 ERU, the Tiers came out to:

Residential	Tier	Equivalent ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	173	20%
Sq Ft >1,466 and <= 4,398	2	1	616	69%
Sq Ft > 4,398	3	Calculated*	96	11%

Commercial	Tier	Equivalent ERU	# of Parcels	% of Parcels
Sq Ft <= 1,466	1	0.5	11	16%
Sq Ft >1,466 and <= 4,398	2	1	8	12%
Sq Ft > 4,398	3	Calculated*	49	72%

A Maximum Fee of $20/Year per ERU

This scenario would charge $20/ERU/year and bring in a total annual revenue of $34,851.80. To date, the Town has averaged an annual expense of $30,000, however, the Town has not yet implemented the necessary impervious area restoration requirements which are the most expensive component of the permit.

Enough Funding to Cover just the Permit's Impervious Area Restoration Requirement

This scenario would charge $26/ERU/year and bring in a total annual revenue of $45,307.34. This would provide enough funding for maintenance of the existing stormwater infrastructure as well as a modest reserve fund for items such as emergency repairs. However, the Town would have to continue to pay for the MCM components of its permit through either its general fund or by raising taxes.

Funding for the Town's Current Level of Service

This scenario would charge $32/ERU/year and bring in a total annual revenue of $55,762.88. This provides enough funding for items on the Town's wish list such as increased street sweeping costs, catch basin cleaning costs, and other maintenance that is required to maintain the Town's current Level of Service in order to meet the requirements of MDE.

Funding for the Town's Recommended Level of Service

This scenario would charge $47/ERU/year and bring in a total annual revenue of $81,901.73. This scenario considers both the costs of the existing permit cycle and puts enough funds in reserve to prepare the Town for its next 5-year permit which will have stricter (aka more expensive) pollution reduction requirements.

Recommendations from the Committee

The committee was split in its recommendations to Town Council. Half of the committee recommended funding at the $20/ERU/year level and the other half recommended funding at the $47/ERU/year level. Next up EFC will present all of the options to Town Council.

Next Up: EFC will present to Town Council on

Monday, March 7th, at 7:00 pm

More information can be found on the Town's calendar:
http://www.emmitsburgmd.gov/calendar.php

Appendix D

Level of Service Document

Permit MCM Requirements

1. **MCM #1 -- Public Education and Outreach**

   Develop and implement a stormwater public outreach and education program.

Level of Service Options	Associated Activities	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Develop and passively distribute education materials on stormwater and actions the public can take to reduce runoff and pollutants. Offer a hotline to report water quality complaints. Develop an employee training program to prevent or reduce pollutants going into the storm system.	None	None	$408	
Medium	Minimal + and actively distribute materials.				
High	Medium + develop and actively distribute audience-specific print and web materials to encourage pollution prevention actions by HOA's, schools, and businesses.				

Notes:

- Public Education and Outreach – $408 is the 3-year average of what was spent on MCM #1 (based on past three annual reports)
- Costs include sewer/water brochure mailing, storm drain marking brochure, and training costs
- 1/10/22 Comments from Town During Level of Service Discussion**:**
  - Town can easily handle this MCM in-house with existing staff and resources
  - The existing program is doing well to reach intended audiences. The Town's newsletter helps us a lot.
  - Town is not interested in expanding education efforts, using additional communications channels, engaging additional audiences, or developing new materials at this time

2. MCM #2 -- Public Involvement and Participation

Implement and maintain a public involvement and participation program.

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Comply with public notice requirements. Allow access to and comment on annual progress reporting. Offer and promote participation events and track public engagement.	None	None	$4,183	
Medium	Minimal + offer a wider variety of public engagement opportunities and establish a more intentional process for community input on stormwater programming.				
High	Medium + include community engagement activities around stormwater at all Town events and track impacts of public participation activities.				

Notes:

- Public Involvement and Participation – $4,183 is the 3-year average of what was spent on MCM #2 (based on past three annual reports)
- Costs include the Town's rain barrel program, storm drain marking program, and Arbor Day tree plantings
- 1/10/22 Comments from Town During Level of Service Discussion**:**
  - Town can easily handle this MCM in-house with existing staff and resources
  - Town is not interested in offering new public engagement activities or reaching new audiences at this time
  - There is interest in continuing the Town's rain barrel program, including holding a rain barrel workshop at least once a year. They currently have 15 rain barrels in stock and plan to apply for a grant to obtain new barrels when they run out.

3. MCM #3 -- Illicit Discharge Detection & Elimination

Implement and enforce an illicit discharge detection and elimination program.

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Respond to complaints as resources allow.				
Medium	Respond to complaints. Prioritize areas with higher likelihood for illicit discharges and inspect a portion annually. Identify source and process for elimination on a case-by-case basis.	None – will be contracted out	EFC recommends establishing a reserve fund for repairs	$4,500 (outfall inspections contract)	
High	Respond to complaints. Prioritize areas with higher likelihood for illicit discharges and inspect a larger portion annually. Identify source and process for elimination on a case-by-case basis. Develop and distribute targeted education materials.				

Notes:

- Illicit Discharge Detection and Elimination – $9,335 is the 3-year average of what was spent on MCM #3 (based on past three annual reports). This number is high due to the cost of MS4 GIS mapping incurred in year one.
- Costs include the Town's MS4 GIS mapping, developing, and updating an IDD&E plan, and annual illicit discharge screenings
- 1/10/22 Comments from Town During Level of Service Discussion:
  - Town must complete nine outfall inspections per year. No dry weather flows have been identified; however, if something were to come up, there would be additional costs.
  - The Town has sufficient resources for enforcement and training needs
  - There is interest in developing targeted outreach to potential dischargers

4. MCM #4 -- Construction Site Runoff Control

Control construction site sediment stormwater runoff in compliance with the Maryland Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland, and the Code of Maryland Regulations (COMAR).

Level of Service Options	Associated Activities	Additional Staff	Additional Operating Costs	Yearly/One -Time Expense	Capital Cost
N/A -- The Town has agreements in place with the County and the County Soil Conservation District for these activities.					
	Attorney fees for SW agreements for any new development projects		$2,500		

- Construction Site Runoff Control – To date $0 has been spent on this MCM because the Town has agreements in place with the County and the County Soil Conservation District for these activities.
- 1/10/22 Comments from Town During Level of Service Discussion**:**
  - The Town is happy with the service provided by the County and the County Soil Conservation District for these activities
  - The Town's attorney has started requiring the Town to complete its own stormwater easement agreements with developers. There is not a lot of new construction in the Town, and this cost will change annually depending on how much new development there is every year. EFC recommends budgeting $2,500 per year for this legal fee (the attorney's rate is $250/hour, so this would cover 10 hours of her time).

5. MCM #5 -- Post Construction Runoff Control

Control stormwater runoff following construction in accordance with Maryland Environment Article, Title 4, Subtitle 1, Annotated Code of Maryland and the Code of Maryland Regulations (COMAR).

Level of Service Options	Associated Activities	Additional Staff	Additional Operating Costs	Yearly/One -Time Expense	Capital Cost
N/A -- The Town has an agreement in place with the County for these activities.					

Notes:

- Post-Construction Runoff Control – $3,619 is the 3-year average of what was spent on MCM #5 (based on past three annual reports)
- Whereas the County covers the plan review and approval for all new and redevelopment projects as well as construction and post construction inspections, the Town must pay for maintenance and/or repairs to its existing stormwater system (if problems are identified by the County in their inspection). To date the Town has reported these costs under MCM #5 in its Annual Reports to MDE. For the sake of this Level of Service Analysis, these expenses have been moved to the "Operations and Maintenance – BMP Asset Management" section of this report.
- 1/10/22 Comments from Town During Level of Service Discussion**:**
    - The Town is happy with the service provided by the County for these activities

6. MCM #6 -- Pollution Prevention and Good Housekeeping

Develop or update, implement and maintain pollution prevention and good housekeeping practices to reduce pollutants from all municipal operations.*

Level of Service Options	Associated Activities	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Offer annual staff and contractor training. Have pollution prevention plans for all facilities. Document discharge events and clean up. Quantify efforts to reduce use of fertilizers, pesticides, and deicers. Implement routine schedule for BMP and stormwater system inspection and maintenance.			$11,398	
Medium	Minimal + offer more frequent, ongoing training for staff and contractors on a variety of topics. Conduct routine street sweeping. Inspect and clean additional BMPs and inlets.				

High	Medium + state a procurement preference for goods and services from vendors that also employ pollution prevention practices. Inspect and clean additional BMPs and inlets.				

*BMP and stormwater system inspections and cleaning and street sweeping are addressed in more detail in the Operations & Maintenance section of this document.

Notes:

- While EFC was completing its Stormwater Utility Feasibility Study, the Town hired another contractor to develop a new Pollution Prevention and Good Housekeeping Plan. The Plan was not yet completed at the time of this Level of Service Analysis, but its cost to the town was $11,398.
- 1/10/22 Comments from Town During Level of Service Discussion**:**
    - The third-party contractor will evaluate each Town-owned facility (six locations)
    - The Town wants to allocate funds annually for actions identified in the Pollution Prevention and Good Housekeeping Plan

Chesapeake Bay TMDL

In response to the nutrient and sediment reduction requirements of the Chesapeake Bay TMDL, the Phase II General permit also requires a 20% impervious surface restoration element.

Associated Activities	**Additional Staff**	**Additional Operating Costs**	**Yearly/One-Time Expense**	**Capital Cost**
Silo Hill SWM basin restoration			$16,018	
Tree planting restoration			$12,000	
North Seton Avenue Green Street				
Updating the baseline impervious assessment			$522	

Notes:

- The baseline impervious assessment must be updated at the beginning of each permit cycle, once every five years. The last time the Town completed this it cost $522.
- The annual cost included for the Silo Hill restoration project is what was reported in the Town's 2021 Annual MS4 Report. The total cost of that project is estimated at $224,000.
- 1/10/22 Comments from Town During Level of Service Discussion:
    - The Town acknowledges that it eventually needs to include the North Seton Green Street project in its budget. Right now, it is still in the concept design phase.

Operations and Maintenance -- BMP Asset Management

Maintain, inspect, and evaluate the effectiveness of BMPs owned or maintained by the Town, as well as those which are privately owned.

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Perform maintenance on BMPs as resources become available.				
Medium	Minimal + inspect and maintain more than the minimum level of BMPs.		$789+$2,087= $2,876	$3,619	
High	Medium + develop program to also address BMPs on private property.				

Notes:

- Post-Construction Runoff Control – $3,619 is the 3-year average of what was spent on MCM #5 (based on past three annual reports)
- Whereas the County covers the plan review and approval for all new and redevelopment projects, as well as construction and post construction inspections, the Town must pay for maintenance and/or repairs to its existing stormwater system (if problems are identified by the County in their inspection). To date the Town has reported these costs under MCM #5 in its Annual Reports to MDE, but for the sake of this Level of Service Analysis these expenses have been moved to this section of the Level of Service Analysis.

- Costs in the yearly/one-time expense column include town-owned BMP maintenance and outfall stabilization
- The additional operating costs listed are the estimated annual maintenance costs of the Silo Hill SWM basin project and the tree planting project. The methodology used to determine maintenance costs can be found in Table 2 of this report.[1]
- 1/10/22 Comments from Town During Level of Service Discussion:
    - There is interest from the Town in developing a formal asset management plan. The estimated cost to develop an asset management plan is $120,000 and is not included in this Level of Service document.
    - One additional BMP (likely a rain garden) will be installed at the new pump station on Creamery Road in the next two years and will have associated maintenance and inspection costs.
    - In the next permit cycle, the Town will also need to include the Silo Hill SWM Pond Retrofit which will cost $224,000. Currently they have a $34,000 WAGP grant from CBT for design.

Operations and Maintenance -- Stormwater System Asset Management

Inspect, evaluate, and maintain the effectiveness of the Town's stormwater system, including inlets, ditches and drains.

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Prioritize inlets for cleaning based on complaints.			$1,441	
Medium	Proactively prioritize and inspect, clean, and maintain a percentage of inlets, ditches, and drains annually.				
High	Proactively prioritize and inspect, clean, and maintain a larger percentage of inlets,				

[1] https://arch.umd.edu/sites/default/files/docs/publications/blair_county_stormwater_financing_final_report_0.pdf

	ditches, and drains annually.				

Notes:

- The one-time expense of $1,441 is the 3-year average of what the Town has spent on inlet repairs.
- Town's DPW currently completes basic maintenance such as mowing basins and checking for trash, but these costs are not included in annual reports to MDE.
- 1/10/22 Comments from Town During Level of Service Discussion:
    - The County completes inspections of the Town's conveyance system. Therefore, the Town is reactive when it comes to inspecting and maintaining its conveyance system and only inspects when a problem is reported.
    - There is interest from the Town in developing a formal asset management plan. The estimated cost to develop an asset management plan is $120,000 and is not included in this Level of Service document.

Operations and Maintenance -- Street Sweeping

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Maintain the current level of sweeping.				
Medium	Increased frequency.			$24,000	
High	Maximum frequency.				

Notes:

- The Town does not currently report what it spends on street sweeping each year in its annual reports to MDE. Currently, DPW staff use a sweeper that attaches to a skid loader, and they do not have the capacity to increase street sweeping beyond the current monthly sweeping schedule.
- The $24,000 cost estimate assumes that a contractor (with a vacuum sweeper) is hired to street sweep twice a month. Costs vary widely. EFC assumes that a contractor can be hired for $1,000 per day and will street sweep 24 times a year.
- 1/10/22 Comments from Town During Level of Service Discussion:
    - The Town is interested in keeping the level of pollution reduction credit that they currently receive from MDE for this BMP. To do this, in the next permit cycle the Town wants to invest in vacuum sweeping. Ideally, the same company hired to do street sweeping can also clean catch basins.

Green Infrastructure & Capital Improvements

Consider the role of natural/green infrastructure in addressing flooding and water quality priorities, as well as public education and engagement opportunities. Consider opportunities to fold green infrastructure practices into existing capital plans and other projects.

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Implement green infrastructure demonstration projects to educate and engage citizens on stormwater.				North Seton Avenue Green Street is currently in the design phase but will require CIP funding.
Medium	Minimal + identify and map opportunities to expand existing natural infrastructure. Develop programs that incentivize practices on private property.				
High	Medium + include green and natural infrastructure in Asset Management regimes. Routinely screen capital plan and other projects for opportunities to include green infrastructure.				

Notes:

- Town has G3 grant money from CBT to design a high-performing green street conceptual plan for North Seton Avenue. Currently, stormwater sheet flows down North Seton Avenue and goes directly into Flat Run stream, which causes stream bank erosion and frequent flooding that entraps the residents of the Northgate residential development. This project will create a plan to greatly reduce the amount of stormwater runoff and pollution that is piped and discharged directly into local streams, protect and restore the health of local waterways, and incorporate flood hazard mitigation.
- 1/10/22 Comments from Town During Level of Service Discussion:
    - Ideally, the Planning Department could have their own stormwater CIP budget (separate from DPW's)

Other Costs -- Training, Technology and Consultant Services

Consider the training and technology needs beyond what is required for pollution prevention and good housekeeping requirements.

Level of Service Options	Program Gap	Additional Staff	Additional Operating Costs	Yearly/One-Time Expense	Capital Cost
Minimal	Upgrade technology and offer professional development opportunities reactively as needed or funds are available.			$500	
Medium	Proactively plan and budget annually for technology and professional development needs.				
High	Medium + additional workshops and training provided to staff.				

Notes:

- EFC recommends the Town budget $500 per year for staff training.
- 1/10/22 Comments from Town During Level of Service Discussion:
    - In the past this service was provided for free by a contractor, but that is no longer the case.

Appendix E

Impervious Surface Analysis Methodology

City of Emmitsburg: Impervious Surface Assessment using GIS Data

Background

To develop potential rate structures, the Town's equivalent residential unit (ERU) was calculated after measuring the amount of impervious surface area for all Town parcels except those classified as Right-of-Way (ROW) and then averaging the impervious surface area of single-family residential properties to arrive at the ERU. This analysis involved calculating the amount of impervious surface (pavement and buildings) within each parcel using GIS software. The resulting data was then exported and analyzed in Excel.

Methods and Data

The first step in the analysis was retrieving parcel and impervious cover data from municipal staff and other sources. The data was then reformatted and analyzed in order to feed into the rate structure analysis. Parcel, zoning, and municipal boundary data were downloaded from the Frederick County Open GIS website. The County zoning layer classified all Town parcels as "municipal," which prevented a detailed analysis by type of property, so an additional parcel layer that had been populated (via Intersect) with the actual municipal zoning information was acquired from the County.

The project team then reviewed the Town's Revised NPDES Baseline Impervious Assessment (June 2021) and the methods the Town's consultant, GPI, used to develop geodatabases of existing pavement and structures. GPI used the "Edge of Pavement" and "Buildings" shapefiles from Frederick County (dated 2005) and checked them for accuracy by comparing them to 2016 Maryland Statewide Imagery. They reported that "impervious was added or subtracted as necessary but changes were relatively minor. Surface mounted solar panels, turf grass, and playgrounds with mulch surfaces were not included in this analysis." The County's "Edge of Pavement" data included roads, sidewalks, driveways, parking lots, and other impervious surfaces, and the "Buildings" data consisted of above-ground structures. GPI advised that the impervious layers they created "includes everything within the Town's area of responsibility including impervious considered treated by SHA facilities but does NOT include impervious within SHA's rights-of-way. This is essentially a slightly updated version of the Frederick County layers available on their GIS data website." EFC determined that these two existing layers (pavement and structures), which were outputs of the Baseline Impervious Assessment prepared by GPI for the Town, were sufficiently accurate for completing our assessment of impervious surface by parcel type.

To determine the amount of impervious surface within each parcel in the Town, EFC ran a spatial analysis process in GIS to calculate the area of the structure and pavement layers within each parcel boundary. The result was a data table that added a new field to the parcel data layer that was populated with the total impervious area per parcel. This data was exported to an Excel spreadsheet where the remainder of the analysis was completed.

More detailed information on data and methods is outlined below.

Data used:

Layer name	**Source**
Imp_Structure	Zip folder received from the consultants (GPI), December 2021
Imp_Pavement	Zip folder received from the consultants (GPI), December 2021
ParcelsSpJnZoning_20211210	Mary McCullough, Frederick County, acquired via email, December 2021

Emmitsburg_boundary	Municipalities layer, Frederick County, downloaded January 2022

Methods:

- The Imp_Structure and Imp_Pavement layers were merged into one single layer called Merged_Imp_PaveStructure using the geoprocessing tool Merge.
- A new layer was created from ParcelsSpJnZoning_20211210 which does not include the town-owned parcels (as mentioned by Zach in the email dated 12/10/21).
- The Merged_Imp_PaveStructure was clipped to the ParcelsSpJnZoning_20211210 layer.
- From the clipped layer created above, 'ROW' SDATLUCode was excluded using Select By Attributes and a new layer named Final_ImpSurface_inParcel was created.
- Two new fields were added to the above layer: ImpArea (Type:Double) and TownParcel (Type:Text). The total area for the impervious surface in the parcel was calculated using 'Calculate Geometry' for the ImpArea layer (right-click on ImpArea field in the attribute table). The TownParcel is a text field which indicates if a parcel is Town-owned. Select all town-owned parcels in the attribute table and use 'Calculate Field' equals 'Yes'. This field will let the user know if the parcel is town-owned or not.
- This layer can further be exported as a .dbf table and opened using Excel for further analysis.
- The Boundary layer for Emmitsburg was extracted from the Municipalities layer using 'Select By Attribute' and creating a new layer from the selection.
- The geodatabase also contains impervious surface information for non-residential parcels and village zone (VZ) mixed-use parcels.

**All analysis was done in ArcGIS Pro and then exported to an Excel file.

Appendix F

Village Zone Parcel Categorization

Parcels not marked as "Town" or "Commercial" were classified as "Residential".

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	Town Parcel	Commercial
24762018	79948			VZ	31.87		
24741017	82235	1105183057	MAIN ST	VZ	91.83		
24722883	63963	1105185335	CHESAPEAKE AVE	VZ	292.47		
24757135	68371	1105161258	E MAIN ST	VZ	390.54		
24766345	67598	1105162750	MAIN ST	VZ	459.26		
24795432	70177	1105178622	2 SETON PL	VZ	473.87		
24712090	69346	1105178665	6 SETON PL	VZ	535.15		
24744563	65777	1105178614	1 SETON PL	VZ	535.32		
24782343	71290	1105178657	5 SETON PL	VZ	548.15		
24733435	67802	1105168554	E MAIN ST	VZ	565.00		
24710853	66506			VZ	627.89		
24714251	71417	1105178673	7 SETON PL	VZ	630.59		
24726727	69313	1105178630	3 SETON PL	VZ	657.85		
24782259	65776	1105178649	4 SETON PL	VZ	659.59		
24757647	67825	1105157714	317 W MAIN ST	VZ	703.76		
24704756	70458	1105178584	10 SETON PL	VZ	719.01		
24766923	65778	1105178576	9 SETON PL	VZ	780.92		
24787819	71781	1105178606	12 SETON PL	VZ	801.63		
24735688	67887	1105162777	717 W MAIN ST	VZ	807.85		
24763180	70217	1105163013	807 W MAIN ST	VZ	856.62		
24731313	69725	1105178681	8 SETON PL	VZ	896.17		
24730647	63672	1105171695	101 E MAIN ST	VZ	933.37		
24776002	67452	1105168570	E MAIN ST	VZ	986.25		
24706193	71578	1105178592	11 SETON PL	VZ	1,015.59		
24790330	62371	1105163919	114 E MAIN ST	VZ	1,067.03		
24785519	69377	1105161436	12 FEDERAL ST	VZ	1,082.90		
24711201	68125	1105162688	126 E MAIN ST	VZ	1,108.36		
24722809	88634	1105166543	535 W MAIN ST	VZ	1,170.83		
24703402	67050	1105163226	800 W MAIN ST	VZ	1,234.29		
24793437	72746	1105159210	524 W MAIN ST	VZ	1,235.92		
24743932	66400	1105164303	436 E MAIN ST	VZ	1,246.28		
24709580	67828	1105163021	809 W MAIN ST	VZ	1,272.44		
24720108	62449	1105173485	209 W MAIN ST	VZ	1,273.09		
24779259	64561	1105157153	30 W MAIN ST	VZ	1,307.10		
24725737	71120	1105170370	225 N SETON AVE	VZ	1,377.75		
24743044	67575	1105167833	214 E MAIN ST	VZ	1,484.40		
24753004	65070	1105168449	215 E MAIN ST	VZ	1,519.00		
24791008	64540	1105159032	120 E MAIN ST	VZ	1,549.69		
24769233	67242	1105165458	810 W MAIN ST	VZ	1,550.40		
24714529	67950	1105173868	221 N SETON AVE	VZ	1,554.61		
24749333	66980	1105177626	205 W MAIN THRU 207 ST	VZ	1,560.07		
24744841	72659	1105179068	226 W MAIN ST	VZ	1,745.47		
24758768	65265	1105177901	437 E LINCOLN AVE	VZ	1,746.12		
24743796	71047	1105170508	208 E MAIN ST	VZ	1,748.55		
24787493	63145	1105175534	510 W MAIN ST	VZ	1,763.04		
24745052	63116	1105162017	321 E MAIN ST	VZ	1,770.96		
24768012	70463	1105160634	314 W MAIN ST	VZ	1,773.47		
24730209	70580	1105158273	306 W MAIN ST	VZ	1,780.08		
24733503	71261	1105170346	212 E MAIN ST	VZ	1,785.72		
24732456	67976	1105161991	314 E MAIN ST	VZ	1,802.90		
24778107	69871	1105173744	110 S SETON AVE	VZ	1,817.02		

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	Town Parcel	Commercial
24745797	69754	1105167728	218 W MAIN ST	VZ	1,818.35		
24745858	71236	1105160227	22 W MAIN ST	VZ	1,827.06		
24783597	65294	1105162459	316 W MAIN, ALSO 318 ST	VZ	1,830.31		
24788292	69196	1105177928	439 E LINCOLN AVE	VZ	1,840.54		
24769716	68615	1105174007	205 N SETON AVE	VZ	1,860.46		
24736897	69195	1105177936	441 E LINCOLN AVE	VZ	1,867.75		
24792483	68555	1105159083	30 E MAIN ST	VZ	1,884.77		
24781483	69838	1105167809	222 E MAIN ST	VZ	1,923.91		
24747701	67029	1105161444	201 E MAIN ST	VZ	1,927.29		
24781337	67809	1105168791	317 E MAIN ST	VZ	1,928.26		
24770563	68825	1105172616	702 FRAILEY RD	VZ	1,932.19		
24718655	65857	1105163420	118 E MAIN ST	VZ	1,944.45		
24706754	66354	1105168635	218 E MAIN ST	VZ	1,958.28		
24776790	67574	1105176778	216 E MAIN ST	VZ	1,976.31		
24778989	74645	1105159571	31 E MAIN ST	VZ	1,980.24		
24792449	68094	1105170060	527 W MAIN ST	VZ	1,984.89		
24728676	65072	1105162297	211 E MAIN ST	VZ	1,989.37		
24765645	67810	1105172772	104 E MAIN ST	VZ	2,000.79		
24741418	70464	1105165814	143 N SETON AVE	VZ	2,014.26		
24772354	63674	1105177324	201 W MAIN ST	VZ	2,016.44		
24736606	65425	1105164729	215 N SETON AVE	VZ	2,033.34		
24703974	69259	1105161843	308 W MAIN ST	VZ	2,061.89		
24738216	64245	1105172063	217 E MAIN ST	VZ	2,064.70		
24716623	69835	1105159717	221 W MAIN ST	VZ	2,076.86		
24747171	69837	1105165830	224 E MAIN ST	VZ	2,115.25		
24746039	69295	1105176697	417 W MAIN ST	VZ	2,152.36		
24783037	74623	1105167884	13 E MAIN ST	VZ	2,159.95		
24760108	65852	1105178495	211 W MAIN ST	VZ	2,161.57		
24730454	68777	1105176662	502 W MAIN ST	VZ	2,186.08		
24743763	69752	1105165989	519 W MAIN ST	VZ	2,195.24		
24765895	70970	1105167647	324 E MAIN ST	VZ	2,205.96		
24773427	69840	1105160057	220 E MAIN ST	VZ	2,219.55		
24723461	65655	1105159938	121 E MAIN ST	VZ	2,220.81		
24733166	70370	1105175658	100 E MAIN ST	VZ	2,228.85		
24790715	67100	1105159512	511 W MAIN ST	VZ	2,231.91		
24758819	65798	1105167949	219 W MAIN ST	VZ	2,270.91		
24788380	68310	1105177197	804 W MAIN ST	VZ	2,271.11		
24761196	66606	1105161746	110 E MAIN ST	VZ	2,277.57		
24770614	68614	1105162319	513 W MAIN ST	VZ	2,281.65		
24781016	66261	1105162009	316 E MAIN ST	VZ	2,319.95		
24785919	66836	1105164362	517 W MAIN ST	VZ	2,327.55		
24736292	66411	1105163064	701 W MAIN ST	VZ	2,337.79		
24778995	67345	1105168708	312 W MAIN ST	VZ	2,365.24		
24709187	69773	1105177944	443 E LINCOLN AVE	VZ	2,365.46		
24787806	70232	1105160707	803 W MAIN ST	VZ	2,365.97		
24707934	74624	1105164052	E MAIN ST	VZ	2,367.05		
24745818	69670	1105160189	122 E MAIN ST	VZ	2,369.95		
24783803	68776	1105164389	500 W MAIN ST	VZ	2,392.95		
24772320	66426	1105160960	329 E MAIN ST	VZ	2,398.09		
24761284	64780	1105171571	309 E MAIN ST	VZ	2,401.41		
24794532	67681	1105158346	110 MAIN ST	VZ	2,406.05		
24766680	62836	1105166136	719 W MAIN ST	VZ	2,448.26		

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	Town Parcel	Commercial
24721154	68394	1105158443	29 LINCOLN AVE	VZ	2,455.46		
24746042	74617	1105166578	531 W MAIN, THRU 533 ST	VZ	2,460.26		
24741225	63431	1105158451	111 W MAIN ST	VZ	2,462.81		
24733121	69359	1105163293	205 E MAIN ST	VZ	2,469.92		
24779774	69446	1105167744	118 S SETON AVE	VZ	2,474.98		
24716685	64708	1105168775	115 W MAIN ST	VZ	2,497.74		
24764807	64621	1105163005	814 W MAIN ST	VZ	2,501.90		
24784566	63995	1105164567	139 N SETON AVE	VZ	2,509.44		
24710069	90112	1105160235	4 W MAIN ST	VZ	2,524.75		
24754408	65550	1105157129	315 E MAIN ST	VZ	2,546.01		
24762137	70550	1105167116	209 E MAIN ST	VZ	2,549.59		
24756832	69833	1105161193	213 W MAIN ST	VZ	2,552.07		
24714996	71045	1105175607	210 E MAIN ST	VZ	2,572.46		
24747052	69445	1105160715	120 S SETON AVE	VZ	2,596.54		
24763775	66332	1105164761	325 E MAIN ST	VZ	2,599.63		
24780050	70281	1105168627	119 E MAIN ST	VZ	2,619.42		
24766590	71060	1105159210	524 W MAIN ST	VZ	2,633.81		
24794016	70220	1105164427	301 W MAIN ST	VZ	2,634.94		
24785831	68338	1105157528	328 E MAIN ST	VZ	2,643.14		
24760785	63996	1105175542	506 W MAIN ST	VZ	2,648.90		
24770536	65339	1105159199	300 W MAIN ST	VZ	2,664.22		
24750800	67153	1105175194	103 E MAIN ST	VZ	2,678.77		
24721392	63721	1105157587	421 W MAIN ST	VZ	2,691.03		
24758013	69867	1105158699	332 E MAIN ST	VZ	2,695.64		
24732135	69786	1105157706	320 W MAIN ST	VZ	2,695.74		
24766698	69149	1105157102	415 E MAIN ST	VZ	2,697.82		
24776390	68813	1105158877	715 W MAIN ST	VZ	2,698.51		
24732448	66032	1105170400	351 E MAIN ST	VZ	2,708.58		
24721401	68767	1105165644	115 E MAIN ST	VZ	2,712.35		
24727756	70286	1105173221	217 N SETON AVE	VZ	2,713.48		
24719946	67083	1105160324	200 E MAIN ST	VZ	2,714.30		
24717948	70371	1105162076	311 E MAIN ST	VZ	2,722.10		
24769184	66291	1105160243	2 W MAIN ST	VZ	2,723.64		
24788492	84724	1105164060	E MAIN ST	VZ	2,726.33		
24731364	68586	1105172985	216 W MAIN ST	VZ	2,743.23		
24706752	66852	1105157161	307 W MAIN ST	VZ	2,762.32		
24749535	71476	1105161231	E MAIN ST	VZ	2,798.29		
24751409	72743	1105175917	528 W MAIN, ALSO 530 ST	VZ	2,810.07		
24751960	66414	1105159903	214 W MAIN ST	VZ	2,836.04		
24789163	71059	1105163250	514 W MAIN ST	VZ	2,839.36		
24785954	70022	1105157668	401 E MAIN ST	VZ	2,868.57		
24746487	68155	1105176204	403 W MAIN, THRU 405 ST	VZ	2,922.63		
24711780	66762	1105169593	402 W MAIN ST	VZ	2,926.65		
24731404	70504	1105164044	16 W MAIN,ALSO 18 AND 20 ST	VZ	2,942.41		
24730394	64631	1105171830	125 W MAIN ST	VZ	2,943.18		
24776256	68145	1105158389	119 W MAIN ST	VZ	2,951.56		
24771108	71061	1105164036	220 W MAIN ST	VZ	2,952.06		
24781609	69791	1105168678	231 N SETON AVE	VZ	2,952.86		
24732059	63307	1105158370	133 W MAIN ST	VZ	2,955.45		
24788029	69447	1105160723	116 S SETON AVE	VZ	2,965.54		
24762462	68768	1105161185	107 W MAIN ST	VZ	2,972.15		
24746201	68622	1105158400	MAIN ST	VZ	2,987.64		

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	Town Parcel	Commercial
24782948	69189	1105174058	320 E MAIN ST	VZ	2,992.32		
24732986	70513	1105173817	326 E MAIN ST	VZ	2,998.81		
24779264	70525	1105174392	E MAIN ST	VZ	3,019.93		
24752214	74621	1105165652	9 W MAIN,ALSO 11,13,15,17 ST	VZ	3,020.13		
24753514	64558	1105160219	26 W MAIN ST	VZ	3,148.18		
24751616	72747	1105177138	222 W MAIN, ALSO 224 ST	VZ	3,228.34		
24767734	69243	1105161037	133 S SETON AVE	VZ	3,239.03		
24780967	69015	1105171997	404 W MAIN ST	VZ	3,239.44		
24770983	67346	1105172888	135 S SETON AVE	VZ	3,247.51		
24770125	65115	1105158249	663 W MAIN ST	VZ	3,249.98		
24733179	70044	1105159687	435 E LINCOLN AVE	VZ	3,260.30		
24741446	68120	1105170028	201 N SETON AVE	VZ	3,285.66		
24741011	71568	1105159784	700 W MAIN ST	VZ	3,293.36		
24721835	68262	1105158354	114 W MAIN ST	VZ	3,371.56		
24781664	70487	1105170184	207 E MAIN ST	VZ	3,381.09		
24786577	66709	1105157544	147 N SETON AVE	VZ	3,401.62		
24707551	63656	1105175828	419 W MAIN ST	VZ	3,421.69		
24751428	64560	1105176611	311 W MAIN ST	VZ	3,442.13		
24751442	68599	1105164370	343 E MAIN ST	VZ	3,462.31		
24753548	67557	1105177200	700 FRAILEY RD	VZ	3,478.96		
24790113	65758	1105185343	203 S SETON AVE	VZ	3,511.31		
24772634	71506	1105168120	303 S SETON AVE	VZ	3,546.47		
24733878	74641	1105172993	21 E MAIN ST	VZ	3,550.94		
24752655	95284	1105172489	125 S SETON AVE	VZ	3,569.08		
24778406	65410	1105164613	448 E MAIN ST	VZ	3,669.53		
24739553	68897	1105159997	101 W MAIN, THRU 105 ST	VZ	3,720.37		
24748185	68295	1105168546	407 E MAIN ST	VZ	3,746.29		
24741215	68168	1105159679	426 E MAIN ST	VZ	3,817.84		
24730203	65569	1105166241	137 S SETON AVE	VZ	3,822.23		
24718394	68529	1105176271	521 W MAIN, THRU 523 ST	VZ	3,847.49		
24789235	67049	1105165482	706 W MAIN ST	VZ	3,881.31		
24718712	66522	1105170494	711 W MAIN ST	VZ	3,884.43		
24744142	67397	1105176581	333 E MAIN ST	VZ	3,894.96		
24733585	63125	1105168562	410 E MAIN ST	VZ	3,917.52		
24774587	65416	1105164222	211 N SETON AVE	VZ	3,991.74		
24744277	71299	1105174929	111 N SETON AVE	VZ	4,023.33		
24755801	68789	1105167698	113 E MAIN ST	VZ	4,047.66		
24782702	66969	1105161118	425 W MAIN ST	VZ	4,082.05		
24758028	69213	1105162343	512 W MAIN ST	VZ	4,082.50		
24726367	70196	1105175313	714 W MAIN ST	VZ	4,091.65		
24741146	69075	1105177278	305 W MAIN ST	VZ	4,114.42		
24730686	66555	1105172055	300 E MAIN ST	VZ	4,124.84		
24734089	70106	1105159830	205 S SETON AVE	VZ	4,197.70		
24716973	69085	1105167914	812 W MAIN ST	VZ	4,223.43		
24794290	67754	1105166209	400 W MAIN ST	VZ	4,248.38		
24741772	70964	1105172578	S SETON AVE	VZ	4,262.39		
24782586	67827	1105177219	319 W MAIN ST	VZ	4,264.45		
24746282	67807	1105173442	106 E MAIN ST	VZ	4,328.76		
24703936	69625	1105158710	339 E MAIN ST	VZ	4,470.99		
24766539	63723	1105164788	423 W MAIN ST	VZ	4,540.21		
24796443	71567	1105161177	501 W MAIN ST	VZ	4,588.93		
24790611	65858	1105172004	312 E MAIN ST	VZ	4,643.37		

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	Town Parcel	Commercial
24729112	71507	1105163188	219 S SETON AVE	VZ	4,658.26		
24791876	67213	1105169054	401 W MAIN ST	VZ	4,668.03		
24745675	68092	1105176190	321 W MAIN ST	VZ	4,738.99		
24741623	71111			VZ	4,756.34		
24733086	70578	1105169763	302 W MAIN ST	VZ	4,780.09		
24770083	70042	1105163730	225 W MAIN, THRU 227 ST	VZ	4,841.63		
24740393	68450	1105157145	104 W MAIN ST	VZ	4,903.00		
24793826	66401	1105159660	434 E MAIN ST	VZ	4,917.64		
24740862	71477	1105161223	E MAIN ST	VZ	4,929.46		
24760178	65552	1105172047	E MAIN ST	VZ	4,942.55		
24770249	70503	1105175208	W MAIN ST	VZ	4,950.83		
24732632	68954	1105171563	119 N SETON AVE	VZ	5,100.72		
24772248	71411	1105177316	5 W MAIN, THRU 7 ST	VZ	5,401.57		
24778214	74622	1105165148	9 E MAIN ST	VZ	5,423.32		
24757704	68198	1105161622	659 W MAIN ST	VZ	5,631.21		
24721762	74620	1105177308	1 W MAIN, THRU 3 ST	VZ	5,747.14		
24764686	69849	1105163447	420 E MAIN ST	VZ	5,861.25		
24789722	65304	1105173981	239 N SETON AVE	VZ	5,865.47		
24773343	68191	1105167671	123 E MAIN ST	VZ	6,067.06		
24730071	96329	1105177049	140 S SETON AVE	VZ	6,138.52		
24794492	65940	1105173779	CHESAPEAKE AVE	VZ	6,630.33		
24793073	66673	1105171482	500 E MAIN ST	VZ	6,838.27		
24771001	71040	1105159946	406W W MAIN, THRU 410 ST	VZ	7,505.93		
24735447	72739	1105164907	286 S SETON AVE	VZ	7,922.37		
24773552	67293	1105172012	304 E MAIN ST	VZ	8,375.76		
24766318	63657	1105158435	130 W MAIN ST	VZ	8,763.35		
24788466	68706	1105171784	2 E MAIN ST	VZ	9,136.25		
24715244	68156	1105159776	200 MAIN, THRU 202 ST	VZ	9,386.36		
24717449	65618			VZ	9,594.63		
24736571	67736	1105159601	107 S SETON AVE	VZ	10,329.07		
24732950	69678	1105168538	601 W MAIN ST	VZ	11,110.26		
24759184	71048	1105167922	425 E MAIN ST	VZ	11,684.47		
24773572	67735			VZ	12,255.98		
24732021	69492	1105181720	1A WARTHENS WAY, UNIT A	VZ	13,564.28		
24725592	66918	1105172683	51 DEPAUL ST	VZ	16,897.31		
24714238	69596			VZ	17,077.25		
24766955	68585	1105176093	604 W MAIN ST	VZ	17,122.41		
24749952	67693	1105175860	150 S SETON AVE	VZ	17,209.95		
24731299	67824	1105172705	50 DEPAUL ST	VZ	23,275.94		
24793164	71297	1105174937	N SETON AVE	VZ	1,975.91		Yes
24752089	66639	1105159180	CHESAPEAKE AVE	VZ	3,852.59		Yes
24777017	67808	1105174864	301 E MAIN ST	VZ	4,203.57		Yes
24726094	68340	1105161215	E MAIN ST	VZ	4,587.63		Yes
24705060	67148	1105158311	101 S SETON AVE	VZ	5,910.75		Yes
24712036	68154	1105161630	105 N SETON AVE	VZ	6,145.41		Yes
24734156	64970	1105164028	124 W MAIN ST	VZ	6,371.64		Yes
24746386	70003	1105157870	313 W MAIN ST	VZ	6,604.49		Yes
24793225	71701	1105160855	415 W MAIN ST	VZ	7,267.46		Yes
24787173	69260	1105178770	123 W MAIN ST	VZ	7,869.38		Yes
24767719	66876	1105160758	S SETON AVE	VZ	8,091.55		Yes
24731753	69796	1105176751	210 W MAIN ST	VZ	8,393.90		Yes
24718477	69716	1105172543	100 S SETON AVE	VZ	8,579.86		Yes

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	Town Parcel	Commercial
24715335	68479	1105163145	427 E MAIN ST	VZ	13,016.81		Yes
24785345	72740	1105169410	210 S SETON AVE	VZ	13,221.88		Yes
24760262	70107	1105168198	S SETON AVE	VZ	13,948.57		Yes
24765695	70963	1105172551	130 S SETON AVE	VZ	14,876.32		Yes
24775966	74619	1105175224	23 W MAIN, THRU 29 ST	VZ	18,786.32		Yes
24748702	70989	1105165709	200 S SETON AVE	VZ	28,408.58		Yes
24705380	68188	1105173760	CHESAPEAKE AVE	VZ	31,566.01		Yes
24721993	66556	1105161681	1 CHESAPEAKE AVE	VZ	58,397.91		Yes
24738655	68303	1105159091	E MAIN ST	VZ	4,662.98	Yes	
24787233	96328	1105599569	142 SOUTH SCHOOL LN	VZ	8,727.07	Yes	
24742517	68372	1105179009	303 LINCOLN AVE	VZ	11,404.32	Yes	

Appendix G

Annual Cost Estimates

Emmitsburg Annual Cost Estimate: Just Impervious Restoration Requirements

2019 Annual Report Expenses		2020 Annual Report Expenses		2021 Annual Report Expenses	
Arbor Day Tree Planting	$869.08	Inlet Repair	$4,324.00	Outfall Stabilization	$3,357.16
Develop the Impervious Area Restoration Work Plan	$15,000.00	Town-owned BMP Maintenance	$7,498.78	Baseline Impervious Assessment updates (per MDE)	$522.45
		Baseline Impervious Assessment updates (per MDE)	$517.50		
		Silo Hill Bioretention Grant Match	$4,500.00		
		Silo Hill Bioretention Existing Conditions Survey	$3,500.00		
		Silo Hill Bioretention Geotechnical Testing	$7,500.00		
Annual Total	**$15,869.08**		**$27,840.28**		**$3,879.61**
Total (2019-2021)	**$47,588.97**				
Annual Average	**$15,862.99**				

Wish List Items from LOS Discussion with Town	
Under MCM #3 - Keep annual contract for outfall inspections. Budget at least $4K/year.	$4,500.00
Under MCM #3 - Establish a reserve fund for failures/repairs identified in annual outfall inspections	$0.00
Under MCM #4 - Attorney fees for SW agreements for any new development projects	
Under MCM #6 - Inspections and compliance costs (additional notes in LOS doc)	
Good Housekeeping Pollution Prevention Plan	$0.00
SUM	**$0.00**

TMDL Projects Grant Costs	
Silo Hill Basin Retrofit	$0.00
Tree Planting[1]	$12,000.00
North Seton Avenue (only have concept design right now)	$0.00
Creamery Road Pump Station BMP (in the next 2 years)	$0.00
Annual Contribution to Reserve Fund for Maintenance	$25,000.00
SUM	**$25,000.00**

BMPs Annual Maintenance Cost	
Silo Hill Basin Retrofit[2]	$788.53
Tree Planting[3]	$2,086.62
Emmitsburg Community Park Bioretention[4]	$802.10
Emmitsburg Community Park Pond[5]	$802.10
SUM	**$2,875.15**

Other O&M Costs	
Hire contractor to expand street sweeping to 2x/month	$0.00
Catch Basin Cleaning (contractual, same entity as street sweeper is preferable)	$128.00
Cost to hire contractor to write an asset management plan	$0.00
DPW is mowing and cleaning out trash. If larger maintenance needs arise, will need to contract out	$0.00
North Seton Ave project (when installed) will need a 2x/year contract for maintenance[6]	$788.53
SUM	**$916.53**

Total Impervious Restoration Costs	**$44,654.67**

Footnotes

1 - Included in annual costs above
2 - Using the methodology in Table 2 of EFC's Blair County Report: https://arch.umd.edu/sites/default/files/docs/publications/blair_county_stormwater_financing_final_report_0.pdf
3 - Using the methodology in Table 2 of EFC's Blair County Report: https://arch.umd.edu/sites/default/files/docs/publications/blair_county_stormwater_financing_final_report_0.pdf
4 - Included in annual costs above: Sum of annual maintenance plus baseline impervious assessment divided by 10; 5 year permit cycle split for each BMP
5 - Included in annual costs above: Sum of annual maintenance plus baseline impervious assessment divided by 10; 5 year permit cycle split for each BMP
6 - Using the methodology in Table 2 of EFC's Blair County Report: https://arch.umd.edu/sites/default/files/docs/publications/blair_county_stormwater_financing_final_report_0.pdf

Emmitsburg Annual Cost Estimate: Current Level of Service with Specific Additional Contracts

	2019 Annual Report Expenses		2020 Annual Report Expenses		2021 Annual Report Expenses	
MCM #1	Sewer/Water Bill Brochure Mailers (July and October); Training	$706.00	Inlet repair (contractual) based on resident complaint; Training	$4,453.00	Storm Drain Marking Brochure; Training	$389.00
MCM #2	Rain Barrel Program, Storm Drain Marking Program, Arbor Day Tree Plantings	$7,625.00	Rain Barrel Program, Storm Drain Marking Program	$3,485.00	Rain barrel program	$1,438.00
MCM #3	MS4 mapping, IDD&E Plan, Annual Illicit Discharge Screenings	$20,256.00	Annual Illicit Discharge Screenings	$3,242.00	1) Annual Illicit Discharge Screenings 2) Updates to IDDE SOP Manual 3) Updates to MS4 GIS Map	$4,506.00
MCM #4		$0.00		$0.00		$0.00
MCM #5		$0.00	Town-owned BMP Maintenance	$7,499.00	Outfall Stabilization	$3,357.00
MCM #6		$0.00		$0.00		$0.00
TMDL	Baseline Impervious Assessment & Impervious Work Plan	$15,000.00	Baseline Impervious Assessment updates; For the Silo Hill Project 1) Grant Funding Assistance 2) Existing Conditions Survey 3) Geotechnical Testing	$16,018.00	Baseline Impervious Assessment Updates Per MDE Comments	$522.00
Annual Total		**$43,587.00**		**$34,697.00**		**$10,212.00**
Total (2019-2021)		**$88,496.00**				
Annual Average		**$29,498.67**				

Wish List Items from LOS Discussion with Town	
Under MCM #3 - Keep annual contract for outfall inspections. Budget at least $4K/year.[1]	$4,500.00
Under MCM #3 - Establish a reserve fund for failures/repairs identified in annual outfall inspections	$0.00
Under MCM #4 - Attorney fees for SW agreements for any new development projects.[2]	$2,500.00
Under MCM #6 - Inspections and compliance costs (additional notes in LOS doc).[3]	$2,280
SUM[4]	**$4,780**
TMDL Projects Grant Costs	
Silo Hill Basin Retrofit	$0.00
Tree Planting[5]	$12,000.00
North Seton Avenue (only have concept design right now)	$0.00
Creamery Road Pump Station BMP (in the next 2 years)	$0.00
SUM	**$0.00**
BMPs Annual Maintenance Cost	
Silo Hill Basin Retrofit	$0.00
Tree Planting	$0.00
Emmitsburg Community Park Bioretention[6]	$802.10
Emmitsburg Community Park Pond[7]	$802.10
SUM	**$0.00**
Other O&M Costs	
Hire contractor to expand street sweeping to	$24,000.00
Catch Basin Cleaning (contractual, same entity as street sweeper is preferable)[9]	$128.00
Cost to hire contractor to write an asset management plan[10]	$0.00
DPW is mowing and cleaning out trash. If larger maintenance needs arise, will need to contract out	$0.00
North Seton Ave project (when installed) will need a 2x/year contract for maintenance	$0.00
SUM	**$24,128.00**
Annual Training	$500.00
Total	**$58,906.27**

Footnotes

1 - Included in MCM #3 line items above

2 - Current legal staff is $250/hr; assume 10 hours/year

3 - Cost of the new Pollution Prevention and Good Housekeeping Plan the town just contracted out

4 - Divided by 5 so it is paid evenly over permit cycle. Total cost is $11,398

5 - Included in 2020 TMDL cost

6 - Included in annual costs above: Sum of annual maintenance plus baseline impervious assessment divided by 10; 5 year permit cycle split for each BMP

7 - Included in annual costs above: Sum of annual maintenance plus baseline impervious assessment divided by 10; 5 year permit cycle split for each BMP

8 - Cost estimates vary. Assuming $1,000/day and 2 days/month

9 - According to the EPA the national average is $16/catch basin. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=200044BA.txt

10 - Not included in this scenario

Emmitsburg Annual Cost Estimate: Recommended Level of Service

Self Reported Costs from Annual Reports	**2019 Annual Report Expenses**		**2020 Annual Report Expenses**		**2021 Annual Report Expenses**	
MCM #1	Sewer/Water Bill Brochure Mailers (July and October); Training	$706.00	Inlet repair (contractual) based on resident complaint; Training	$4,453.00	Storm Drain Marking Brochure; Training	$389.00
MCM #2	Rain Barrel Program, Storm Drain Marking Program, Arbor Day Tree Plantings	$7,625.00	Rain Barrel Program, Storm Drain Marking Program	$3,485.00	Rain barrel program	$1,438.00
MCM #3	MS4 mapping, IDD&E Plan, Annual Illicit Discharge Screenings	$20,256.00	Annual Illicit Discharge Screenings	$3,242.00	1) Annual Illicit Discharge Screenings 2) Updates to IDDE SOP Manual 3) Updates to MS4 GIS Map	$4,506.00
MCM #4		$0.00		$0.00		$0.00
MCM #5		$0.00	Town-owned BMP Maintenance	$7,499.00	Outfall Stabilization	$3,357.00
MCM #6		$0.00		$0.00		$0.00
TMDL	Baseline Impervious Assessment & Impervious Work Plan	$15,000.00	Baseline Impervious Assessment updates; For the Silo Hill Project 1) Grant Funding Assistance 2) Existing Conditions Survey 3) Geotechnical Testing	$16,018.00	Baseline Impervious Assessment Updates Per MDE Comments	$522.00
Annual Total		**$43,587.00**		**$34,697.00**		**$10,212.00**

Total (2019-2021)	**$88,496.00**
Annual Average	**$29,498.67**

Wish List Items from LOS Discussion with Town	
Under MCM #3 - Keep annual contract for outfall inspections. Budget at least $4K/year.[1]	$4,500.00
Establish a reserve fund (see reserve fund tab)	$25,000.00
Under MCM #4 - Attorney fees for SW agreements for any new development projects.[2]	$2,500.00
Under MCM #6 - Inspections and compliance costs (additional notes in LOS doc).[3]	$2,279.60
SUM	**$29,779.60**

TMDL Projects Grant Costs	
Silo Hill Basin Retrofit	$0.00
Tree Planting[4]	$12,000.00
North Seton Avenue (only have concept design right now)	$0.00
Creamery Road Pump Station BMP (in the next 2 years)	$0.00
Recommended to keep in reserve for match and other expenses.[5]	**$0.00**

BMPs Annual Maintenance Cost	
Silo Hill Basin Retrofit[6]	$0.00
Tree Planting[7]	$0.00
Emmitsburg Community Park Bioretention[8]	$802.10
Emmitsburg Community Park Pond[9]	$802.10
SUM	**$0.00**

Other O&M Costs	
2x/month.[10]	$24,000.00
Catch Basin Cleaning (contractual, same entity as street sweeper is preferable).[11]	$128.00
DPW is mowing and cleaning out trash. If larger maintenance needs arise, will need to contract out	$0.00
North Seton Ave project (when installed) will need a 2x/year contract for maintenance.[12]	$788.53
SUM	**$24,916.53**
Total	**$84,194.80**

Footnotes

1 - Included in MCM #3 line items above

2 - Current legal staff is $250/hr; assume 10 hours/year

3 - Cost of the Pollution Prevention and Good Housekeeping Plan the Town just contracted out. Divided this by 5 so it is spread paid evenly over permit cycle. Total cost is $11,398

4 - Included in 2020 TMDL cost

5 - Assuming a NFWF SWG-I grant which awards up to $500K, a 1/3 non federal match is required this is $165,000; CBT O&R requires no match up to $50K https://arch.umd.edu/sites/default/files/docs/publications/blair_county_stormwater_financing_final_report_0.pdf

7 - In this scenario these costs will come out of the "reserve fund." Using the methodology in table 2 of EFC's Blair County Report (See Footnote 6)

8 - Included in annual costs above: Sum of annual maintenance plus baseline impervious assessment divided by 10; 5 year permit cycle split for each BMP

9 - Included in annual costs above: Sum of annual maintenance plus baseline impervious assessment divided by 10; 5 year permit cycle split for each BMP

10 - Cost estimates vary. Assuming $1,000/day and 2 days/month

11 - Assumptions: $16/catch basin according to EPA and maintaing current level of 8/year cleaned) source: https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=200044BA.txt

12 - Using the methodology in table 2 of EFC's Blair County Report (See Footnote 6

Reserve Fund Calculations

Expenses that can be Drawn from the Reserve Fund[1]	
Match for grants	
Outfall repairs	
Inspections and compliance costs (Good Housekeeping)	
Annual Training	$500.00
Cost to hire contractor to write an asset management plan	
10-20% of total stormwater asset costs (derived from asset management plan)	
North Seton Bioretention Maintenance	
Silo Hill Basin Retrofit maintenance	$788.53
Tree Planting maintenance	$2,086.62
Sum to contribute to reserve fund each year	**$25,000.00**

Town assets include:[2, 3]	
outfalls[4]	43
BMPs (2 are town-owned)[5]	30
Culverts	
Inlets	
Stormwater pipes	
Curb Cuts	
Underdrains	
Swales	

Footnotes

1 - Reserve fund should equal 10%-20% of the costs of all assets

2 - One source of town stormwater assets is page 25 of:
https://cms8.revize.com/revize/emmitsburg/document_center/MS4/2021/2021_IDDE_Manual.pdf

3 - One source of town stormwater assets is:
https://cms8.revize.com/revize/emmitsburg/document_center/MS4/2021/2021_06_Baseline_Impervious_Assessment.pdf

4 - Source: Barton & Loguidice Map in 2021 IDDE Manual (pg 25)

5 - Source: 2021 Baseline Impervious Assessment

Appendix H

Tier 3 Calculation Tables

Tier 3 Residential and Non-Residential Fee Calculation Example

Tier 3 parcels are those that have an impervious area (IA) of greater the 4,398 square feet. Fees for Tier 3 residential and non-residential fees were calculated by dividing the impervious area by the ERU and then multiplying by the desired fee.

(IA/ERU) x fee

(44,039.22 sq ft / 2,932) x $47

Using the above formula, the fee for this Tier 3 parcel at EFC's recommended fee of $47 annually would be $705.95 annually

Tier 3 Non-Residential Property Fee Calculations

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total impervious surface area (sq.ft)	Town Parcel	Village Zone Commercial	$5 Max $20/Year	$26/Year	$32/Year	$47/Year
24739941	70447	1105165040	2 CREAMERY RD	IP	4,547.60			$31.02	$40.33	$49.63	$72.90
24726094	68340	1105161215	E MAIN ST	VZ	4,587.63		Yes	$31.29	$40.68	$50.07	$73.54
24714167	69314	1105187192	CREAMERY RD	IP	5,643.90			$38.50	$50.05	$61.60	$90.47
24705060	67148	1105158311	101 S SETON AVE	VZ	5,910.75		Yes	$40.32	$52.41	$64.51	$94.75
24712036	68154	1105161630	105 N SETON AVE	VZ	6,145.41		Yes	$41.92	$54.50	$67.07	$98.51
24734156	64970	1105164028	124 W MAIN ST	VZ	6,371.64		Yes	$43.46	$56.50	$69.54	$102.14
24757530	84925	1105161924	505 E MAIN ST	B-2	6,516.61			$44.45	$57.79	$71.12	$104.46
24746386	70003	1105157870	313 W MAIN ST	VZ	6,604.49		Yes	$45.05	$58.57	$72.08	$105.87
24793225	71701	1105160855	415 W MAIN ST	VZ	7,267.46		Yes	$49.57	$64.45	$79.32	$116.50
24787173	69260	1105178770	123 W MAIN ST	VZ	7,869.38		Yes	$53.68	$69.78	$85.89	$126.15
24767719	66876	1105160758	S SETON AVE	VZ	8,091.55		Yes	$55.19	$71.75	$88.31	$129.71
24731753	69796	1105176751	210 W MAIN ST	VZ	8,393.90		Yes	$57.26	$74.43	$91.61	$134.55
24718477	69716	1105172543	100 S SETON AVE	VZ	8,579.86		Yes	$58.53	$76.08	$93.64	$137.54
24742961	84025			OS	10,063.90			$68.65	$89.24	$109.84	$161.32
24759741	93758	1105588367	SILO HILL PKY	B-2	10,216.98			$69.69	$90.60	$111.51	$163.78
24708113	99851	1105165768	502 E MAIN ST	B-2	10,780.05			$73.53	$95.59	$117.65	$172.80
24718328	64564	1105178428	9436 WAYNESBORO RD	B-1	12,927.97			$88.19	$114.64	$141.10	$207.24
24715335	68479	1105163145	427 E MAIN ST	VZ	13,016.81		Yes	$88.79	$115.43	$142.07	$208.66
24785345	72740	1105169410	210 S SETON AVE	VZ	13,221.88		Yes	$90.19	$117.25	$144.30	$211.95
24768610	63645	1105168236	882 EMMITSBURG RD	B-2	13,670.95			$93.25	$121.23	$149.21	$219.15
24760262	70107	1105168198	S SETON AVE	VZ	13,948.57		Yes	$95.15	$123.69	$152.24	$223.60
24738779	69129	1105172411	17650 CREAMERY RD	B-2	14,382.60			$98.11	$127.54	$156.97	$230.55
24765695	70963	1105172551	130 S SETON AVE	VZ	14,876.32		Yes	$101.48	$131.92	$162.36	$238.47
24779399	64539	1105182794	110 SILO HILL RD	B-2	18,624.99			$127.05	$165.16	$203.27	$298.56
24775966	74619	1105175224	23 W MAIN, THRU 29 ST	VZ	18,786.32		Yes	$128.15	$166.59	$205.03	$301.14
24791920	69204	1105598829	103 SILO HILL PKY	B-2	19,127.63			$130.47	$169.62	$208.76	$306.62
24786283	69463	1105183170	CREAMERY WAY	IP	20,124.69			$137.28	$178.46	$219.64	$322.60
24705795	68447	1105173574	CREAMERY CT	IP	25,745.52			$175.62	$228.30	$280.99	$412.70
24722081	69882	1105181402	SILO HILL RD	B-2	27,634.04			$188.50	$245.05	$301.60	$442.97
24737936	67227	1105183189	CREAMERY WAY	IP	28,210.69			$192.43	$250.16	$307.89	$452.22
24748702	70989	1105165709	200 S SETON AVE	VZ	28,408.58		Yes	$193.78	$251.92	$310.05	$455.39
24705380	68188	1105173760	CHESAPEAKE AVE	VZ	31,566.01		Yes	$215.32	$279.92	$344.51	$506.00
24719635	68308	1105177413	9428 WAYNESBORO PIKE	B-1	36,058.15			$245.96	$319.75	$393.54	$578.01
24740593	84924	1105163609	501 E 503 MAIN ST	B-2	36,708.87			$250.40	$325.52	$400.64	$588.44
24719226	70750	1105183162	CREAMERY WAY	IP	36,815.05			$251.13	$326.46	$401.80	$590.15
24788308	66348	1105181623	SILO HILL RD	B-2	37,336.05			$254.68	$331.08	$407.49	$598.50
24723752	69850	1105169615	ROUNDTREE RD	B-2	39,072.22			$266.52	$346.48	$426.44	$626.33
24752974	69834	1105169623	515 E MAIN ST	B-2	54,321.47			$370.54	$481.70	$592.87	$870.77
24721993	66556	1105161681	1 CHESAPEAKE AVE	VZ	58,397.91		Yes	$398.35	$517.85	$637.36	$936.12
24757936	82226	1105183081	501 SILO HILL PKY	B-2	62,209.74			$424.35	$551.66	$678.96	$997.22
24703374	64042	1105183154	2 CREAMERY WAY	IP	64,467.22			$439.75	$571.67	$703.60	$1,033.41
24735380	82093	1105158206	300A S SETON AVE	OS	67,431.55			$459.97	$597.96	$735.95	$1,080.93
24764239	74688	1105186196	17701 CREAMERY RD	IP	67,948.31			$463.49	$602.54	$741.59	$1,089.21
24740638	81781	1105159970	17750 CREAMERY RD	IP	71,861.66			$490.19	$637.25	$784.30	$1,151.94
24711887	82635	1105186269	1 CREAMERY WAY	IP	71,979.67			$490.99	$638.29	$785.59	$1,153.84
24750183	84047	1105590398	SETON AVE	OS	75,471.25			$514.81	$669.25	$823.70	$1,209.81
24743601	93300	1105158192	SETON AVE	OS	134,632.63			$918.37	$1,193.88	$1,469.39	$2,158.16
24752894	64837	1105181046	100 CREAMERY CT	ORI	161,468.69			$1,101.42	$1,431.85	$1,762.28	$2,588.35
24788295	67020	1105172195	S SETON AVE	OS	751,698.79			$5,127.55	$6,665.81	$8,204.08	$12,049.74
								$15,414.35	**$20,038.66**	**$24,662.96**	**$36,223.73**
					2,259,743.93			**$15,414.35**	**$20,038.66**	**$24,662.96**	**$36,223.73**
					Average Fee Excluding Seton Ave, 100 Creamery Court and Daghters			$179.72	$233.63	$287.55	$422.34
					Average Fee for parcels under 1 acre IA			$113.91	$148.08	$182.25	$267.68

Tier 3 Residential Property Fee Calculations

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	$5 max $20/Year	$26/Year	$32/Year	$47/Year
24739847	65605	1105183502	1220 BROOKFIELD DR	R-1	4,405.96	$30.05	$39.07	$48.09	$70.63
24776498	69961	1105184398	500 TIMBERMILL CT	R-1	4,434.95	$30.25	$39.33	$48.40	$71.09
24703936	69625	1105158710	339 E MAIN ST	VZ	4,470.99	$30.50	$39.65	$48.80	$71.67
24761980	67841	1105157749	116 WELTY AVE	R-3	4,531.26	$30.91	$40.18	$49.45	$72.64
24766539	63723	1105164788	423 W MAIN ST	VZ	4,540.21	$30.97	$40.26	$49.55	$72.78
24726586	67079	1105185009	2080 PEMBROOK CT	R-1	4,545.22	$31.00	$40.31	$49.61	$72.86
24709594	65920	1105185386	4000 CARRICK CT	R-1	4,549.11	$31.03	$40.34	$49.65	$72.92
24794665	69550	1105185505	4115 CARRICK CT	R-1	4,559.21	$31.10	$40.43	$49.76	$73.08
24727183	67099	1105169585	265 DEPAUL ST	R-1	4,571.74	$31.19	$40.54	$49.90	$73.29
24796443	71567	1105161177	501 W MAIN ST	VZ	4,588.93	$31.30	$40.69	$50.08	$73.56
24783028	68010	1105185548	4085 CARRICK CT	R-1	4,624.36	$31.54	$41.01	$50.47	$74.13
24775395	67252	1105183510	1230 BROOKFIELD DR	R-1	4,635.09	$31.62	$41.10	$50.59	$74.30
24792821	69177	1105185394	4010 CARRICK CT	R-1	4,638.41	$31.64	$41.13	$50.62	$74.35
24790611	65858	1105172004	312 E MAIN ST	VZ	4,643.37	$31.67	$41.18	$50.68	$74.43
24729112	71507	1105163188	219 S SETON AVE	VZ	4,658.26	$31.78	$41.31	$50.84	$74.67
24791876	67213	1105169054	401 W MAIN ST	VZ	4,668.03	$31.84	$41.39	$50.95	$74.83
24745675	68092	1105176190	321 W MAIN ST	VZ	4,738.99	$32.33	$42.02	$51.72	$75.97
24725563	71917	1105182093	430 TIMBERMILL RUN	R-1	4,742.17	$32.35	$42.05	$51.76	$76.02
24741623	71111			VZ	4,756.34	$32.44	$42.18	$51.91	$76.24
24733086	70578	1105169763	302 W MAIN ST	VZ	4,780.09	$32.61	$42.39	$52.17	$76.62
24772630	66430	1105185467	4110 CARRICK CT	R-1	4,838.01	$33.00	$42.90	$52.80	$77.55
24770083	70042	1105163730	225 W MAIN, THRU 227 ST	VZ	4,841.63	$33.03	$42.93	$52.84	$77.61
24714407	68649	1105183596	1315 HUNTLEY CIR	R-1	4,876.93	$33.27	$43.25	$53.23	$78.18
24757686	71266	1105184061	1449 RAMBLEWOOD DR	R-1	4,892.87	$33.38	$43.39	$53.40	$78.43
24740393	68450	1105157145	104 W MAIN ST	VZ	4,903.00	$33.44	$43.48	$53.51	$78.60
24721496	70800	1105184150	1433 RAMBLEWOOD DR	R-1	4,910.92	$33.50	$43.55	$53.60	$78.72
24793826	66401	1105159660	434 E MAIN ST	VZ	4,917.64	$33.54	$43.61	$53.67	$78.83
24742125	64072	1105184991	2070 PEMBROOK CT	R-1	4,927.59	$33.61	$43.70	$53.78	$78.99
24740862	71477	1105161223	E MAIN ST	VZ	4,929.46	$33.63	$43.71	$53.80	$79.02
24760178	65552	1105172047	E MAIN ST	VZ	4,942.55	$33.71	$43.83	$53.94	$79.23
24770249	70503	1105175208	W MAIN ST	VZ	4,950.83	$33.77	$43.90	$54.03	$79.36
24735539	69090	1105183251	1005 BROOKFIELD DR	R-1	5,017.64	$34.23	$44.49	$54.76	$80.43
24731434	66536	1105183359	3125 STONEHURST CT	R-1	5,036.36	$34.35	$44.66	$54.97	$80.73
24756374	63766	1105183243	1015 BROOKFIELD DR	R-1	5,041.61	$34.39	$44.71	$55.02	$80.82
24795736	68065	1105159156	220 DEPAUL ST	R-1	5,054.29	$34.48	$44.82	$55.16	$81.02
24770998	71557	1105181976	431 RAMBLEWOOD CT	R-1	5,078.15	$34.64	$45.03	$55.42	$81.40
24732632	68954	1105171563	119 N SETON AVE	VZ	5,100.72	$34.79	$45.23	$55.67	$81.76
24742158	66047	1105184924	2000 PEMBROOK CT	R-1	5,128.20	$34.98	$45.48	$55.97	$82.21
24745408	67792	1105185629	4015 CARRICK CT	R-1	5,197.85	$35.46	$46.09	$56.73	$83.32
24772635	67186	1105185998	314 MOUNTAINEERS WAY	R-1	5,225.05	$35.64	$46.33	$57.03	$83.76
24789660	90418	1105163382	303 DEPAUL ST	R-1	5,237.94	$35.73	$46.45	$57.17	$83.96
24759546	63585	1105168481	705 E MAIN ST	R-1	5,276.85	$35.99	$46.79	$57.59	$84.59
24762696	69214	1105173973	32 FEDERAL AVE	R-1	5,302.30	$36.17	$47.02	$57.87	$85.00
24719567	68266	1105185416	4030 CARRICK CT	R-1	5,379.03	$36.69	$47.70	$58.71	$86.23
24772248	71411	1105177316	5 W MAIN, THRU 7 ST	VZ	5,401.57	$36.85	$47.90	$58.95	$86.59
24778214	74622	1105165148	9 E MAIN ST	VZ	5,423.32	$36.99	$48.09	$59.19	$86.94
24746049	67926	1105160650	230 DEPAUL ST	R-1	5,428.07	$37.03	$48.13	$59.24	$87.01
24757704	68198	1105161622	659 W MAIN ST	VZ	5,631.21	$38.41	$49.94	$61.46	$90.27
24721762	74620	1105177308	1 W MAIN, THRU 3 ST	VZ	5,747.14	$39.20	$50.96	$62.72	$92.13
24758223	70826	1105181844	1304 HUNTLEY CIR	R-1	5,780.75	$39.43	$51.26	$63.09	$92.67
24777394	66950	1105157641	13 FIRST AVE	R-1	5,818.65	$39.69	$51.60	$63.51	$93.27
24764686	69849	1105163447	420 E MAIN ST	VZ	5,861.25	$39.98	$51.98	$63.97	$93.96
24789722	65304	1105173981	239 N SETON AVE	VZ	5,865.47	$40.01	$52.01	$64.02	$94.02
24750153	69571	1105185106	2011 PEMBROOK CT	R-1	6,042.76	$41.22	$53.59	$65.95	$96.87
24773343	68191	1105167671	123 E MAIN ST	VZ	6,067.06	$41.39	$53.80	$66.22	$97.26
24753934	67224	1105167450	211 DEPAUL ST	R-1	6,099.15	$41.60	$54.09	$66.57	$97.77
24730071	96329	1105177049	140 S SETON AVE	VZ	6,138.52	$41.87	$54.43	$67.00	$98.40
24747675	69001	1105185025	2069 PEMBROOK CT	R-1	6,169.49	$42.08	$54.71	$67.33	$98.90
24768296	69742	1105185122	2009 PEMBROOK CT	R-1	6,284.07	$42.87	$55.73	$68.58	$100.73
24748545	74660	1105162432	316 S SETON AVE	R-1	6,352.27	$43.33	$56.33	$69.33	$101.83

TARGET_FID	PIN	TAX_ACCT	ADDRESS	Zoning Code	Total Impervious Surface Area (sq.ft)	$5 max $20/Year	$26/Year	$32/Year	$47/Year
24794492	65940	1105173779	CHESAPEAKE AVE	VZ	6,630.33	$45.23	$58.80	$72.36	$106.28
24754021	65260	1105170230	110 DEPAUL ST	R-1	6,783.82	$46.27	$60.16	$74.04	$108.74
24771466	74362	1105597193	322 S SETON AVE	R-1	6,785.82	$46.29	$60.17	$74.06	$108.78
24793073	66673	1105171482	500 E MAIN ST	VZ	6,838.27	$46.65	$60.64	$74.63	$109.62
24770853	63038	1105185483	4135 CARRICK CT	R-1	6,931.13	$47.28	$61.46	$75.65	$111.11
0	66021	1105161584	ANNANDALE RD	R-1	7,383.76	$50.37	$65.48	$80.59	$118.36
24703347	70948	1105164281	253 DEPAUL ST	R-1	7,415.37	$50.58	$65.76	$80.93	$118.87
24710767	64530	1105160766	703 E MAIN ST	R-1	7,452.66	$50.84	$66.09	$81.34	$119.47
24771001	71040	1105159946	406W W MAIN, THRU 410 ST	VZ	7,505.93	$51.20	$66.56	$81.92	$120.32
24735447	72739	1105164907	286 S SETON AVE	VZ	7,922.37	$54.04	$70.25	$86.47	$127.00
24731659	92933	1105170915	35 FEDERAL AVE	R-1	8,291.46	$56.56	$73.53	$90.49	$132.91
24773552	67293	1105172012	304 E MAIN ST	VZ	8,375.76	$57.13	$74.27	$91.41	$134.26
24741306	91922	1105168171	320 S SETON AVE	R-1	8,531.44	$58.20	$75.65	$93.11	$136.76
24766318	63657	1105158435	130 W MAIN ST	VZ	8,763.35	$59.78	$77.71	$95.64	$140.48
24788466	68706	1105171784	2 E MAIN ST	VZ	9,136.25	$62.32	$81.02	$99.71	$146.45
24715244	68156	1105159776	200 MAIN, THRU 202 ST	VZ	9,386.36	$64.03	$83.24	$102.44	$150.46
24717449	65618			VZ	9,594.63	$65.45	$85.08	$104.72	$153.80
24726104	68195	1105172659	100 N SETON AVE	R-1	9,828.33	$67.04	$87.15	$107.27	$157.55
24765173	68678	1105170052	700 E MAIN ST	R-1	9,879.80	$67.39	$87.61	$107.83	$158.37
24736571	67736	1105159601	107 S SETON AVE	VZ	10,329.07	$70.46	$91.59	$112.73	$165.58
24724207	67286	1105157854	600 E MAIN ST	R-1	10,411.79	$71.02	$92.33	$113.63	$166.90
24732950	69678	1105168538	601 W MAIN ST	VZ	11,110.26	$75.79	$98.52	$121.26	$178.10
24759184	71048	1105167922	425 E MAIN ST	VZ	11,684.47	$79.70	$103.61	$127.52	$187.30
24703719	74663	1105166969	312 S SETON AVE	R-1	11,832.76	$80.71	$104.93	$129.14	$189.68
24742550	68950	1105175925	486 NORTH THRU 502 AVE	R-3	12,126.87	$82.72	$107.54	$132.35	$194.39
24773572	67735			VZ	12,255.98	$83.60	$108.68	$133.76	$196.46
24732021	69492	1105181720	1A WARTHENS WAY, UNIT A	VZ	13,564.28	$92.53	$120.28	$148.04	$217.44
24750998	70468			R-2	15,755.30	$107.47	$139.71	$171.95	$252.56
24705975	69563	1105159520	100 CREEKSIDE DR	R-2	16,024.31	$109.31	$142.10	$174.89	$256.87
24725592	66918	1105172683	51 DEPAUL ST	VZ	16,897.31	$115.26	$149.84	$184.42	$270.86
24714238	69596			VZ	17,077.25	$116.49	$151.44	$186.38	$273.75
24766955	68585	1105176093	604 W MAIN ST	VZ	17,122.41	$116.80	$151.84	$186.87	$274.47
24749952	67693	1105175860	150 S SETON AVE	VZ	17,209.95	$117.39	$152.61	$187.83	$275.88
24731299	67824	1105172705	50 DEPAUL ST	VZ	23,275.94	$158.77	$206.40	$254.03	$373.11
24785801	62314	1105170095	47 DEPAUL ST	R-1	28,863.08	$196.88	$255.95	$315.01	$462.68
24758678	70449	1105164699	401 LINCOLN AVE	R-3	44,039.22	$300.40	$390.53	$480.65	$705.95
						$5,117.45	**$6,652.68**	**$8,187.92**	**$12,026.00**
					750,217.92	**$5,117.45**	**$6,652.68**	**$8,187.92**	**$12,026.00**
					Average Fee Parcels under 1 acre IA	$50.71	$65.92	$81.13	$119.16

Appendix I

Tax Increase Calculations

Tax Increase Calculations

How much do taxes have to increase (just impervious scenario) to make up the difference?

Information provided by the town: 0.3464 per $100 assessed. $205,148,120 in total assessed.

This means that the annual amount of annual tax income to the Town is $710,633.09

Cost of just impervious scenario	$44,654.67	Difference to make up in taxes
Cost of current LOS scenario	$58,906.27	$14,251.60
Cost of recommended LOS scenario	$84,194.80	$39,540.13

How much is needed for current LOS?	$724,884.69	Multiplier =	0.35334698
How much is needed for recommended LOS?	$750,173.22	Multiplier =	0.36567394

Appendix J

Ordinance and Appeals Procedures Examples

Sample Ordinances and Appeals Procedures

Copies of the ordinances for the City of Frederick, the City of Takoma Park, and the Town of Berlin have been included in this appendix.

City of Frederick, MD
City of Frederick Stormwater fee ordinance
Information on the adjustments and appeals process can be found in Sec. 28-33.

City of Takoma Park, MD
Town of Takoma Park Stormwater Management Fee System
Information on the appeals process under appeals process/requests for correction can be found in Sec. 16.08.120.

Town of Berlin, MD
Town of Berlin Stormwater Management Utility Fee ordinance
Information on the appeals process and requests for correction can be found in Section 26-272.

Prince George's County, MD
A copy of Prince George's County's Clean Water Fee Regulation was not included in this appendix due to its length (39 pages). Within the regulation, information regarding the appeals process can be found in Section 7. They also have an online Fee Appeal Request Form.

Gettysburg, PA
Because Gettysburg formed a Storm Water Authority to manage their fee, their ordinance and appeals procedure look different from the above examples and do not provide the best format for Emmitsburg to follow. As with Prince George's County, Gettysburg's regulations were not included due to their length (64 pages). The Gettysburg website provides the Gettysburg Storm Water Authority (GBSWA) Resolutions and organizational documents including the signed resolutions adopting the GBSWA Rates, Rules, and Regulations and the ERU Fee Schedule.

The GBSWA has published a Rates, Rules, and Regulations Policy Manual and developed a Stormwater Adjustment Appeal form to accompany the manual.

ORDINANCE 2013-01

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE TOWN OF BERLIN, MARYLAND, A MARYLAND MUNICIPAL CORPORATION, AMENDING CHAPTER 26 OF THE TOWN CODE BY ADDING ARTICLE V THERETO FOR THE PURPOSE OF ESTABLISHING A STORMWATER UTILITY DEPARTMENT UNDER THE DIRECTION AND SUPERVISION OF THE WATER RESOURCES DEPARTMENT AND FURTHER ESTABLISHING A STORMWATER MANAGEMENT UTILITY FEE SYSTEM

NOW THEREFORE, BE IT ENACTED BY THE MAYOR AND COUNCIL OF THE TOWN OF BERLIN, MARYLAND AS FOLLOWS:

STORMWATER
CHAPTER 26

ARTICLE V. ESTABLISHMENT OF STORMWATER UTILITY DEPARTMENT AND A STORMWATER MANAGEMENT UTILITY FEE SYSTEM

§ 26-260 FINDINGS.

(A) THE TOWN MAINTAINS A SYSTEM OF STORM AND SURFACE WATER MANAGEMENT FACILITIES INCLUDING, BUT NOT LIMITED TO, INLETS, CONDUITS, MANHOLES, CHANNELS, DITCHES, DRAINAGE EASEMENTS, RETENTION AND DETENTION BASINS, INFILTRATION FACILITIES, AND OTHER COMPONENTS AS WELL AS NATURAL WATERWAYS.

(B) THE STORMWATER SYSTEM IN THE TOWN NEEDS TO BE UPGRADED, IMPROVED AND REGULARLY MAINTAINED.

(C) WATER QUALITY IS DEGRADING DUE TO EROSION AND THE DISCHARGE OF NUTRIENTS, METALS, OIL, GREASE, TOXIC MATERIALS AND OTHER SUBSTANCES INTO AND THROUGH THE STORMWATER SYSTEM.

(D) THE PUBLIC HEALTH SAFETY AND WELFARE IS ADVERSELY AFFECTED BY POOR AMBIENT WATER QUALITY AND EXTREME FLOODING THAT RESULTS FROM INADEQUATE MANAGEMENT OF BOTH THE QUALITY AND QUANTITY OF STORMWATER.

(E) ALL REAL PROPERTY IN THE TOWN USES AND BENEFITS FROM THE MAINTENANCE OF THE STORMWATER SYSTEM.

(F) THE EXTENT OF THE USE OF THE STORMWATER SYSTEM BY EACH PROPERTY IS DEPENDENT ON FACTORS THAT INFLUENCE RUNOFF, INCLUDING LAND USE AND THE AMOUNT OF IMPERVIOUS SURFACE ON THE PROPERTY.

(G) THE COSTS OF IMPROVING, MAINTAINING, OPERATING AND MONITORING THE STORMWATER SYSTEM SHOULD BE ALLOCATED, TO THE EXTENT PRACTICABLE, TO ALL PROPERTY OWNERS BASED ON THE IMPACT OF RUNOFF FROM THE IMPERVIOUS AREAS OF THEIR PROPERTY ON THE STORMWATER MANAGEMENT SYSTEM.

(H) MANAGEMENT OF THE STORMWATER SYSTEM TO PROTECT THE PUBLIC HEALTH, SAFETY AND WELFARE REQUIRES THE CREATION OF A STORMWATER UTILITY DEPARTMENT TO MONITOR, MAINTAIN, IMPROVE AND OVERSEE THE OPERATION OF THE STORMWATER UTILITY SYSTEM AND FURTHER REQUIRES THAT ADEQUATE REVENUES BE GENERATED TO PROVIDE FUNDING FOR THE OPERATION, IMPROVEMENT, MAINTENANCE AND MONITORING OF THE STORMWATER UTILITY SYSTEM. THEREFORE IT IS IN THE INTEREST OF THE PUBLIC TO FINANCE STORMWATER MANAGEMENT ADEQUATELY WITH A USER CHARGE SYSTEM THAT IS REASONABLE AND EQUITABLE SO THAT EACH USER OF THE SYSTEM PAYS TO THE EXTENT TO WHICH EACH USER CONTRIBUTES TO THE NEED FOR IT.

§ 26-261. AUTHORITY.

(A) AUTHORITY FOR THE CREATION OF A STORMWATER UTILITY DEPARTMENT IS CONFERRED ON THE MAYOR AND COUNCIL BY THE TOWN CHARTER SECTION C5-1(16).

(B) AUTHORITY FOR THE ADOPTION OF A SYSTEM OF CHARGES AND FEES TO FUND THE IMPLEMENTATION OF STORMWATER MANAGEMENT PROGRAMS IS CONFERRED ON THE MAYOR AND COUNCIL BY SECTION 4-204(D), ENVIRONMENTAL ARTICLE, ANNOTATED CODE OF MARYLAND, AS AMENDED.

§ 26-262. CREATION OF STORMWATER UTILITY DEPARTMENT.

A STORMWATER UTILITY DEPARTMENT IS HEREBY ESTABLISHED FOR THE PURPOSE OF MONITORING, MAINTAINING, IMPROVING AND OVERSEEING THE OPERATION OF THE STORMWATER UTILITY SYSTEM IN THE TOWN OF BERLIN. THE STORMWATER UTILITY DEPARTMENT SHALL PERFORM ITS FUNCTIONS UNDER THE DIRECTION AND SUPERVISION OF THE WATER RESOURCES DEPARTMENT AND THE TOWN ADMINISTRATOR.

§ 26-263. DEFINITIONS.

FOR PURPOSES OF THIS CHAPTER, THE FOLLOWING WORDS AND PHRASES SHALL HAVE THE MEANINGS INDICATED:

(A) EQUIVALENT RESIDENTIAL UNIT (ERU) RATE MEANS THE STORMWATER MANAGEMENT FEE CHARGED ON AN EQUIVALENT RESIDENTIAL UNIT (ERU). THE ANNUAL (FIXED YEAR) STORMWATER MANAGEMENT FEE FOR SINGLE FAMILY RESIDENTIAL PROPERTY IN THE TOWN EQUALS THE ERU RATE.

(B) EQUIVALENT RESIDENTIAL UNIT (ERU) MEANS THE MEDIAN IMPERVIOUS SURFACE AREA ASSOCIATED WITH A SINGLE FAMILY RESIDENTIAL PROPERTY IN THE TOWN.

(C) TOWN ADMINISTRATOR MEANS THE TOWN ADMINISTRATOR FOR THE TOWN OF BERLIN, MARYLAND OR HIS OR HER DESIGNEE.

(D) FEE OR STORMWATER MANAGEMENT FEE MEANS THE CHARGE ESTABLISHED UNDER THIS CHAPTER AND LEVIED ON OWNERS OF PARCELS OR PIECES OF REAL PROPERTY TO FUND THE COSTS OF STORMWATER MANAGEMENT AND OF OPERATING, MAINTAINING AND IMPROVING THE STORMWATER SYSTEM IN THE TOWN.

(E) FISCAL YEAR MEANS JULY 1 OF A CALENDAR YEAR TO JUNE 30 OF THE NEXT CALENDAR YEAR, BOTH INCLUSIVE.

(F) IMPERVIOUS SURFACE AREA MEANS THE NUMBER OF SQUARE FEET OF HORIZONTAL SURFACE COVERED BY BUILDINGS AND OTHER IMPERVIOUS SURFACES. ALL BUILDING MEASUREMENTS SHALL BE MADE BETWEEN EXTERIOR FACES OF WALLS, FOUNDATIONS, COLUMNS OR OTHER MEANS OF SUPPORT OR ENCLOSURE.

(G) IMPERVIOUS SURFACE MEANS A SURFACE AREA WHICH IS COMPACTED OR COVERED WITH MATERIAL THAT IS RESISTANT TO INFILTRATION BY WATER, INCLUDING, BUT NOT LIMITED TO, MOST CONVENTIONALLY SURFACED STREETS, ROOFS, SIDEWALKS, PATIOS, DRIVEWAYS, PARKING LOTS, SWIMMING POOLS AND ANY OTHER OILED, GRAVELED, GRADED, COMPACTED, OR OTHER SURFACE WHICH IMPEDES THE NATURAL INFILTRATION OF SURFACE WATER.

(H) NON-RESIDENTIAL PROPERTY MEANS PROPERTY OTHER THAN SINGLE-FAMILY RESIDENTIAL PROPERTY. SUCH PROPERTY SHALL INCLUDE, BUT NOT BE LIMITED TO, MULTI-FAMILY DWELLINGS, COMMERCIAL PROPERTY, INDUSTRIAL PROPERTY, PARKING LOTS, HOSPITALS, SCHOOLS, RECREATIONAL AND CULTURAL FACILITIES, HOTELS, OFFICES AND CHURCHES.

(I) PROPERTY OWNER MEANS THE PROPERTY OWNER OF RECORD AS LISTED IN THE STATE ASSESSMENT ROLL. A PROPERTY OWNER INCLUDES ANY INDIVIDUAL, CORPORATION, FIRM, PARTNERSHIP, OR GROUPS OF INDIVIDUALS ACTING AS A UNIT, AND ANY TRUSTEE, RECEIVER OR PERSONAL REPRESENTATIVE.

(J) SINGLE FAMILY RESIDENTIAL PROPERTY MEANS A PROPERTY WHICH SERVES THE PRIMARY PURPOSE, OR IS ZONED TO PROVIDE THE PRIMARY PURPOSE, OF PROVIDING A PERMANENT DWELLING UNIT AND WHICH IS CLASSIFIED AS RESIDENTIAL IN THE STATE ASSESSMENT ROLLS. TOWNHOUSES ARE INCLUDED IN THIS DEFINITION.

(K) STORMWATER MANAGEMENT FUND MEANS THE FUND CREATED BY THIS CHAPTER TO OPERATE, MAINTAIN, AND IMPROVE THE TOWN'S STORMWATER SYSTEM.

(L) STORMWATER MANAGEMENT MEANS THE PLANNING, DESIGN, CONSTRUCTION, REGULATION, IMPROVEMENT, REPAIR, MAINTENANCE AND OPERATION OF FACILITIES AND PROGRAMS RELATING TO WATER, FLOOD PLAINS, FLOOD CONTROL, GRADING, EROSION, TREE CONSERVATION AND SEDIMENT CONTROL.

(M) STORMWATER SYSTEM MEANS THE SYSTEM OR NETWORK OF STORM AND SURFACE WATER MANAGEMENT FACILITIES INCLUDING BUT NOT LIMITED TO INLETS, CONDUITS, MANHOLES, CHANNELS, DITCHES, DRAINAGE EASEMENTS, RETENTION AND DETENTION BASINS, INFILTRATION FACILITIES, AND OTHER COMPONENTS AS WELL AS ALL NATURAL WATERWAYS.

§ 26-264. ESTABLISHMENT OF STORMWATER MANAGEMENT FUND.

(A) THE STORMWATER MANAGEMENT PROGRAM IS ESTABLISHED AND THE STORMWATER SYSTEM IS PROVIDED TO PROTECT THE WATERWAYS AND LAND IN THE TOWN BY CONTROLLING FLOODING AND TO PROTECT THE NATURAL ENVIRONMENT. THE COSTS OF DESIGNING, DEVELOPING, IMPROVING, OPERATING, MAINTAINING, AND MONITORING THE STORMWATER SYSTEM REQUIRED IN THE TOWN SHOULD, THEREFORE,

BE ALLOCATED, TO THE EXTENT PRACTICABLE, TO ALL PROPERTY OWNERS BASED ON THEIR IMPACT ON THE STORMWATER SYSTEM. IN ORDER TO PROVIDE A REVENUE TO FUND THOSE COSTS AND TO FAIRLY ALLOCATE THOSE COSTS, A STORMWATER MANAGEMENT FUND ("THE FUND") IS ESTABLISHED.

(B) ALL REVENUES COLLECTED FROM THE STORMWATER MANAGEMENT FEE AND FROM GRANTS, PERMIT FEES AND OTHER CHARGES COLLECTED UNDER CHAPTER 26, STORMWATER MANAGEMENT, SHALL BE DEPOSITED TO THE FUND. THE COUNCIL MAY MAKE ADDITIONAL APPROPRIATIONS TO THE FUND. ALL DISBURSEMENTS FROM THE FUND SHALL BE FOR THE PURPOSES OF THE FUND AS SET FORTH IN SECTION 26-265.

§ 26-265. PURPOSES OF THE FUND.

THE FUND SHALL BE USED FOR THE FOLLOWING PURPOSES:

(A) THE ACQUISITION BY GIFT, PURCHASE, OR CONDEMNATION OF REAL AND PERSONAL PROPERTY, AND INTERESTS THEREIN, NECESSARY TO CONSTRUCT, OPERATE, AND MAINTAIN STORMWATER CONTROL FACILITIES.

(B) ALL COSTS OF ADMINISTRATION AND IMPLEMENTATION OF THE STORMWATER MANAGEMENT PROGRAM, INCLUDING THE ESTABLISHMENT OF REASONABLE OPERATING AND CAPITAL RESERVES TO MEET UNANTICIPATED OR EMERGENCY STORMWATER MANAGEMENT REQUIREMENTS.

(C) ENGINEERING AND DESIGN, DEBT SERVICE AND RELATED FINANCING EXPENSES, CONSTRUCTION COSTS FOR NEW FACILITIES, AND ENLARGEMENT OR IMPROVEMENT OF EXISTING FACILITIES.

(D) OPERATION AND MAINTENANCE OF THE STORMWATER SYSTEM.

(E) MONITORING, SURVEILLANCE, AND INSPECTION OF STORMWATER CONTROL DEVICES.

(F) WATER QUALITY MONITORING AND WATER QUALITY PROGRAMS.

(G) RETROFITTING DEVELOPED AREAS FOR POLLUTION CONTROL.

(H) INSPECTION AND ENFORCEMENT ACTIVITIES.

(I) BILLING AND ADMINISTRATIVE COSTS.

(J) OTHER ACTIVITIES WHICH ARE REASONABLY REQUIRED.

§ 26-266. STORMWATER MANAGEMENT FEE.

AN ANNUAL SERVICE CHARGE IS IMPOSED UPON ALL REAL PROPERTY IN THE TOWN, AS OF JULY 1 BILLING OF EACH FISCAL YEAR, AND SHALL BE BILLED MONTHLY, BEGINNING JULY 1, 2013, TO FUND STORMWATER MANAGEMENT PROGRAMS. THIS SERVICE CHARGE SHALL BE KNOWN AS THE STORMWATER MANAGEMENT FEE ("FEE"). ANY REAL PROPERTY ANNEXED INTO THE TOWN AFTER JULY 1 MAY BE SUBJECT TO A PARTIAL YEAR CHARGE. THE FEE IS BASED ON: (1) THE EXTENT TO WHICH EACH PROPERTY CREATES A NEED FOR

THE STORMWATER MANAGEMENT PROGRAM; (2) THE AMOUNT OF IMPERVIOUS AREA ON EACH PROPERTY; AND (3) THE COST OF IMPLEMENTING A STORMWATER MANAGEMENT PROGRAM.

§ 26-267. CLASSIFICATION OF PROPERTY FOR PURPOSES OF DETERMINATION OF THE STORMWATER MANAGEMENT FEE.

(A) FOR PURPOSES OF DETERMINING THE STORMWATER MANAGEMENT FEE, ALL PROPERTIES IN THE TOWN ARE CLASSIFIED INTO ONE OF THE FOLLOWING CLASSES:

(1) SINGLE-FAMILY RESIDENTIAL PROPERTY; OR

(2) NON-RESIDENTIAL PROPERTY.

(B) SINGLE-FAMILY RESIDENTIAL FEE. THE COUNCIL FINDS THAT THE INTENSITY OF DEVELOPMENT OF MOST PARCELS OF REAL PROPERTY IN THE TOWN CLASSIFIED AS SINGLE FAMILY RESIDENTIAL IS SIMILAR AND THAT IT WOULD BE EXCESSIVELY AND UNNECESSARILY EXPENSIVE TO DETERMINE PRECISELY THE SQUARE FOOTAGE OF THE IMPROVEMENTS (SUCH AS BUILDINGS, STRUCTURES, AND OTHER IMPERVIOUS AREA) ON EACH SUCH PARCEL. THEREFORE, ALL SINGLE FAMILY RESIDENTIAL PROPERTIES IN THE TOWN SHALL BE CHARGED A FLAT STORMWATER MANAGEMENT FEE, EQUAL TO THE ERU RATE, REGARDLESS OF THE SIZE OF THE PARCEL OR THE IMPROVEMENTS.

(C) NON-RESIDENTIAL PROPERTY FEE. THE FEE FOR NON-RESIDENTIAL PROPERTY IN THE TOWN SHALL BE THE ERU RATE MULTIPLIED BY THE NUMERICAL FACTOR OBTAINED BY DIVIDING THE TOTAL IMPERVIOUS SURFACE AREA (SQUARE FEET) OF THE PROPERTY BY ONE ERU UNIT. THE IMPERVIOUS SURFACE AREA FOR NON-RESIDENTIAL PROPERTY IS THE SQUARE FOOTAGE FOR THE BUILDINGS AND OTHER IMPROVEMENTS ON THE PROPERTY AS LISTED IN THE STATE ASSESSMENT ROLL. ALTERNATIVELY, AT THE SOLE DISCRETION OF THE TOWN ADMINISTRATOR, THE IMPERVIOUS SURFACE AREA OF NON-RESIDENTIAL PROPERTY MAY BE DETERMINED THROUGH SITE EXAMINATION, MAPPING INFORMATION, AERIAL PHOTOGRAPHS OR OTHER AVAILABLE INFORMATION. THE MINIMUM STORMWATER MANAGEMENT FEE FOR NON-RESIDENTIAL PROPERTY SHALL EQUAL THE ERU RATE FOR SINGLE FAMILY RESIDENTIAL PROPERTY.

§ 26-268. ERU RATE.

THE COUNCIL SHALL, BY RESOLUTION, ESTABLISH THE ANNUAL (FISCAL YEAR) ERU RATE FOR THE STORMWATER MANAGEMENT FEE. THE BASE RATE SHALL BE CALCULATED TO INSURE ADEQUATE REVENUES TO FUND THE COSTS OF STORMWATER MANAGEMENT AND TO PROVIDE FOR THE OPERATION, MAINTENANCE, AND CAPITAL IMPROVEMENTS OF THE STORMWATER SYSTEM IN THE TOWN.

§ 26-269. CHARGES FOR TAX-EXEMPT PROPERTIES.

THE COUNCIL FINDS THAT ALL REAL PROPERTY IN THE TOWN CONTRIBUTES TO RUNOFF AND EITHER USES OR BENEFITS FROM THE MAINTENANCE OF THE STORMWATER SYSTEM. ALL REAL PROPERTY IN THE TOWN, INCLUDING PROPERTY THAT IS EXEMPT FROM PROPERTY TAX BY TITLE 7 OF THE TAX-PROPERTY, ANNOTATED CODE OF MARYLAND, AS AMENDED, SHALL BE CHARGED THE FEE.

§ 26-270. ASSESSMENT NOTICES.

(A) THE TOWN ADMINISTRATOR SHALL FOR THE FISCAL YEAR BEGINNING JULY 1, 2013 ONLY, SEND ASSESSMENT NOTICES FOR THE FEE TO PROPERTY OWNERS OF NON-RESIDENTIAL PROPERTY PRIOR TO THE BILLING FOR THE FEE.

(B) THE NOTICE SHALL INCLUDE THE FOLLOWING INFORMATION:

(1) THE CLASSIFICATION OF THE PROPERTY FOR PURPOSES OF DETERMINING THE FEE;

(2) FOR PROPERTY CLASSIFIED AS NON-RESIDENTIAL PROPERTY:

(I) THE IMPERVIOUS SURFACE AREA OF THE PROPERTY; AND

(II) THE METHOD BY WHICH THE IMPERVIOUS SURFACE AREA OF THE PROPERTY WAS DETERMINED; THAT IS, WHETHER THE COMPUTATION OF THE IMPERVIOUS SURFACE AREA OF THE PROPERTY IS BASED ON INFORMATION IN THE STATE ASSESSMENT ROLL, SITE EXAMINATION, MAPPING INFORMATION, AERIAL PHOTOGRAPHS, OR OTHER AVAILABLE INFORMATION.

(3) THE AMOUNT OF THE ERU RATE (I.E., THE SINGLE FAMILY RESIDENTIAL FEE) AND, FOR NON-RESIDENTIAL PROPERTY, THE NUMBER OF ERU UNITS ON THE PROPERTY. IF THE NUMBER OF UNITS IS A FRACTION, IT SHALL BE ROUNDED TO THE NEXT HIGHEST WHOLE NUMBER.

§ 26-271. WHEN STORMWATER MANAGEMENT FEE PAYABLE; INTEREST AND PENALTIES; LIEN ON REAL PROPERTY.

(A) THE FEE THAT IS DUE ON A MONTHLY BASIS MUST BE PAID WITHIN 30 DAYS AFTER THE BILL IS MAILED OR ISSUED TO THE PROPERTY OWNER AND IS OVERDUE AFTER THAT DATE. AN OVERDUE FEE BEARS INTEREST AND PENALTIES AT THE RATE OF 1.5% FOR EACH MONTH OR FRACTION OF A MONTH THAT THE FEE IS OVERDUE.

(B) THE FEE, INCLUDING INTEREST AND PENALTIES, WHEN OVERDUE IS A LIEN ON REAL PROPERTY AND MAY BE COLLECTED IN THE SAME MANNER AS DELINQUENT REAL PROPERTY TAXES OR BY A SUIT AGAINST THE PROPERTY OWNER.

§ 26-272. REQUESTS FOR CORRECTION OF THE STORMWATER MANAGEMENT FEE.

(A) A PROPERTY OWNER MAY REQUEST CORRECTION OF THE FEE BY SUBMITTING THE REQUEST IN WRITING TO THE TOWN ADMINISTRATOR AFTER THE DATE THE ASSESSMENT NOTICE OR THE BILL IS MAILED OR ISSUED TO THE PROPERTY OWNER. GROUNDS FOR CORRECTION OF THE FEE INCLUDE:

(1) INCORRECT CLASSIFICATION OF THE PROPERTY FOR PURPOSES OF DETERMINING THE FEE;

(2) ERRORS IN THE SQUARE FOOTAGE OF THE IMPERVIOUS SURFACE AREA OF THE PROPERTY;

(3) MATHEMATICAL ERRORS IN CALCULATING THE FEE TO BE APPLIED TO THE PROPERTY; AND

(4) ERRORS IN THE IDENTIFICATION OF THE PROPERTY OWNER OF A PROPERTY SUBJECT TO THE FEE.

(B) THE TOWN ADMINISTRATOR SHALL MAKE A DETERMINATION WITHIN 30 DAYS AFTER RECEIPT OF THE PROPERTY OWNER'S COMPLETED WRITTEN REQUEST FOR CORRECTION OF THE FEE. THE TOWN ADMINISTRATOR'S DECISION ON A REQUEST FOR CORRECTION OF THE FEE SHALL BE FINAL.

(C) A PROPERTY OWNER MUST COMPLY WITH ALL RULES AND PROCEDURES ADOPTED BY THE TOWN WHEN SUBMITTING A REQUEST FOR CORRECTION OF THE FEE AND MUST PROVIDE ALL INFORMATION NECESSARY FOR THE TOWN ADMINISTRATOR TO MAKE A DETERMINATION ON A REQUEST FOR CORRECTION OF THE FEE. IF A PROPERTY OWNER ALLEGES AN ERROR UNDER SECTION 26-272(A)(2), THEN THE REQUEST FOR CORRECTION MUST INCLUDE A CERTIFICATION BY A REGISTERED ENGINEER OR PROFESSIONAL LAND SURVEYOR OF THE IMPERVIOUS SURFACE AREA OF THE PROPERTY. FAILURE TO COMPLY WITH THE PROVISIONS OF THIS SUBSECTION SHALL BE GROUNDS FOR DENIAL OF THE REQUEST.

THIS ORDINANCE was introduced and read at a meeting of the Town Council held on the 14th day of January, 2013, and thereafter a statement of the substance of the Ordinance having been published as required by law was finally passed by the Town Council on the 28th day of January, 2013.

Adopted and effective this 28th day of January, 2013 by the Mayor and Council of the Town of Berlin, Maryland, by affirmative vote of 5 to 0 opposed, with 0 abstaining.

Elroy Brittingham, Vice-President

Approved and effective this 28th day of January, 2013 by the Mayor of the Town of Berlin.

Wm. Gee Williams, Mayor

ATTEST: Anthony Carson, Town Administrator

ARTICLE II. STORMWATER MANAGEMENT UTILITY FEES

Sec. 28-23. Authority.

This article is enacted pursuant to the Annotated Code of Maryland, Environment Article, § 4-204(d), which authorizes municipalities to adopt a system of charges to fund the implementation of stormwater management programs.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-24. Purpose.

To protect the public health, safety, and welfare, the City's stormwater management, storm drainage, and water quality programs must be supported by an adequate, sustainable source of revenue. All real property in the City, including property owned by public and tax-exempt entities, benefits from these City programs and services. Those with higher amounts of impervious surface area contribute greater amounts of stormwater or pollutants to the City's stormwater management facilities, storm drains, and streams, and therefore should carry a proportionate burden of the cost. The City has determined that it is in the interest of the public to enact a stormwater management utility fee that allocates program costs to all property owners based on impervious surface area measurement.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-25. Definitions.

For the purposes of this article, the following terms have the meanings given:

"2000 Design Standards" means the standards established in the 2000 Maryland Stormwater Design Manual.

"Community association" means a mandatory membership organization created for the maintenance of commonly owned real estate and improvements where the members are required to adhere to a set of rules and to pay certain assessments. "Community association" includes homeowners' associations and commercial property owners' associations.

"Commercial lot" means any lot that is used for a non-residential purpose and that is located in an NC, GC, PB, MO, M1, M2, or MXE zoning district, or within the commercial component of a PND or mixed use development.

"Condominium" means a residential property that is subject to a condominium regime established under the Maryland Condominium Act.

"ESD to the MEP" means environmental site design implemented to the maximum extent practicable, as defined in the Stormwater Management Ordinance (Article I of this Chapter).

"Downtown District" means the area of the City bounded on the north by 7th Street, on the south by South Street, on the west by Bentz Street, and on the east by East Street.

"Impervious surface" means a surface that is compacted or covered with material that is resistant to infiltration by water, including but not limited to, most conventionally surfaced streets, roofs, sidewalks, patios,

driveways, parking lots, and other oiled, graveled, graded, compacted or similar surface that impedes the natural infiltration of surface water and from which stormwater runoff will be produced.

"Impervious surface area" means the number of square feet of horizontal surface covered by buildings and other impervious surfaces.

"Multifamily dwelling" means a building containing three (3) or more dwelling units.

"Percent impervious factor" or "PIF" means average percent impervious surface area as defined in this article.

"Single family dwelling" means a dwelling unit designed and used exclusively by one family and surrounded on all sides by yards or other open space.

"Structural management facilities" include facilities that include recharge storage as a portion of the full water quality treatment volume if they are subject to routine structural maintenance.

"Townhouse dwelling" means one of a series of two (2) or more attached dwelling units separated from one another by continuous party walls, which are without openings from lowest floor level to the highest point of the roof.

"Unit rate" means the stormwater management utility fee for one thousand (1,000) square feet of impervious surface area, as established by the fee schedule ordinance in effect at the time the fee is calculated.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-26. Stormwater Management Fund.

(a) Establishment. The City's Stormwater Management Fund is a dedicated enterprise fund. It will be used only to fund stormwater management, storm drainage, and water resources programs and services.

(b) Revenues. The following revenue will be deposited into the Stormwater Management Fund:

(1) all fees established by the Board of Aldermen to cover the cost of administering the provisions of the City's Stormwater Management Ordinance (Article I of this Chapter), including but not limited to application and permit fees and fines and waiver fees;

(2) all revenue collected from the imposition of the utility fee pursuant to this article;

(3) all interest from deposits in the Stormwater Management Fund; and,

(4) any other revenue as may be determined by the Board of Aldermen, including but not limited to grants and special appropriations.

(c) Expenses. The City may use the Stormwater Management Fund only for the following expenses:

(1) regulatory review and inspection of stormwater management, sediment control, and storm drainage for development permits;

(2) watershed, stormwater management, floodplain, and storm drainage conveyance studies and planning;

(3) the study, design, purchase, construction, expansion, retrofit, repair, maintenance, landscaping, operation or inspection of stormwater management facilities, storm drainage, and other watershed improvements;

(4) land acquisition (including easements and rights-of-way) for stormwater management facilities or storm drainage;

(5) water quality programs related to State or Federal laws, including requirements for the City's National Pollution Discharge Elimination System permits;

(6) water quality monitoring, inspection, and enforcement activities, including illicit discharge and illicit connection investigations;

(7) water quality and pollution prevention education and outreach activities;

(8) program administration and implementation, including reasonable operating and capital reserves to meet unanticipated or emergency requirements for stormwater management, storm drainage and water quality; and,

(9) other stormwater management, storm drainage, and water quality programs that are reasonably required to protect public safety or meet applicable regulatory requirements.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-27. Applicability.

Except as otherwise provided in this article, this article applies to all improved real property in the City, including but not limited to government-owned real property and real property that is tax exempt from property tax by Title 7 of the Tax Property Article of the Annotated Code of Maryland.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-28. Administrative regulations.

The City Engineer may develop and implement administrative regulations as needed to implement the provisions of this article, including but not limited to procedures for the application for and granting of credits.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-29. Utility fees.

(a) *Establishment.* The City shall charge an annual stormwater management utility fee on all improved real property in the City based on the amount of impervious surface area on each property and the cost of implementing the City's stormwater management, storm drainage, and water quality programs. Except as otherwise provided in this article, the owner of each lot is responsible for paying the stormwater management utility fee imposed for that lot. Any real property added to the State assessment role after July 1 or annexed into the City after July 1 may be subject to a partial year charge.

(b) *Single family dwellings.* The City Engineer will calculate the utility fee for single family dwellings, except for those located within the Downtown District, in accordance with this subsection.

(1) The PIF for a lot on which a single family dwelling is located (PIFSF) is defined as thirty (30) percent.

(2) The utility fee for each lot on which a single family dwelling is located is calculated as follows: PIFSF x Lot Area in sf × Unit Rate/1,000 sf.

(c) *Townhouse dwellings, condominiums and multifamily dwellings.* The City Engineer will calculate the utility fee for townhouse dwellings, condominiums, and multifamily dwellings, except for those located within the Downtown District, in accordance with this subsection.

(1) The PIF for a lot on which a townhouse, condominium or multifamily dwelling (PIFM) is located is defined as fifty-five (55) percent.

(2) The utility fee for each lot on which a townhouse, condominium or multifamily home is located is calculated as follows:

PIFM × Lot Area in sf × Unit Rate/1,000 sf.

(d) *Downtown District lots.* The City Engineer will calculate the utility fee for properties located within the Downtown District in accordance with this subsection.

(1) The PIF for a lot located within the Downtown District (PIFD) is defined as fifty-five (55) percent.

(2) The utility fee for each Downtown District lot is calculated as follows:

PIFDD × Lot Area in sf × Unit Rate/1,000 sf.

(e) *Commercial lots.* The City Engineer will calculate the utility fee for commercial lots, except for those located within the Downtown District, by:

(1) Determining the impervious surface area measurement in square feet for the lot; and

(2) Multiplying the impervious surface area in square feet by the unit rate divided by one thousand (1,000) sf.

(f) *Other improved lot fee.* The City Engineer will calculate the utility fee for any improved lot for which a calculation is not provided in subsections (b) through (e) of this section by:

(1) Determining the impervious surface area measurement in square feet for the lot; and

(2) Multiplying the impervious surface area in square feet by the unit rate divided by one thousand (1,000) sf.

(g) *Common areas.* Common areas owned by a community association will be charged based on the total impervious surface area of the common area.

(h) *Roads and other rights-of-way.* The City will not charge a stormwater utility fee for public roads or other property within a public right of way. The City will charge a stormwater utility fee to owners of private rights of way, meaning those rights of way that have not been dedicated to public use and are not maintained by the City or other governmental agency.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-30. Impervious surface area measurements.

(a) *Methods.* The City Engineer shall calculate impervious surface area measurements using one of the following methods:

(1) geographic information systems analysis of aerial photography;

(2) measurement from approved as-built engineering drawings; or

(3) at the option of a property owner and at the property owner's sole expense, a field survey signed and sealed by a Maryland professional land surveyor.

(b) *Exemptions.* An impervious surface area is exempt from measurement for purposes of this article if the area is:

(1) less than one hundred (100) square feet and located within an unimproved lot; or

(2) located within a public right-of-way.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-31. Credits.

(a) *Generally.* The stormwater management utility fee for commercial lots may be reduced through the use of credits when an investment in on-site stormwater management system results in a reduced impact on the public stormwater management system. Residential lots (single family dwellings, townhouse dwellings, multifamily dwellings, and condominiums) are not eligible for credits, except for those properties where stormwater management has been provided through ESD to the MEP.

(b) *Amount of credit.* The City Engineer shall determine the amount of the credit based on the extent of runoff control provided by the on-site stormwater management system, as further described in this section and the administrative regulations.

(c) *Application.* A property owner seeking credits against the stormwater management utility fee shall submit an application, including an administrative fee as established by the Board of Aldermen, in accordance with the requirements set forth in the administrative regulations.

(d) *Basis.* The amount of a credit is a percentage of the amount of impervious surface area draining to the private stormwater management facility, as specified in subsections (e) through (g) of this section.

(e) *Previous standards credit.* An eligible structural management facility that does not meet the 2000 Design Standards may receive a maximum cumulative credit of twenty (20) percent against the utility fee.

(1) A ten (10) percent credit will be applied against the utility fee if the stormwater management facility provides stormwater quality control; and

(2) A ten (10) percent credit will be applied against the utility fee if the stormwater management facility provides stormwater quantity control.

(f) *2000 design standards credit.* An eligible structural management facility that meets the 2000 Design Standards may receive a maximum cumulative credit of fifty (50) percent against the utility fee.

(1) A twenty-five (25) percent credit will be applied if the facility provides stormwater quality control for water quality volume (WQv); and

(2) A twenty-five (25) percent credit will be applied if the facility provides stormwater quantity control for channel protection storage volume (CPv).

(g) *ESD to the MEP credit.* Any property for which stormwater management has been provided through ESD to the MEP may receive a maximum cumulative credit of sixty (60) percent against the utility fee.

(1) A fifty (50) percent credit will be applied if the full ESD volume is treated through a combination of ESD and structural management practices.

(2) An additional ten (10) percent credit will be applied if the full ESD volume is treated solely through ESD practices.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-32. Collection.

(a) *Means of collection.* The stormwater management fee for an owner of property who is using the City's water or sewer service will be billed and collected as part of the water and sewer bill for that property. The fee will be included as a separate line item on the water and sewer bill for each property subject to the fee. The stormwater management fee for an owner of property who is not using the City's water or sewer service will be billed and collected on a quarterly basis.

(b) *Common areas.* Except as otherwise provided in this subsection, the utility fee for common areas owned by community associations will be billed directly to the community association.

(c) *Delinquency.* Unpaid stormwater management utility fees may be collected in any manner permissible under Maryland law, including but not limited to the methods specified in this section.

(1) Upon the failure of a property owner who is using the City's water service to pay the stormwater management utility fee within thirty (30) days after it is due, the Director of Finance will issue a written notice to the property owner, stating that if the fee is not paid within ten (10) days, water service to the property will be discontinued and suit may be instituted to recover the amount of the fee. In addition, a charge of one percent per month will be added to any stormwater management utility fee not paid thirty (30) days after it is due as established by this article.

(2) The Department of Public Works shall discontinue water service to the property until the owner pays the amount due, plus a reconnection charge as established by the Board of Aldermen. Once discontinued, water service will be restored only after payment in full of the stormwater management utility fee and any other outstanding water charges.

(3) Any unpaid stormwater management utility fee will be a lien against the property to be collected in the same manner as municipal taxes are collected.

(Ord. No. G-13-21, § II, 9-5-13)

Sec. 28-33. Adjustments.

(a) *Submission of request.* Within thirty (30) days after a bill is mailed or issued to a property owner, the property owner may request an adjustment of the utility fee. A request for an adjustment must be submitted to the Director of Finance in writing, stating the grounds for the request. Additional submittal requirements may be set forth in the administrative regulations.

(b) *Criteria.* The Director of Finance may adjust the utility fee if:

(1) the property was incorrectly classified under § 28-29;

(2) the impervious surface area was measured incorrectly;

(3) there is a mathematical error in calculating the utility fee; or

(4) the property owner invoiced for the fee was identified in error.

(c) *Appeals.* The decision of the Director of Finance on a utility fee adjustment is a final decision from which an aggrieved party may appeal, within thirty (30) days after the decision, to the Circuit Court for Frederick County in accordance with Title 7, Chapter 200 of the Maryland Rules.

(Ord. No. G-13-21, § II, 9-5-13)

Chapter 16.08
STORMWATER MANAGEMENT FEE SYSTEM

Sections:

16.08.010 Findings.

A. The City maintains a system of storm and surface water management facilities, including but not limited to inlets, conduits, manholes, channels, ditches, drainage easements, retention and detention basins, infiltration facilities and other components as well as natural waterways.

B. The stormwater system in the City needs regular maintenance and improvements.

C. Water quality is degrading due to erosion and the discharge of nutrients, metals, oil, grease, toxic materials and other substances into and through the stormwater system.

D. The public health, safety and welfare is adversely affected by poor ambient water quality and flooding that results from inadequate management of both the quality and quantity of stormwater.

E. All real property in the City either uses or benefits from the maintenance of the stormwater system.

F. The extent of use of the stormwater system by each property is dependent on factors that influence runoff, including land use and the amount of impervious surface on the property.

G. The costs of improving, maintaining, operating and monitoring the stormwater system should be allocated, to the extent practicable, to all property owners based on the impact of runoff from the impervious areas of their property on the stormwater management system.

H. Management of the stormwater system to protect the public health, safety and welfare requires adequate revenues and it is in the interest of the public to finance stormwater management adequately with a user charge system that is reasonable and equitable so that each user of the system pays to the extent to which he or she contributes to the need for it. (Ord. 2021-12, 2021/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-1)

16.08.020 Statutory authority.

Authority for the adoption of a system of charges to fund the implementation of stormwater management programs is conferred on the City by Section 21-625 of the Local Government Article and by Section 4-204(d) of the Environment Article of the Annotated Code of Maryland, as amended. (Ord. 2021-12, 2021/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-2)

16.08.030 Definitions.

For purposes of this chapter, the following words and phrases shall have the meanings indicated:

"Base rate" means the stormwater management fee charged on a base unit.

"Base unit" is equal to 500 square feet of impervious surface for property types.

"Board" means the Stormwater Management Board for Takoma Park established under the Municipal Charter. In accordance with the Municipal Charter, the Council of the City has been designated the Stormwater Management Board.

“Developed property” means real property which has been altered from its natural state by the addition of any improvements, such as buildings, structures or other impervious area.

“Fee” or “stormwater management fee” means the charge established under this chapter and levied on owners of parcels or pieces of real property to fund the costs of stormwater management and of operating, maintaining and improving the stormwater system in the City.

“Fiscal year” means July 1st of a calendar year to June 30th of the next calendar year, both inclusive.

“Impervious surface” means a surface that is compacted or covered with material that is resistant to infiltration by water, including, but not limited to, most conventionally surfaced streets, roofs, sidewalks, patios, driveways, parking lots and any other oiled, graveled, graded, compacted or other surface that impedes the natural infiltration of surface water.

“Impervious surface area” means the number of square feet of horizontal surface covered by buildings and other impervious surfaces. All building measurements shall be made between exterior faces of walls, foundations, columns or other means of support or enclosure.

“Multifamily dwelling” means a building with more than two dwelling units.

“Other developed property” means developed property other than single-family residential property. Such property shall include, but not be limited to, multifamily dwellings, commercial properties, industrial properties, parking lots, hospitals, private schools, private recreational and cultural facilities, hotels, offices and churches.

“Property owner” means the property owner of record as listed in the State assessment roll. A property owner includes any individual, corporation, firm, partnership or group of individuals acting as a unit and any trustee, receiver or personal representative.

“Single-family residential property” means a developed property the primary purpose of which is providing a permanent dwelling unit and that is classified as residential in the State assessment roll. A single-family detached dwelling, or a townhouse, containing an accessory apartment or second dwelling unit is included in this definition.

“State assessment roll” means the official listing of assessments of real property maintained by the State Department of Assessments and Taxation of Maryland.

“Stormwater management” means the planning, design, construction, regulation, improvement, repair, maintenance and operation of facilities and programs relating to water, floodplains, flood control, grading. erosion, tree conservation and sediment control.

“Stormwater Management Fund” or “fund” means the fund created by this chapter to operate, maintain and improve the City’s stormwater system.

“Stormwater system” means the system or network of storm and surface water management facilities, including but not limited to inlets, conduits, manholes, channels, ditches, drainage easements, retention and detention basins, infiltration facilities and other components as well as all natural waterways.

“Undeveloped property” means any property which has three-quarters or less of the base unit of impervious surface area.

“Water” means any stormwater, surface water, snow melt or groundwater. (Ord. 2021-12, 2021/Ord. 2016-9 § 1, 2016/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-3)

16.08.040 Establishment of Stormwater Management Fund.

A. The stormwater management program is established and the stormwater system is provided to protect the waterways and land in the City by controlling flooding and to protect the natural environment. The costs of designing, developing, improving, operating, maintaining and monitoring the stormwater system required in the City should, therefore, be allocated, to the extent practicable, to all property owners based on their impact on the stormwater system. In order to provide revenue to fund those costs and to fairly allocate those costs, a Stormwater Management Fund (the fund) is established.

B. All revenues collected from the stormwater management fee and from grants, permit fees and other charges collected under this chapter, shall be deposited to the fund. The Council, acting as the Board, may make additional appropriations to the fund. All disbursements from the fund shall be for the purposes of the fund as set forth in this chapter. (Ord. 2021-12, 2021/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-4)

16.08.050 Purposes of fund.

The fund shall be used for the following purposes:

A. The acquisition by gift, purchase or condemnation of real and personal property, and interests therein, necessary to construct, operate and maintain stormwater control facilities;

B. All costs of administration and implementation of the stormwater management program, including the establishment of reasonable operating and capital reserves to meet unanticipated or emergency stormwater management requirements;

C. Engineering and design, debt service and related financing expenses, construction costs for new facilities, and enlargement or improvement of existing facilities;

D. Operation and maintenance of the stormwater system;

E. Monitoring, surveillance and inspection of stormwater control devices;

F. Stormwater quality monitoring programs;

G. Retrofitting developed areas for pollution control;

H. Inspection and enforcement activities;

I. Billing and administrative costs;

J. Evaluate the impact of stormwater runoff on private property, or within groups of private properties; and

K. Other activities which are reasonably required. (Ord. 2021-12, 2021/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-5)

16.08.060 Imposition of stormwater management fee.

A. An annual service charge is imposed upon all real property in the City, as of July 1st of each fiscal year, beginning July 1, 1996, to fund stormwater management programs. This service charge shall be known as the "stormwater management fee" (fee). Any real property completed or added to the State assessment roll after July 1st or annexed into the City after July 1st may be subject to a partial year charge. The fee is based on:

1. The extent to which each property creates a need for the stormwater management program;
2. The amount of impervious area on each property; and
3. The cost of implementing a stormwater management program.

B. The fee charged to the owners of single-family residential properties between July 1, 2021, and June 30, 2022, shall not exceed $275.00. Beginning July 1, 2022, the fees charged to the owners of single-family residential properties shall not be so limited.

C. The City Manager shall establish an application and review process by which lower income property owners may apply for reduction of the fee. (Ord. 2021-12, 2021/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-6)

16.08.070 Classification of property—Establishment of fee.

A. For purposes of determining the stormwater management fee, all properties in the City are classified into one of the following classes:

1. Single-family residential property; or
2. Other developed property.

B. Single-Family Residential Fee. All single-family residential properties in the City shall be charged a rate based on dividing the total impervious surface area (square feet) of the property by one base unit and multiplying that result by the base rate.

C. Other Developed Property Fee.

1. The fee for other developed property in the City shall be a rate based on dividing the total impervious surface area (square feet) of the property by one base unit and multiplying that result by the base rate. The impervious surface area for other developed property is the square footage for the buildings and other improvements on the property as listed in the State assessment roll. Alternatively, at the sole discretion of the City Manager, when evidence suggests that the impervious surface on the property listed in the State assessment roll is inaccurate, the impervious surface area of other developed property may be determined through site examination, mapping information, aerial photographs, and other available information. The minimum stormwater management fee for other developed property shall equal the base rate for single-family residential property.

2. If the other developed property is a condominium, the fee for each condominium unit will be calculated by dividing the total fee for the condominium property by the number of condominium units in the development and will be billed to each condominium unit owner.

D. Stormwater Management Fee Credit Program.

1. There shall be a stormwater management fee credit program that is designed to recognize specific actions or installations a property owner has taken or made to reduce the quantity or improve the quality of stormwater discharged from a particular property.

2. Approved credits shall not exceed 50% of the total fee assessed to a property owner and shall be applied to the next annual billing cycle provided the reasons for granting the approval remain for the duration of the billing cycle.

3. The City Manager shall adopt regulations by October 1, 2021, implementing the stormwater management fee credit program.

4. At a minimum, the stormwater management fee credit program regulations shall:

a. Define potential credits related to stormwater remediation efforts undertaken on private property;

b. Consistent with best management practices, define the structural and nonstructural qualifications for the credit;

c. Establish approval criteria for credits;

d. Establish approval periods for each type of credit in order to promote maintenance of the stormwater management practice and ensure that the practice provides intended water quality improvement;

e. Permit property owners who were previously awarded a credit to reapply for a credit for the next approval period;

f. Establish all necessary forms;

g. Establish a review process for applications that, when feasible, will be complete within 30 days upon receipt of a completed application, except in the first year of the fee credit program when the review process may allow for up to four months for completion;

h. Require the City, in the event a fee credit application is rejected, to notify the applicant in writing of any additional documentation and information for reconsideration for approval of the credit and, when reasonably feasible, explain why such documentation and information are necessary after which the applicant may submit a revised application; and

i. Provide a methodology for rescinding the approval of a credit if the reasons for granting the credit no longer exist and changing the amount credited on a pro rata basis. (Ord. 2021-12, 2021/Ord. 2016-9 § 1, 2016/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-7)

16.08.080 Base rate.

The Council, acting as the Board, shall, by ordinance, establish the annual (fiscal year) base rate for the stormwater management fee. The base rate shall be calculated to ensure adequate revenues to fund the costs of stormwater management and to provide for the operation, maintenance and capital improvements of the stormwater system in the City. (Ord. 2021-12, 2021/Ord. 2016-9 § 1, 2016/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-8)

16.08.090 Charges for tax-exempt properties—Exemptions for undeveloped property and for government property used for public purposes.

A. The Council finds that all real property in the City contributes to runoff and either uses or benefits from the maintenance of the stormwater system. Therefore, except as otherwise provided in this section, all real property in the City, including property that is exempt from property tax by Title 7 of the Tax-Property Article, Annotated Code of Maryland, as amended, shall be charged the fee.

B. Undeveloped property shall be exempt from the fee. (Ord. 2021-12, 2021/Ord. 2015-49 § 1, 2015/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-9)

16.08.100 Assessment notices.

A. Beginning on July 1, 2026, and every five years thereafter, the City Manager shall assess every property and send assessment notices for the fee to property owners prior to the billing for the fee. Nothing herein shall be construed as barring the City from billing property owners for the fee based on existing information in the City's possession until the new assessment and notice cycle is implemented on July 1, 2026.

B. Assessment notices shall include the following information:

1. The classification of the property for purposes of determining the fee;

2. The impervious surface area of the property;

3. The method by which the impervious surface area of the property was determined; that is, whether the computation of the impervious surface area of the property is based on information in the State assessment roll, site examination, mapping information, aerial photographs, or other available information; and

4. The amount of the base rate, and the number of base units on the property. (Ord. 2021-12, 2021/Ord. 2016-9 § 1 (part), 2016/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-10)

16.08.110 When fee is payable—Interest and penalties—Lien on real property—Abatement of small amounts due.

A. The fee that is due for a fiscal year must be paid within 30 days after the bill is mailed or issued to the property owner and is overdue after that date. An overdue fee bears interest and penalties at the rate of 1.67% for each month or fraction of a month that the fee is overdue.

B. The fee, including interest and penalties, when overdue is a lien on real property and may be collected in the same manner as delinquent real property taxes or by a suit against the property owner.

C. The City Manager may abate the fee, including interest and penalties, if the cost of collection is reasonably estimated to exceed the amount of the fee, including any interest and penalties, due and payable.

D. Unless the County declines to enforce collection of any fee imposed by this chapter, the provisions of this section do not apply to fees collected pursuant to real property tax bills issued by Montgomery County. (Ord. 2021-12, 2021/Ord. 2016-9 § 1, 2016/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-11)

16.08.120 Requests for correction.

A. A property owner may request correction of the fee by submitting the request in writing to the City Manager within 30 days after the date the assessment notice or the bill is mailed or issued to the property owner. Grounds for correction of the fee include:

1. Incorrect classification of the property for purposes of determining the fee;

2. Errors in the square footage of the impervious surface area of the property;

3. Mathematical errors in calculating the fee to be applied to the property; and

4. Errors in the identification of the property owner of a property subject to the fee.

B. A property owner must comply with all rules and procedures adopted by the City when submitting a request for correction of the fee and must provide all information necessary for the City Manager to make a determination on a request for correction of the fee. If a property owner alleges an error in the square footage of the impervious surface area of the property, then the property owner may be required by the City Manager to include with the request for correction a certification by a registered engineer or professional land surveyor of the impervious surface area of the property. Failure to comply with the provisions of this subsection shall be grounds for denial of the request.

C. The City Manager shall make a determination within 30 days after receipt of the property owner's completed written request for correction of the fee. At the City Manager's discretion, the fee may be modified if the property owner is able to establish, through a reasonably reliable method, that the City's calculation of square footage of impervious surface area on the property is erroneous. The City Manager's decision on a request for correction of the fee shall be final. (Ord. 2021-12, 2021/Ord. 2016-9 § 1, 2016/Ord. 2001-29 § 2 (part), 2001: prior code § 10D-12)

Appendix K

Sample Asset Management Plan
Scope of Work and Cost Estimate

The estimate below was generated using information provided by a reputable firm with experience developing Asset Management Plans

Estimated Cost to Develop an Asset Management Plan

Task	Hours
Establish system inventory database	
Obtain existing GIS data for 74 locations (43 outfall and 31 BMPs) and estabilish GIS database with additional asset data	148
Assessment of existing stormwater assets (condition and function)	
Field condition assessment rating for 4 types of BMPs and outfalls (4 sites per day, 2 people) with photolog	292
Evaluation of levels of service the stormwater asset	
Determine residual life and level of service	148
Summary of efforts necessary to meet the desired level of service	
Determine life cycle & replacement costs	148
Develop Capital Improvement Plan	
Set target LOS, optimize O&M investiment & capital investiment and funding strategy	148
AMP report	
Develop the report including a draft and edits	116
Total hours	**1000**

Estaimated cost assuming $120/hr for 1000 hours **$120,000.00**