



Stormwater Management Fee Calculation Report

Antrim Township, Franklin County, PA

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Introduction

This report is prepared on behalf of Antrim Township, Franklin County, PA. Antrim Township is located entirely within the Chesapeake Bay watershed, draining to the Bay via tributaries to the Potomac River. Antrim Township occupies 70.3 square miles (approximately 45,000 acres) and had a population of approximately 15,000 in the 2010 census. About 10% of the Township (4,348 Acres) is located within urbanized area (UA) #36190 for Hagerstown, Maryland, which also includes portions of West Virginia and Pennsylvania.

Because Antrim Township contains areas designated as “urbanized” by the US Census, it is required to obtain a Municipal Separate Storm Sewer (MS4) permit from the Pennsylvania Department of Environmental Protection (PADEP). In addition, because the Township is within the Chesapeake Bay watershed, it is required to enact a Chesapeake Bay Pollutant Reduction Plan (CBPRP). Further details regarding the CBPRP are available in our September 2017 report titled “Chesapeake Bay Pollutant Reduction Plan for Individual MS4 Permit.”

Maintaining compliance with the MS4 permit and its CBPRP component represents a significant financial burden to the Township, and funds have not been provided from the state or national level to cover the associated costs. Pennsylvania Act 62 of 2016 amended the Second Class Township code to allow that, *“For the purposes of funding the construction, maintenance and operation of storm water management facilities, systems and management plans authorized under this article, a township may assess reasonable and uniform fees based in whole or in part on the characteristics of the property benefited by the facilities, systems and management plans.”* The Township Board of Supervisors retained Dewberry Engineers Inc. to perform a study to calculate what this reasonable and uniform fee should be. The following report is intended to document the methodology and findings of that study.

Mapping

In their MS4 permitting documents, PADEP indicates that impervious area is directly related to the rate and volume of stormwater runoff, as well as the quantity of sediment and nutrient pollution flowing to the Chesapeake Bay. Impervious area was therefore selected as the basis upon which the Stormwater Management Fee would be calculated.

Existing impervious areas across the Township were delineated using GIS (Geographic Information Systems) technology. This approach utilizes aerial photography to distinguish the pervious from the impervious land. An analyst manually collected the

impervious area and an independent review was then conducted by another analyst to ensure accuracy of the impervious coverage. When the delineation and review was completed, the resulting shapes were overlaid with the parcel outlines supplied by the Franklin County GIS department to select the impervious area within each parcel. The selected area of impervious coverage on each parcel was then calculated and recorded in a database.

Cost Estimates

To estimate the total cost of the Township's Stormwater Management program, cost estimates were prepared for each component of the program, and the results were then added together. The cost of each component is provided below, and detailed cost estimates are provided in Appendix A.

Item No.	Description	Estimated Cost
1	Stream Restoration Construction, Operation, and Maintenance Contract	\$1,920,000
2	Survey, Design, Permitting, Bidding, and Construction Phase Services	\$452,000
3	Costs incurred in meeting other permit "Minimum Control Measures" (MCMs)	\$418,000
	TOTAL	\$2,790,000

These costs will not be incurred all at one time, but over a period of several years. For example, Item #1 includes a stream restoration project that is planned for construction in calendar year 2021. After the construction work is complete, the contractor will be responsible for maintaining the plantings for a period of several years until they become established and the stream corridor becomes naturalized.

The Township's current MS4 permit expires in 2023. The Stormwater Management Fee has been calculated to fund the improvements required by the current permit, and to have those funds in place before the permit expires. However, not all of the funds are anticipated to be expended until sometime in the next permit cycle due to factors like the maintenance period described above. It is therefore recommended that the Township reassess the stormwater management fee approximately every 5 years based upon the following:

- Changing requirements in each MS4 permit cycle
- Growth and development trends in the Township

- Actual costs incurred and fees collected in the previous permit cycle

Determination of the Average Residential Impervious Coverage

Single family residential dwellings occupy more parcels in Antrim Township than any other use, and each one represents a very small fraction of the Township's total impervious coverage.

The square footage of impervious coverage for every residential parcel was calculated (excluding parcels with less than 500 square feet and more than 10,000 square feet of impervious area). The resulting average residential impervious area is 4,130 square feet based on the total residential impervious area divided by the total number of residential tax parcels. Non-residential properties were not included in the average residential square footage calculations as they would have skewed the baseline value significantly. Shared use trails on residential properties are also not included in the calculation of impervious coverage.

The Fee Structure

Most residential properties contain impervious areas totaling somewhere between 2,065 SF and 6,196 SF. It should be noted that all square footages are rounded to the nearest whole number for the purpose of this study. All property owners will receive a bill for the stormwater fee. If the calculated bill amount is less than \$10, then the bill will state that the amount due is \$0.

A database was developed to calculate and organize the fee value assigned to each parcel in the Township. A summary of that database is provided in Appendix B, and the full database has been provided to the Township in electronic format.

As described in the foregoing sections, the Stormwater Management program is estimated to cost \$2,790,000 over a period of 3 years in order to satisfy the requirements of the current MS4 program, which is regulated under the National Pollutant Discharge Elimination System (NPDES) permit. The stormwater management fee is based on the estimated cost of \$2,790,000 divided by the total impervious area of 89,815,295 square feet divided by 3 years yielding a rate of \$0.0104 per square foot of impervious area. To help reduce cost to the property owners the Township Board of Supervisors have proposed a Township contribution of \$42.27 for all properties in the first year (2020). This Township contribution is based on the impervious area for the average representative residential tax parcel. The remaining 2 years (2021 and 2022) will be assessed at the rate of \$0.0104 per square foot of impervious area. The

Township Board of Supervisors may consider extending the Township contribution into years 2021 and 2022. The Township contribution portion will be reviewed annually.

Because of changing permit requirements, this fee may require recalculation and adjustment in future permit cycles. It is therefore possible that the fee will increase or decrease in future years.

By providing the Township contribution in 2020, the remaining 24 monthly billing periods have a calculated fee of \$3.52 per month for every 4,130 square feet of impervious coverage. However, collecting on a monthly basis is deemed inefficient due to the administrative cost of collecting at such a rapid pace for a relatively small billing amount. The Township has determined that the minimum fee to be \$10.00 annually. Any calculated fee less than \$10.00 will not be assessed to the property owner. We therefore recommend that the fee be billed on a less frequent basis, with that frequency depending upon the impervious coverage assessed. The billing cycle breaks down as follows:

- Properties representing less than 12,390 square feet of impervious coverage
 - Option 1 – Pay entire three-year fee in a single payment
 - Option 2 – Pay an annual fee once per year for three years
- Properties representing 12,390 square feet of impervious coverage or more
 - Option 1 – Pay entire three-year fee in a single payment
 - Option 2 – Pay an annual fee once per year for three years
 - Option 3 – Pay a quarterly fee once per quarter for twelve quarters

Fee Adjustments

Any funds accumulated due to a slight over-assessment of impervious coverage can be carried forward into the next billing cycle, and adjustments can be made at that time if necessary. A fee adjustment process will be established for future assessment cycles if the property owner provides proof of having less impervious coverage than previously assessed, or if changes occurred that reduced the impervious coverage.

Documentation such as Township issued land use permits, plot plans and surveys from a certified surveyor or engineer, or other legal documents identifying impervious coverages shall be provided as proof prior to any cost adjustment.

Stormwater Credit Program

PA Act 62 of 2016 requires that *"In establishing the fees, the township shall consider and provide appropriate exemptions or credits for properties which have installed and are maintaining storm water facilities that meet best management practices and are*

approved or inspected by the township.” To meet this requirement, a four-tiered credit program has been developed, as follows:

Tier 1 – Additional BMPs for Properties with Greater than 12,390 sq. ft. of Impervious Area.

Properties having 12,390 sq. ft. or more of impervious area, such as commercial or industrial properties, as well as developers proposing multiple developments may apply for Tier 1 Stormwater Credits. In order to obtain Tier 1 credits, the applicant is required to submit stormwater plans and engineering calculations describing the installation of stormwater BMPs (Best Management Practices) beyond those which would otherwise be required. The stormwater plans and calculations will be reviewed by the Township Engineer in accordance with Chapter 126 “Stormwater” of the Code of the Township of Antrim who will issue comments if necessary. Upon resolution of the Township Engineer’s comments and concurrence by the Township, the property will receive impervious coverage credit consistent with the approved stormwater plans and calculations.

For the purpose of meeting this requirement, additional BMPs can be provided, or BMPs which would otherwise be required can be enlarged. However, the applicant must make a clear demonstration that the facilities installed to receive Tier 1 Stormwater Credits are in addition to any facilities that would be required to meet other regulations. “Double counting” BMPs installed to meet stormwater management regulations will not be permitted. In addition, the applicant must make provisions for ongoing operation and maintenance.

Construction of Tier 1 Credit BMPs is subject to the same inspection requirements that any stormwater management BMP would be. The credit is not applied until the Township inspector has verified that the BMP was properly constructed, and all BMP’s are subject to periodic inspection by the Township to ensure compliance. All fees associated with the review and inspection shall be reimbursed to the Township. A Township stormwater permit shall be required for each BMP for tracking purposes.

This credit will remain on the property owner’s account for as long as the controls exist and are properly maintained. Credits may be revoked at the Township’s discretion in accordance with the section of this report entitled “Revocation of Credits”.

Tier 2 – Additional BMPs for Residential Properties up to 12,390 sq. ft. of Impervious Area.

Residential properties up to 12,390 sq. ft. of impervious area may apply for Tier 2 Stormwater Credits. To receive Tier 2 credits, a property owner selects from one of the

approved on-lot BMP types and completes the applicable calculation worksheets to determine the credit that the BMP generates. The applicant must also make provisions for ongoing operation and maintenance. The BMP is then installed by the property owner or their contractor in accordance with the applicable detail. Worksheets, and details for the Tier 2 Stormwater Credit program are provided in Appendix C.

Owners of single properties are also permitted to apply for Tier 1 credits if they meet all of the requirements of that program. However, due to the costs involved, it is expected that this will occur infrequently, if at all.

Construction of Tier 2 Stormwater Credit BMPs is subject to the same inspection requirements that any stormwater management BMP would be. The credit is not applied until the Township inspector has verified that the BMP was properly constructed, and all BMP's are subject to periodic inspection by the Township to ensure compliance. All fees associated with the review and inspection shall be reimbursed to the Township. A Township stormwater permit shall be required for each BMP.

This credit will remain on a property owner's account for as long as the controls exist and are properly maintained. Credits may be revoked at the Township's discretion in accordance with the section of this report entitled "Revocation of Credits".

Tier 3 – Active Participation in Stormwater Events and Organizations for Residential Properties.

Residential properties representing up to 12,390 sq. ft. of impervious area may also apply for Tier 3 Stormwater Credits. To be eligible for this fee credit, the applicant must become an active participant in a Township approved watershed protection association or attend at least 3 stormwater events within the community. The Township intends to form a new association specifically for this purpose, but will also consider active membership in other existing organizations provided that their goals and activities align with one or more of the permitting requirements the Stormwater Management Fee is intended to meet, namely:

- Reduction of Stormwater runoff rate or volume
- Reduction of sediment or nutrient loading in local waterways and/or the Chesapeake Bay
- Protection and/or restoration of local streams and waterways
- Protection and/or restoration of forests, wetlands, meadows, or wilderness areas
- Minimization of erosion
- Public education, outreach, or training related to any of the above.

In order to qualify for a Tier 3 Stormwater Credit, the applicant must provide documentation to demonstrate that he or she is a member in good standing of a qualifying organization and/or has participated in a minimum of three activities with the organization in the previous calendar year. It is at the sole discretion of the Township to determine if an event is a qualifying event. Communication with the Township 30 days prior to the event in question is required in order to determine eligibility and set up for proper confirmation of attendance and participation.

Failure to obtain Township approval of an event 30 days in advance, failure to submit adequate documentation within 15 days after the approved event, failure to complete 3 events within the calendar year or failure to supply the event verification of participation within the given time frame shall result in forfeiting the Tier 3 credit in the following calendar year.

The activities undertaken by the qualifying organization are intended to offset the expenses described as “Other Costs and Minimum Control Measures (MCMs)” in the cost estimate section of this report. That component represents approximately 15% of the total cost of the Township’s Stormwater Management program, so the value of the Tier 3 Stormwater Credit is therefore set at 15% of the value applied to the property. Property owners who own multiple properties within the Township may only apply their activities with one organization to one property. In order to receive credits for multiple properties, the owner must demonstrate that they have performed a sufficient number of activities with multiple organizations. Credits will be achieved based on the property represented at a qualifying event or organization and not the number of attendees representing a property at any given event or organization.

This credit is valid for 1 year. Events can be attended annually or more frequently to achieve credits each year.

Tier 4 - Agricultural BMPs.

DEP guidelines state that existing and new construction of buildings and other impervious areas are not deemed as agricultural activity. All impervious areas are subject to the stormwater fee. This credit helps offset the stormwater fee for improvements that will help reduce pollutants entering surface water and/or groundwater. Properties that are primarily utilized for agricultural purposes may apply for Tier 4 Stormwater Credits. BMPs that are existing or proposed may be approved by the Township and may qualify for this credit so long as the BMP is not already required by the State or Federal government. A meeting with the Township and the Township engineer is required to determine if the BMP qualifies for the credit. It is at the

Township's sole discretion to determine the credit value of the BMP(s). Agricultural properties shall be in compliance with all state and federal guidelines in order for a property owner to receive Tier 4 credits.

Construction of Tier 4 Stormwater Credit BMPs are subject to the same inspection requirements that any stormwater management BMP would be. The credit is not applied until the Township inspector has verified that the BMP was properly constructed. All BMP's are subject to periodic inspection by the Township to ensure compliance. All fees associated with the review and inspection shall be reimbursed to the Township. Permits may be required for each BMP.

This credit will remain on the property owner's account for as long as the controls exist and are properly maintained. Credits may be revoked at the Township's discretion in accordance with the section of this report entitled "Revocation of Credits".

Tier 5 – Host or Sponsor a Public Stormwater Event.

Businesses, Associations, or Community Organizations may host or sponsor a stormwater event that would help the Township meet their goal for MCM 1 "Public Education and Outreach" or MCM 2 "Public Involvement and Participation". The activities undertaken are intended to offset the expenses described as "Other Costs and MCMs" in the cost estimate section of this report. A meeting with the Township is required to present the proposed event. The Township, based on the size and details of the event, will then assess the amount of credit eligible. The credit amount assessed by the Township will be applied after the event has been held.

This credit is valid for 1 year. Events can be held or sponsored annually to achieve credits each year.

Tier 6 – Stream Bank Restoration.

Stream Bank Restoration is strongly encouraged and can produce the greatest amount of pollutant reduction to generate a larger stormwater credit. Property owners who have streams on their property may arrange to have a meeting with the Township and the Township engineer to determine if the stream qualifies. Property owners with qualifying streams on their property may choose to contract with a business, organization, or association to reassign credits to an off-site location. The property owner or the responsible party of a qualifying project may then contract with their own PA Licensed engineer to prepare an engineered stream restoration plan. All stream restoration projects shall be subject to review and approval by Antrim Township, Pennsylvania

Department of Environmental Protection, Franklin County Conservation District and other Federal or State entities as deemed necessary.

Land owner agreements are required. The agreement shall set forth the terms and conditions of the design, construction, preservation and maintenance of the approved project. The agreement shall also address the assignment of credits. This agreement shall be recorded with the Franklin County Recorder.

All costs associated with the assessment, review and approval of the stream bank restoration project incurred by the Township shall be paid by the property owner or those contracted with to obtain the credits. All applications, permits and fees required as part of the restoration project shall be the responsibility of the property owner or those they contract with.

This credit will remain on your account for as long as the stream bank is properly maintained. Credits may be revoked at the Township's discretion in accordance with the section of this report entitled "Revocation of Credits".

Revocation of Credits.

If a BMP installed to generate a Tier 1, Tier 2, Tier 4, or Tier 6 credit is found to have been removed or taken out of service during the course of a periodic inspection, the credit shall be revoked immediately. In this case, the property owner will be required to reapply if they wish to reinstate a credit.

If, during the course of a periodic inspection, a BMP installed to generate a Tier 1, Tier 2, Tier 4, or Tier 6 credit is found to be present but improperly maintained or otherwise rendered only partially operational, the property owner will be notified in writing of the deficiencies and given a period of time to make the necessary repairs. The period of time will be as set forth by the Township in the notification. Upon completing the necessary repairs, the property owner shall be responsible for notifying the Township and scheduling a follow-up inspection. If the repairs are found to be acceptable in the follow-up inspection, then the credit will not be revoked. However, if the property owner does not contact the Township to schedule a follow-up inspection, or if the repairs are inadequate, the credit resulting from the subject BMP will be revoked.

All costs associated with the review and enforcement of each Tier shall be reimbursed to the Township. Antrim Township shall set forth the time frames in which corrective action needs to be completed based on the level of work required to regain compliance.

After the third credit revocation, a property owner shall become ineligible for reinstatement of any Tier 1, Tier 2, Tier 4, or Tier 6 credit.

Public Participation

The following Public Participation activities are proposed in association with this Stormwater Management Fee:

- Run two newspaper advertisements on August 16, 2019 and August 19, 2019 to advise residents that this plan is available for public comment. The advertisement will provide instructions on how to provide written comments, and it will inform readers that comments can also be provided verbally at the Supervisors meeting on September 24, 2019.
- Make this report available in both hard copy and electronic format for public review and comment from approximately August 16, 2019 until September 24, 2019.
- Provide a presentation at the Supervisors meeting on September 24, 2019 to describe the plan. Receive comments from the Board of Supervisors and residents.
- Revise the plan based upon comments from Supervisors and residents.
- Draft proposed ordinance amendment(s) as necessary to enact the plan.
- Run two newspaper advertisements during the month of October 2019 to advise residents that the ordinance amendments are available for public review, and that they will be considered for adoption at the Supervisors October 22, 2019 meeting.
- Request that the Supervisors amend the ordinance to enact the Stormwater Management Fee at their October 22, 2019 meeting.