



STEELTON BOROUGH

Dauphin County, Pennsylvania

Chesapeake Bay Pollutant Reduction Plan

Amendment 1

February 2023

HRG Project No. R001337.0451

HRG

Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AN EMPLOYEE-OWNED COMPANY

Chesapeake Bay Pollutant Reduction Plan

STEELTON BOROUGH

DAUPHIN COUNTY, PENNSYLVANIA

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INTRODUCTION

The following Chesapeake Bay Pollutant Reduction Plan (CBPRP) addresses how the Steelton Borough, Dauphin County, Pennsylvania intends to achieve the pollutant reduction requirements prescribed by the Pennsylvania Department of Environmental Protection (PADEP) in the Municipal MS4 Requirements Table¹.

This document was prepared following the guidance provided in the PADEP National Pollutant Discharges Elimination System (NPDES) Stormwater Discharges from Small Municipal Separate Storm Sewer Systems Pollutant Reduction Plan (PRP) Instructions².

General Information	
Permittee Name: Steelton Borough	NPDES Permit No.: PAG133625
Mailing Address: 123 North Front Street	Effective Date: May 1, 2018
City, State, Zip: Steelton, PA 17113	Expiration Date: March 15, 2025
MS4 Contact Person: Jeff Baltimore	Renewal Due Date: October 15, 2022
Title: Public Works Director	Municipality: Steelton Borough
Phone: (717)939-9842	County: Dauphin
Email: jbbaltimore@steeltonpa.com	Consultant Name: Herbert, Rowland & Grubic, Inc.
Co-Permittees (if applicable): N/A	Consultant Contact: Randy Watts 369 East Park Drive Harrisburg, PA 17109 (717)564-1121

Steelton Borough is a small MS4 community currently in its administratively extended third general permit term. The Borough is fully developed and the entire 1191.8 acre municipality is classified as Urbanized Area (UA) according to the United States Census Bureau's 2010 census. Steelton Borough is located solely within the Laurel Run-Susquehanna River HUC 12 watershed. As such the CBPRP/ Appendix-E Planning Area shall be considered as the UA contained within the municipal boundary minus those areas parsed in Section D of this Plan. Several streams within the Borough's jurisdiction are classified as impaired; however, no total maximum daily load (TMDL), or waste load allocations (WLAs) have been established for any stream in the Borough's CBPRP / Appendix-E Planning Area. The Borough currently owns, operates, and maintains a Small Municipal Separate Storm Sewer System (MS4) which consists of all of the Borough's stormwater management facilities. As an MS4 community that discharges to the Chesapeake Bay Watershed, the Borough is responsible for preparing and submitting to PADEP a Chesapeake Bay Pollutant Reduction Plan.

¹ PADEP, MS4 Requirements Table (Municipal), Last revised 05/09/2017

² PADEP PRP Instructions; Document # 3800-PM-BCW0100k (rev. 3/2017)

SUMMARY OF PROPOSED AMENDMENTS

All proposed amendments are included in the following pages. They have been structured so that once approved, they can fully replace the equivalent section, figure, or table in the original PRP. The original PRP is included at the end of this list for the sake of comparison, though no other changes other than the following amendments are proposed.

Section A: Public Participation

Amended to meet the requirements for public comment on the Amendment 1 portion of the Chesapeake Bay Pollutant Reduction Plan.

Section B: Map

No amendments proposed.

Section C: Pollutants of Concern

No amendments proposed.

Section D: Determine Existing Loading for Pollutants of Concern

No amendments proposed.

Section E: Select BMPs to Achieve Required Pollutant Load Reductions

Amended to show updated proposed BMPs.

Section F: Identify Funding Mechanisms

Amended to show updated funding mechanisms.

Section G: BMP Operation and Maintenance (O&M)

Amended to show updated O&M plans.

Appendix A: Public Participation

Amended to display updated documentation of public participation for Amendment 1.

Appendix B: Mapping

Amended to show updated proposed BMP locations.

Appendix C: PADEP Requirement Tables

No amendments proposed.

Appendix D: Existing Pollutant Loading Calculations

No amendments proposed.

Appendix E: Proposed BMP Pollutant Reduction Calcs

Amended to show updated proposed BMP load reduction calculations.

Appendix F: Intergovernmental Agreement

New section added to show details of WREP Program and Agreement between Steelton Borough and Dauphin County.

SECTION A: PUBLIC PARTICIPATION

A complete copy of this CBPRP addendum was made available for the public to review at the Steelton Borough municipal office from XXXX XX, 2023 to XXXX XX, 2023. The availability of the document was publicized on the Borough's website and in *The Patriot News* on XXXX XX, 2023. The published public notice contained a brief description of the plan, the dates and locations at which the plan was available for review by the public, and the length of time provided for the receipt of comments. Public comments were accepted for 30 days following the publication date of the public notice.

The public notice (newspaper and municipal website post), public comment and response, and public meeting presentation are included in Appendix A.

SECTION E: SELECT BMPS TO ACHIEVE THE MINIMUM REQUIRED REDUCTIONS

Steelton Borough discharges stormwater to surface water located within the Chesapeake Bay Watershed and is therefore regulated by PAG-13 General Permit, Appendix D (nutrients and sediment in stormwater discharges to waters in the Chesapeake Bay watershed). The pollutants of concern for the Appendix-D CBPRP are TSS, TP, and TN with required loading reductions of 10%, 5%, and 3%, respectively. However, it is presumed that within the overall Bay watershed, the TP and TN goals will be achieved when a 10% reduction in sediment is achieved³. Therefore, only the required 10% TSS reduction is calculated herein as a requirement for CBPRP / Appendix-E Planning Area load reductions (Table 5).

As one of the older communities in Dauphin County, Steelton Borough's roadway and utility infrastructure is ageing and being incrementally repaired and updated as needed. It is anticipated that during the permit term, other municipal infrastructure projects will arise. As the Borough understands the importance of stormwater management, any large-scale infrastructure improvement projects that come up will be evaluated to determine if there is the potential to incorporate green infrastructure or other stormwater improvements into the project. If the opportunity becomes available to meet the pollutant load reduction goals of this plan through modifications or expansions to other infrastructure projects, rather than through the stand alone BMPs described below, the municipality may choose to do so. If this route of meeting the pollutant load reduction requirements is chosen, all plans, details, and associated pollutant load reduction calculations for the new project will be included in future Annual Status Reports.

Table 5: Required Pollutant Load Reduction

Planning Area	Impairment	Existing Sediment Load (lbs/yr)	Required Sediment Load Reduction (lbs/yr)
CBPRP /Appendix-E	Sediment	390,116	39,012

Proposed BMPs

The following section outlines the BMP implementation strategy developed to achieve the required pollutant load reduction goals stated above. The proposed BMPs were determined through discussions with the public works employees and municipal staff, in-field site assessments, and public outreach meetings.

The proposed strategy (Table 6) consists of Steelton Borough's partnership with the Dauphin County WREP Program. As part of the WREP Program, a joint stream restoration project will be completed on the Conewago Creek in Londonderry Township to meet the pollutant load reduction requirements for the planning area. The pollutant loading reduction for these BMPs were calculated in terms of pounds per year using Master Stream Restoration Crediting Guide⁴. Complete calculations for the anticipated pollutant load reductions for each of the BMPs listed below is provided in Appendix E.

³ PADEP - PRP Instructions, Document # 3800-PM-BCW0100k (rev. 3/2017)

⁴ A Unified Guide for Crediting Stream and Floodplain Restoration Projects in the Chesapeake Bay Watershed (Wood, Schueler and Stack, 2021).

Table 6: BMP Strategy Summary

Site	BMP ID	BMP Type	Planning Area	Drainage Area (acres)	Length (ft)	Load Reduction TSS (lbs/yr)
WREP Program (Londonderry Township)	BMP-1	Conewago Creek Stream Restoration (Including Brills Run)	CBPRP	n/a	6,382	39,012
Total						39,012

BMP Project Descriptions

WREP Program/Conewago Creek Stream Restoration – This project proposes a partnership with the Dauphin County WREP Program and consists of a stream and floodplain restoration along 4,960-LF of the Conewago Creek and 1,422-LF of the tributary Brills Run. The restoration originates immediately downstream of the Hertzler Rd bridge on Brills Run, and approximately 3,500-LF downstream of the Mill Rd bridge on the mainstem. The restoration continues through the Brills Run-Conewago Creek confluence and downstream through an existing farm bridge to its terminus approximately 750-LF upstream of the PA-230 bridge.

The purpose of this project is to restore Conewago Creek, Brills Run, the associated floodplain, and existing wetland system as close as possible to historical pre-settlement conditions by removing legacy sediment from the floodplain. The stream restoration will include both structural repairs (as needed), in-stream calming measures (rock vanes, wing deflectors, etc.) to decrease water velocity and direct stream flow away from eroding streambanks. The structures will be constructed of natural materials such as rock, root wads, and logs. If needed, additional plantings will be added to areas in which the existing riparian buffer is in poor condition. Buffer rehabilitation will include the removal and replacement of dead and diseased vegetation, as well as the addition of new plantings to provide further streambank stabilization. The exact number and locations for structural and in-stream structures, and riparian planting areas will be determined during engineering design of the project.

SECTION F: IDENTIFY FUNDING MECHANISMS

The design and construction of the BMPs proposed herein will be funded through municipal funds, as well as available grants, and public donation of materials and manpower. Additionally, Steelton Borough recently implemented a Stormwater Utility Fee to assist in funding the requirements of the MS4 Program.

SECTION G: BMP OPERATIONS AND MAINTENANCE (O&M)

Through the Intergovernmental Cooperation Agreement (Appendix F) between Steelton Borough and Dauphin County, all perpetual long-term maintenance of the stream restoration will be completed by Londonderry Township. Steelton Borough has no responsibility for long-term O&M for the Conewago Creek Restoration Project.

APPENDIX A – PUBLIC PARTICIPATION

Public Participation Documentation

Notice of Public Participation & Public Meeting Notice Published on Borough Website

Posting to be added

Notice of Public Participation & Public Meeting Notice from The Patriot News

Proof of Publication to be added

Page to be Replaced with public meeting agenda and minutes

PUBLIC COMMENTS

Written:

1. Written Public Comments to be added.
 - a. Response to Comments to be added.

Verbal:

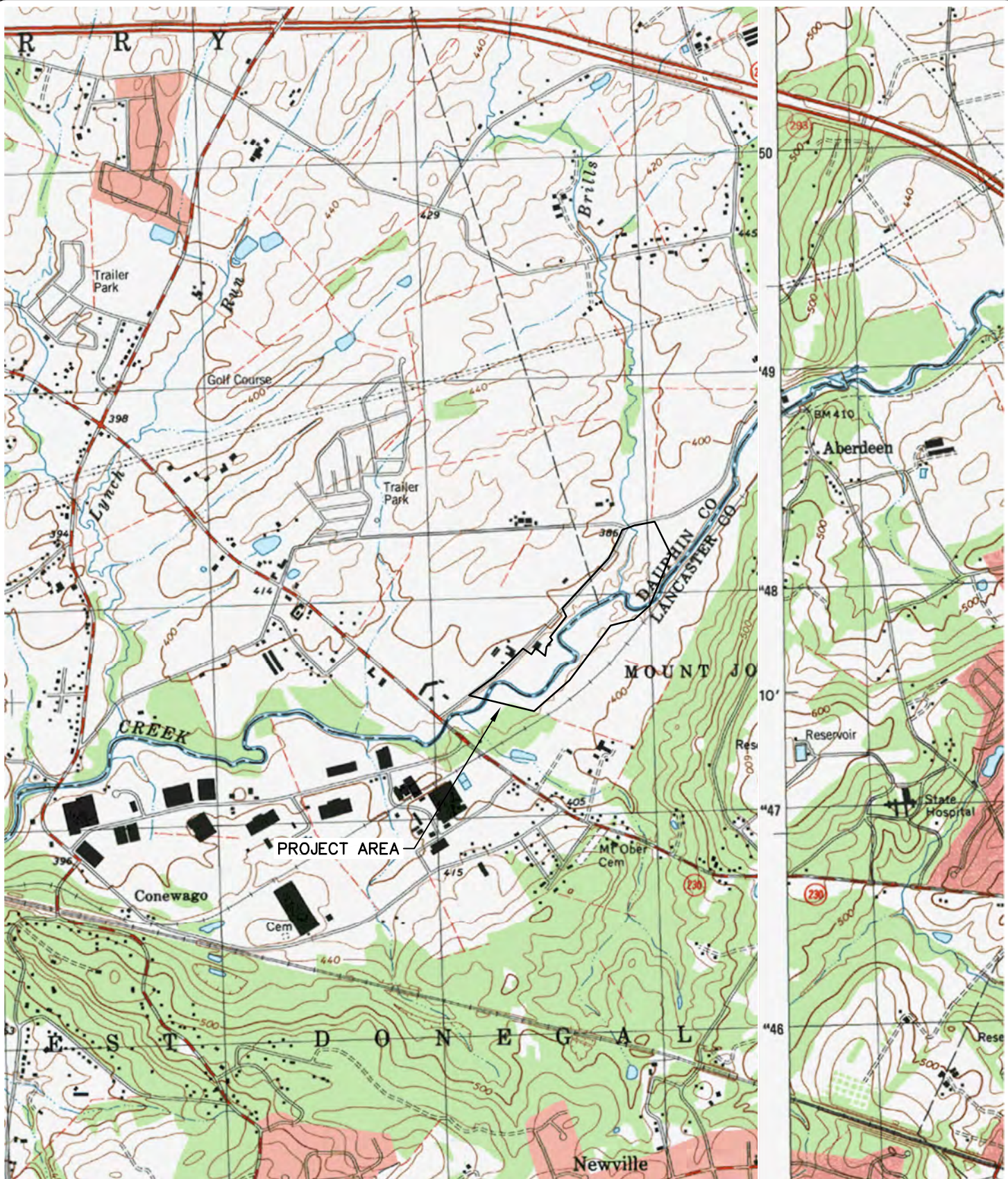
1. Verbal Public Comments to be added
 - a. Response to Comments to be added.

APPENDIX B – MAPPING



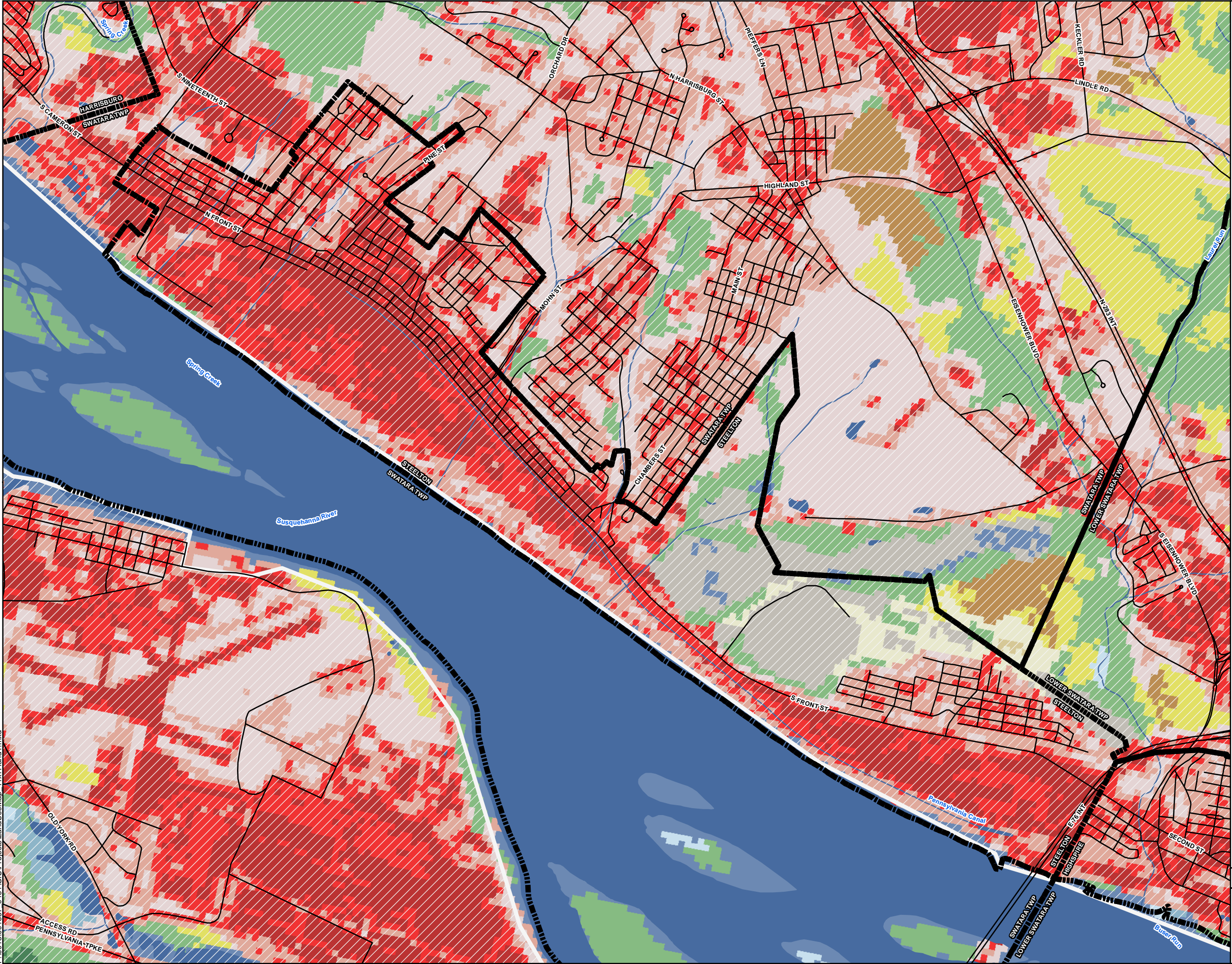
CBPRP Planning Area
Steelton Borough
Dauphin County, Pennsylvania

- Storm Outfall
- Storm Inlet
- Storm Manhole
- Storm Gravity Main
- Storm Virtual Drainline
- State Road (Parsed Area)
- Local Roads
- Sediment Impaired Stream
- Non-Impaired Stream
- USGS HUC12 Watershed
- Parsed Areas
- Urbanized Area (2010)



USGS QUADMAP: MIDDLETOWN/ELIZABETH TOWN

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Land Use Map
Steelton Borough
Dauphin County, Pennsylvania

- Road
- Municipal Boundary
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands
- Urban Areas (2010)



Mapping derived from data provided by Dauphin County, York County, USGS, US Census, and MRLC.

5/4/2017 PM: EGL GIS: BLS/HMG QA: HSH R001337.0451



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APPENDIX E – PROPOSED BMP POLLUTANT REDUCTION CALCS

Proposed BMP Pollutant Load Reduction Calculations

Appendix E – Table 1: Proposed BMPs

Site	BMP ID	BMP Type	Planning Area	Lat	Long	Drainage Area (acres)	Length (ft)	Drainage Area Characteristics				Loading Rate TSS* (lbs/ac/yr)		Total Load TSS (lbs/yr)	BMP Effectiveness **	Pollutant Load Reduction TSS (lb/yr)
								% Imperv.	Imperv. (acres)	% Perv.	Perv. (acres)	Imperv.	Perv.			
WREP Program (Londonderry Township)	BMP-1	Conewago Creek Stream Restoration (Including Brills Run)	CBPRP	40.16754	-76.638351	n/a	6,382	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Reference Londonderry Township's PRP	80,568
Total																80,568

*PADEP - Statewide MS4 Land Cover Estimates
**PADEP PRP Instructions - Attachment B, Developed Land Loading Rates for PA Counties
***PADEP – BMP Effectiveness Values

APPENDIX F

Letter to PADEP Regarding Eligibility for Joint Project.

Intergovernmental Cooperation Agreement between Middletown Borough and Dauphin County.

December 19, 2022

Mr. Scott Arwood
Pennsylvania Department of Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, Pennsylvania 17110

**Re: Conewago Creek Restoration Project Partnerships
Dauphin County Water Resource Enhancement Program (WREP)**

Dear Mr. Arwood:

Chesapeake Bay Pollutant Reduction Plan (CBPRP) implementation has been challenging for municipalities to afford or logistically complete in the Lower Susquehanna watershed. Over the previous years, municipalities have completed field evaluations, desktop analysis, and explored partnership opportunities to meet the 10% Total Suspended Solids (TSS) reduction goals. Despite continued efforts, many municipalities have been unable to find project locations that can meet these goals in a way that meet site and budget constraints.

The Conewago Creek Restoration Project proposed by Londonderry Township provides a significant excess of TSS reduction and a unique opportunity for partnership. Dauphin County has recently established a Water Resource Enhancement Program (WREP) to provide the framework for partnership associated with this project. Currently, the following municipalities are expected to partner on this project via the WREP program:

- > Lower Swatara Township
- > New Cumberland Borough
- > Middletown Borough
- > Steelton Borough

In addition to the White Paper provided to you on January 4, 2022, regarding Steelton Borough's eligibility to partner on this project, we respectfully request that you consider the following information which demonstrates a watershed approach for the partnership.

PROXIMITY EVALUATION

Neighboring HUC 12 Watersheds

An evaluation of neighboring HUC 12 watersheds demonstrated that the following watersheds bordered the Laurel Run-Susquehanna River HUC 12 watershed which includes a significant portion of both Lower Swatara Township and New Cumberland Borough, additionally the Southwestern portion of Middletown Borough (as highlighted on the attached map):

- > Bennett Run-Conewago Creek (York County)
- > Salem Run-Fishing Creek (York County)
- > Conodoguinet Creek-Susquehanna River (Cumberland County)
- > Lower Yellow Breeches Creek (York and Cumberland Counties)
- > Cove Creek-Susquehanna River (multiple upstream counties)
- > Paxton Creek (Dauphin County)
- > Spring Creek (Dauphin County)
- > Iron Run - Swatara Creek (Dauphin County)

- > Conewago Creek (Dauphin County)
- > Hartman Run-Susquehanna River (multiple downstream counties)

The portions of Lower Swatara Township and Middletown Borough that are not within the Laurel Run-Susquehanna River watershed are located within the Iron Run-Swatara Creek Watershed. The portion of New Cumberland Borough outside of the Laurel Run-Susquehanna River Watershed is located within the Lower Yellow Breeches Creek Watershed.

As shown on the attached Watershed Map, the sediment load from Lower Swatara Township, Middletown Borough, and New Cumberland Borough will flow to the same discharge point for the Conewago Creek HUC 12 within the same Laurel Run-Susquehanna River HUC 12. So, the sediment load from the Conewago Creek HUC 12 will influence the same receiving Susquehanna River segment as Lower Swatara Township, Middletown Borough, and New Cumberland Borough.

SUMMARY

Lower Swatara Township, Middletown Borough, and New Cumberland Borough have done their due diligence regarding CBPRP implementation challenges and suitable alternatives, and a more innovative solution to meeting water quality goals is necessary for the municipalities to meet their MS4 permit obligations. Therefore, this joint project is being proposed with Londonderry Township via the Dauphin County WREP Program. The Conewago Creek Stream Restoration project has an opportunity to decrease sediment loading into a shared waterway, the Susquehanna River, that exceeds the **municipalities'** combined requirements under their CBPRPs. This project is also currently in construction, with approximately 60% of the project completed and the remaining portion anticipated to be completed in early 2023.

We recognize that an intergovernmental cooperative agreement, or its equivalent, will be required to be submitted to PADEP. The Dauphin County WREP Program outlines the sediment reduction commitment, cost, and long-term operation and maintenance responsibilities for each party. Once all agreement documentation between these partners and the County are signed, they will be provided to PADEP as part of the annual report.

It is respectfully requested that you allow the Lower Swatara Township, Middletown Borough, and New Cumberland Borough to partner with Londonderry Township via Dauphin County WREP to meet the sediment reduction requirements for this permit term. To avoid additional timeline constraints, a timely response is greatly appreciated.

Sincerely,

HERBERT, ROWLAND & GRUBIC, INC.



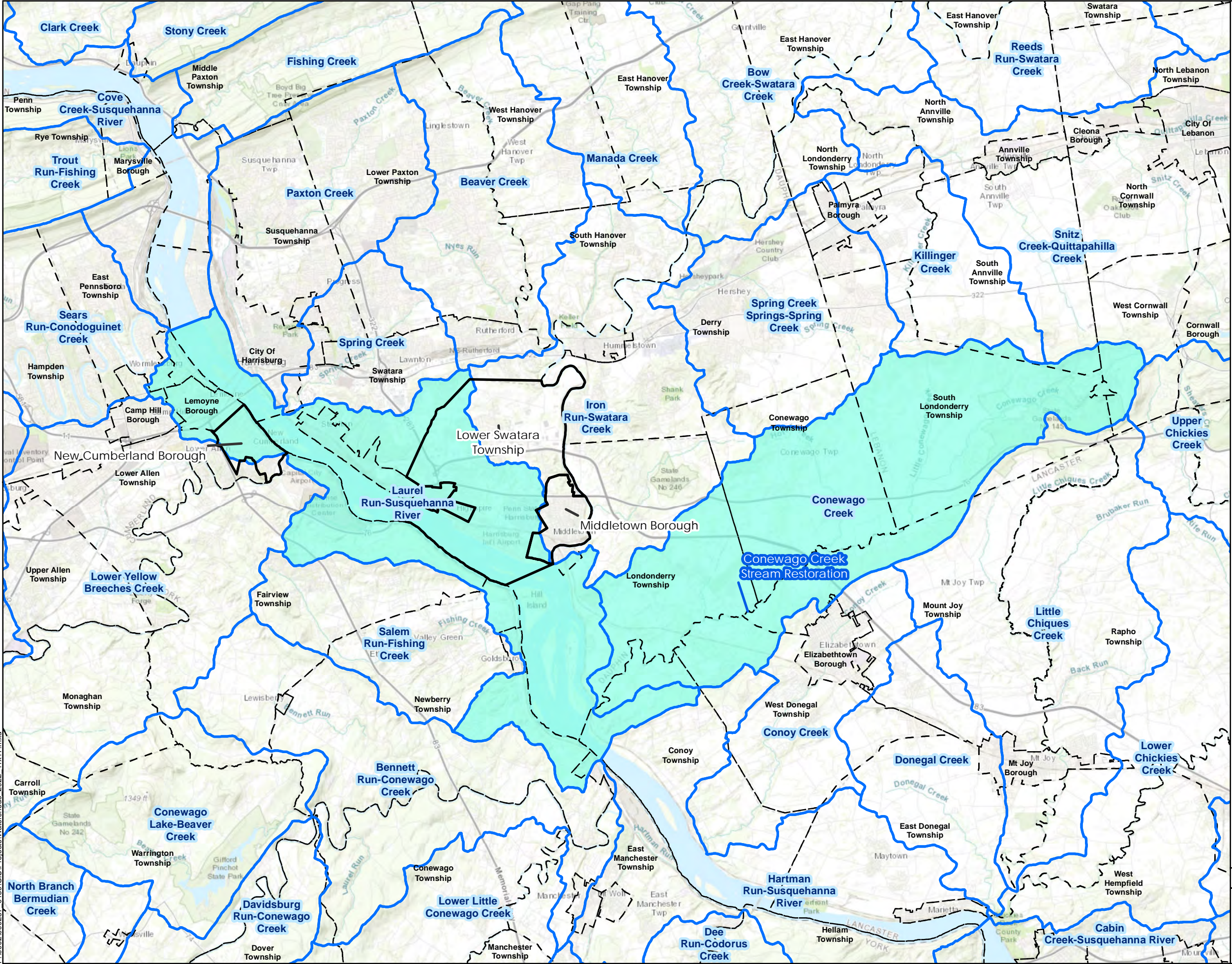
Shawn E. Fabian, CPESC, CPSWQ
Project Manager

TME/SEF/pk
R001068.0521

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Enclosures (Watershed Map)

c: File
Shawn Fabian – HRG (via e-mail)
Adrienne Vicari – HRG (via e-mail)
Erin Letavic – HRG (via e-mail)
Randy Watts – HRG (via e-mail)
Joshua Sheetz – HRG (via e-mail)
Jacob Rakowsky, Environmental Engineering Specialist – PADEP (via e-mail)
Leah Staley, Civil Engineer Trainee - PADEP (via e-mail)


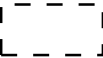


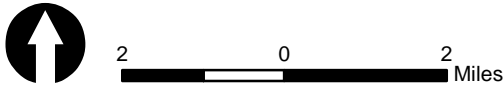
Watershed Map

Lower Swatara Township
Dauphin County, Pennsylvania

Middletown Borough
Dauphin County, Pennsylvania

New Cumberland Borough
Cumberland County, Pennsylvania

-  HUC 12 Watershed Boundary
-  Municipal Boundary



Mapping derived from data provided by PASDA & ESRI.

12/13/2022 | PM: SEF | GIS: MSM | QA: TME | R000257.0439



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LM 12/14/2022
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**INTERGOVERNMENTAL COOPERATION AGREEMENT
FOR THE CREATION AND IMPLEMENTATION OF THE DAUPHIN COUNTY
REGIONAL WATER RESOURCE ENHANCEMENT PROGRAM**

This **AGREEMENT** is made this 14 day of December, 2022 pursuant to the Pennsylvania Intergovernmental Cooperation Act, 53 Pa.C.S.A. § 2301, *et. seq.*, (hereinafter referred to as the "Agreement") by and between the County of Dauphin, Pennsylvania (hereinafter referred to as "Dauphin County"), a County of the third class having its principal office at the Office of the County Commissioners, 4th floor, Dauphin County Administration Building, 2 South Second Street, Harrisburg, Pennsylvania 17101, and all of the local governments (hereinafter collectively referred to as "Municipalities" or "Participants" or singularly as "Municipality" or "Party") properly executing this Intergovernmental Cooperation Agreement (together hereinafter referred to as the "Parties"), jointly, for the implementation of a regional stormwater management program to for the improvement of watercourses in the County of Dauphin and its associated watersheds.

WITNESSETH

WHEREAS, the Pennsylvania Intergovernmental Cooperation Act, 53 Pa.C.S.A. § 2301, *et. seq.*, authorizes two or more "local governments" and certain Municipal Authorities in this Commonwealth to jointly cooperate in the exercise or in the performance of their respective governmental functions, powers or responsibilities, 53 Pa.C.S.A. § 2303(a), and pursuant to 53 Pa.C.S.A. § 2303(b) to enter into a written agreement for intergovernmental cooperation with, or delegate any functions, powers or responsibilities to, another local government upon the passage of an ordinance or resolution by its governing body; and

WHEREAS, the Parties hereto are defined by the Intergovernmental Cooperation Act as "local governments", 53 Pa.C.S.A. § 2302; or an Authority eligible to participate in intergovernmental cooperation, 53 Pa.C.S.A. § 2305(b); and

WHEREAS, the Parties have a mutual public interest in working together in a cooperative manner to manage stormwater and improve water quality including regional stormwater infrastructure projects, implementation of Regional Plans which identify and fund cost effective best management practices (hereinafter referred to as "BMP(s)"), and flood mitigation, to reduce the annual amount of nitrogen, phosphorous and sediment entering impaired and non-impaired surface waters in Dauphin County, Pennsylvania as efficiently as possible, to work together in a cooperative manner to reduce flooding, and achieve the objectives set forth in this Agreement; and

WHEREAS, water quality and stormwater management were identified as Dauphin County priority issues in the 2017 Dauphin County Comprehensive Plan, and

WHEREAS, Pennsylvania is under pressure from its Chesapeake Bay Agreement partners to implement its Phase 3 Watershed Implementation Plan (Phase 3 WIP) by 2025, and Dauphin County has developed and is implementing a Countywide Action Plan, which will further Pennsylvania's overall nutrient reduction progress; and

WHEREAS, Municipalities that hold a Pennsylvania Department of Environmental Protection (hereinafter referred to as "DEP") Municipal Separate Storm Sewer System (hereinafter referred to

as “MS4”) Permit (regarding stormwater discharges) within the Chesapeake Bay watershed are required to prepare and implement a Chesapeake Bay Pollutant Reduction Plan for the current permit term and it is anticipated similar Plans will be required for future permit cycles; and

WHEREAS, a new MS4 permit term is expected to commence in 2023 and may impose additional requirements on municipalities, especially with respect to nutrients (nitrogen and phosphorus); and

WHEREAS, certain BMPs are designed to control stormwater and improve water quality, and are required to be implemented as part of a pollutant reduction plan; and

WHEREAS, MS4 Municipalities are required to comply with certain stormwater related Minimum Control Measures (hereinafter referred to as “MCM”) as mandated by law; and

WHEREAS, Projects and MCM work require capital expenditures, in some cases, significant capital expenditures; and

WHEREAS, the mileage of impaired streams within Dauphin County remains relatively unchanged despite many individual initiatives; and

WHEREAS, a majority of municipalities who participated in County-led outreach activities in 2019 and 2020 indicated an interest in a regional stormwater solution that tackles water quality, MS4 compliance, stream restoration, infrastructure resilience, flood mitigation; and

WHEREAS, the Parties anticipate that municipal cooperation will produce higher quality results at a reduced per participant cost; and

WHEREAS, by fostering a collaborative approach in advance of new MS4 permit and Countywide Action Plan implementation, the participating municipalities will be positioned to cost effectively comply while improving grant program success; and

WHEREAS, regional water quality improvements can be designed to improve localized flooding; and

WHEREAS, stormwater flooding has impacted properties throughout the County and Municipalities realize regional Flood Mitigation Projects can help to minimize the occurrence and extent of flooding; and

WHEREAS, Municipalities remain committed to enforcing their individual stormwater ordinances and accompanying obligations, and complying with their MS4 permit requirements, as applicable, and are interested in solutions that can increase their level of service and/or decrease their level of stormwater funding (through taxes or fees); and

WHEREAS, it is recognized that cost drivers associated with flooding, water quality and MS4 permit compliance correlate to a municipality’s urbanized area (designated through the U.S. Census Bureau), non-urbanized area, and pollutant reductions required by the existing and future MS4 permit; and

WHEREAS, existing and future permit compliance costs can be estimated according to publicly available models, which regulators use to develop future permit requirements; and

WHEREAS, Dauphin County has developed a regional water resource enhancement program that is flexible so that it continually meets the needs of the Parties; and

WHEREAS, the Parties desire to cooperate to effectuate the cost-effective installation, operation, and maintenance of certain Projects to accomplish annual reduction(s) of nitrogen, phosphorous and sediment discharges into surface waters in the Dauphin County region; and

WHEREAS, Municipalities desire that Dauphin County will engage in stormwater management activities and provide assistance including facilitating the development and implementation of Regional Chesapeake Bay Pollution Reduction Plans for future permit cycles and the Countywide Action Plan ("Regional Plans"), along with the creation, operation, and maintenance of certain BMPs on behalf of the Participants as more specifically set forth herein; and

WHEREAS, as set forth in this Agreement, all Municipalities shall share in the cost to develop and implement the Regional Plans and BMPs through financial contributions as set forth in this Agreement in accordance with 53 P.S. § 2862; and

WHEREAS, the Municipalities desire to coordinate and cooperate with Dauphin County in efforts to plan, implement, fund, and operate certain water resource-related services at a regional level; and

WHEREAS, Dauphin County shall, with the Municipalities, develop new stormwater and water quality BMP Projects, including stormwater infrastructure construction and improvements, (individually referred to as a "BMP Project" or collectively "BMP Projects") to be identified in future Regional Plans and will fund the cost of doing so, along with providing the Municipalities with the related MS4 Permit administration information, through funds received annually from participating Municipalities consistent with this Agreement; and

WHEREAS, it is intended that Municipalities holding an MS4 Permit report the pollutant reductions achieved by construction of the Projects and that such pollutant reductions may be reported in each Municipality's MS4 Annual Status Report to DEP in accordance with the approved Regional Plans; and

WHEREAS, the content of the Regional Plans, including Project selection and the level of funding for Projects and other regional stormwater management program efforts, shall be determined as set forth herein; and

WHEREAS, the purpose of this Agreement is to set forth the understanding of the Participants as to how, *inter alia*, the Participants will cooperate to create and revise the Regional Plans, manage Projects throughout Dauphin County, interact with the regulatory agencies regarding MS4 permit requirements, implementation of the Regional Plans, and the obligations of each Municipality and Dauphin County; and

WHEREAS, the Participants agree and acknowledge that nothing in this Agreement or the resultant actions therefrom, shall prohibit, prevent, or interfere with any Participant's ability or obligation to

comply with applicable Pennsylvania law and regulation, Federal law and regulation, applicable regulatory agency rules and policies, permit requirements, DEP directives, or United States Environmental Protection Agency (hereinafter referred to as "EPA") directives, and local ordinances; and

WHEREAS, the Parties hereto believe that a regional approach to water resource management will result in significant cost savings through economies of scale, elimination of redundancy, and increased effectiveness of larger regional BMPs, and that such savings should be returned to the taxpayers or rate-payers in the form of reduced rates or enhanced investment in local infrastructure.

NOW, THEREFORE, the Parties hereto, in consideration of the mutual promises, covenants, and undertakings herein contained, each binding itself and representing that each has proper legal authority to enter into this Intergovernmental Cooperation Agreement, and intending to be legally bound, agree as follows:

ARTICLE I

Background and Definitions

1.01 Recitals.

The above recitals are incorporated herein by reference.

1.02 Definitions.

For purposes of this Agreement, the terms and phrases defined in this Section shall have the following meanings unless the context clearly otherwise requires:

"Administrative Expenses" shall mean the ordinary and usual expenses included in the general costs necessary to manage this Agreement.

"Authority" shall mean a governmental body created pursuant to the Pennsylvania Municipality Authorities Act, 53 Pa.C.S.A. § 5601, *et. seq.*, to finance and/or operate specific public works projects without using the general taxing powers of the municipality.

"Best Management Practices (BMP)" shall mean structural (including but not limited to the devices listed in the Pennsylvania Stormwater Best Management Practices Manual) and non-structural (design standards and planning concepts) items used to control the volume, rate and water quality of post construction stormwater runoff so as to protect and maintain the chemical, physical and biological properties of waters of the Commonwealth. BMP's must, at a minimum, protect and maintain water resources, preserve water supplies, maintain stream base flows, preserve and restore the flood carrying capacity of waters, preserve to the maximum extent practicable the natural stormwater runoff regimes and natural course, current and cross section of waters of the Commonwealth, and/or protect and conserve ground water and ground-water recharge areas.

"Chesapeake Bay Agreement" shall mean the Chesapeake Watershed Agreement of June 16, 2014, as amended January 24, 2020, for the restoration and protection of the Chesapeake Bay.

"Commonwealth" shall mean the Commonwealth of Pennsylvania.

“Consulting engineers” shall mean licensed experts in the fields of planning, design, and construction of public and private infrastructure.

“County Commissioners” shall mean the Board of Commissioners of the County of Dauphin.

“Flood Mitigation Projects” shall mean local level drainage and flood control projects that improve drainage and reduce flood risk for communities. It includes activities such as drainage pipes, topographic grading, wetland restoration, and other nature-based solutions.

“Minimum Control Measures (MCM)” shall mean the six categories required by DEP and EPA, as may be amended from time to time, to be addressed in municipal stormwater management programs, specifically: public education and outreach; public participation/involvement; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; and pollution prevention/good housekeeping.

“Municipal Separate Storm Sewer System (MS4)” shall mean all separate storm sewers that are defined as “large” or “medium” or “small” municipal separate storm sewer systems pursuant to 40 CFR §§ 122.26(b)(4), (b)(7), and (b)(16), respectively, or designated under 40 CFR § 122.26(a)(1)(v). (25 Pa. Code § 92a.32(a) and 40 CFR §122.26(b)(18)) including a conveyance or system of conveyances owned by a state, city, town, village, or other public entity that discharges waters of the Commonwealth; designed or used to collect or convey stormwater (including storm drains, pipes, ditches, etc.); not a combined sewer; and not part of a Publicly Owned Treatment Works (sewage treatment plant).

“Municipality(ies)” shall mean a city, borough, or township situate or draining to watersheds within Dauphin County Pennsylvania, or a municipal sewer, water, stormwater, or other Authority within Dauphin County Pennsylvania having the function, power or responsibility for stormwater management germane to this Agreement authorized by both the law under which the authority was created and the powers or purposes of the authority contained within its articles of incorporation.

“National Pollutant Discharge Elimination System (NPDES)” shall mean the federal government and Commonwealth of Pennsylvania’s system for issuance of discharge permits under the federal Clean Water Act (CWA), the Pennsylvania Clean Streams Law and Storm Water Management Act.

“Nutrient Reduction Process” shall mean the process used for nitrogen and phosphorus removal from wastewater before it is discharged into surface or groundwater.

“Project” shall mean a structural Regional BMP Project, Flood Mitigation Project or MCM, implementation of a Regional Plan, or other activity under this Agreement for which the County may issue debt.

“Pollutant” shall mean any contaminant or other alteration of physical, chemical, biological, or radiological integrity of surface water which causes or has the potential to cause pollution.

“Regional BMP Project” shall mean a project of such scale that the results of the project (including but not limited to MS4 credit, water quality, flood mitigation, organizational capacity, recreation,

education, environmental) benefits multiple Municipalities while being impractical and/or unaffordable for each Participant to do by itself.

“Total Maximum Daily Load (TMDL)” shall mean the sum of individual waste load allocations for point sources, load allocations for nonpoint sources and natural quality and a margin of safety expressed in terms of mass per time, toxicity, or other appropriate measures.

“Watercourse” shall mean a distinct natural or artificial body of water flowing perennially or intermittently in a defined channel with bed and banks. The term includes a river, creek, stream, slough or canal.

“Watershed” shall mean the drainage area of a watercourse of a minimum drainage area determined in accordance with guidelines developed pursuant to 27 Pa.C.S.A. § 3115(a)(2) (relating to development, adoption, amendment and periodic review of State water plan).

“Watershed Implementation Plan (WIP)” shall mean plans for how the Chesapeake Bay watershed jurisdictions, in partnership with the federal government, will achieve the Chesapeake Bay TMDL allocations and planning targets.

“WREP” shall mean this Water Resource Enhancement Program.

ARTICLE II

Establishment and Organization

2.01. Establishment.

The Municipalities agree that Dauphin County shall be responsible for coordinating (1) the development and implementation of certain Projects, (2) the Regional Plans, (3) the creation, operation, and maintenance of certain Projects based upon their design and performance lifespan, and (4) select MCMs, as further set forth in this Agreement. All of these activities collectively shall be known as the “Dauphin County Regional Water Resource Enhancement Program” (hereinafter the “Program”).

2.02. Authorization.

The Parties certify that they are authorized to enter into and execute this Agreement in the exercise and/or performance of their governmental functions, powers, or responsibilities. Participants further certify that they are not the subject of any pending lawsuits, regulatory actions, consent decrees, or other similar sanction of whatever kind related to stormwater, including but not limited to stormwater regional BMPs, Flood Mitigation Projects, and MCMs located within the Participants’ municipal boundaries that would compromise or jeopardize the goals of this Agreement or any of the duties to be performed hereunder. Such Municipalities shall undertake best efforts to resolve any and all such lawsuits, fines, consent decrees, or similar sanctions prior to that Municipality’s execution of this Agreement. In the event such a Municipality is unable to resolve such lawsuits, fines, consent decrees, or similar sanctions prior to execution of this Agreement, the Municipality agrees to fully indemnify and defend the Participants against any associated damages and liability incurred by Participants by virtue of said Municipality’s lawsuits, fines, consent decrees, or similar sanctions to the extent permitted by law.

2.03 Delegation.

The Municipalities properly adopting and executing this Agreement hereby delegate such functions, powers, and responsibilities exclusively to Dauphin County only to the extent necessary to effectuate the Projects in which they have elected to participate, or work permitted, agreed to, or required herein.

2.04. Participant Representation.

Each Municipality shall designate a primary voting representative and an alternate to serve as the contact person(s) on all matters related to the Program. The name and contact information for the representative and alternate shall be provided to the Tri-County Regional Planning Commission in writing, as well as any subsequent changes, within 15 days of final execution of this Agreement by the Municipality.

2.05. WREP Advisory Committee.

Each Municipality adopting this Agreement by September 30, 2022, shall be considered a "Founding Municipality." The WREP Advisory Committee tasked with determining the initial Tier Levels of Service shall be comprised only of the representatives designated by the Founding Municipalities, a representative designated by the Dauphin County Conservation District, the County Commissioners, and the Dauphin County Planning Commission. Municipalities electing to participate in the Program after September 30, 2022 will become voting members of the WREP Advisory Committee following the promulgation of the inaugural Tier Level of Service options. Alternates may attend all Committee meetings but may participate and vote only when the designated representative is unavailable. Unless a different person is designated from time to time by the County Commissioners, the Executive Director of the Tri-County Regional Planning Commission, *ex officio*, shall serve as Administrator for the Committee. The Administrator shall be a participating and voting member of the Advisory Committee and shall chair all meetings. The Administrator shall receive no additional compensation for performing these duties.

2.05.1. Advisory Committee Duties.

The WREP Advisory Committee shall provide input to Dauphin County staff, consultants, and consulting engineers on the service offerings, cost share formula, Project costs, proposed financing, Tier Level of Service offerings, and selection of Projects. The initial service offerings and cost share formula shall be recommended to the County Commissioners by December 31, 2022.

2.05.2. Advisory Committee Recommendations.

Only those Project recommendations made by a majority vote of the WREP Advisory Committee will be sent for review by the Dauphin County Planning Commission and the Dauphin County Conservation District for ultimate submission and consideration by the County Commissioners. Nothing herein shall limit or restrict Dauphin County or a Participant from implementing stormwater projects independently of this Agreement or its Participants.

ARTICLE III

Functions, Powers and Responsibilities

3.01. Dauphin County Functions, Powers and Responsibilities.

Among other things, Dauphin County shall be responsible for the following Program tasks:

3.01.1. Regional Plans and Regional Flood Mitigation Projects.

3.01.1.1. Prepare and make available to all Municipalities minutes from all Dauphin County and Tri-County Regional Planning Commission (TCRPC) meetings related to the Program, and any Projects thereunder, including Regional Plans, Projects, Flood Mitigation Projects, and other material matters contemplated by this Agreement.

3.01.1.2. Arrange, plan, and coordinate all meetings and/or conference/video calls regarding the Program, and any Projects thereunder, including, Regional Plans, Projects, Flood Mitigation Projects, and MCMs as deemed necessary by Dauphin County.

3.01.1.3. Prepare the Regional Plans, and any and all drafts, revisions, updates, or other amendments to the same.

3.01.1.4. Administer and implement the Regional Plans and conduct a review of the Regional Plans as deemed administratively necessary or otherwise required by law.

3.01.1.5. Oversee, supervise, and administer Projects, including ensuring that these projects are constructed as approved by Dauphin County. A description of services for the first project ("Project 1") is attached hereto and incorporated herein as Appendix A.

3.01.1.6. Approve for payment and pay appropriate invoices submitted for Projects.

3.01.1.7. Provide Program supplemental information as necessary for each Municipality to submit its MS4 Annual Status Report.

3.01.1.8. Arrange for the management and administration of the Program related funds including, but not limited to, Municipality contributions, grant monies, or any other similar funds of Dauphin County related to the Regional Plans, Projects, and MCM work.

3.01.1.9. Prepare or cause to be prepared an annual Financial Report of the Dauphin County Stormwater Account and all expenditures related to the Regional Plans, Projects, and MCM work.

3.01.1.10. Dauphin County shall be responsible for the implementation of new Projects (including, but not limited to, funding, design, permitting, construction, operation, monitoring, and maintenance). Dauphin County may contractually transfer such obligations for design, construction, operation and maintenance, and monitoring to qualified third parties, but Dauphin County shall remain responsible to ensure that the contracted third parties are performing the required tasks satisfactorily.

3.01.1.11. Dauphin County shall maintain the Program and Project documentation in accordance with applicable laws and regulations and shall provide copies of the same and updates to Municipalities upon request as more specifically set forth herein.

3.01.1.12. Dauphin County shall be responsible for any regulatory fines occasioned by actions taken under this Agreement to the extent of their responsibility as defined under this Agreement.

3.01.2. Minimum Control Measures (MCMs).

A Municipality may delegate responsibility for implementation of MCMs to the Program if approved by a majority vote of the WREP Advisory Committee and subsequent written approval of the County Commissioners for integration into this Agreement.

3.01.3. Other Dauphin County Tasks.

3.01.3.1. Dauphin County shall ensure that all applicable notice requirements are satisfied, and all required advertisements are drafted and published, at Dauphin County's expense, as required by applicable laws, including, but not limited to, the Pennsylvania Sunshine Act, 65 Pa.C.S.A. § 701, *et. seq.* Dauphin County shall not be responsible for any notices or advertisements for anything not related to this Agreement or anything required by law to be done by the Municipality.

3.01.3.2. Dauphin County shall retain all records, as that term is defined by the Pennsylvania Right-to-Know Law, 65 P.S. § 67.102, for the time period required by the County Records Manual or applicable law, whichever is longer, but in no event for less than six (6) years. Such records related to the Regional Plans, Projects, MCM work, or other activities undertaken pursuant to this Agreement shall be available for review and copying by any Municipality at Dauphin County offices upon request.

3.01.3.3. Dauphin County shall undertake other actions that may be necessary or convenient to implement the provisions and intent of this Agreement.

3.01.3.4. Dauphin County shall perform its obligations and duties under this Agreement in a competent and business-like manner and shall exercise due care, diligence, and control in connection with costs, fees, and expenses related to such performance so that the ratepayers that it serves will receive the benefits accruing from proper and efficient implementation of the Regional Plans, construction, operation and maintenance of Projects, and providing MCM support as contemplated by this Agreement.

3.01.4. Designated Representatives.

Dauphin County reserves the right to authorize any of its officers, employees, representatives or agents to administer this Agreement and exercise its rights under this Agreement.

3.02. Municipality Functions, Powers and Responsibilities.

The Municipalities' functions, powers and responsibilities shall be as follows:

3.02.1. Municipalities agree to act in good faith and to cooperate in all reasonable respects with Dauphin County so that Dauphin County may perform the obligations and duties assumed and undertaken under and by virtue of this Agreement in a proper and satisfactory manner.

3.02.2. Municipalities agree to take any and all legislative or other acts necessary to confirm Program participation and Project participation, as elected by each Municipality in accordance with this Agreement, in a timely manner and to not delay implementation of the Program or any Project elected by the Municipality.

3.02.3. Municipalities shall perform their obligations and duties under this Agreement in a competent and business-like manner and shall exercise due care, diligence, and control in connection with costs, fees, and expenses related to such performance so that property owners within the Municipalities will receive the benefits accruing from proper and efficient implementation of the Regional Plans, construction, operation and maintenance of Projects, and work related to covered MCMs.

3.02.4. To the extent they elect to participate in the Projects pursuant to this Agreement, Municipalities consent to the placement, construction, ownership, continued operation, and ongoing maintenance of new Projects by Dauphin County within their municipal borders consistent with the Regional Plans. Dauphin County may purchase or otherwise acquire any real property necessary to effectuate the purposes set forth herein, unless a Municipality otherwise agrees to acquire real property. If necessary, Municipalities agree to cooperate fully with Dauphin County's efforts in obtaining real property, which may include, at the Municipality's discretion, the use of eminent domain pursuant to the Eminent Domain Code, 26 Pa.C.S.A. § 101, *et seq.* In the event it is deemed preferable for a Municipality to acquire real property for a Project, a Municipality must act through its governing body or by referendum. Nothing in this section shall prevent a Municipality from being the Condemnor for a Project if mutually agreed to by the Municipality and Dauphin County.

3.02.5. Municipalities agree to continue the operation and maintenance and regulatory compliance requirements with respect to any and all existing BMPs and stormwater infrastructure for which they were responsible before the formation and implementation of this Agreement. All aspects of said operation and maintenance, including all administrative and document related tasks, shall be solely the Municipality's responsibility, to be performed at the Municipality's sole cost and expense. The Parties may, upon mutual agreement, elect to transfer responsibility for operation and maintenance, including all associated administrative functions, of existing BMPs to Dauphin County. Unless otherwise agreed upon, Dauphin County shall be responsible only for the placement, construction, ownership, operation, and maintenance of new Projects created pursuant to this Agreement and consistent with the Regional Plans.

3.02.6. Municipalities shall timely submit MS4 Annual Status Reports as required by existing law and regulations. Each Municipality shall, contemporaneously upon submission to DEP, provide to Dauphin County a digital or hard copy of the Municipality's MS4 Annual Status Report as well as reporting to Dauphin County on retained responsibilities relative to MS4 compliance.

3.02.7. Municipalities agree to cooperate fully in Dauphin County's acquisition of any easement or right-of-way necessitated by Dauphin County's administration of this Agreement and its creation, operation, and maintenance of any Project or other function covered by this Agreement.

3.02.8. Municipalities shall cooperate in any application by Dauphin County for grants or other

funding that can be used to fund the Regional Plan's implementation, Projects, and/or the actions and activities undertaken pursuant to this Agreement.

ARTICLE IV

Finance and Accounting

4.01. Municipality Contributions.

4.01.1. Initial Contribution.

Each Founding Municipality shall make an initial contribution for \$500, payable to "Dauphin County," for purposes of financing the work items described in this Agreement ("Initial Contribution"). The Initial Contribution shall be tendered no later than sixty (60) days after the Effective Date of this Agreement.

4.01.2. Future Tier Level of Service Selection.

The Program, starting in 2023, will include a range of tiered services ("Tier Level of Service") to be developed by the WREP Advisory Committee by the end of 2022 for approval by the Dauphin County Commissioners during the first quarter of 2023, with said Tier Level of Service schedule being integrated into this Agreement upon approval by the Dauphin County Commissioners. At that time, Dauphin County will offer a 120-day period in which a Municipality may select to enroll in a Tier or withdraw from this Agreement and participation in the Program. The Tier Levels of Service may not include participation in Projects. Beginning in year 2025, Municipalities must select the desired Tier Level of Service for the subsequent two calendar years by December 1st of the preceding year. Any subsequent changes in Tier selection may result in additional charges borne by the Municipality.

4.01.3. Project Contribution.

Municipalities may elect to participate in Projects as distinct proposals offered to Participants. Participation in such Projects shall be offered by Dauphin County through the distribution of a specification report detailing the material Project information, including, but not limited to, total Project cost, anticipated MS4 credits available, if any, timelines of any phases and for completion, and reasonable estimations as to operation and maintenance costs. Project participation is distinct from Program participation. Municipalities must elect to participate in individual Projects and take any necessary legislative action to authorize each Project in which a Municipality elects to participate. Project costs will be billed to participating Municipalities in accordance with the details accompanying the Project specifications.

4.01.4. Annual Contribution.

For each year following 2023, Dauphin County will distribute annual invoices to each Municipality for the charges corresponding to each Municipality's selected Tier Level of Service. Dauphin County shall adopt and notify the Municipalities of the costs assigned to each Tier Level of Service not later than July 1 of each year, after which, the associated cost of each Tier may only be reduced.

4.01.5. Add-On Services Contribution.

In the event the Program offers Municipalities additional services separate from services provided in a Tier Level of Service (hereinafter "Add-On Services") and a Municipality selects one or more of the Add-On Services, the County will invoice each Municipality annually for the cost of those Add-On Services payment thereof net sixty (60) days unless an alternative financing plan is arranged with Dauphin County.

4.01.6. In-Kind Contributions.

A Municipality may choose to provide services to the benefit of the Program and the stormwater management services described herein in complete or partial payment of its required contribution. The value of any such service or services provided in lieu of a cash payment or contribution may be used as an offset to the contribution obligations provided in this Agreement. In-kind services may include, but are not limited to, peer to peer training, coordination of inspection services, hosting or inputting of regional Geographic Information System data and the like. The level and type of service to be provided and the level of credit would be mutually agreed upon by Dauphin County and the Municipality in advance of providing such service. Any offset of the Municipality's contribution would be reflected in the Municipality's contribution in the following year of the Program. If an offset to a Municipality's contribution is to occur in the final year of the Municipality's participation in the Program, Dauphin County will reimburse the Municipality in full not later than March 1st following the year the Municipality elected to terminate this Agreement.

4.01.7. Subsequent Participant ("opt in").

Dauphin County shall develop a separate policy with the input of all Founding Municipalities regarding the contribution required to be made by any local government that chooses to opt in/execute this Agreement after September 30, 2022. Any Subsequent Participant shall, however, contribute a one-time payment in an amount not less than the amount of any administrative costs and expenses occasioned on Dauphin County by virtue of the Subsequent Participant's opt-in (i.e., a "Plan Revision Fee"). Any initial contribution required of a Subsequent Participant shall not reduce the other Participants' Initial Contribution or entitle any Participant to a refund of the same.

4.02. County Contributions.

4.02.1. County Funding.

Dauphin County, in its sole discretion, may appropriate funds to the Program from time to time. Nothing herein shall be construed to require Dauphin County to make appropriations, or to guarantee any level of appropriation, to the Program. The award of Program grants shall be made in the sole discretion and approval of the County Board of Commissioners, upon recommendation of its Planning Commission and the WREP Advisory Committee.

4.02.2. County Indebtedness.

4.02.2.1. The County may, in its sole discretion, incur or guarantee indebtedness for the benefit of Projects undertaken in furtherance of the Program, including establishment of a Line(s) of Credit, the issuance of General Obligation Notes, or other instruments of indebtedness allowable for a County government, the proceeds of which will be used to (i)

provide funding to the Program for planning, designing, permitting, acquiring, constructing and installing certain approved Projects and (ii) paying the costs of issuance of the instrument, all of which constitute a valid governmental purpose.

4.02.2.2. The debt service for any County indebtedness for the benefit of Projects shall be paid exclusively by Municipality contributions and any grants awarded to the Program if allowable by the terms of the grant. Municipality contributions will only be required in support of Project indebtedness for Projects in which the Municipality has elected to Participate pursuant to 4.01.3.

4.02.2.3. Dauphin County shall present to the WREP Advisory Committee the details of any debt intended to be incurred requiring a multi-year contribution by the Municipalities at least ninety (90) days prior to entering a binding commitment to incur said debt. Municipalities must exercise proportional legislative authority necessary to incur debt prior to being held subject to any debt or debt service costs.

4.02.3. County Staffing.

Dauphin County shall provide, either directly or through delegation and/or subcontract, sufficient staff to administer the Program.

4.02.4. County Grant Management.

Dauphin County shall use best efforts to secure grant funding for the construction, operation and maintenance of Projects.

4.03. Accounting.

4.03.1. Dauphin County Stormwater Account.

Dauphin County shall establish a separate account (the "Dauphin County Stormwater Account") for the deposit of all funds related to or contemplated by this Agreement, including the Municipalities' Initial Contributions, Annual Contributions, and all other monies received by Dauphin County related to this Agreement from whatever source.

4.03.2. Initial Contribution Fund.

Municipality Initial Contributions shall be accounted for in the Dauphin County Stormwater Account in a separate and dedicated fund and shall be used solely for reimbursement for eligible Dauphin County administrative costs and expenses related to the operation and administration attributable to establishing the Program which includes the development and implementation of the Regional Plans. Future administrative expenses will be determined and allocated on a Project and Program basis as recommended by the WREP Advisory Committee and approved by the County Commissioners.

4.03.3. Other Revenues.

Any and all other revenues that may be acquired or used by Dauphin County under this Agreement related to stormwater management, including, but not limited to, grants, loans, or donated funds shall be accounted for separately from the Municipality Contributions. Said funds shall be used for the development and implementation, including but not limited to, construction, operation and maintenance of Projects, and MCMs identified in the Regional

Plans.

4.03.4. Fund Administration.

Administration of these funds to pay for proper expenses under this Agreement shall be the responsibility of Dauphin County. The County may assign this duty, through a separate agreement, to the Tri-County Regional Planning Commission or other qualified entity such as the Dauphin County Economic Development Corporation.

4.03.5. Audits.

An annual audit of all accounts and funds of the Program and Dauphin County Stormwater Account shall be completed by a qualified CPA to assure all Participants and the public that the accounts are in order. Each Participant shall be provided a true and correct copy of the annual audit upon completion thereof. The cost of this audit shall be included in the Program's budget.

4.04. Taxpayer/Ratepayer Returns.

4.04.1. Annual Report.

Dauphin County will provide, beginning in the year 2024, each Municipality an annual report that summarizes the accomplishments of the Program and an estimate of the cost savings yielded from the Program. Cost savings will be calculated for capital projects, mapping, inspection, etc. and grants or other funding support received by virtue of the Program.

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4.04.2. Mandatory Returns.

Beginning in the year 2024, the Municipalities shall either (i) return a minimum of 60% of the respective reported cost savings directly to the Municipalities' taxpayers/rate payers through tax/rate reduction or (ii) certify to Dauphin County that any savings are being invested into infrastructure or water resource improvement projects that otherwise would have been funded through public funds. In no event shall a Municipality be required to show returns or investment justification in excess of 100% of its annual total stormwater management costs.

4.05. Fees and Costs.

Unless otherwise expressly stated herein, the Participants agree to bear their own fees and costs in connection with or incurred related to the matters between them, and relating to this Agreement.

ARTICLE V

Term and Termination

5.01. Effective Date.

This Agreement shall become effective as to each Participant upon execution of this Agreement. It is the intent of the Participants that their cooperative efforts, including the conduct of meetings authorized or required by this Agreement, shall commence within 60 days of the initial execution of the Agreement.

5.02. Term.

The term of this Agreement shall commence on the Effective Date and continue until terminated as set forth herein.

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5.03. Term Stipulations.

If this Agreement is deemed to constitute a contractual impairment or limitation upon future governing bodies of the Parties in a legislative or governmental function, then the Parties hereby stipulate that this Agreement constitutes one of urgency and necessity, is in the public interest, and is absent of bad faith or ulterior motivation. The Parties further stipulate that stormwater management is statutorily prescribed.

5.04. Termination and Wind-Up.

5.04.1. Municipalities may elect to terminate this Agreement at the end of each regularly scheduled Pennsylvania Department of Environmental Protection General MS4 Permit period (hereinafter referred to as the "Permit Period"). Should the Permit Period be administratively extended by the Pennsylvania Department of Environmental Protection, that later date shall be deemed to be the end of the Permit Period for purposes of this section.

5.04.2. A Municipality electing to discontinue participation ("Discontinuing Municipality") in the Program shall elect to terminate its participation herein through the adoption of a resolution or ordinance not later than one hundred-eighty (180) days prior to end of a Permit Period. Termination shall be effective at 11:59 P.M. on the last day of the Permit Period with Tier Level of Service costs prorated as of such last day. The fund administrator will provide to the Discontinuing Municipality an accounting of the pro-rated costs within ninety (90) days of the date of termination including any charges against which the refund is set-off. Termination will not affect debts and costs previously incurred by the Municipality in accordance with its participation in the Program or the Discontinuing Municipality's obligation to pay thereon; however, in no event may an invoice related to such debts and costs exceed the amount that the Discontinuing Municipality duly assumed through an election to participate in the selected Tier Level of Service or Projects during its participation in the Program. Debts incurred during the participation in the Program will not be discharged as to the Discontinuing Municipality until such time as the original debts incurred by Dauphin County and accepted by the Municipality in furtherance of the Projects have been satisfied. At the request of a Municipality, Dauphin County will provide a one-time payment option, if accurately calculable, at the date of termination to cover future Program related debt and costs, as opposed to payments for the term of outstanding debt issuances.

5.04.3. In the event of termination of this Agreement as to all Municipalities for the discontinuance of the Program through mutual agreement, any funds remaining in the Dauphin County Stormwater Account, subject to any offsets necessary to retire any outstanding debt related to the Program, shall be returned to those Municipalities who remain participants in this Agreement at the time of termination based upon the contribution of the Municipality as of the date of termination. In the event funds remaining in the Dauphin County Stormwater Account are insufficient to retire any outstanding debt and cover operation and maintenance of Projects installed through the Agreement, Municipalities agree that Dauphin County may continue to charge the participating Municipalities in an amount sufficient and for as long as necessary to cover debt service on debts previously adopted by the Municipality and operation and maintenance costs of Projects installed unless alternate operation and maintenance arrangements are agreed to by the County and participating Municipalities at the Project development and

approval phase. Any funds remaining after any outstanding debt service and other costs are paid shall be disbursed to the Municipalities remaining on the date of Termination no more than one hundred twenty (120) days after the date of Termination.

ARTICLE VI

Contract Provisions

6.01. Integration.

This Agreement (and the incorporated Appendices) constitute the entire understanding and agreement between the Parties with respect to the subject matter of this Agreement and cancels, supersedes and terminates all prior agreements, contracts, understandings, negotiations, and other arrangements between the Parties whether written or oral or partly written and partly oral with respect to the subject matter of this Agreement. There are no understandings or agreements, verbal or otherwise, in relation hereto, except those expressly and specifically set forth herein.

6.02. No Reliance.

The Parties warrant that they have not relied upon any statement, projection, disclosure, report, information or any other representation or warranty except for those as may be specifically and expressly set forth in this Agreement.

6.03. No Third-Party Beneficiaries.

No provision of this Agreement shall be construed in any manner so as to create any rights in any third parties not party to this Agreement. This Agreement shall be interpreted solely to define specific duties and responsibilities between Dauphin County and the Municipalities and shall not provide any basis for claims of any other individual, partnership, corporation, organization, or municipal entity.

6.04. Other Contracts.

The Parties, at their sole expense, may undertake or award other contracts for additional or related work, and the Parties, and any subcontractors of the Parties, shall fully cooperate with the Program created hereby and carefully fit any additional or related work to the Program. The Parties shall not commit or permit any act that will interfere with the performance of work pursuant to this Agreement. This paragraph shall be included in the contracts of all contractors with whom each Party will be required to cooperate.

6.05. Amendment.

Any alterations, variations, modifications, amendments, waivers or additional provisions to this Agreement will be valid only when reduced to writing, approved by official action of each Party and duly signed by authorized representatives of all Parties, and attached hereto. No oral amendment, modification or waiver shall be effective, and this provision may not be orally amended or waived. The parties hereto further agree that any particular course of performance may not be used by any trier-of-fact to imply or infer a modification of this Agreement.

6.06. Severability.

All agreements, provisions and covenants contained in this Agreement are severable, and in the event any of them are held to be invalid by any competent court, this Agreement shall be interpreted as if the invalid agreements, provisions or covenants were not contained in this Agreement.

6.07. Applicable Law.

This Agreement shall be construed and governed pursuant to the laws of the Commonwealth of Pennsylvania. Any dispute arising from this Agreement shall be heard in the Court of Common Pleas of Dauphin County and the Parties hereby submit to the exclusive jurisdiction of that Court.

6.08. Dispute Notification.

In the event of disputes arising under this Agreement and prior to the initialization of mediation as required by Section 6.09 and thereafter legal action, the complaining Party shall reduce each and every complaint to writing and deliver same to the Dauphin County Commissioners.

6.09. Dispute Resolution.

Upon the written request of a Party, any dispute or claim in law or equity arising out of this Agreement shall be submitted to neutral, non-binding mediation prior to the commencement of litigation or any other proceeding before a trier of fact, as follows:

6.09.1. The Parties to the dispute or claim agree to act in good faith to participate in mediation and to identify a mutually acceptable mediator. If they are unable to agree upon a mediator within twenty (20) days from the date of the written request for mediation the Dauphin County Solicitor shall appoint a mediator. All Parties to the mediation shall share equally in the costs. After the selection of the mediator, the Parties shall submit to mediation for a period up to forty-five (45) days.

6.09.2. If the dispute or claim is not resolved by the forty-fifth (45th) day after the selection of the mediator or if the mediation does not successfully resolve the dispute or claim, then the mediator shall provide written notice to the Parties reflecting the same and the Parties may seek alternative forms of resolution to the dispute or claim in accordance with the terms of this Agreement and other rights and remedies afforded by law.

6.09.3. If the dispute or claim is resolved through mediation, the resolution will be documented by a written agreement executed by all Parties.

ARTICLE VII

Execution

7.01. Representation by Counsel.

This Agreement has been negotiated by the Parties through their respective legal counsel and embodies terms that were arrived at through mutual negotiation and joint effort, and the Parties shall be considered to have contributed equally to the preparation of this Agreement. The Parties warrant and represent that the terms and conditions of this Agreement have been discussed and negotiated between them, and their respective counsel, and are voluntarily and knowingly accepted for the purpose of making a binding contract between the Parties. The Parties further acknowledge that they understand the facts and their respective legal rights and obligations pursuant to this Agreement.

7.02. Ordinance or Resolution.

Pursuant to 53 Pa.C.S.A. § 2305(a) the Parties shall enter into this Agreement for intergovernmental cooperation only through the passage of an ordinance or resolution by their respective governing bodies. Each Municipality shall provide Dauphin County with a copy of said ordinance or resolution prior to participation.

7.03. Notices.

All notices required by a Municipality to be given or so sent hereunder or any other official correspondence regarding this Agreement to Dauphin County shall be sent by the Municipality via United States mail, postage prepaid, addressed to the following individuals at the following addresses unless Dauphin County informs the Municipality, in a future writing, of a different address(es) for purposes of receiving notices hereunder. All notices given pursuant to this Section shall be effective as of the date said notice is mailed.

TCRPC Executive Director
112 Market Street, 2nd Floor
Harrisburg, PA 17101

Dauphin County Chief Clerk
2 S. Second Street, 4th Floor
Harrisburg, PA 17101

7.04. Counterparts.

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement may be electronically transmitted and electronically signed, in whole or in part, pursuant to the Pennsylvania Electronic Transactions Act, 73 P.S. § 2260.101 *et. seq.* and The Electronic Signatures in Global and National Commerce Act, 15 U.S.C.A. § 7001, *et. seq.* The effectiveness of such documents and signatures shall have the same force and legal effect as manually signed originals and shall be binding on the parties.

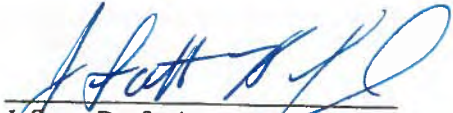
7.05. Signatures.

The undersigned individuals and/or representatives of each party, represent and warrant that they have the signatory authority to enter into this Agreement and legally bind the respective party hereto.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the Dauphin County Regional Water Resource Enhancement Program to be executed by their authorized officers.


ATTEST:


J. Scott Burford
Chief Clerk/Chief of Staff


COUNTY of DAUPHIN
COMMONWEALTH of PENNSYLVANIA


Mike Pries, Chairman
Board of Commissioners

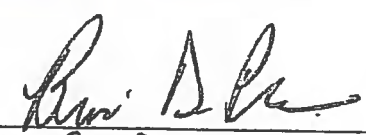

Chad Saylor, Vice-Chairman
Board of Commissioners


George P. Hartwick, III, Secretary
Board of Commissioners

ATTEST:


Ciara Dent, Mayor

MUNICIPALITY:


Brian Proctor, President
Steelton Borough

For eligible municipalities, Project 1 Add-on Service Investment (\$2/lb sediment):

\$ _____ for _____ sediment

Note: Separate Page 19 for each participating Municipality.

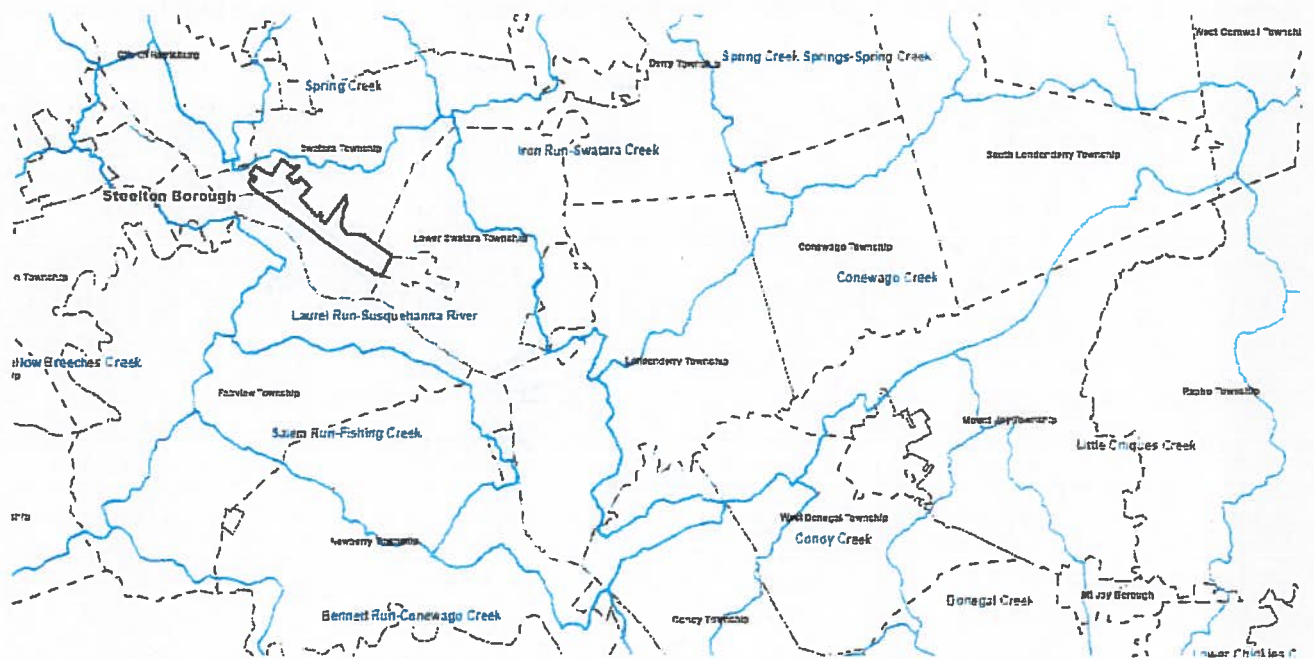
**APPENDIX A
OF THE
INTERGOVERNMENTAL COOPERATION AGREEMENT
FOR THE
DAUPHIN COUNTY
REGIONAL WATER RESOURCE ENHANCEMENT PROGRAM**

- I. Project 1 Background: MS4 municipalities have a difficult time meeting their sediment reduction requirements within their boundaries by 2023 (space constraints, cost constraints). To kickoff WREP, a regional project was identified that can be started in 2022 to demonstrate that Dauphin County's role in assisting municipalities with stormwater management can result in cost savings and other co-benefits. Londonderry Township has a large-scale stream restoration BMP (Conewago Creek project) that is anticipated to result in more sediment reduction credits than the Township, and its partner Mount Joy Township, need to satisfy their MS4 requirements. Candidate MS4 municipalities who may have interest in paying into the partnership in return for sediment reduction credits that will be reportable to PADEP: Steelton Borough, Middletown Borough, Lower Swatara Township, Highspire Borough, Swatara Township, New Cumberland Borough (Cumberland County) – refer to Figure 1 for eligible municipalities in cyan watersheds.
- II. Conewago Creek Restoration Project construction schedule:
 - A. Phase 1 – Brills Run to confluence
 - B. Phase 2 – entirely in Lancaster County
 - C. Phase 3 – entirely in Dauphin County
 - D. Opened bids February 16, 2022, start construction May 2022
 - E. Milestone 1 – Final Grading due August 25, 2022
 - F. Substantial Completion – due September 22, 2022
 - G. Final Completion – due October 22, 2022
 - H. Phase 3 – anticipated to be built in 2023, notice to proceed will be issued upon confirmation that it is fully funded
- III. Roles:
 - A. TCRPC – Sediment reduction intergovernmental partnership administration (issue partnership agreements, track sediment reduction balance, coordinate partnership candidates, distribute MS4 documentation to partners for annual reports); lead on WREP advancement.
 - B. DC DCED – Debt issuance and funding administration; additional roles based upon funding sources.
 - C. Londonderry Township – Administer the existing local funding and construction project (Project owner for Phases 1 and 2 is certain; Owner of Phase 3 if funding sources require it); project permittee; provide MS4 documentation to TCRPC to distribute to partnering municipalities for their annual reports; take part in decision making regarding \$/lb. and candidate partners.
 - D. Municipal Partner – Invest an amount that contributes to project costs at a rate of \$2.00 per pound of sediment. Municipal Partner will receive documentation from TCRPC regarding the sediment reduction yield of the project and the reportable amount of sediment reduction credits that the Municipal Partner should report on its Annual Report for Pollutant Reduction Plan credit.

IV. Add-on service optional signup:

- A. Eligible municipalities will designate their investment in the Conewago Creek Restoration Project by indicating the cash amount and corresponding sediment reduction credits at the rate listed under Section III.D. on the signature page of the Intergovernmental Cooperation Agreement.

FIGURE 1 - ELIGIBLE MUNICIPALITIES MAP

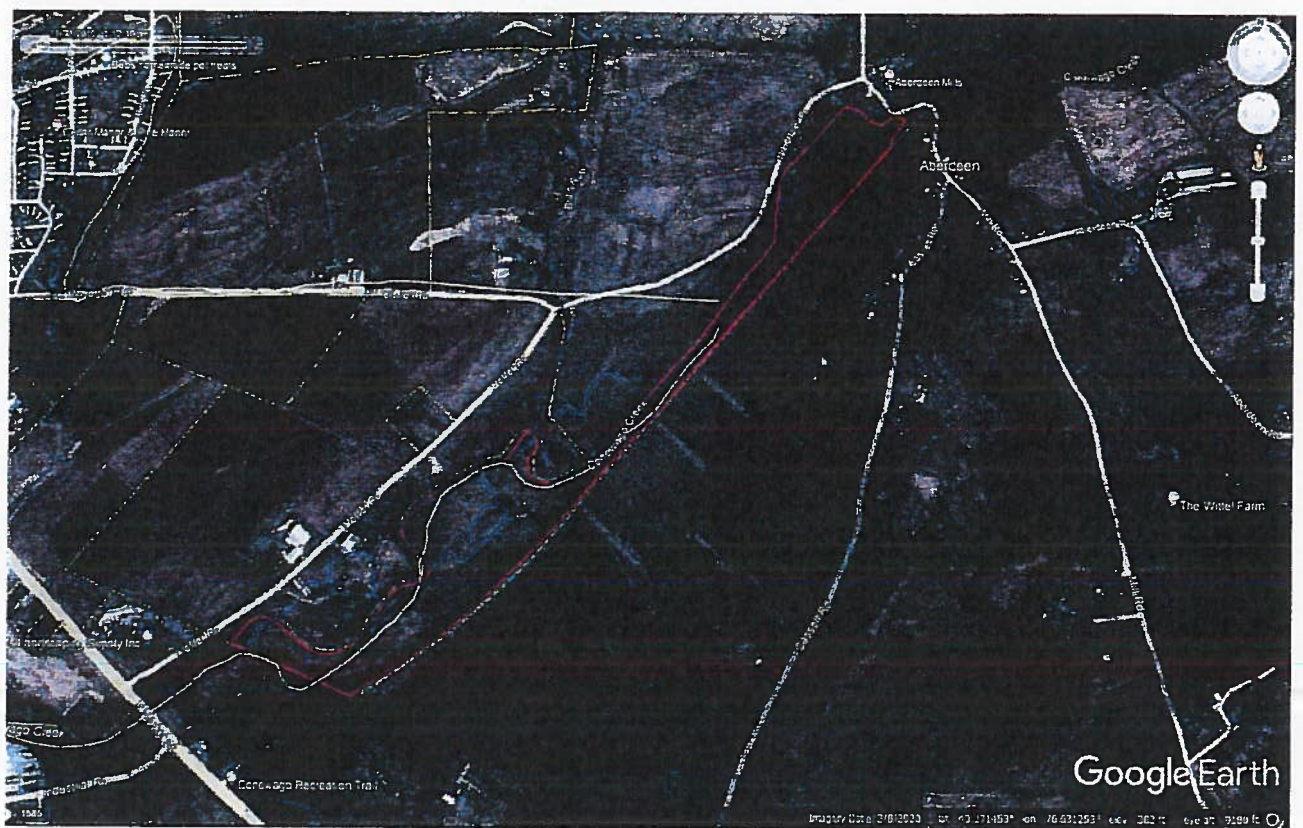


Excerpt from HRG Whitepaper, January 4, 2022 – Steelton Borough Joint PRP Project with Londonderry Township (Dauphin County)

15.2-ac floodplain restored to historical conditions

1.018.000-lb sediment reduction credit

FIGURE 3 – LAND ACQUISITION AREA MAP



ORIGINAL PRP



STEELTON BOROUGH

Dauphin County, Pennsylvania

Chesapeake Bay Pollutant Reduction Plan

September 2017
HRG Project No. R001337.0494

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services
AN EMPLOYEE-OWNED COMPANY

Chesapeake Bay Pollutant Reduction Plan

STEELTON BOROUGH

DAUPHIN COUNTY, PENNSYLVANIA

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INTRODUCTION

The following Chesapeake Bay Pollutant Reduction Plan (CBPRP) addresses how the Steelton Borough, Dauphin County, Pennsylvania intends to achieve the pollutant reduction requirements prescribed by the Pennsylvania Department of Environmental Protection (PADEP) in the Municipal MS4 Requirements Table¹.

This document was prepared following the guidance provided in the PADEP National Pollutant Discharges Elimination System (NPDES) Stormwater Discharges from Small Municipal Separate Storm Sewer Systems Pollutant Reduction Plan (PRP) Instructions².

General Information	
Permittee Name: Steelton Borough	NPDES Permit No.: PAG133625
Mailing Address: 123 North Front Street	Effective Date: August 1, 2013
City, State, Zip: Steelton, PA 17113	Expiration Date: March 15, 2018
MS4 Contact Person: Doug Brown	Renewal Due Date: September 16, 2017
Title: Borough Manager	Municipality: Steelton Borough
Phone: (717)939-9842	County: Dauphin
Email: dbrown@steeltonpa.com	Consultant Name: Herbert, Rowland & Grubic, Inc.
Co-Permittees (if applicable): N/A	Consultant Contact: Erin Letavic, P.E. 369 East Park Drive Harrisburg, PA 17109 (717)564-1121

Steelton Borough is a small MS4 community currently in its administratively extended second general permit term. The Borough is fully developed and the entire 1191.8 acre municipality is classified as Urbanized Area (UA) according to the United States Census Bureau's 2010 census. Steelton Borough is located solely within the Laurel Run-Susquehanna River HUC 12 watershed. As such the CBPRP/ Appendix-E Planning Area shall be considered as the UA contained within the municipal boundary minus those areas parsed in Section D of this Plan. Several streams within the Borough's jurisdiction are classified as impaired; however, no total maximum daily load (TMDL), or waste load allocations (WLAs) have been established for any stream in the Borough's CBPRP / Appendix-E Planning Area. The Borough currently owns, operates, and maintains a Small Municipal Separate Storm Sewer System (MS4) which consists of all of the Borough's stormwater management facilities. As an MS4 community that discharges to the Chesapeake Bay Watershed, the Borough is responsible for preparing and submitting to PADEP a Chesapeake Bay Pollutant Reduction Plan.

¹ PADEP, MS4 Requirements Table (Municipal), Last revised 05/09/2017

² PADEP PRP Instructions; Document # 3800-PM-BCW0100k (rev. 3/2017)



SECTION A: PUBLIC PARTICIPATION

A complete copy of this CBPRP was made available for the public to review at the Steelton Borough Office from August 2, 2017 to September 1, 2017. The availability of the document was publicized in *The Paxton Herald* on August 2, 2017. The published public notice contained a brief description of the plan, the dates and locations at which the plan was available for review by the public, and the length of time provided for the receipt of comments.

A copy of the public notice is included in Appendix A. Public comments were accepted for 30 days following the publication date of the public notice. The Borough did not receive any public comments during the public review and comment period.

A public meeting was held on August 21, 2017 at the Steelton Borough Municipal Office to present the information contained in this report to the public. Comments and questions regarding the CBPRP were received during the public presentation. A copy of the meeting agenda at which the CBPRP was presented are included in Appendix A. Meeting minutes were not approved as of the date of this submittal, but will be held on file once approved.

SECTION B: MAP

The Borough's CBPRP Planning Area Map depicts the Borough's entire Municipal Separate Storm Sewer System (MS4), as required under MCM #3, BMPs 2 and 3 of the PAG-13 Notice of Intent (NOI). In addition to the MS4 infrastructure (inlets, pipes, outfalls, existing BMPs, etc.), the CBPRP Planning Area Map also shows the CBPRP / Appendix E Planning Area, UA, and proposed BMP locations. The Borough's Land Use Map was developed using the most recent National Land Cover Database³. The Borough is largely developed at a level of medium or high intensity with extremely limited open space.

³ Multi-Resolution Land Characteristics (MRLC) Consortium, *National Land Cover Database 2011* (NLCD 2011)

SECTION C: POLLUTANTS OF CONCERN

The pollutants of concern for Steelton Borough, shown in Table 1, were determined by referencing the PADEP MS4 Municipal Requirements Table⁴. The applicable section of this table is included for reference in Appendix C.

Table 1. Pollutants of Concern by Watershed

Impaired Watershed	Pollutants of Concern
Pennsylvania Canal	Appendix E - Siltation (5)
UNTs to Spring Creek	Appendix E - Siltation (5)
UNTs to Susquehanna River	Appendix E - Siltation (5)
UNTs to Swatara Creek	Appendix E - Siltation (5)
Chesapeake Bay	Appendix D – Nutrients, Siltation (4a)

Likely sources of these pollutants in the Borough have been identified as follows:

- Siltation / Sediment (TSS):
 - Streambank erosion
 - Construction / earth moving activities
 - Urban runoff
 - Industrial Activities
- Nutrients (TN, TP):
 - Lack of adequate stream buffer
 - Heavy use of lawn fertilizers
 - Urban runoff

Since all impaired watersheds (Table 1) drain to the Laurel Creek-Susquehanna River HUC-12 watershed (020503051011), and ultimately to the Chesapeake Bay; the required pollutant load reductions for all impaired watersheds listed in Table 1 will be achieved through the implementation of the Borough's Chesapeake Bay Pollution Reduction Plan, as suggested by PADEP's Pollutant Aggregation Table.

TSS – Total Suspended Solids

TN – Total Nitrogen

TP – Total Phosphorus

⁴ PADEP, MS4 Requirements Table (Municipal) (rev. 6/26/2017)

SECTION D: DETERMINE EXISTING LOADING FOR POLLUTANTS OF CONCERN

In order to calculate the actual pollutant loads applicable to the Steelton Borough MS4, the PRP Instructions allow areas that do not drain to the MS4 and areas that are already covered by an NPDES permit to be removed from the CBPRP / Appendix E Planning Area⁵ through the parsing process.

The following areas were parsed from the CBPRP and PRP planning area:

- **PennDOT Roadways** – The impervious area attributed to state roadways (PennDOT) within the Borough was parsed from the existing pollutant base load, as PennDOT as maintains their own MS4 permit to account for stormwater runoff generated from their systems.
- **General Permit for Stormwater Associated with Industrial Activity (PAG-03)** – Parcels located within the Planning Area that discharge stormwater associated with a General Permit for Stormwater Associated with Industrial Activity (PAG-03) were parsed from the existing load calculations.
- **Combined Sewer Overflow (CSO) Areas (PAG-06)** - Parcels located within the CSO service area that discharge stormwater associated with a General Permit for Wet Weather Overflow Discharges from Combined Sewer Systems (PAG-06) were parsed from the existing load calculations.
- **Direct Discharge Areas** – Direct discharge areas where stormwater runoff does not enter the MS4 and drain directly to a lake or river were removed from the Borough's planning areas.

A summary of parsed area removed from the Borough planning areas is shown in Table 2. Parsed areas are shown on the Planning Area Map (Appendix B). Detailed parsing calculations are included in Appendix D of the CBPRP.

Table 2. Parsed Area Summary – CBPRP / Appendix E Combined Planning Area

Parsed Area	Urbanized Area (acres)
PennDOT Roadways	21.2
PAG-03 Industrial Dischargers	278.3
CSO Capture Area	57.4
Direct Dischargers	181.4
Total Area Parsed	538.3

⁵ PADEP - PRP Instructions, Attachment A: Parsing Guidelines for MS4s in Pollutant Reduction Plans (rev. 3/2017)

Baseline Sediment Load Calculation

The existing pollutant loadings were calculated using the Simplified Method⁶. In accordance with this method, the parsed areas referenced in Table 2 were used to calculate the adjusted UA which was then multiplied by the percent pervious and impervious land use values for Steelton Borough listed in the Statewide MS4 Land Cover Estimates⁷ guidance document from PADEP. This calculation evaluates the acres of impervious and pervious land within the given planning area. The impervious and pervious acreages were then multiplied by the Developed Land Loading Rates for Dauphin County⁸ to determine the total existing pollutant load attributed to each planning area. The existing pollutant loading was determined for the CBPRP planning area.

As stated previously in Section C, the pollutants of concern are TSS, TN, and TP, however, it is presumed that within the overall Bay watershed, the TP and TN goals will be achieved when the permit-required sediment reduction is achieved⁹. For that reason, only the sediment load was calculated and included in Table 4. Detailed pollutant load calculations are provided in Appendix D.

Table 4. Baseline Sediment Load

Planning Area	Urbanized Area (acres)	Baseline Sediment Load (lbs/yr)
CBPRP/Appendix E	1191.8	1,268,557

Existing Pollutant Loading Adjustment for Previously Implemented BMPs

Steelton Borough does not have any previously installed BMPs to be used as a credit towards reducing the Borough's baseline load. As such, only the load reductions from the parsed areas listed in Table 2 were subtracted from the Borough's Baseline sediment load in order to determine the Borough's Existing sediment load (Table 4).

Table 4: Existing Sediment Load Summary – CBPRP Planning Area

Planning Area	Adjusted UA (acres)	Baseline Sediment Load (lbs/yr)	Parsed Area Sediment Load Reduction (lbs/yr)	Existing Sediment Load (lbs/yr)
CBPRP	653.5	1,268,557	878,442	390,116

The Borough's existing sediment load was calculated to be 390,116 lbs/yr.

⁶ PADEP PRP Instructions, Attachment C: Chesapeake Bay PRP Exemplified Using DEP Simplified Method (rev. 3/2017)

⁷ PADEP - Statewide MS4 Land Cover Estimates

⁸ PADEP - PRP Instructions, Attachment B: Developed Land Loading Rates for PA Counties (rev. 3/2017)

⁹ PADEP - PRP Instructions, Document # 3800-PM-BCW0100k (rev. 3/2017)

SECTION E: SELECT BMPS TO ACHIEVE THE MINIMUM REQUIRED REDUCTIONS

Steelton Borough discharges stormwater to surface water located within the Chesapeake Bay Watershed and is therefore regulated by PAG-13 General Permit, Appendix D (nutrients and sediment in stormwater discharges to waters in the Chesapeake Bay watershed). The pollutants of concern for the Appendix-D CBPRP are TSS, TP, and TN with required loading reductions of 10%, 5%, and 3%, respectively. However, it is presumed that within the overall Bay watershed, the TP and TN goals will be achieved when a 10% reduction in sediment is achieved¹⁰. Therefore, only the required 10% TSS reduction is calculated herein as a requirement for CBPRP / Appendix-E Planning Area load reductions (Table 5).

As one of the older communities in Dauphin County, Steelton Borough's roadway and utility infrastructure is ageing and being incrementally repaired and updated as needed. It is anticipated that during the permit term, other municipal infrastructure projects will arise. As the Borough understands the importance of stormwater management, any large-scale infrastructure improvement projects that come up will be evaluated to determine if there is the potential to incorporate green infrastructure or other stormwater improvements into the project. If the opportunity becomes available to meet the pollutant load reduction goals of this plan through modifications or expansions to other infrastructure projects, rather than through the stand alone BMPs described below, the municipality may choose to do so. If this route of meeting the pollutant load reduction requirements is chosen, all plans, details, and associated pollutant load reduction calculations for the new project will be included in future Annual Status Reports.

Table 5: Required Pollutant Load Reduction

Planning Area	Impairment	Existing Sediment Load (lbs/yr)	Required Sediment Load Reduction (lbs/yr)
CBPRP /Appendix-E	Sediment	390,116	39,012

¹⁰ PADEP - PRP Instructions, Document # 3800-PM-BCW0100k (rev. 3/2017)

Proposed BMPs

Steelton Borough is fully developed and lacks the available open or green space that is generally required for the placement of traditional land-based BMPs. Additionally, nearly all tributaries located in Steelton Borough are piped through the Borough's storm sewer system, offering extremely limited opportunities for instream BMP implementation.

The proposed strategy (Table 6) includes three stream restoration projects, of which one will be chosen to be implemented in order to accomplish the Borough's sediment required load reduction. The proposed sediment load reduction for the proposed BMP were calculated in terms of pounds per year using PADEP's standard BMP Effectiveness Values¹¹. Complete calculations for the anticipated sediment load reduction is provided in Appendix E.

Table 6: Proposed BMPs

Project Location	BMP ID	BMP Type	Length (ft)	Pollutant Load Reduction (lbs/yr)
Adams Street at North Street	BMP-01	Stream Restoration, Buffer Rehabilitation	871	39,090
Total				39,090


BMP Project Descriptions

The proposed BMP-01 project and alternate projects described below have not been fully designed. The project description is conceptual and intended for planning purposes only. The proposed project has been evaluated in terms of feasibility and estimated pollutant load reductions in order to meet the goals of this plan. It is possible that during plan implementation, the scope of the proposed BMP project may change or be replaced as additional information becomes available. Details for any and all projects providing improved water quality to the receiving waters of Steelton Borough will be documented in the Annual Status Reports.

BMP-01, Adams Street Stream Restoration - This project involves the implementation of 871 feet of streambank restoration for a high flow channel of a UNT to Susquehanna River. While the channel receives flow only during moderate to high flow events, the unstable and deteriorating condition of the channel offers the best opportunity to reduce the Borough's contributing sediment load enough to achieve the 10% CBPRP reduction requirement. Additionally, the site has been exploited as an illegal dumping ground for many years, and has become laden with accumulated trash and debris that has the potential of making its way into the Borough's storm sewer system and receiving waters. The project would entail the removal of the dumped materials, and the eroded banks would be regraded and undergo vegetative stabilization. The site also exhibits potential for implementation of bioretention that may be added to the project during the design phase.

ALT-01 & ALT-02, Pennsylvania Canal Confluence Stabilization - Two additional sites have been identified as alternate BMP locations (ALT-01 and ALT-02) should proposed BMP-01 be deemed insufficient or infeasible at some point during the forthcoming implementation phase. Both alternate projects include approximately

¹¹ PADEP Document 3899-PM-BCW0100M, NPDES Stormwater Discharges from Small MS4s, BMP Effectiveness Values (5/2015)



870 feet of stream restoration and naturalization, as well as riparian buffer rehabilitation on the Pennsylvania Canal as shown on the Project Location Map (Appendix B).



SECTION F: IDENTIFY FUNDING MECHANISMS

The design and construction of the BMPs proposed herein will be funded through municipal funds, as well as available grants, and public donation of materials and manpower.

SECTION G: BMP OPERATIONS AND MAINTENANCE (O&M)

Stream Restoration/Riparian Restoration

Operation and maintenance requirements for the streambank stabilization and buffer restoration projects include:

- Ensure disturbed areas are kept free of foot and/or vehicular traffic until full stabilization has occurred.
- Regular watering of plantings during the first growing season. Planting in the fall may reduce the need for additional watering.
- Conduct monthly site visits to ensure plantings are healthy and sufficiently watered, weeds are properly managed, sufficient mulch is in place until site is stabilized and plantings have become established.
- Conduct monthly site visits to ensure all disturbed earth remains stabilized and erosion or cutting of the streambank has not taken place. Any destabilized earth or active streambank erosion shall be repaired immediately upon discovery.
- Conduct annual inspections once streambank is stabilized and plants have become established.
- Immediately upon notice; repair any rills, gullies, or streambank cutting that may occur.
- Remove weeds and invasive plant species during each growing season. Naturally growing native vegetation should be left intact to promote stabilization of the streambank and surrounding area.
- Replace mulch as needed.
- Remove accumulated trash and debris weekly.
- Remove and replace dead and diseased plantings annually.
- Keep machinery and vehicles away from stabilized areas.

The contractor shall be responsible for the operation and maintenance of the streambank restoration and buffer project(s) until all features of the project have been successfully constructed to the specifications and design standards set forth by the Borough Engineer. The Contractor shall remain responsible for operation and maintenance of the streambank restoration and buffer project(s) until 70% permanent stabilization has been achieved.

Once construction of the project(s) is complete and stabilization has occurred, the Borough shall be responsible for long term implementation of all Operation and Maintenance procedures to ensure the streambank stabilization and buffer improvements remain operationally functional and physically consistent with the original design.



APPENDIX A – PUBLIC PARTICIPATION

Public Notice

Public Meeting Agenda



Order Confirmation

Ad Order Number 0008286097

Customer

STEELTON BOROUGH

Account: 34327

STEELTON BOROUGH

123 N FRONT ST,

STEELTON PA 17113 USA

(717)939-9842

FAX:

eletavic@hrg-inc.com; ltaylor@hrg-inc.com

Payor Customer

STEELTON BOROUGH

Account: 34327

STEELTON BOROUGH

123 N FRONT ST,

STEELTON PA 17113 USA

(717)939-9842

PO Number

Sales Rep. Marianna Aldridge

Order Taker Marianna Aldridge

Order Source Phone

Special Pricing

Tear Sheets	1	Net Amount	\$144.03
Proofs	0	Tax Amount	\$0.00
Affidavits	1	Total Amount	\$144.03
Blind Box		Payment Method	Invoice
Promo Type		Payment Amount	\$0.00
Materials		Amount Due	\$144.03
Invoice Text			

Ad Schedule

Product	The Patriot News	Placement/Class	Main Legals
# Inserts	1	POS/Sub-Class	Misc Legal Notices
Cost	\$136.53	AdNumber	0008286097-01
Ad Type	PA CLS Legal Liner	Ad Size	1 X 29 li
Pick Up #		Ad Attributes	
External Ad #		Color	<NONE>
Production Method	AdBooker	Production Notes	
Run Dates	Sort Text	NOTIC2500OFPUBLICPARTICIPATIONANDPUBLICMEETINGFORCHESAPEAKEBAYPOLLUTANTREDUCTIONPLANST	
08/01/2017			

Product	PennLive.com	Placement/Class	Main Legals
# Inserts	1	POS/Sub-Class	Misc Legal Notices
Cost	\$2.50	AdNumber	0008286097-01
Ad Type	PA CLS Legal Liner	Ad Size	1 X 29 li
Pick Up #		Ad Attributes	
External Ad #		Color	<NONE>
Production Method	AdBooker	Production Notes	
Run Dates	Sort Text	NOTIC2500OFPUBLICPARTICIPATIONANDPUBLICMEETINGFORCHESAPEAKEBAYPOLLUTANTREDUCTIONPLANST	
08/01/2017			

Ad Content Proof

**NOTICE OF PUBLIC
PARTICIPATION AND PUBLIC
MEETING FOR
CHESAPEAKE BAY POLLUTANT
REDUCTION PLAN**

Steelton Borough hereby gives notice of the 30-day public comment period for its National Pollutant Discharge Elimination (NPDES) Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) Pollutant Reduction Plan (PRP). Best management practices (BMPs) are proposed in the Plan to satisfy PRP requirements for the Chesapeake Bay and local stream impairments. The 30-day public comment period begins August 2, 2017 and ends September 1, 2017. At that time, the plan will be available on the municipal website (<http://www.steeltonpa.com>) and a hard copy will be available at the municipal office. The public is invited to review this document and provide written comments. The Plan will be discussed during the regularly scheduled municipal meeting on August 21, 2017 starting at 6:30PM, at the municipal building.

Steelton Borough Council Agenda

August 21, 2017

Call Meeting to Order: President Jeffrey Wright

Pledge of Allegiance: President Jeffrey Wright

Moment of Silence: Mayor Maria Marcinko

Executive Sessions between meetings: None

Approval of Minutes from previous meeting: August 7, 2017

Public Comment on Agenda Items only:

Approval of schedule of billing, requisitions, and change orders as presented for: July 2017

Approval of Department Reports:

Fire Department and Ambulance (Written Report)

Police Department (Written Report)

NEDC Committee (Written Report)

Public Works (Written Report)

Codes Department (Written Report)

Mayor's Report (Oral Report)

Borough Manager's Report (Oral Report)

Presentations:

Ms. Petrina

Request to Address Council
Regarding Codes Issue at
Neighboring Property

Mr. Brandon Meyers, HRG, Inc.

Presentation of MS4 Permit
Application and Associated
Chesapeake Bay Pollution Reduction
Plan

Mr. Wenger/Ms. Kreiser

Recommendation of Bank Proposal
for Financing of Steelton Fire Truck

Mr. Justin Mendinsky, HRG, Inc.

Engineer's Report

Action Items Presented by Engineer:

1. Request for Approval of
Payment Application #3 for
Arment Concrete for \$30,699.00

2. Approval of Change Order #4
Midstate Mechanical &
Electrical, LLC for Steelton Fire
House Annunciator for \$1,014
3. Change Orders to Arment
Concrete for Installation of
Bollards at Skate Park for \$1,250
4. Change Orders to Arment
Concrete for Installation of Fence
at Bowl for \$1,050
5. Change Order to Arment
Concrete for Installation of Fence
by Playground at Skate Park for
\$820

Communication:

Dauphin County Conservation District

Community Assistance Contact
Meeting to Review Floodplain Areas
September 19, 2017 to review
floodplain areas.

Herbert, Rowland & Grubic, Inc.

Recognition of Justin Mendinsky's
Status as Shareholder with HRG.

Dauphin County Office of Tax Assessment

Notice of Change in Assessment on
three properties from taxable to
non-taxable

United States Department of Commerce

Requesting Update for of Residential
Address for 2020 Census

Leane Beckey, Rollers Varsity Football Mom

Commendation to Officer Dory
Thompson for Providing Emergency
Assistance

Unfinished Business:

New Business:

Mr. Brown

CREDC Request to be Co-Applicant
on Gaming Grant for Arcelor
Mittal/UGI Project in Amount of

Mr. Brown

Request from Bright Futures Learning Center to be Co-Applicant on Dauphin County Gaming Grant in Amount of \$50,000

Mr. Brown

Request from Constables Association to Waive Outstanding Sewer Bill at 801 S. Front St.

Mr. Brown

Appointment of Delegate and Alternate to the Pennsylvania Municipal League 2017 Resolutions Committee Meeting and Business Meeting.

Mr. Brown

Request to Attend Training Sponsored by the PA State Association of Township Supervisors

Public Comments:

Council Concerns:

Executive Session:

Adjournment:

to Discuss Personnel Matters




APPENDIX B - MAPPING

Project Location Maps

Land Use Map

CBPRP Planning Area
Steelton Borough
Dauphin County, Pennsylvania

- Storm Outfall
- Storm Inlet
- Storm Manhole
- Storm Gravity Main
- Storm Virtual Drainline
- State Road
- Local Roads
- Sediment Impaired Stream
- Non-Impaired Stream
- USGS HUC12 Watershed
- Proposed Stream Bank Restoration
- Parsed Areas
- Urbanized Area (2010)



60000600
feet

Mapping derived from data provided by Steelton Borough,
PA DEP, PennDOT, US Census, and USGS.

7/28/2017	PM: MSB	GIS: BLS	QA: MDW	R001337.0494
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HRG
Herbert, Rowland & Grubb, Inc.
Engineering & Related Services
An Employee-Owned Company

369 East Park Drive
Harrisburg, PA 17111
717.564.1121 (phone)
717.564.1158 (fax)
www.hrg-inc.com



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

BMP-01

Steelton Borough
Dauphin County, Pennsylvania

- Storm Inlet
- Storm Manhole
- Storm Gravity Main
- Proposed Stream Bank Restoration
- Sediment Impaired Stream
- State Road
- Local Road
- Municipal Boundary

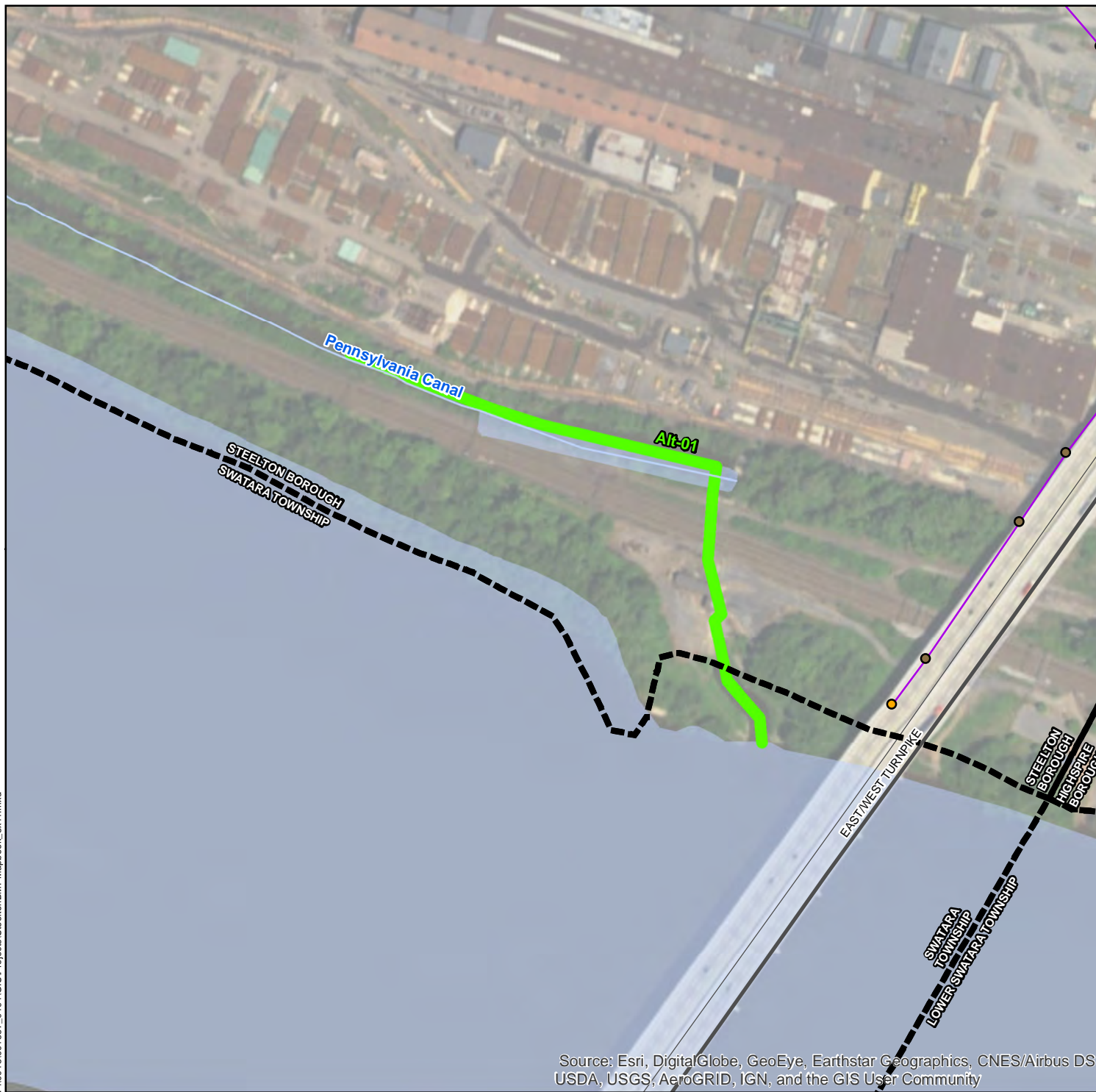
Mapping derived from data provided by Dauphin County, PA DEP, USGS, and ESRI.

7/28/2017	PM: MSB	GIS: BLS	QA: HSH	R001337.0494
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Alt-01

Steelton Borough
Dauphin County, Pennsylvania

- Storm Outfall
- Storm Manhole
- Storm Gravity Main
- Proposed Stream Bank Restoration
- State Road
- Local Road
- Municipal Boundary



0 300 Feet

Mapping derived from data provided by Dauphin County, PA DEP, USGS, and ESRI.

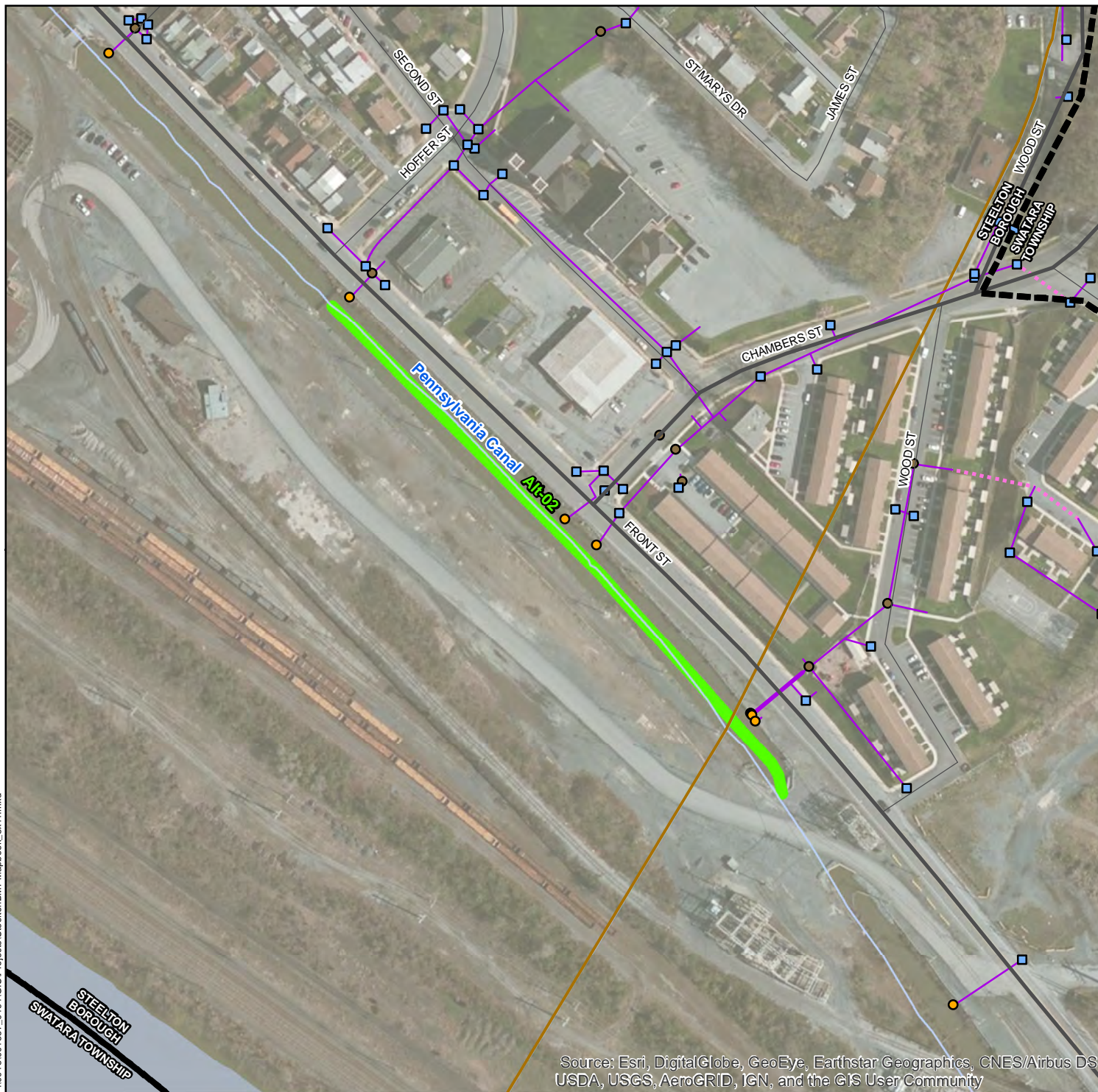
7/28/2017 PM: MSB GIS: BLS QA: HSH R001337.0494

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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Alt-02

Steelton Borough
Dauphin County, Pennsylvania

- Storm Outfall
- Storm Inlet
- Storm Manhole
- Storm Gravity Main
- Storm Virtual Drainline
- Proposed Stream Bank Restoration
- Sediment Impaired Stream
- State Road
- Local Road
- Municipal Boundary



0 200 Feet

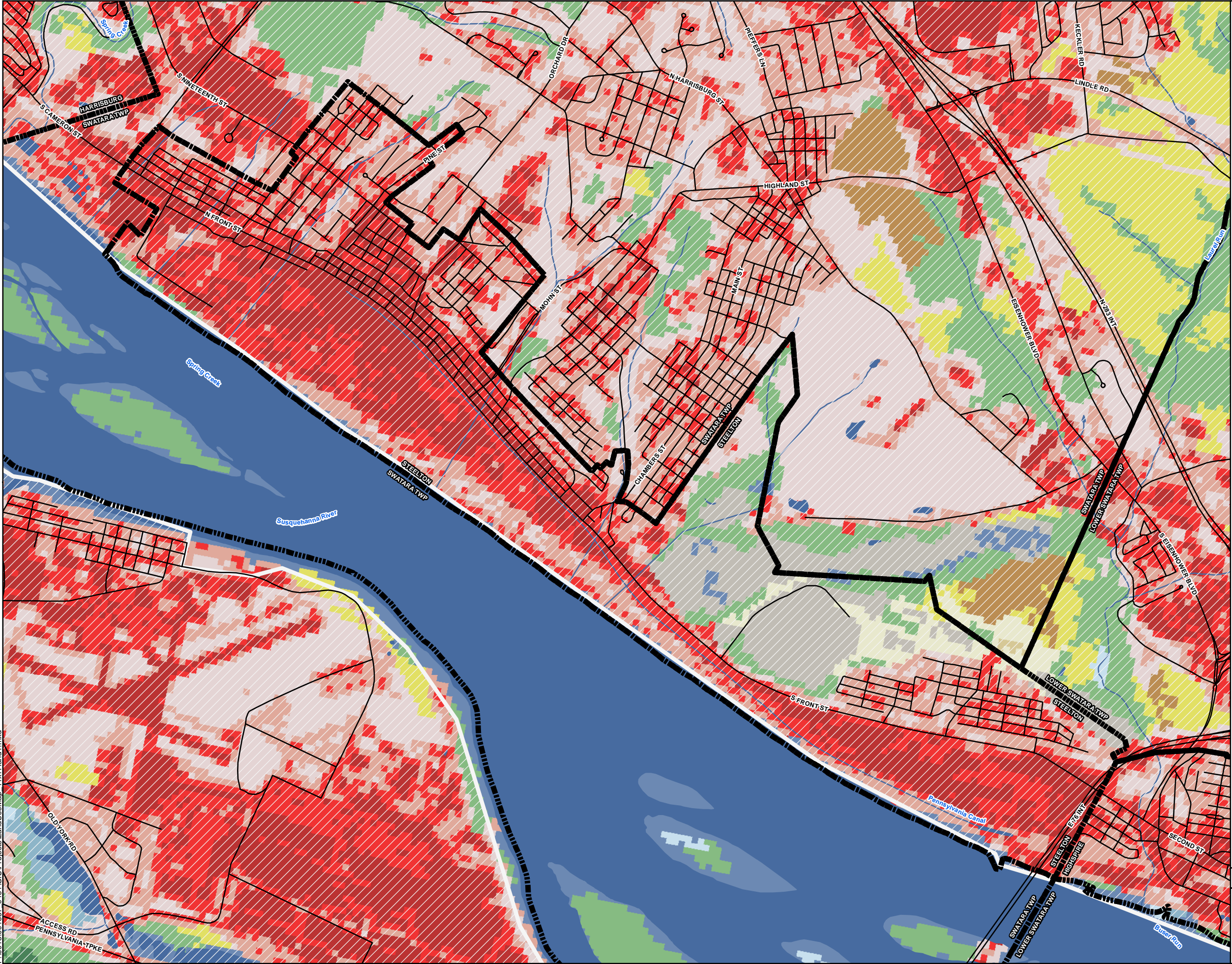
Mapping derived from data provided by Dauphin County, PA DEP, USGS, and ESRI.

7/28/2017 PM: MSB GIS: BLS QA: HSH R001337.0494

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Land Use Map
Steelton Borough
Dauphin County, Pennsylvania

- Road
- Municipal Boundary
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands
- Urban Areas (2010)



Mapping derived from data provided by Dauphin County, York County, USGS, US Census, and MRLC.

5/4/2017 PM: EGL GIS: BLS/HMG QA: HSH R001337.0451



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APPENDIX C – PADEP REQUIREMENT TABLES

PADEP Municipal MS4 Requirements Table

PADEP Pollutant Aggregation Table

MS4 Name	NPDES ID	Individual Permit Required?	Reason	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)	Other Cause(s) of Impairment
Dauphin County						
PENBROOK BORO	PAG133555	Yes	TMDL Plan	Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
				Unnamed Tributaries to Spring Creek	Appendix E-Siltation (5)	
				Susquehanna River	Appendix C-PCB (5)	
				Spring Creek		Cause Unknown (5)
				Asylum Run	Appendix B-Pathogens (5)	Water/Flow Variability (4c)
				Paxton Creek	Appendix B-Pathogens (5)	Other Habitat Alterations, Water/Flow Variability (4c)
				Paxton Creek TMDL	TMDL Plan-Siltation, Suspended Solids (4a)	
ROYALTON BORO	PAG133641*	No		Susquehanna River	Appendix C-PCB (5)	
				Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
SOUTH HANOVER TWP	PAG133500	No		Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
				Unnamed Tributaries to Beaver Creek	Appendix E-Siltation (5)	Flow Alterations (4c)
				Manada Creek	Appendix B-Pathogens (5)	
STEELTON BORO	PAG133625	No		Susquehanna River	Appendix C-PCB (5)	
				Pennsylvania Canal	Appendix E-Siltation (5)	
				Unnamed Tributaries to Spring Creek	Appendix E-Siltation (5)	
				Unnamed Tributaries to Susquehanna River	Appendix E-Siltation (5)	
				Unnamed Tributaries to Swatara Creek	Appendix E-Siltation (5)	
				Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
SUSQUEHANNA TWP	PAG133633	Yes	TMDL Plan	Slotznick Run		Cause Unknown (5)
				Paxton Creek TMDL	TMDL Plan-Siltation, Suspended Solids (4a)	
				Asylum Run	Appendix B-Pathogens (5)	Water/Flow Variability (4c)
				Paxton Creek	Appendix B-Pathogens (5)	Other Habitat Alterations, Water/Flow Variability (4c)
				Susquehanna River	Appendix C-PCB (5)	
				Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
				Unnamed Tributaries to Asylum Run		Other Habitat Alterations (4c)
				Unnamed Tributaries to Spring Creek	Appendix E-Siltation (5)	
				Wildwood Lake	Appendix E-Nutrients, Suspended Solids (4a)	
				Spring Creek		Cause Unknown (5)

MS4 Name	Permit Number	HUC 12 Name	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)
Dauphin County				
LOWER PAXTON TWP	PAG133643	Beaver Creek	Nyes Run	Appendix B-Pathogens
		Laurel Run-Susquehanna River, Paxton Creek	Asylum Run, Paxton Creek, Paxton Creek TMDL	Appendix B-Pathogens, Appendix E-Siltation, Suspended Solids, TMDL Plan-Siltation, Suspended Solids
		Laurel Run-Susquehanna River, Paxton Creek, Spring Creek	Asylum Run, Chesapeake Bay Nutrients\Sediment, Paxton Creek, Paxton Creek TMDL	Appendix D-Siltation/Nutrients, Appendix E-Siltation, Suspended Solids, TMDL Plan-Siltation, Suspended Solids
		Laurel Run-Susquehanna River	Susquehanna River	Appendix C-PCB
		Beaver Creek, Swatara Creek-Susquehanna River	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation/Nutrients
LOWER SWATARA TWP	PAG133543	Laurel Run-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Susquehanna River, Unnamed Tributaries to Sherman Creek, Unnamed Tributaries to Susquehanna River	Appendix C-PCB, Appendix D-Siltation/Nutrients, Appendix E-Siltation
		Swatara Creek-Susquehanna River	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation/Nutrients
MIDDLE PAXTON TWP	PAG133688	Clark Creek, Cove Creek-Susquehanna River, Fishing Creek-Dauphin County, Fishing Creek-Perry County, Laurel Run-Susquehanna River, Stony Creek	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation/Nutrients
		Cove Creek-Susquehanna River, Laurel Run-Susquehanna River	Susquehanna River	Appendix C-PCB
MIDDLETOWN BORO	PAG133645	Laurel Run-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Susquehanna River, Unnamed Tributaries to Sherman Creek, Unnamed Tributaries to Susquehanna River	Appendix C-PCB, Appendix D-Siltation/Nutrients, Appendix E-Siltation
		Swatara Creek-Susquehanna River	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation/Nutrients
PAXTANG BORO	PAG133554	Laurel Run-Susquehanna River, Spring Creek	Chesapeake Bay Nutrients\Sediment, Unnamed Tributaries to Spring Creek	Appendix D-Siltation/Nutrients, Appendix E-Siltation
		Laurel Run-Susquehanna River	Susquehanna River	Appendix C-PCB
		Spring Creek	Unnamed Tributaries to Spring Creek	Appendix E-Siltation
PENBROOK BORO	PAG133555	Laurel Run-Susquehanna River	Susquehanna River	Appendix C-PCB
		Laurel Run-Susquehanna River, Paxton Creek	Asylum Run, Paxton Creek, Paxton Creek TMDL	Appendix B-Pathogens, TMDL Plan-Siltation, Suspended Solids
		Laurel Run-Susquehanna River, Paxton Creek, Spring Creek	Asylum Run, Chesapeake Bay Nutrients\Sediment, Paxton Creek, Paxton Creek TMDL, Unnamed Tributaries to Spring Creek	Appendix D-Siltation/Nutrients, Appendix E-Siltation, Suspended Solids, TMDL Plan-Siltation, Suspended Solids
ROYALTON BORO	PAG133641	Hartman Run-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Susquehanna River	Appendix C-PCB, Appendix D-Siltation/Nutrients
		Laurel Run-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Susquehanna River	Appendix C-PCB, Appendix D-Siltation/Nutrients
		Swatara Creek-Susquehanna River	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation/Nutrients
SOUTH HANOVER TWP	PAG133500	Beaver Creek	Unnamed Tributaries to Beaver Creek	Appendix E-Siltation
		Beaver Creek, Manada Creek, Swatara Creek-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Unnamed Tributaries to Beaver Creek	Appendix D-Siltation/Nutrients, Appendix E-Siltation
		Manada Creek, Swatara Creek-Susquehanna River	Manada Creek	Appendix B-Pathogens
		Beaver Creek, Manada Creek, Swatara Creek-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Unnamed Tributaries to Beaver Creek	Appendix D-Siltation/Nutrients, Appendix E-Siltation
STEELTON BORO	PAG133625	Laurel Run-Susquehanna River	Chesapeake Bay Nutrients\Sediment, Pennsylvania Canal, Susquehanna River, Unnamed Tributaries to Spring Creek, Unnamed Tributaries to Susquehanna River, Unnamed Tributaries to Swatara Creek	Appendix C-PCB, Appendix D-Siltation/Nutrients, Appendix E-Siltation



APPENDIX D – EXISTING POLLUTANT LOADING CALCULATIONS

Baseline Pollutant Loading Calculations

Parsing Calculations

Existing Load Calculations

Table A: Baseline Sediment Load Calculation Summary

MS4	Urbanized Area					Loading Rate Sediment (lbs/ac/yr)		Total Load Sediment (lbs/yr)
	UA (acres)	% Imperv.	% Pervious	Imperv. (acres)	Perv. (acres)	Imperv.	Perv.	
Baseline Sediment Load	1191.8	45%	55%	536.31	655.49	1999.14	299.62	1,268,557

Table B: Parsed Area – Industrial Stormwater Permittees (PAG-03)

Permittee Name	Site	Site Address	UA	Approx. Site Area (acres)
ISG Steelton LLC (210034)	ArcelorMittal Steelton	215 S Front St Steelton, Pa 17113-2538	Yes	159.2
Dura Bond Pipe LLC (212927)	Dura Bond Steel Pipe Coating Steelton Plant	2716 S Front St Steelton, Pa 17113-3099	Yes	119.1
Total Parsed Area				278.3

Table C: Parsed Area – State Roadways (PennDOT)

Parsed Area (Roadway Name)	Roadway Dimensions		Area to be Parsed	
	Length (ft)	Width (ft)	Square Feet (ft ²)	Acres
Front Street	18,894	38	717,972	16.5
Pine Street	5,024	16	80,384	1.8
N. Harrisburg Street	1,524	30	45,720	1.1
Gibson Street	511	36	18,396	0.4
Mohn Street	573	52	29,796	0.7
Chambers Street	772	39	30,108	0.7
Total Parsed Area			922,376	21.2

Table C: Parsed Area – Direct Dischargers

Location	Site Description	Site Address	UA	Approx. Site Area (acres)
Hempt Bros. Inc.	Quarry	1001 S Front St Steelton, Pa 17113	Yes	181.4
Total Parsed Area				181.4

Table D: Parsed Area – Combined Sewer PAG-06

Permittee Name	Site Description	UA	Approx. Site Area (acres)
Steelton Boro Authority	Combined Sewer Overflow Service Area	Yes	57.4
Total Parsed Area			57.4

Table E: Existing Sediment Load Calculation Summary

MS4	Urbanized Area					Loading Rate Sediment (lbs/ac/yr)		Total Load Sediment (lbs/yr)
	UA (acres)	% Imperv.	% Pervious	Imperv. (acres)	Perv. (acres)	Imperv.	Perv.	
Baseline Sediment Load	1191.8	45%	55%	536.31	655.49	1999.14	299.62	1,268,557
Parsed Area (Roads)	21.2	100%	0%	21.17	0.00	1999.14	299.62	42,331
Parsed Area Adjustment (Steel Mill)	278.3	85%	15%	236.53	41.74	1999.14	299.62	485,362
Parsed Area (Quarry)	181.4	70%	30%	126.97	54.42	1999.14	299.62	270,141
Parsed Area Combined Sewer	57.4	65%	35%	37.31	20.09	1999.14	299.62	80,607
Existing Sediment Load								390,116



APPENDIX E – PROPOSED BMP POLLUTANT REDUCTION CALCS

Proposed BMP Pollutant Load Reduction Calculations

Table F: Proposed BMP Sediment Load Reduction Calculations

BMP Type	Map Reference	Location (Lat. / Long.)	Stream Length	Reduction Factor (lbs/ft)	Sediment Load Reduction (lbs/yr)
Streambank Stabilization	BMP-01	40.237801°, -76.840787°	871 ft.	44.88	39,090
Total Reduction					30,090

Table G: Alternate BMP Sediment Load Reduction Calculation

BMP Type	Map Reference	Location (Lat. / Long.)	Stream Length	Reduction Factor (lbs/ft)	Sediment Load Reduction (lbs/yr)
Streambank Stabilization	ALT-01	40.210301° - 76.802756°	870 ft.	44.88	39,046
Streambank Stabilization	ALT-02	40.224195° -76.827006°	870 ft.	44.88	39,046