

DRAFT

**PENNSYLVANIA TURNPIKE COMMISSION
POLLUTANT REDUCTION PLAN
FOR THE
CHESAPEAKE BAY DRAINAGE BASIN
NPDES PERMIT NO. PAI139602**



**PENNSYLVANIA TURNPIKE COMMISSION,
PENNSYLVANIA
OCTOBER 2022**



**PREPARED BY
SKELLY AND LOY, INC.
HARRISBURG, PENNSYLVANIA**

**PENNSYLVANIA TURNPIKE COMMISSION
POLLUTANT REDUCTION PLAN
FOR THE
CHESAPEAKE BAY DRAINAGE BASIN
PENNSYLVANIA TURNPIKE COMMISSION,
PENNSYLVANIA
NPDES PERMIT NO. PAI139602**

PREPARED FOR

**PENNSYLVANIA TURNPIKE COMMISSION
700 SOUTH EISENHOWER BOULEVARD
MIDDLETOWN, PENNSYLVANIA 17057**

PREPARED BY

SKELLY_{AND} LOY

A  Terracon Company

**449 EISENHOWER BOULEVARD, SUITE 300
HARRISBURG, PENNSYLVANIA 17111**

OCTOBER 25, 2022

TABLE OF CONTENTS

| | PAGE |
|---|------|
| 1.0 Executive Summary | 1 |
| A. Results | 1 |
| B. Purpose | 1 |
| C. PRP Layout | 2 |
| 2.0 Introduction | 3 |
| A. Location | 3 |
| 1. Contextual Location | 3 |
| 2. MS4 Regulated Area | 3 |
| 3. Chesapeake Bay Drainage Basin Location | 4 |
| B. Hydrology | 9 |
| C. Topography and Geology | 12 |
| D. Soils | 12 |
| E. Land Use | 13 |
| 3.0 Required PRP Components | 15 |
| A. Public Participation | 15 |
| B. Map | 16 |
| 1. MS4 Base Map | 17 |
| 2. Municipal Separate Storm Sewer System | 17 |
| 3. Outfalls | 18 |
| 4. Storm Sewersheds | 18 |
| 5. Numbering System | 19 |
| 6. Planning Areas | 21 |
| C. Pollutants of Concern | 21 |
| 1. MS4 Reduction Goals | 21 |
| D. Existing Loading for Pollutants Of Concern | 22 |
| 1. Synopsis | 22 |
| 2. Calculating MS4 Existing Pollutant Load | 23 |
| E. BMPs to Achieve the Minimum Required Reductions in Pollutant Loading | 25 |
| 1. Alternatives Considered | 30 |
| F. Funding Mechanism(s) | 32 |
| G. Responsible Parties for Operation and Maintenance of BMPs | 33 |



LIST OF FIGURES

| | PAGE |
|---|-------------|
| FIGURE 1 LOCATION MAP | 5 |
| FIGURE 2 HUC12 WATERSHEDS | 6 |
| FIGURE 3 PTC CHESAPEAKE BAY OUTFALL SUMMARY | 18 |
| FIGURE 4 BMP-4 LOCATION | 26 |

LIST OF TABLES

| | PAGE |
|---|------|
| TABLE 1 PTC CHESAPEAKE DRAINAGE BASIN: EXISTING POLLUTANT LOADS, REQUIRED REDUCTION TARGETS, AND ACHIEVED REDUCTIONS..... | 1 |
| TABLE 2 PENNSYLVANIA TURNPIKE SYSTEM ROADWAYS | 3 |
| TABLE 3 PTC CHESAPEAKE BAY DRAINAGE BASIN REGULATED/PLANNING AREA MS4 SEGMENTS | 7 |
| TABLE 4 PTC MS4 CHESAPEAKE BAY DRAINAGE BASIN HUC12 WATERSHEDS AND SURFACE WATERS | 9 |
| TABLE 5 PTC MS4 CHESAPEAKE BAY DRAINAGE BASIN SEDIMENT AND NUTRIENT IMPAIRED NON-ATTAINING RECEIVING SURFACE WATERS SUMMARY | 11 |
| TABLE 6 PTC MS4 CHESAPEAKE BAY LAND USE DISTRIBUTION TABLE SUMMARY | 14 |
| TABLE 7 SEWERSHED NUMBERING CODE | 20 |
| TABLE 8 TURNPIKE MILEPOST DIRECTION | 20 |
| TABLE 9 POLLUTANT REDUCTION TARGETS FOR THE CHESAPEAKE BAY DRAINAGE BASIN IN PTC PERMIT PAI136602..... | 21 |
| TABLE 10 EXISTING POLLUTANT LOAD BY URBANIZED AREA AND HUC12 WATERSHED FOR REGULATED PTC MS4 | 22 |
| TABLE 11 PROPOSED CHESAPEAKE BAY DRAINAGE BASIN BMPS | 25 |
| TABLE 12 ANTICIPATED SEDIMENT REDUCTION SUMMARY FOR BMP-4..... | 27 |
| TABLE 13 PTC MS4 TYPICAL BID PROCESS | 32 |
| TABLE 14 RES PERFORMANCE STANDARDS SUMMARY TABLE | 35 |



LIST OF APPENDICES

APPENDIX A – PUBLIC NOTICE COPY OF PA BULLETIN

APPENDIX B – PTC MS4 CHESAPEAKE BAY DRAINAGE BASIN
RECEIVING SURFACE WATERS TABLE

APPENDIX C – MS4 MAP LAYERS AND DATA SOURCES

APPENDIX D – MAPSHED URBAN AREA TOOL RESULTS

D1 Planning Area Existing Loads

D2 Land Use Distribution Summary

APPENDIX E – BMP CONCEPT DESIGN AND SUPPORT INFORMATION

E1 Project Location Map

E2 UNT to Susquehanna River (BMP-4) Existing Conditions Photographs

E3 Conceptual BMP Design Plan

E4 Anticipated Project Schedule

E5 Example Site Protection Instrument (SPI)

APPENDIX F – PUBLIC REVIEW COMMENTS



LIST OF ACRONYMS

| | |
|---------|---|
| BMP | Best Management Practices |
| CAST | Chesapeake Assessment Scenario Tool |
| CBPRP | Chesapeake Bay Pollutant Reduction Plan |
| CWA | Clean Water Act |
| GIS | Geographic Information System |
| GWLF | Generalized Watershed Loading Function |
| HUC | Hydrologic Unit Code |
| ID | Identification |
| IDD&E | Illicit Discharge Detection and Elimination |
| lbs/yr | Pounds per Year |
| LF | Linear Feet |
| M&M | Maintenance and Monitoring |
| MS3 | Municipal Separate Storm Sewer |
| MS4 | Municipal Separate Storm Sewer System |
| NHD | National Hydrology Dataset |
| NPDES | National Pollutant Discharge Elimination System |
| O&M | Operations and Maintenance |
| PA DEP | Pennsylvania Department of Environmental Protection |
| PA DCNR | Pennsylvania Department of Conservation and Natural Resources |
| PennDOT | Pennsylvania Department of Transportation |
| PRP | Pollutant Reduction Plan |
| PTC | Pennsylvania Turnpike Commission |
| RES | Resource Environmental Solutions, LLC |
| SCM | Stormwater Control Measure |
| SPI | Site Protection Instrument |
| TMDL | Total Maximum Daily Load |



| | |
|------|-----------------------------------|
| TN | Total Nitrogen |
| TP | Total Phosphorus |
| TSS | Total Suspended Solids (Sediment) |
| UA | Urbanized Area |
| UNT | Unnamed Tributary |
| USGS | United States Geological Survey |
| WLA | Waste Load Allocation |

1.0 EXECUTIVE SUMMARY

A. RESULTS

The pollutants of concern are sediment, phosphorus and nitrogen. Existing pollutant loads for the Pennsylvania Turnpike Commission (PTC) were estimated using the MapShed model. PA DEP declared that if the sediment (TSS) reduction goal is obtained, the permittee may presume that the total phosphorus (TP) and total nitrogen (TN) reduction goals are also met. Consequently, the PTC is reporting sediment reduction. A single Pollution Reduction Plan (PRP) Best Management Practice (BMP) is proposed to meet the PTC sediment reduction goal for the PTC's entire Chesapeake Bay Drainage Basin obligation. The pollution reduction project is a restoration and floodplain reconnection of a 1,440-foot segment of an unnamed tributary (UNT) to the Susquehanna River located in Lower Swatara Township, Dauphin County, Pennsylvania. Existing pollutant loads, required reduction targets, and achieved reductions are summarized in **Table 1** below.

TABLE 1
PTC CHESAPEAKE DRAINAGE BASIN: EXISTING POLLUTANT LOADS,
REQUIRED REDUCTION TARGETS, AND ACHIEVED REDUCTIONS

| POLLUTANT | EXISTING LOAD | REQUIRED REDUCTION % | REQUIRED REDUCTION (LBS/YR) | ACHIEVED REDUCTION (LBS/YR) | EXCESS REDUCTION (LBS/YR) |
|---|---------------|----------------------|-----------------------------|-----------------------------|---------------------------|
| Sediment (TSS) | 2,475,903 | 10% | 247,600 | 296,450* | 48,850 |
| Phosphorus (TP) | 659 | 5% | 33 | Presumed | - |
| Nitrogen (TN) | 10,186 | 3% | 306 | Presumed | - |
| * The sediment reduction total represents use of Chesapeake Bay Expert Panel Urban Stream Restoration Protocols 1 and 3 with pre-construction soils testing, stream assessment and monitoring, and with post-construction monitoring. | | | | | |

B. PURPOSE

The Chesapeake Bay Pollutant Reduction Plan (CBPRP) was prepared to comply with Pennsylvania Department of Environmental Protection (PA DEP) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit No. PAI139602, effective November 1, 2021, through October 31, 2026. The purpose of a PRP is to provide a basis for implementation of specific projects to capture and reduce pollutants conveyed by stormwater runoff before they reach streams, rivers, lakes, etc. (a.k.a., surface waters). Each PRP provides the background, assumptions, analysis, and methodology to establish a justifiable baseline of current pollutant load generation and then identifies BMPs with site locations, planning-level concept designs, costs, and implementation schedules. It also offers a framework for funding installation, operation, and maintenance activities that provides regulators with assurance that the identified project(s) will materialize within the scheduled timeframe. This PTC CBPRP assesses the urban watersheds within the Chesapeake Bay Drainage Basin through



which the Pennsylvania Turnpike passes, regardless of the surface waters' water quality (attaining or non-attaining) designated use status.

C. PRP LAYOUT

The Executive Summary is followed by two sections. Section 2.0 (Introduction) describes the PTC's characteristics influencing PRP decisions. Topics within Section 2.0 include Hydrology, Topography and Geology, Soils, and Land Use.

Section 3.0 (Required PRP Components) provides technical data, analysis and substantiation, and proposed BMP specifics. It is organized and titled to match the titles and sequence of the PA DEP's PRP Instructions per the directions. The subsections are:

- A. Public Participation
- B. Map
- C. Pollutants of Concern
- D. Existing Loading for Pollutants of Concern
- E. BMPs to Achieve the Minimum Required Reductions in Pollutant Loading
- F. Funding Mechanism(s)
- G. Responsible Parties for Operation and Maintenance (O&M) of BMPs

The PTC opted to use the presumptive approach to report pollutant reduction. Under this approach, it is assumed that if the required sediment reduction is achieved, phosphorus and nitrogen reductions are also reached. Therefore, only sediment load reduction is reported.

2.0 INTRODUCTION

A. LOCATION

1. Contextual Location

The Pennsylvania Turnpike is a limited-access toll road network that crosses the state from the Pennsylvania-Ohio border northwest of Pittsburgh to the Pennsylvania-New Jersey border east of Philadelphia. The network also serves regions north and south of Pittsburgh and north of Philadelphia and is comprised of the segments listed in **Table 2**, Turnpike System Roadways.

TABLE 2
PENNSYLVANIA TURNPIKE SYSTEM ROADWAYS

| ROADWAY NAME | ROUTE NO. | DESCRIPTION | MILES |
|--|------------|--|------------|
| Turnpike Mainline | I-76/I-276 | Ohio to New Jersey Connector | 359 |
| Beaver Valley Expressway | I-376 | PA-51 to US-422 | 16.3 |
| Southern Beltway | PA-576 | South of Pittsburgh International Airport to I-79 | 5.7 |
| Mon/Fayette Expressway | PA-43 | Pittsburgh to Uniontown Connector | 51.4 |
| Amos K. Hutchinson Bypass (a.k.a., Greensburg Bypass) | PA-66 | I-70 to US-22 Connector | 13.3 |
| Northeast Extension | I-476 | Philadelphia-Allentown-Wilkes Barre-Scranton Connector | 110.1 |
| TOTAL LENGTH | | | 556 |

2. MS4 Regulated Area

The MS4 NPDES Permit applies only to urban runoff from land within the Urbanized Areas (UAs), as defined by the 2010 Census, that flows through a municipally owned and operated stormwater system with an identifiable concentrated discharge (outfall) to a surface water. The MS4 Permit also applies to non-municipal entities specified by PA DEP that are public-sector organizations and function similarly to municipal governments relative to operations of stormwater infrastructure and contributing drainage areas. The PTC is one of the organizations within this group of non-traditional MS4s.

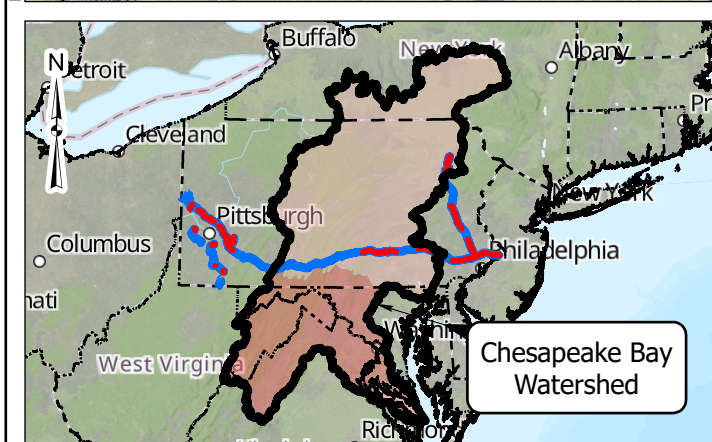
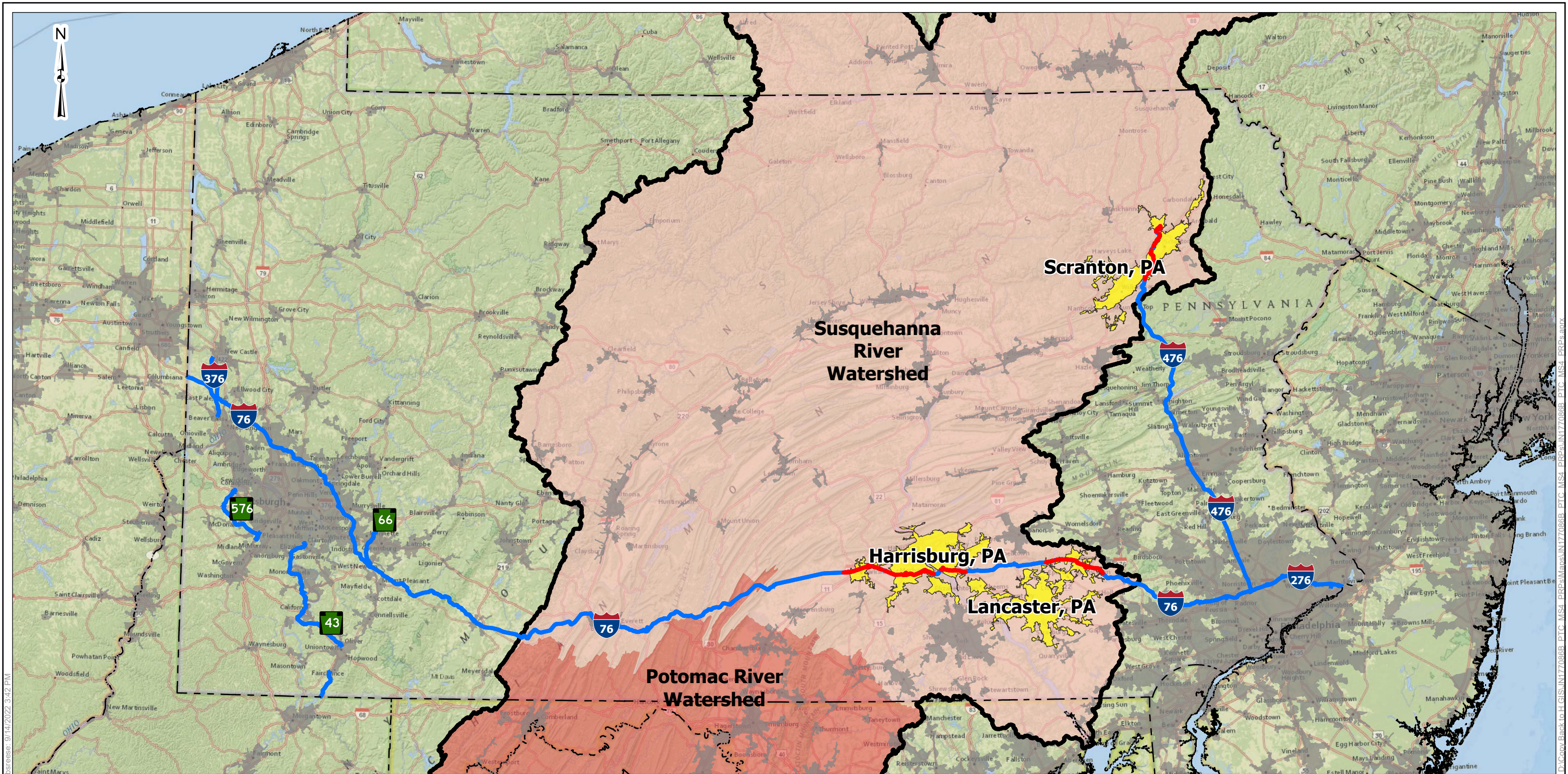
The MS4 regulated area for the PTC includes UAs as defined by the U.S. Census Bureau in its 2010 ten-year census plus the upland contributory drainage area that is within the jurisdiction of the PTC. The basis for the UA criteria, the 2010 Census, is specified in the PTC's MS4 Permit and the additional upgradient area contributing to the UA is stipulated in FAQ #10 of PA DEP's *MS4 NPDES Permits Frequently Asked Questions* (revised December 2, 2021).

The storm sewer system consists of the PTC-owned and -operated stormwater conveyance network, including the roadway, inlets/catch basins, curbs, gutters, ditches, man-made channels, or storm drains.

3. Chesapeake Bay Drainage Basin Location

This PRP is focused on the regulated portion of the 556-mile Pennsylvania Turnpike located in or contributing runoff to the UAs within the Chesapeake Bay Drainage Basin. Approximately 43 miles of the Turnpike Mainline roadway located in southcentral Pennsylvania, and 15 miles of the Northeast Extension in the Wilkes-Barre Scranton region (a total of 58 miles of the Turnpike corridor) are within the Chesapeake Bay MS4 regulated area. Of the 43 miles along the Turnpike Mainline's regulated area, approximately 29 miles are within the Harrisburg UA and 14 miles are within the Lancaster UA. All of the MS4-regulated area along the Northeast Extension within the Chesapeake Bay Basin is within the Scranton UA.

The following figures and tables provide locational detail from the regional to more-detailed perspective. **Figure 1** is a location map that identifies the PTC's Chesapeake Bay MS4-regulated portion of the Turnpike. The applicable roadway segments are highlighted on the Location Map. **Figure 2** identifies the Hydrologic Unit Code (HUC) 12 watersheds that the PTC's Chesapeake Bay MS4-regulated area passes through. **Table 3** provides locational references for PTC's Chesapeake Bay regulated roadway segments to the nearest intersecting road or stream as well as providing Turnpike roadway segment length, latitude, and longitude of the segment midpoint and references to the UA, county, and HUC 12 watershed the PTC regulated-MS4 traverses.



Legend

- Pennsylvania Turnpike Roadway
- Pennsylvania Turnpike Roadway in MS4 Areas
- State Boundary
- Harrisburg, PA; Lancaster, PA; Scranton, PA;
- Other Urban Areas
- Chesapeake Bay Watershed
- Potomac River Watershed
- Susquehanna River Watershed

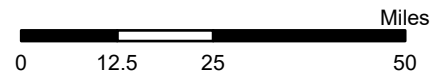
DATA SOURCES:
NatGeo World Map 2022, PTC 2021, US Census Bureau 2021, USGS 2022

| | |
|--------------|----------------|
| Permit No.: | PAI139602 |
| Date: | September 2022 |
| Drawn By: | BSR |
| Reviewed By: | SEL |



| LOCATION MAP |
|--|
| PTC MS4 REGULATED AREA CHESAPEAKE BAY WATERSHED PENNSYLVANIA |

| Figure |
|--------|
| 1 |



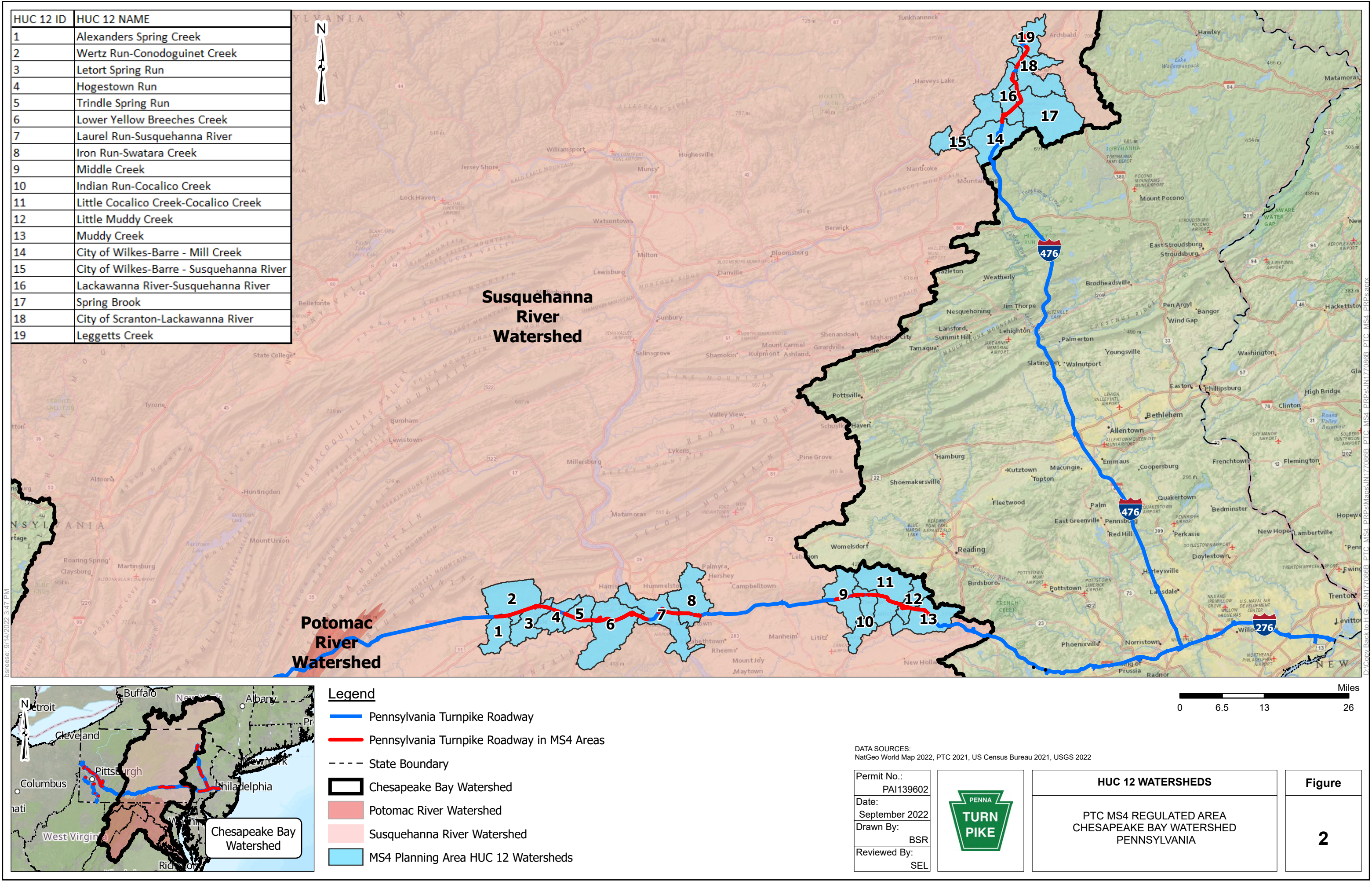


TABLE 3
PTC CHESAPEAKE BAY DRAINAGE BASIN REGULATED/PLANNING AREA MS4 SEGMENTS

| PTC ROADWAY NAME | | URBANIZED AREA | COUNTY | HUC12 NUMBER | HUC12 NAME | NEAREST CROSS- FEATURE BEGIN (WEST/SOUTH) | MILE POST BEGIN (WEST/SOUTH) | NEAREST CROSS- FEATURE END (EAST/NORTH) | MILE POST END (EAST/NORTH) | DISTANCE (MILES) | APPROXIMATE MIDPOINT (MILE POST) | LATITUDE | LONGITUDE |
|---|-------------------------|-------------------|--------------------------------------|--------------------------------|---|--|------------------------------------|--|----------------------------------|---------------------|--|-----------------|-----------|
| Turnpike Mainline | | | | | | | | | | | | | |
| Harrisburg, Pennsylvania | Cumberland | 020503050402 | Alexanders Spring Creek | McAllister Church Road | 219.9 | Letort Spring Run | 227.15 | 7.25 | 223.53 | N 040°12'56.42" | W 077°12'23.06" | | |
| | | 020503050403 | Wertz Run-Conodoguinet Creek | | | | | | | | | | |
| | | 020503050404 | Letort Spring Run | Interstate 81 | 227.45 | Railroad | 228.68 | 1.23 | 228.07 | N 040°13'35.83" | W 077°7'23.34" | | |
| | | 020503050405 | Hogestown Run | Appalachian Trail | 229.18 | Biddle Road | 230.03 | 0.84 | 229.60 | N 040°13'8.45" | W 077°5'44.12" | | |
| | | 020503050407 | Trindle Spring Run | North Locust Point Road | 231 | None | 233.2 | 2.2 | 232.10 | N 040°12'20.84" | W 077°3'5.80" | | |
| | York | 020503050505 | Lower Yellow Breeches Creek | None | 233.28 | Marsh Run Road | 244.5 | 11.22 | 238.89 | N 040°11'44.26" | W 076°55'32.79" | | |
| | | 020503051011 | Laurel Run-Susquehanna River | | | | | | | | | | |
| | Dauphin | | | PA Route 230 | 246.79 | PA Route 283 | 251.86 | 5.07 | 249.33 | N 040°12'38.05" | W 076°45'3.01" | | |
| | | 020503050906 | Swatara Creek-Susquehanna River | Roundtop Road | 252.38 | Schoolhouse Road | 253.31 | 0.93 | 252.85 | N 040°12'18.25" | W 076°41'4.35" | | |
| | Lancaster, Pennsylvania | Lancaster | 020503060902 | Middle Creek | Seglock Road | 274.95 | Kleinfeltersville Road | 276.88 | 1.93 | 275.92 | N 040°14'18.86" | W 076°15'47.45" | |
| | | | 020503060904 | Cocalico Creek-Conestoga River | Forest Hill Road | 277.52 | Sandy Hill Road | 279.35 | 1.83 | 278.44 | N 040°14'45.41" | W 076°12'59.63" | |
| | | | | | None | 279.96 | Swamp Bridge Road | 280.92 | 0.96 | 280.44 | N 040°14'43.81" | W 076°10'41.71" | |
| | | | | | Indian Run Tributary (Reach 02050306001409) | 281.15 | Stony Run | 290.9 | 9.75 | 286.03 | N 040°13'7.32" | W 076°4'59.91" | |
| 020503060901 | | | Little Cocalico Creek-Cocalico Creek | | | | | | | | | | |
| 020503061101 | | | Little Muddy Creek | | | | | | | | | | |
| | 020503061102 | Muddy Creek | | | | | | | | | | | |
| Subtotal Main Line MS4 Regulated/Planning Area Length | | | | | | | | | | 43.2 | | | |

**TABLE 3
(CONTINUED)**

| PTC ROADWAY NAME | | URBANIZED AREA | COUNTY | HUC12 NUMBER | HUC12 NAME | NEAREST CROSS-FEATURE BEGIN (WEST/SOUTH) | MILE POST BEGIN (WEST/SOUTH) | NEAREST CROSS-FEATURE END (EAST/NORTH) | MILE POST END (EAST/NORTH) | DISTANCE (MILES) | APPROXIMATE MIDPOINT (MILE POST) | LATITUDE | LONGITUDE |
|---|------------------------|----------------|--------------|--|-------------------------------|--|------------------------------|--|----------------------------|------------------|----------------------------------|-----------------|-----------|
| Northeast Extension | Scranton, Pennsylvania | Luzerne | 020501070202 | City of Wilkes-Barre-Mill Creek | Demark Road | 113.34 | North Keyser Avenue | 122.07 | 8.73 | 117.71 | N 041°20'14.66" | W 075°42'33.87" | |
| | | | 020501070205 | City of Wilkes-Barre-Susquehanna River | | | | | | | | | |
| | | | 020501070110 | Lackawanna River-Susquehanna River | | | | | | | | | |
| | | | 020501070108 | Spring Brook | | | | | | | | | |
| | | Lackawanna | 020501070109 | City of Scranton-Lackawanna River | North Keyser Ave | 122.12 | None | 122.51 | 0.39 | 122.32 | N 041°23'52.22" | W 075°43'49.64" | |
| | | | 020501070110 | Lackawanna River-Susquehanna River | | | | | | | | | |
| | | | 020501070109 | City of Scranton-Lackawanna River | None | 123.66 | Newton Road | 125.48 | 1.8 | 124.58 | N 041°25'34.28" | W 075°42'34.11" | |
| | | | | | None | 125.7 | None | 127.5 | 1.8 | 126.60 | N 041°27'0.08" | W 075°41'16.77" | |
| | | | 020501070105 | Leggetts Creek | Morgan Highway (PA Route 307) | 128.52 | End PTC (U.S. Route 11) | 130.97 | 2.45 | 129.75 | N 041°29'2.98" | W 075°41'25.15" | |
| | | | | | | | | | | | | | |
| Subtotal Northeast Extension – MS4 Regulated/Planning Area Length | | | | | | | | | | 15.2 | | | |
| TOTAL CHESAPEAKE BAY DRAINAGE BASIN MS4 PLANNING AREA LENGTH | | | | | | | | | | 58 | | | |

B. HYDROLOGY

The United States Geological Survey (USGS) developed a hierarchical system to classify hydrology by the region size draining to the watercourse. The HUCs are comprised of 2 to 12 digits and include regions (2 digits), subregions (4 digits), basins (6 digits), subbasins (8 digits), watershed (10 digits), subwatershed (12 digits), and reach codes (14 digits). HUC14 watersheds, or reach codes, aid in identifying specific outfalls within the HUC12 watersheds. Coding of smaller drainage areas to tributaries continue the same pattern with reach codes (14 digits). The PRP has been prepared based on the subwatershed (HUC12) level. HUC12s are generally in the 40- to 60-square-mile size (but can be larger or smaller). The PTC MS4 is contributory to 68 HUC12 watersheds statewide. Of those, 19 HUC12 watersheds are located within the Chesapeake Bay Drainage Basin and PTC MS4 Outfalls are located on 72 Chesapeake Bay Drainage Basin Surface Waters. (See **Table 4** below and **Figure 2**, PTC MS4 HUC12 Watersheds, p. 6)

TABLE 4
PTC MS4 CHESAPEAKE BAY DRAINAGE BASIN
HUC12 WATERSHEDS AND SURFACE WATERS

| HUC12 CODE | HUC12 WATERSHED NAME | SUBJECT SURFACE WATERS WITHIN HUC12 WATERSHED |
|--------------|--|---|
| 020503050402 | Alexanders Spring Creek | <ul style="list-style-type: none"> Alexanders Spring Creek |
| 020503050403 | Wertz Run- Conodoguinet Creek | <ul style="list-style-type: none"> Conodoguinet Creek 3 Conodoguinet Creek Unnamed Tributaries |
| 020503050404 | Letort Spring Run | <ul style="list-style-type: none"> Letort Spring Run 1 Letort Spring Run Unnamed Tributary |
| 020503050405 | Hogestown Run | <ul style="list-style-type: none"> Hogestown Run |
| 020503050407 | Trindle Spring Run | <ul style="list-style-type: none"> Trindle Spring Run |
| 020503050505 | Lower Yellow Breeches Creek | <ul style="list-style-type: none"> Cedar Run 2 Cedar Run Tributaries Yellow Breeches Creek 9 Yellow Breeches Creek Unnamed Tributaries |
| 020503051011 | Laurel Run- Susquehanna River | <ul style="list-style-type: none"> Marsh Run Buser Run Burd Run 1 Burd Run Unnamed Tributary 3 Susquehanna River Unnamed Tributaries |
| 020503050906 | Swatara Creek- Susquehanna River | <ul style="list-style-type: none"> Swatara Creek 2 Swatara Creek Unnamed Tributaries Iron Run 1 Iron Run Tributary |
| 020503060902 | Middle Creek | <ul style="list-style-type: none"> Segloch Run Middle Creek 2-Middle Creek Unnamed Tributaries |
| 020503060904 | Cocalico Creek- Conestoga River | <ul style="list-style-type: none"> Indian Run 2 Indian Run Unnamed Tributaries |
| 020503060901 | Little Cocalico Creek- Cocalico Creek | <ul style="list-style-type: none"> Cocalico Creek Little Cocalico Creek Stony Run |
| 020503061101 | Little Muddy Creek | <ul style="list-style-type: none"> Little Muddy Creek |
| 020503061102 | Muddy Creek | <ul style="list-style-type: none"> Muddy Creek 3 Muddy Creek Unnamed Tributaries |

**TABLE 4
(CONTINUED)**

| HUC12 CODE | HUC12 WATERSHED NAME | SUBJECT SURFACE WATERS WITHIN HUC12 WATERSHED |
|--------------|--|---|
| 020501070202 | City of Wilkes-Barre-Mill Creek | <ul style="list-style-type: none"> • 1 Gardner Creek Unnamed Tributary |
| 020501070205 | City of Wilkes-Barre-Susquehanna River | <ul style="list-style-type: none"> • Susquehanna River |
| 020501070110 | Lackawanna River-Susquehanna River | <ul style="list-style-type: none"> • Mill Creek • Lidy Creek • Saint Johns Creek • 1 Saint Johns Creek Unnamed Tributary |
| 020501070108 | Spring Brook | <ul style="list-style-type: none"> • Spring Brook • Spring Brook Unnamed Tributary • Stafford Meadow Brook |
| 020501070109 | City of Scranton-Lackawanna River | <ul style="list-style-type: none"> • Lackawanna River • Lucky Run • Lindy Creek • 1 Lindy Creek Unnamed Tributary • Keyser Creek |
| 020501070105 | Leggetts Creek | <ul style="list-style-type: none"> • South Branch Leach Creek • Leach Creek • Lindy Creek • 1 Lindy Creek Unnamed Tributary • Summit Lake Creek • 2 Summit Lake Creek Unnamed Tributaries • Leggetts Creek • 1 Leggetts Creek Unnamed Tributary |

Surface waters of Pennsylvania have been classified into four designated uses (aquatic life, fish consumption, potable water supply, and recreation), as found in Pennsylvania Title 25 Environmental Protection, Chapter 93 Water Quality Standards (Chapter 93). Every two years the surface waters are qualitatively evaluated and classified as having water quality supportive of their designated use (attaining) or having water quality deficient for support of the designated use (non-attaining). Non-attaining surface waters are tracked on the Clean Water Act (CWA) Section 303(d) List. The PTC's Permit stipulates use of the 2014 version as the basis for the PTC's pollutant load reductions.

Appendix B, PTC MS4 Chesapeake Bay Drainage Basin Receiving Surface Waters Table, identifies the PTC MS4 HUC14 receiving surface waters. Use of the HUC14 reach codes facilitates distinguishing one unnamed tributary from another one. The table provides outfalls, surface water name, reach code, the impairment status of the receiving surface water, and the cause of impairment if it is non-attaining. Of the 72 receiving surface waters, 15 are non-attaining due to sediment and/or nutrient impairment and are listed in **Table 5**, PTC MS4 Chesapeake Bay Drainage Basin Sediment and Nutrient Impaired Non-Attaining Receiving Surface Waters Summary (p. 11). Note that there are a number of surrogate names for sediments and nutrients. Surrogate names for sediments include Siltation, Suspended Solids, and Turbidity. Surrogate names for nutrients include Organic Enrichment/Low D.O. and Excessive Algal Growth. The Impairment Cause column also includes additional sources of impairment if identified on the CWA Section 303(d) List for the surface water.

TABLE 5
PTC MS4 CHESAPEAKE BAY DRAINAGE BASIN SEDIMENT AND NUTRIENT
IMPAIRED NON-ATTAINING RECEIVING SURFACE WATERS SUMMARY

| URBAN AREA | RECEIVING SURFACE WATER NAME | HUC12 CODE | HUC12 NAME | REACH CODE AT MOST DOWNSTREAM OUTFALL | CHAPTER 93 DESIGNATED USE | IMPAIRMENT CAUSE | SURFACE WATER NAME DOWNSTREAM OF RECEIVING SURFACE WATER |
|---|---|--------------|--------------------------------------|---------------------------------------|---------------------------|---|--|
| HARRISBURG, PENNSYLVANIA | Alexander Spring Creek | 020503050402 | Alexanders Spring Creek | 02050305000347 | CWF ¹ | Siltation | Conodoguinet Creek |
| | Hogestown Run | 020503050405 | Hogestown Run | 02050305000404 | CWF ¹ | Pathogens, Organic Enrichment/Low D.O., Siltation | Conodoguinet Creek |
| | Trindle Spring Run | 020503050407 | Trindle Spring Run | 02050305000490 | CWF ¹ | PCB, Siltation | Conodoguinet Creek |
| | Cedar Run • Cedar Run, Unnamed Tributary | 020503050505 | Lower Yellow Breeches Creek | 02050305000585 | CWF ¹ | Pathogens, Nutrients, Siltation | Lower Yellow Breeches Creek |
| | | | | 02050305000587 | CWF ¹ | Nutrients, Siltation | Cedar Run |
| | Marsh Run • Susquehanna River, Unnamed Tributary | 020503051011 | Laurel Run-Susquehanna River | 02050305000580 | WWF ² | Siltation | Susquehanna River |
| | | | | 02050305003257 | WWF ² | Siltation | Susquehanna River |
| LANCASTER, PENNSYLVANIA | Cocalico Creek | 020503060901 | Little Cocalico Creek-Cocalico Creek | 02050306000180 | WWF ² | Pathogens, Nutrients, Siltation | Conestoga River |
| | Stony Run • Muddy Creek, Unnamed Tributary | | | 02050306000492 | WWF ² | Pathogens, Nutrients, Siltation | Cocalico Creek |
| | | | | 02050306001365 | HQ-TSF ⁴ | Pathogens, Nutrients, Siltation | Muddy Creek |
| SCRANTON, PENNSYLVANIA | Lackawanna River | 020501070109 | City of Scranton-Lackawanna River | 02050107000109 | CWF ¹ | pH, Metals, Pathogens, Siltation | Susquehanna River |
| | Saint Johns Creek | 020501070110 | Lackawanna River-Susquehanna River | 02050107001015 | CWF ¹ | Siltation, Flow Alterations | Lackawanna River |
| | Summit Lake Creek | 020501070105 | Leggetts Creek | 02050107002484 | TSF ³ | Siltation, Thermal Modifications | Leggetts Creek |
| | Leggetts Creek • Leggetts Creek, Unnamed Tributary | | | 02050107000305 | CWF ¹ | Siltation | Lackawanna River |
| | | | | 02050107000307 | CWF ¹ | Siltation | Leggetts Creek |
| 1. CWF – Cold Water Fishes 2. WWF – Warm Water Fishes 3. TSF – Trout Stocking 4. HQ-TSF – High Quality Waters-Trout Stocking | | | | | | | |

The number of surface waters and the extent of the region covered preclude identification of all the individual surface waters on a small-scale report-sized exhibit. However, the HUC14 receiving waters are shown as lines on the MS4 maps for the entire PTC MS4-regulated area previously submitted to and on file at PA DEP (see Section 3.B, Map).

C. TOPOGRAPHY AND GEOLOGY

The Turnpike within the Chesapeake Bay is located in two physiographic provinces: the Ridge and Valley Province and the Piedmont Province. The PTC's Mainline lies in the Great Valley of the Ridge and Valley Province within Cumberland, Dauphin, and eastern Lancaster Counties. The Great Valley is characterized by undulating relatively flat topography with typical altitude of approximate 300 feet near streams and rivers and rising to 500 feet elevation above sea level at the high points along the Turnpike. This region has a strong tendency for sinkhole formation due to the dominance of the underlying limestone and its karst topography that has numerous enclosed depressions.

The Turnpike traverses the northern part of Lancaster County along the ridges of the Piedmont Province. Topographic relief is greater than the valley to the west, and the hills are comprised largely of conglomerate, sandstone shale, and diabase with elevations varying between 450 to 530 feet above sea level along the Turnpike that is situated between 800- to 1,000-foot ridges.

The northern part of the Turnpike's Northeast Extension lies in a unique section of the Ridge and Valley Province called the Anthracite Valley. True to the name, this area consists of coal-rich geology in high valleys between 1,200-foot-high mountain ridges. Due to the geology's metamorphic formation and its surrounding sandstone/conglomerate ridges, the coal fields of this formation are more resistant to erosion than other coal of Pennsylvania associated with finer-grained sedimentary rocks.

D. SOILS

This discussion is a generalized impression of the character of the PTC soils. Site-specific soils investigations will be required for design development.

Soils are foundational for stormwater pollution management. Well-drained soils with moderate permeability are ideal for successful implementation of infiltrative stormwater BMPs. Good soil fertility supports vigorous plant growth that is integral to infiltrative stormwater BMP effectiveness in pollution reduction. Soil characteristics along degraded streams guide the design response and are predictive of the effectiveness of sediment reduction. Soils with high levels of silt and very fine sand (loamy) tend to be more erodible. So, while loamy soils require careful management during construction to prevent sediment discharges, restorative projects that stabilize such soils can produce significant sediment reductions.

Soils of the Great Valley of Cumberland and Dauphin Counties are generally deep, moderately to well-drained, fine-textured silt loams and are limestone-based. The soils' fine-grained size aids in water retention, and their tendency toward alkalinity is conducive to plant growth. The loamy nature of the soils indicate that they are generally suitable for infiltrative BMPs and also suggests that stream stabilizing projects located in these soils can effectively reduce sediment pollution in the region.

In the northern part of Lancaster County (where the Turnpike crosses the Piedmont Province), the soils are sandy silt loams of the Ungers, Bucks, and Lansdale soil units. The soils have a good bit of variability; they are less fertile than the previously discussed soils, and their permeability fluctuates from very slow to very fast. The depth to bedrock also varies from deep to shallow. These soils tend to be easily eroded. Such variability underscores the need for thorough evaluation of soils to determine appropriate BMP selection and design response. The ease of soil erosion indicates that stream restoration/stabilization projects should be considered as an appropriate approach to sediment reduction.

The Anthracite Valley soils in the Wilke-Barre Scranton region have very poor fertility, often lacking any perceptible soil horizons. They are shallow, frequently less than two feet deep to a restrictive layer. An abundance of large surficial boulders hinders excavation. The overwhelming majority of soils in this area are Hydrologic Groups C and D. The lack of fertility and depth to limiting horizons suggest that restorative landscape and stream projects may be more effective than infiltrative BMPs for pollution reduction in the region.

E. LAND USE

The Turnpike is its own unique use. It is a limited-access road with user service and roadway maintenance support facilities. More than half of the corridor length traverses rural, agricultural, and forested land. The remainder crosses more metropolitan regions with urban character. New construction in the Chesapeake Bay Drainage Basin consists of bridge and infrastructure repair/replacement, roadway widening, and redevelopment of existing service plazas and maintenance facilities. Generally, the Turnpike is split evenly between impervious surfaces and pervious surfaces (vegetated). The ratio fluctuates to more strongly impervious where the roadway passes through urbanized environments and less impervious in rural and suburban settings.

The land uses depicted by the aerial photograph background of the MS4 maps are described below in **Table 6**, PTC MS4 Chesapeake Bay Land Use Distribution Table. The land uses were derived from the pollutant load estimating model (MapShed) utilized in preparation of the PRP (see **Appendix D**, Mapshed Urban Area Tool Results). The Land Use Distribution Table includes the Turnpike itself, but the reported categories reflect the land use through which the roadway passes. Mapshed names are cross-referenced to the Chesapeake Assessment Scenario Tool (CAST) program and are provided in accordance with the PA DEP PRP preparation instructions to refer to CAST names and definitions.

TABLE 6
PTC MS4 CHESAPEAKE BAY LAND USE DISTRIBUTION TABLE SUMMARY

| LAND USE | | CHESAPEAKE BAY DRAINAGE BASIN |
|---|-----------------------------------|--|
| MAPSHED NAME | CAST NAME | PLANNING AREA (ACRES) |
| Hay/Pasture | Pasture | 36 |
| Cropland | Double Cropped Land | 11 |
| Forest | True Forest | 43 |
| Wetland | Non-tidal Floodplain Wetland | 0 |
| Disturbed | Regulated Construction | 2 |
| Turfgrass (includes golf courses and large expanses of turf) | MS4 Turfgrass | 0 |
| Open Land | Mixed Open | 187 |
| Bare Rock | Non-Regulated Buildings and Other | 0 |
| Sandy Areas | Non-Regulated Buildings and Other | 0 |
| Unpaved Roads | No Equivalent | 0 |
| Low-Density (LD) Mixed | MS4 Buildings and Other | 468 |
| Medium Density (MD) Mixed | MS4 Buildings and Other | 424 |
| High-Density (HD) Mixed | MS4 Buildings and Other | 488 |
| Low-Density (LD) Residential | MS4 Buildings and Other | 4 |
| Medium Density (MD) Residential | MS4 Buildings and Other | 13 |
| High-Density (HD) Residential | MS4 Buildings and Other | 2 |
| Water | Water | 0 |
| TOTAL | | 1,678 |

3.0 REQUIRED PRP COMPONENTS

A. PUBLIC PARTICIPATION

The PTC invited public involvement and participation in the development of the Chesapeake Bay PRP as specified in their approved Permit and outlined below.

- The draft Chesapeake Bay PRP was posted on the PTC's Clean Water Website from September 24, 2022 to October 24, 2022.
- Notice of the draft Chesapeake Bay PRP was published in the *Pennsylvania Bulletin* on September 24, 2022. The announcement directed the public to its website to review the PRP, and a 30-day comment period was provided.
- A copy of public comments that were received are included in Appendix F, Public Review Comments.
- The PTC also directly contacted Lower Swatara Township, where the PTC's sole PRP project is located, on June 24, 2022, which is at least 30 days prior to the submission of the PRP to PA DEP (on October 31, 2022).
- Following approval by PA DEP, a complete copy of the Chesapeake Bay PRP will be posted on the PTC's Clean Water Website <https://www.paturndpike.com/responsibility-matters/clean-water> and will continue to be published on the website for the duration of permit coverage.

Should there be revisions to the PTC's Chesapeake Bay PRP that modifies the location, type, or number of proposed BMPs, the PTC will identify the revision(s) on its website and provide a 30-day period for the acceptance of public comments. Subsequently, a copy of public comments received and the PTC's record of consideration of the comments will be provided with PTC's Chesapeake Bay PRP to PA DEP.

The verbiage of the Notification placed in the *Pennsylvania Bulletin* is presented below. A copy of the *Pennsylvania Bulletin* notification is provided in **Appendix A**.



**PENNSYLVANIA BULLETIN NOTIFICATION FOR
THE PENNSYLVANIA TURNPIKE COMMISSION
CHESAPEAKE BAY DRAINAGE BASIN PRP**

Draft National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Pollution Reduction Plans for the Pennsylvania Turnpike Commission

Notice is hereby given that the Pennsylvania Turnpike Commission will receive public comment(s) on three proposed Pollution Reduction Plans (PRPs) required for their 2021-2026 National Pollutant Discharge Elimination System (NPDES) Individual Permit to discharge stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) Permit No. PAI139602.

The Pennsylvania Turnpike Commission has developed PRPs for the Chesapeake Bay, Delaware River and Ohio River Watersheds. The PRPs determine existing sediment pollutant loadings associated with stormwater runoff and proposes potential Best Management Practices to reduce the pollutant loads to meet the requirements of the MS4 Permit, for each watershed.

The proposed PRPs can be reviewed online by visiting <https://www.paturndpike.com/responsibility-matters/clean-water> then selecting “MS4” at the top of the page and navigating to “MS4 Documentation” under “MS4 Resources”. Written comments on the PRPs will be accepted for a period of 30 days from the date of this public notice by mail to Mr. James Kaiser, Pennsylvania Turnpike Commission, 700 South Eisenhower Blvd., Middletown, PA 17057 or by e-mail at jkaiser@paturndpike.com. All comments will be tabulated and considered with the final PRPs.

B. MAP

The PTC’s MS4 map that is the basis for the PRP was submitted as part of the MS4 Annual Report for the period ending June 30, 2018, and is on file as part of the publicly accessible record with PA DEP. The sidebar graphic on the next page summarizes the information provided narratively in the following section. The map is a Geographic Information System (GIS) product created using ESRI Arc Map and serves the following purposes:

1. Inventory of the PTC’s existing stormwater network
2. Regulated area identification including delineation of the following components listed in the PA DEP PRP Instructions:
 - a. Land uses and/or impervious and pervious surfaces
 - b. Outfalls
 - c. Storm sewershed boundaries
 - d. Planning areas
 - e. Locations of proposed BMPs
3. Framework for inspections and documenting maintenance practices and Illicit Discharge Detection and Elimination (IDDE) activities

4. Future project identification that show the location of proposed pollutant-reducing projects

1. MS4 Base Map

The base map information was acquired from various publicly available sources including Bing Maps, County Parcel Information provided by the PTC, PA DEP, Pennsylvania Department of Conservation and Natural Resources (PA DCNR), Pennsylvania Department of Transportation (PennDOT), and the U.S. Census Bureau that are detailed in **Appendix C**, MS4 Map Layers and Data Sources. The information from these sources is shown on the map unedited. There are variations in the locations of duplicated information. However, the composite of the information sufficiently provides the required data elements including land uses, impervious/pervious surfaces, locations and names of surface waters that receive discharges from the MS4 outfalls, public and private property lines, municipal boundaries, and the UA boundary according to the 2010 Census. The PTC and its consultant, Skelly and Loy, Inc., A *Terracon Company* (Skelly and Loy) make no claims as to the accuracy of the public-source data.

2. Municipal Separate Storm Sewer System

The stormwater sewer collection system shown on the MS4 maps, consisting of the surface stormwater conveyances (PTC roadway, catch basins/inlets, pipes, manholes, intakes and discharges, ditches, swales, and similar municipally owned or PennDOT components that are connected to the system and located within the PTC property), was digitized based on historical PTC construction plans and desktop analysis of aerial photographs and topography. During the analysis, some segments of the Turnpike were under construction and other areas contained documented and/or aerial images that showed conflicting information. These areas were flagged as areas of “Insufficient Data” because positions of the stormwater sewer system could not be conclusively located using desktop source information.

The stormwater sewer system and Insufficient Data areas will be updated on an ongoing basis, and updated mapping will be provided as part of Annual Reports during the permit term as required by the PTC’s approved MS4 Permit.

MS4 MAP SUMMARY

Purposes

- Inventory
- Regulated area identification
- Framework for inspections
- Future project identification

MS4 Base Map

- GIS-Based
- Compiled from publicly available sources

Municipal Separate Storm Sewer System

- Digitized from PTC construction plan archive and aerial photographs

Outfalls and Sewersheds

- Produced by professionals
- Color-coded:
 - Green for Attaining
 - Red for Non-Attaining

Planning Areas

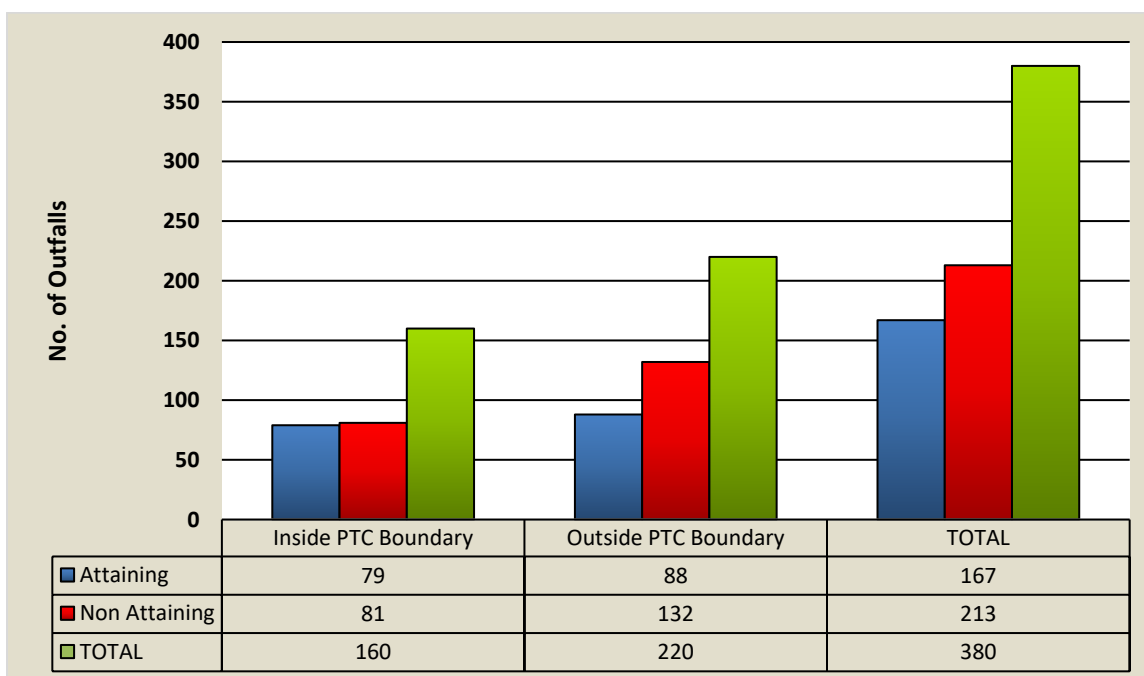
- Demarcated through GIS Analysis

3. Outfalls

The outfalls were located by the PTC's consultant, Skelly and Loy, by plotting the path that storm runoff will follow by gravity between the PTC's MS4 and the receiving surface water (a.k.a., rain traces). In establishing rain traces, surface topography with enclosed depression characteristics (such as stormwater basins, sinkholes, and ponds) were ignored, in accordance with PA DEP directions, to assume flooded conditions.

Statewide, PTC discharges to 1,727 outfalls; 886 outfalls are located within the PTC boundary, and 841 are outside the PTC territory. (**Appendix B**, PTC MS4 Chesapeake Bay Drainage Basin Receiving Surface Waters Table, provides the comprehensive list of outfalls, receiving surface waters, and surface water statistics.) There are 380 outfalls within the Chesapeake Bay Drainage Basin. **Figure 3**, PTC Chesapeake Bay Outfall Summary, provides a synopsis of the outfalls by location within the PTC MS4 (or beyond) and by impairment status of the receiving surface waters at the outfall location.

FIGURE 3
PTC CHESAPEAKE BAY OUTFALL SUMMARY

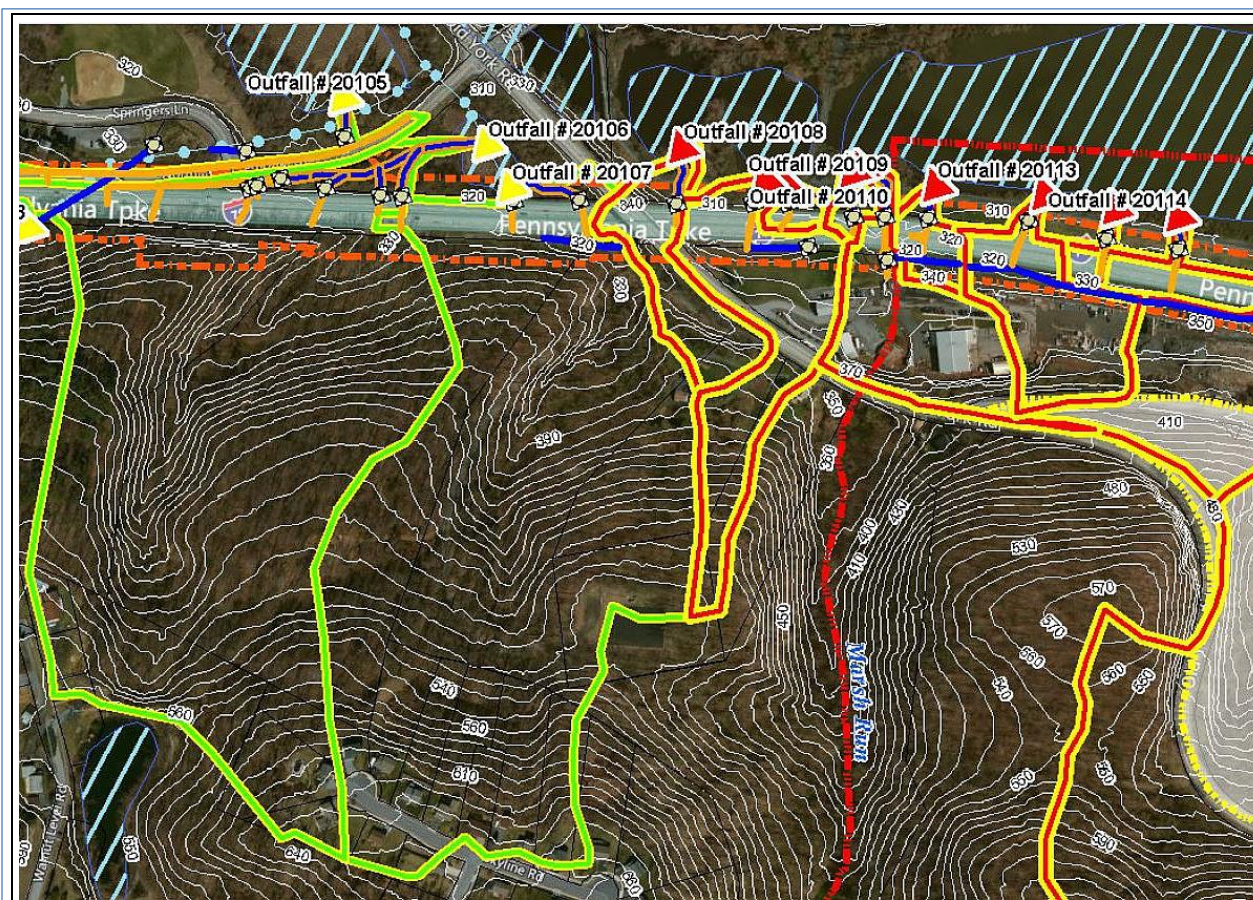


Of the 380 total outfalls, 160 are located within PTC-owned or -operated property; the remaining 220 outfalls discharge to surface waters beyond the PTC boundary and outside PTC purview. Outfalls within the PTC right-of-way have been field-verified during IDD&E screenings.

4. Storm Sewersheds

Storm sewersheds were produced by qualified staff using professional judgment to delineate contributory drainage area to each outfall. Sewersheds were color-coded to correspond

to the impairment/attainment status (in accordance with PA DEP's Integrated Water Quality Monitoring and Assessment Report) of the receiving surface water at the PTC MS4 outfall location. Sewersheds discharging to surface waters attaining their designated Chapter 93 use are color-coded "green." Sewersheds discharging to non-attaining surface waters are color-coded "red with a yellow halo." (See Photograph 1 below.)



Photograph 1 – Sample from 500-scale PTC MS4 Map: The image shows green-colored sewersheds discharging to attaining surface waters at yellow-colored outfalls and red-colored sewersheds discharging to non-attaining surface waters at red-colored outfalls.

5. Numbering System

The numbering code has five digits. The first digit refers to the major drainage basin in which the outfall is located. The next number refers to the sewershed's UA. The final three digits are the sewershed identification (ID) number. (See **Table 7**, PTC Sewershed Numbering Code, below.)

**TABLE 7
SEWERSHED NUMBERING CODE**

| DIGIT 1 | MAJOR DRAINAGE BASIN | DIGIT 2 | URBANIZED AREA | DIGITS 3 THROUGH 5 (SEQUENTIAL SEWERSHED ID) |
|---------|-------------------------------|---------|-------------------------|--|
| 1 | Ohio River Basin | 1 | Pittsburgh | 001 to 999 |
| | | 2 | Uniontown-Connellsville | |
| | | 3 | California-Monessen | |
| 2 | Chesapeake Bay Drainage Basin | 1 | Harrisburg | |
| | | 2 | Lancaster | |
| | | 3 | Wilkes Barre-Scranton | |
| 3 | Delaware River Basin | 1 | Philadelphia | |
| | | 2 | Allentown | |

The three-digit outfall ID was generated using the latitude/longitude coordinates of the outfall locations relative to their geographic position within each UA. A numbering routine to assign a “next number” based on longitudinal values for west-east Turnpike segments and latitudinal values for the north-south segments, supplemented with operator input on curving and transitional Turnpike segments, resulted in Sewershed IDs that generally follow the Turnpike System Roadway mile marker direction as shown below (**Table 8**, Turnpike Milepost Direction). In areas where there are multiple roadway segments or particularly dramatic changes in direction, sequential numbering might have sequencing gaps. This is because the following east or south coordinate is located on another road segment or curve within the same UA. Out-of-sequence numbering may also occur to accommodate new outfalls discovered during outfall screenings.

**TABLE 8
TURNPIKE MILEPOST DIRECTION**

| TURNPIKE ROADWAY NAME | ROUTE NUMBER | MILE POST DIRECTION (LOWEST TO HIGHEST VALUE) |
|---|--------------|---|
| Turnpike Mainline | I-76/I-276 | West to East |
| Beaver Valley Expressway | I-376 | Nominally: West to East Geographically: North to South |
| Southern Beltway | PA-576 | Nominally: West to East Geographically: North to South |
| Mon/Fayette Expressway | PA-43 | South to North |
| Amos K. Hutchinson Bypass (a.k.a., Greensburg Bypass) | PA-66 | South to North |
| Northeast Extension | I-476 | South to North |

Sewersheds contain structures and conveyances. The numbers are not shown on the map to preserve map legibility, but these features are numbered, too. The first five numbers of each component of the storm sewer system within a sewershed uses that sewershed’s ID number to tie those features to the sewershed. The number is followed by a period and suffix codes that identify the type of structure or conveyance, etc.

Once established, the numbering needs to remain constant so that activities occur at the same location and records stay connected perpetually. Newly discovered outfalls will most often result in splitting an established sewershed. Additionally, there are a few instances where the same sewershed identification number was inadvertently duplicated. In these cases, a prefix number “9” is added to one of the two sewersheds to differentiate them and their affiliated storm sewer components. For example, if an established sewershed with the number 22024 is split, one will retain 22024 and the other will become 922024.

6. Planning Areas

Planning Areas were derived through GIS analysis that merged and clipped the sewershed, the 2010 UA, and the upstream contributory area to the limits of the PTC right-of-way. Planning Areas represent the portion of the PTC where pollutant reduction is required. In the Chesapeake Bay Basin, the Planning Area includes all sewersheds regardless if they are attaining or non-attaining relative to the pollutants of concern, because every sewershed ultimately discharges the Chesapeake Bay which is subject to a Total Maximum Daily Load (TMDL) for sediment and nutrients, so sediment reduction is restorative to the Chesapeake Bay.

C. POLLUTANTS OF CONCERN

Pollutants of concern within the overall PRP Planning Area are sediment, total phosphorus, and total nitrogen. PA DEP established pollutant removal targets in the PTC’s approved permit. Pollutant removal goals for the Chesapeake Bay Drainage Basin are listed in **Table 9**.

TABLE 9
POLLUTANT REDUCTION TARGETS FOR THE
CHESAPEAKE BAY DRAINAGE BASIN IN PTC PERMIT PAI136602

| POLLUTANT | REDUCTION TARGET |
|-----------------|------------------|
| Sediment (TSS) | 10% |
| Phosphorus (TP) | 5% |
| Nitrogen (TN) | 3% |

1. MS4 Reduction Goals

The PTC has opted to use the presumptive approach. BMP projects to reduce pollutants will report only sediment reduction required to achieve 10% sediment reduction.

a. Presumptive Approach to Pollutant Reduction

In accordance with PA DEP’s PRP Instructions (3800-PM-BCW0100k, Rev. 3/2017) Section I.B., a presumption of nutrient removal compliance may be assumed if the permit-required sediment removal is achieved (10% in the Chesapeake Bay Drainage Basin).

D. EXISTING LOADING FOR POLLUTANTS OF CONCERN

1. Synopsis

Existing loading totals for sediment, phosphorus, and nitrogen were calculated by HUC12 watershed using the MapShed model. Analysis at HUC12 watershed scale is consistent with the requirement to apply the MapShed model to sufficiently sized (>10-square-mile) watersheds.

Table 10 lists the existing pollutant loads for each of the UAs and HUC 12 watersheds where the PTC MS4 is located. (Also see MapShed Urban Area Tool Results, **Appendix D1**, Planning Area Existing Loads.) A detailed discussion of the approach, the computer model, and other supporting calculations are provided below.

TABLE 10
EXISTING POLLUTANT LOAD
BY URBANIZED AREA AND HUC12 WATERSHED FOR REGULATED PTC MS4

| URBAN AREA | WATERSHED NAME (HUC CODE) | SEDIMENT TSS (LBS/YR) | PHOSPHORUS TP (LBS/YR) | NITROGEN TN (LBS/YR) |
|--|---|-----------------------------|------------------------------|----------------------------|
| HARRISBURG, PENNSYLVANIA | Alexanders Spring Creek (020503050402) | 6,731.0 | 9.8 | 280.9 |
| | Wertz Run-Conodoguinet Creek (020503050403) | 60,718.5 | 22.7 | 529.9 |
| | Letort Spring Run (020503050404) | 26,266.5 | 23.8 | 591.0 |
| | Hogestown Run (020503050405) | 976.5 | 1.0 | 48.4 |
| | Trindle Spring Run (020503050407) | 17,480.6 | 13.8 | 391.1 |
| | Lower Yellow Breeches Creek (020503050505) | 902,204.0 | 172.7 | 1,557.2 |
| | Laurel Run-Susquehanna River (020503051011) | 772,096.4 | 135.4 | 1,082.4 |
| | Swatara Creek-Susquehanna River (020503050906) | 57,941.2 | 17.6 | 288.5 |
| | <i>Subtotal – Harrisburg, Pennsylvania</i> | 1,844,414.7 | 396.8 | 4,769.4 |
| LANCASTER, PENNSYLVANIA | Middle Creek (020503060902) | 10,827.9 | 6.5 | 199.7 |
| | Cocalico Creek-Conestoga River (020503060904) | 36,519.8 | 17.2 | 362.2 |
| | Little Cocalico Creek-Cocalico Creek (020503060901) | 71,231.7 | 28.9 | 735.3 |
| | Little Muddy Creek (020503061101) | 59,867.4 | 41.9 | 920.3 |
| | Muddy Creek (020503061102) | 69,910.9 | 30.4 | 835.4 |
| | <i>Subtotal – Lancaster, Pennsylvania</i> | 248,357.7 | 124.9 | 3,052.9 |
| SCRANTON, PENNSYLVANIA | City of Wilkes-Barre-Mill Creek (020501070202) | 1,163.9 | 0.3 | 1.5 |
| | City of Wilkes-Barre-Susquehanna River (020501070205) | 35,888.8 | 17.2 | 282.3 |
| | Lackawanna River-Susquehanna River (020501070110) | 72,292.4 | 32.1 | 587.3 |
| | Spring Brook (020501070108) | 42,631.1 | 18.8 | 455.1 |
| | City of Scranton-Lackawanna River (020501070109) | 91,311.6 | 30.6 | 435.4 |
| | Leggetts Creek (020501070105) | 139,842.7 | 38.6 | 602.3 |
| | <i>Subtotal – Scranton, Pennsylvania</i> | 383,130.5 | 137.6 | 2,363.9 |
| CHESAPEAKE BAY DRAINAGE BASIN PTC MS4 TOTAL | | 2,475,902.9 | 659.3 | 10,186.2 |

2. Calculating MS4 Existing Pollutant Load

Calculating the existing pollutant load includes first determining what areas are regulated by the MS4 permit. The regulated portion of the PTC property includes the roadway and facilities that are in a UA or drain into a UA called planning areas. The initial planning area pollutant loads may be determined through accepted computer modeling (like MapShed) or by using the PA DEP Simplified Method (a spreadsheet application of generalized county-based pollutant loading rates that can be applied to planning areas to produce pollutant load estimates). The total pollutant load may be adjusted to recognize other conditions that could decrease MS4 pollutant- reduction obligations. Adjustments include 1) reducing the planning area through parsing and 2) reducing the modeled pollutant load equivalent to the capacity for pollution treatment in existing stormwater BMPs in excess of their required construction stormwater discharge NPDES Permit obligations.

The PTC used MapShed to generate pollutant loads and made no adjustments to decrease its MS4 pollutant load-reduction obligations.

a. MapShed Discussion

MapShed is a PA DEP- approved GIS-based modeling method. Data layers were downloaded from the MapShed website and serve as the basis for calculating existing pollutant loads. PTC performed Pollutant Load Calculations in 2017 to align with PA DEP instructions at the time and performed their pollutant modeling using MapShed. The results of the 2017 model represent identical criteria that municipal MS4 permittees applied.

i. MapShed Urban Area Tool

MapShed's Urban Area Tool analyzes the intensely developed portions of watershed to determine the existing pollutant loads generated by the PTC MS4 regulated area (Planning Area). The Urban Area Tool is reliant on access to a data layer and look-up table defining municipal boundaries referred to as the UA data layer. The turnpike is linear, and it crosses numerous municipalities. The PTC's boundaries do not coincide with municipal boundaries, and the MS4 Planning Area is only a portion of the entire PTC right-of-way. In order to access the underlying database, it was necessary to create and associate the PTC Planning Area as a substitution for MapShed's UA data layer.

In addition to the substitution for the built-in municipal layers that did not coincide with the planning area, limited adaptations were made to MapShed and are listed to the right.

MODIFICATIONS TO MAPSHED

- MapShed-provided data layers were re-projected and clipped to the municipal boundary to gain performance, reduce inconsistencies, and provide platform stability.
- Consultant-created Planning Areas were substituted for the MapShed-provided UA data layer.
- HUC12 watersheds from the USGS were substituted for MapShed-provided smaller watersheds.

The Urban Area Tool provides four categories of information:

1. **Watershed Total Pollutant Load** – The annual load of sediment, phosphorus, and nitrogen generated by the entire HUC12 watershed, expressed in pounds per year. Pollutant loading rates are generated at the HUC-12 watershed level.
2. **MS4 Total Pollutant Load** – The MS4 portion of the watershed's pollutant load. The MS4 Pollutant Load is the load generated when no adjustments are made to the planning area (planning area with no parsing).
3. **MS4 Regulated Pollutant Load** – Subset of MS4 total load reflecting any acreage reductions from the Planning Areas. This category would be used if parsing is applied to reduce the size of the planning area.
4. **Unregulated Pollutant Load** – Counterpart to the Regulated Pollutant Load that represents the portion of the pollutant load conveyed by another MS4 permittee (and not conveyed through the PTC MS4 stormwater sewer system).

The Regulated Pollutant Load portion of the Urban Area Tool allows the user to simulate parsing by inputting an adjusted percentage of land area within land use categories to reflect a smaller regulatory area resulting from exclusions (parsing). There was no parsing for the PTC (see Subsection d, Planning Area Deductions - Parsing, below).

GIS analysis was used to generate a substitute boundary for the Urban Area data layer. Therefore, the Regulated Pollutant Load and its counterpart, Unregulated Pollutant Load, categories of the Urban Area Tool were unnecessary. The Watershed Total Pollutant Load feature does not address PTC-relevant loading. The MS4 Total Pollutant Load feature of the Urban Area Tool is the only necessary Urban Area Tool feature that is needed for reporting.

b. Planning Area Determination

As stated in Section 3.B, Map (p. 16), the limits of the planning areas were created using GIS analysis to identify the portion of the PTC property within and contributing to the 2010 UA that is also served by the PTC separate storm sewer. In the Chesapeake Bay Drainage Basin, the planning area is synonymous with the regulated PTC MS4 because all sewersheds were included regardless of the impairment status of the receiving surface water. The PTC Planning Area was substituted for the Urban Area data layers in the MapShed model and consists of 1,678 acres.

c. Pollutant Load Calculation

Calculating the existing pollutant load includes determining which HUC12 watersheds require modeling. Applicable HUC12 watersheds are those containing planning areas (segments of the Turnpike that are in a UA or drain into the UA). MapShed analyzes data affecting pollution loads including streams, land cover, soils, topography/terrain, long-term precipitation data, and a few data sets like discharges from wastewater treatment plants and animal populations, that are not relevant to the PTC. Loading rates are generated for pollutants of concern based on the

character of the entire HUC12. The HUC12 loading rate is applied to the planning area(s) within the HUC12 to estimate the existing pollution generated by each planning area.

d. Planning Area Deductions - Parsing

Per the PA DEP PRP Instructions, it is acceptable to decrease the area from the first analysis by excluding/parsing areas that possess their own NPDES permit such as an industrial site covered by a PAG-03 permit, regions under the jurisdiction of another regulated MS4, and areas that do not contribute drainage to the permittee's Municipal Separate Storm Sewer (MS3). The smaller region remaining following the parsing exercise represents the MS4 Planning Area that is subject to pollutant reduction removal.

The PTC PRP did not perform any parsing.

e. Existing Stormwater Facility Pollutant Load Adjustments

In addition to land area excluded from the MS4 planning area, the pollutant load baseline is permitted to be further decreased to reflect the runoff pollution treatment provided by the PTC's existing stormwater management facilities in excess of the pollutant reduction required by their respective NPDES permits for construction stormwater discharges.

The PTC's PRP does not quantify/take reduction credit for pollutant removal accomplished by existing facilities to reduce the sediment reduction target. Therefore, the pollutant loads generated by the MapShed model represent the existing load baseline used to generate pollutant reduction targets.

Table 10, Existing Pollutant Load By Urbanized Area and HUC12 Watershed for Regulated PTC MS4 (page 22) presents the results from MapShed's Urban Area Tool. The results tables generated by the model are provided in **Appendix D**.

E. BMPs TO ACHIEVE THE MINIMUM REQUIRED REDUCTIONS IN POLLUTANT LOADING

The PTC is planning a single BMP project to meet the required sediment reduction target. The project is a 1,440-linear-foot (LF) stream floodplain restoration and is summarized in **Table 11**, Proposed Chesapeake Bay Drainage Basin BMPs, below.

**TABLE 11
PROPOSED CHESAPEAKE BAY DRAINAGE BASIN BMPs**

| BMP OPTIONS | NO. OF PROJECTS | TREATED LF | SEDIMENT REDUCTION (LBS/YR) | REDUCTION GOAL (LBS/YR) | EXCESS REDUCTION (LBS/YR) | COST |
|--|-----------------|------------|-----------------------------|-------------------------|---------------------------|------------|
| Stream Restoration | 1 | 1,440 | 296450* | 247,600 | 48,850 | \$1.95/lb. |
| * The sediment reduction total represents use of Chesapeake Bay Expert Panel Urban Stream Restoration Protocols 1 and 3 with pre-construction soils testing, stream assessment and monitoring and with post-construction monitoring. | | | | | | |

PTC and PennDOT collaboratively contracted a full-delivery vendor, Resource Environmental Solutions, LLC (RES) to locate PA DEP-acceptable pollution reduction projects; obtain required permits and approvals; and construct, operate, and maintain the project(s) perpetually to meet PTC's sediment reduction obligation in the Chesapeake Bay Drainage Basin.

RES identified the UNT to Susquehanna River Project (a.k.a., BMP-4) to meet PTC's reduction goal. The BMP is located just north of Lake Drive in Lower Swatara Township, Dauphin County, Pennsylvania, approximately 1,500 feet (0.28 mile) south of the PTC MS4 boundary (see **Figure 4**). The project meets PA DEP's site location criteria for stream restoration projects because it is within one mile of the PTC MS4 boundary. Additionally, the Turnpike is in the tributary's watershed and the tributary is downgradient of the Turnpike. Therefore, restoring the stream serves to reduce sediment pollution associated with the Turnpike's stormwater runoff.

Existing land cover within the proposed BMP project limits is mostly early successional forest and shrubland between roadways and residential developments. BMP-4 consists of a mainstem UNT originating from a culvert underneath Rosedale Avenue that flows south $\pm 1,950$ LF before entering an enclosure that feeds Lisa Lake to the south and an easterly flowing contributing UNT from White House Lane for a distance of approximately 620 feet to its confluence with the main stream. The main stream reach is listed as attaining for aquatic life, and its designated use is listed as Warm Water Fisheries (2014 and 2020 Integrated Report; Ch. 93 Designated Use). The stream is deeply entrenched with vertical banks up to six feet in areas and minimal bank protection/vegetation. RES proposes to utilize floodplain restoration for the majority of the reaches to maximize sediment reduction potential.



FIGURE 4
BMP-4 LOCATION

BMP-4 is the restoration of an unnamed tributary to the Susquehanna River



RES and Turnpike representatives confirmed with PA DEP staff that the proposal meets the eligibility requirements listed in PA DEP's *Considerations of Stream Restoration Projects in Pennsylvania for Eligibility as an MS4 Best Management Practice* (May 11, 2018).

RES applied Protocols 1 and 3 outlined by the Chesapeake Bay Program *Expert Panel to Define Removal Rates for Individual Stream Restoration Projects* reports as required when seeking sediment reduction credit above the default planning value. Pre-construction soils bulk density testing was completed. Erosion bank pins were set. Pre- and post-construction monitoring and surveying are planned. A PTC sediment (TSS) reduction of 296,450 pounds per year (lbs/yr) is projected.

RES will be restoring a longer stream segment than is needed to satisfy PTC's sediment reduction requirements. The company will be restoring 2,573 LF of degrading stream channel. However, the apportioned reductions credited to PTC is 296,450 lbs/year, which translates to approximately 1,440 LF of the overall stream restoration project. RES will sell the sediment reduction credits not committed to PTC to other MS4 permittees, such as Lower Swatara Township or PennDOT. **Table 12** summarizes expected sediment pollution reduction for the overall project and the commitment PTC is providing for MS4 pollutant reduction. compliance.

TABLE 12
ANTICIPATED SEDIMENT REDUCTION SUMMARY FOR BMP-4

| VARIABLES | | TOTAL BMP-4 PROJECT | PTC PORTION |
|--|---------------------------------------|---------------------|----------------|
| Sediment (TSS) Loading (lbs/yr) | | 303,010 | 169,582 |
| Protocol 1: Annual TSS Reduction (lbs/yr) | Interim 75% Efficiency | 227,258 | 127,187 |
| | Post-monitoring 90% Efficiency | 272,709 | 152,624 |
| Protocol 3: Additional TSS Reduction (lbs/yr) | | 257,000 | 143,832 |
| Total Annual TSS Reduction (lbs/yr) | Interim 75% Efficiency | 484,258 | 271,019 |
| | Post-monitoring 90% Efficiency | 529,709 | 296,456 |

The following BMP-4 information is located in **Appendix E**:

- (E1) Project Location Map
- (E2) UNT to Susquehanna River (BMP-4) Existing Conditions Photographs
- (E3) Conceptual BMP Design Plan
- (E4) Anticipated Project Schedule
- (E5) Example Site Protection Instrument (SPI)

In addition to the project's sediment reduction effectiveness, the project was selected for the following reasons:

1. **Prevents Stream Degradation/Restores Stream Health:** The ultimate purpose of the MS4 program is to ensure that surface waters are healthy. Whether the stream is classified as attaining, like the one proposed by BMP-4, or it is non-attaining and already on the integrated 303.D list, stream restoration provides meaningful sediment reduction. Additionally, the practices required by PA DEP to ensure eligibility for pollution reduction credits for stream restoration mandate introducing biodiversity and eco-system sustainability. While it is true that implementation of widely distributed new and retrofit SCMs will also improve stream health, benefits will be incremental, necessitate many projects, and require a long period of time to realize desired pollutant reductions in comparison to a single stream restoration project. The outcome of stream restoration is that more streams will attain or preserve their designated use more effectively than possible through implementation of other types of projects.
2. **Achievable implementation schedule:** PTC adheres to internal procedures for capital budget planning and a structured bid and procurement process for outsourcing of design, permitting, and construction. PTC has been making accommodations to prioritize expenditures for the capital investment so the allocation for BMP-4 is in the current budget. However, typical timing for a single uncontroversial contract from inception through construction is three to six years. The turnaround time is dependent on many factors (e.g., regulatory approvals) outside PTC's control. The variables and number of projects could destroy the schedule if PTC needed to process hundreds of smaller projects to meet its pollutant reduction obligations. A single, meaningful pollution reduction project adds predictability to the schedule.
3. **Effective:** The PTC is sensitive to budget because of its fiduciary responsibility to Turnpike users. It is important that projects perform well and are constructed for the best price, since ultimately it is Turnpike travelers who pay for improvements.
4. **Environmentally Sensitive:** A single construction site minimizes the overall

JUSTIFICATION FOR SELECTED POLLUTION REDUCTION PROJECT

- Prevents Stream Degradation/Restores Stream Health
- Achievable implementation schedule
- Effective
- Environmentally Sensitive
- Safety
- Potential flood alleviation for downstream neighbors
- Environmental Justice Benefits
- Consistent with PTC Sustainability Plan and Clean Water Initiative
- Diversification of PTC's Stormwater Management Response

amount of disturbed land and concentrates fewer construction vehicles and equipment at a single area. The simplicity minimizes potential for sediment releases from construction activity and air pollution and automotive fluid discharges from construction vehicles/equipment that multiply when construction takes place at numerous widely distributed construction locations. Additionally, stream restorations are designed to be self-sustaining, and therefore require fewer site visits for maintenance and less use of herbicides, pesticides, etc. over their life cycle. Finally, the habitat created by the restoration itself is environmentally beneficial.

5. **Safety:** Construction activity for a stream restoration project like BMP-4 is off the roadway. Generally, Stormwater Control Measures (SCMs) that capture and treat stormwater are located in close proximity to the travel lanes. As previously expressed, in order to be as effective for pollution reduction, many SCMs would be required to be constructed or renovated. Even though jersey barriers direct traffic and provide a protected area for contractors, each construction site would create safety hazards for both the Turnpike travelers and for construction contractors due to the disruptive traffic patterns. The proposed project selection eliminates hundreds of opportunities for traffic accidents because the project is separated from the active roadway.
6. **Potential flood alleviation for downstream neighbors:** BMP-4 is located upstream of a mobile home park adjacent to Lisa Lake. The community headlined local news in 2017 and 2021 due to flooding and experiences less intense inundation more frequently. The stream restoration project includes reconnection of the stream channel to its floodplain. This means that flood waters will have the opportunity to spread out and slow down before reaching Lisa Lake. The floodplain will provide additional flood storage and dampen the peak flood surges. While not guaranteed to prevent flooding downstream, the project should reduce the frequency and severity of flooding at the mobile home park.
7. **Consistent with PTC Sustainability Plan and Clean Water Initiative-** The previous bullets exemplify the PTC's mission to incorporate the organization's economic, environmental and social impact in decision making and to implement sustainable practices throughout the PTC system.
8. **Diversification of PTC's Stormwater Management Response:** The Turnpike already supports an inventory of approximately 430 widely dispersed SCMs that attenuate runoff and pollution from the roadway. These SCMs are engineered structures or devices designed to slow down, hold, infiltrate, and/or treat stormwater runoff before it enters waterbodies and groundwater. Stream restorations add diversity to the PTC stormwater management response.

1. Alternatives Considered

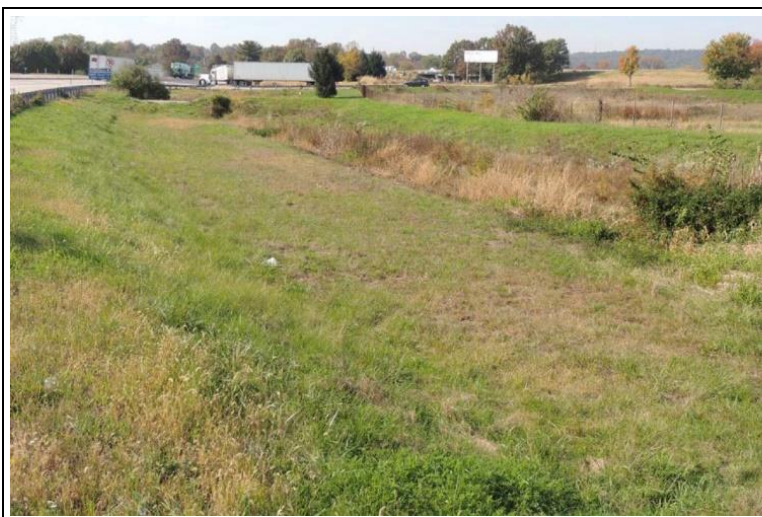
The PTC considered an abundance of options to accomplish pollution reduction. PTC initially analyzed sediment reduction through modifications of existing stormwater management facilities and capitalizing on landforms within the right-of-way that had spatial and physical characteristics that could be modified to hold runoff, allow sediment to settle, and provide infiltration. A list of criteria used to search and evaluate potential locations for PRP Projects is listed in the sidebar to the right. A total of 138 opportunity sites were identified. In order to achieve the same volume of sediment reduction accomplished by the selected BMP-4 stream restoration, PTC identified that 89 projects would be required. The projects included 1 dry detention basin, 40 extended-dry detention basins, and 48 swales. Some of the projects included treatment trains consisting of multiple SCM types at a single project location. The estimated cost was over \$47 million.

A significant determinative factor in project selection is achievability with the permit's time frame. While individual projects were achievable within the time frame established by the permit, collectively the time to design, permit, and construct the projects exceeded the schedule. (See the section on Impacts to Project Schedule provided below.)

The PTC also identified a potential stream restoration project in collaboration with municipal MS4s. The project is located in East Cocalico Township, Lancaster County. While the project meets the PTC reduction and location criteria, the schedules and legal complexities surrounding the collaboration in addition to schedule misalignment for the various partners, tipped the decision in favor of BMP-4 in Lower Swatara Township.

CRITERIA USED TO SEARCH AND EVALUATE PRP PROJECTS

- Simplicity of ownership
 - 1st PTC-owned properties
 - 2nd Land owned by an adjacent MS4
- Spatial and physical characteristics to support appropriately responsive BMP
- Modifications to existing stormwater management facilities
 - 1st Facilities constructed prior to 2003
 - 2nd Facilities constructed between 2003 and 2010
- Ease of Access
- Simplicity of Permitting
- Project achievable within time frame established by permit



Photograph No. 3 – Existing Stormwater Basin: Example of an existing stormwater facility evaluated for retrofit to improve pollutant removal capabilities.

a. Impacts to Project Schedule

There are two significant factors to project schedule: 1) internally required PTC procedures and 2) design/permitting timing. The second item has been previously discussed in this report. While PTC can prioritize design schedules, once the pre-construction permit applications are initiated, schedules are heavily influenced by the regulatory approval process and often include delays beyond PTC's control. As previously stated, the larger the number of projects, the greater the uncertainty for the schedule. The focus of the discussion below provides some of the internal complexities of scheduling within the PTC.

The PTC is a State Commission; its primary purpose is to construct, finance, and maintain the Pennsylvania Turnpike. It is an independent commission, not part of another state agency. It operates under the leadership of a five-member board (four members are appointed by the Governor with $\frac{2}{3}$ Senate approval, and one member is the current Secretary of PennDOT).

The PTC planning process intertwines time frame and costs. The cost of new construction activity is tied to its projected schedule for allocating funds. According to PTC Policy and Procedure [(PTC 502005539(02/01))]:

"The Ten-Year Capital Plan ("Capital Plan") is the process for identifying both short and long-term needs, establishing priorities and examining long-term financial implications and the overall effectiveness of funding such long-term needs and debt."

The Capital Plan is updated annually, allowing for modification based on new conditions/information. Projects are generally coordinated by matching their priority and available funds. Typically, a capital project will methodically move from long-term planning (10+ years) to construction.

The PTC outsources design, permitting, and construction services and has a structured bid and procurement process it follows to employ consultants and contractors. The procurement process is managed by PTC staff. The process ensures project quality as well as compliance with all ancillary regulation pertaining to the Commission's actions as a public governmental body. The integration of these requirements causes all but the most urgent emergency response activities to be completed more slowly than projects managed by local municipal governments or completed by the private-market sector.

Typical timing for a single uncontroversial contract from inception through construction is provided in **Table 13**, below. (Complex projects can require a longer time frame.)

TABLE 13
PTC MS4 TYPICAL BID PROCESS

| ID | DESCRIPTION | TIME EXPENDED |
|-----------------------|--|---|
| Project origination | Project added to Capital Plan | Varies (1 to 10+ years) |
| Project initiation | Project moved from planning to Request for Proposal (RFP) for Design | 12 months |
| Design and Permitting | Notice to Proceed to shovel-ready bid package | 12-24 months |
| Construction | Bidding through Final Construction | 12-36 months |
| TOTAL | | 36 to 72 months (excluding time on Capital Plan prior to bid process) |

If the Chesapeake Bay Drainage Basin PRP proposed 89 projects, some, but not all, could be processed simultaneously. This PRP focuses solely on the Chesapeake Bay Drainage Basin. The Turnpike also traverses the Ohio River Basin and the Delaware River Basin, which are included under the jurisdiction of the same MS4 permit with the same deadlines. The sheer number of projects; the extent of geographic regions involved; the number of projects (including those in the other major drainage basins); and the number of agencies, authorizations, and approvals realistically make use of widely dispersed small-scale pollution-reduction projects unrealistic. The only reasonable solution is to focus on a few large and effective stream restoration projects. The benefits of stream restoration as a solution for sediment pollution are itemized starting on page 28.

F. FUNDING MECHANISM(S)

The PTC contracted RES as part of an agreement for full-delivery of pollution-reducing projects in collaboration with PennDOT. The contract stipulates \$1.95/pound of sediment removed. The price includes locating and selecting project(s), securing land and easements or rights required for project implementation, designing the project, obtaining required permits and approvals, justifying project eligibility and pollution reduction credits including pre- and post-construction testing and monitoring, constructing the project, and providing for perpetual operations and maintenance (O&M) of the project. When complete the project will meet PTC's sediment reduction obligation in the Chesapeake Bay Drainage Basin. Since the preconstruction monitoring and design are underway but not finalized, the quote for the ultimate price is not yet available.

PTC reserved adequate funds, including a contingency buffer, in its capital budget in anticipation of this obligation. The organization will pay for the project from the Commission's general funds. The contract contains contract payment milestones; when the contractor satisfies that portion of work, PTC will release payment. The structure of the contract provides legal protections for PTC to compel work completion tied both to work quality and adherence to schedule. The PTC is confident in its capability to fund the project.

G. RESPONSIBLE PARTIES FOR OPERATION AND MAINTENANCE OF BMPs

As stated in the previous section, RES will be responsible for providing ongoing O&M. The following excerpt is taken from the *Chesapeake Bay Watershed Sediment Reduction Project Conceptual Pollutant Reduction Plan*, First Pennsylvania Resources, LLC, January 2022. (The table numbering and appendix reference in the excerpt were revised to be consistent with this document.)

Per the excerpt below, RES is responsible for maintenance during the Maintenance and Monitoring (M&M) period associated with Chapter 105 permit conditions, which includes fixing damage to the stream banks due to flood events, invasive species control, and performing inspections after major flood events that have the potential to damage the stream system during the establishment period covered by the permit. Following the M&M period, when the long-term O&M period begins, RES will act as the initial long-term steward unless responsibility is formally and legally delegated to another qualified, watershed-focused entity to assume long-term stewardship responsibilities. PTC can use legal remedies to enforce these contractual O&M obligations.

A copy of the Example Site Protection Instrument (SPI) is located in **Appendix E5**.

BMP Operations and Maintenance (O&M)

(Excerpted from *Chesapeake Bay Watershed Sediment Reduction Project Conceptual Pollutant Reduction Plan*, First Pennsylvania Resources, LLC, January 2022)

With regard to the land acquisition, RES identifies potential BMPs and contacts the landowners of the potential BMP. Regardless of ownership type (private or public), RES negotiates a site protection instrument (SPI) such as a declaration of restrictive covenant for conservation (DRC), and an agreement with the landowner which provides for the execution of the SPI upon the closing of the agreement. A memorandum of this agreement is recorded at the county courthouse to give public notice of the agreement. The agreement also provides an inspection period which typically consists of an initial 12-month term with two 6-month extensions for a total of 24 months until closing must be initiated or the contract expires. During the inspection period, RES conducts due diligence on the property and confirms title to the subject property, acquires title insurance and addresses concerns with the title, such as pre-existing easements, or liens. During this time, RES also conducts physical inspections like surveys and RES completes the engineering and permitting of the project. Finally, necessary 'Secondary Agreements' for situations such as spoil stockpiles, access, staging, etc. are negotiated with the landowner during the inspection period. Upon closing, the landowner executes the DRC and the Secondary Agreements.

As described above, the SPI will be placed on the property parcels in advance of the proposed restoration activities, thereby ensuring the long-term protection of the site. The SPI restricts activities that are incompatible with the objectives of the project site. The SPI will be recorded within 60 days at the county courthouse after receipt of all required permits, clearances, approvals and authorizations and prior to project implementation. Recording the SPI after all necessary permits are approved avoids creating irreversible encumbrances on the land title until there is minimal risk of project modification. An example copy of an SPI that would be filed upon project authorization is included as Appendix B: Site Protection Instrument. The final SPI may be subject to review and approval by all parties.

Following construction, RES will perform the maintenance and monitoring (M&M) responsibilities for a period of five years, as required by the Chapter 105 permit conditions. RES will inspect the BMPs annually to perform monitoring and all necessary maintenance needed for the continued viability of the project for the M&M period. The need to perform maintenance will be assessed during annual visits, and if deemed necessary, appropriate remedial action will be performed to repair deficient areas. This includes fixing damage to the stream banks due to flood events. Maintenance events will also be used for invasive species control to promote the success of the riparian plantings. RES will also perform inspections after major flood events that have the potential to damage the stream system. Once the long-term operations and maintenance (O&M) period begins, RES will act as the initial long-term steward until another qualified, watershed-focused entity is willing to assume long-term stewardship responsibilities. Coordination with other potential organizations has been initiated and is ongoing.

Following construction at each BMP, RES will complete an as-built survey of the relocated stream to include a full longitudinal profile illustrating the channel restoration. One permanent monitoring location will be installed as a reference at each site to illustrate post-construction conditions. For projects claiming Protocol 3 credits, HOBO water gauge data loggers will be installed at this location within the stream and floodplain to gather hydrologic data. The as-built reports will be submitted to PA DEP and USACE following construction and planting completion. During the five-year maintenance and monitoring period, annual monitoring reports will be submitted to PA DEP and USACE by December 31 each year monitoring occurs. At a minimum, monitoring reports will include:

- Photos taken from ground level at each permanent photo monitoring location
- Assessment of vegetative cover in reestablished wetland corridor (if Protocol 3 credits are claimed)
- BEHI and NBS assessments for the restored stream channel to validate nutrient reduction efficiency
- Hydrologic data from the stream channel and wetlands to record real time water
- surface elevations throughout the growing season and validate the reconnection of the stream to the floodplain (if Protocol 3 credits are claimed)
- Discussion of the maintenance and monitoring activities conducted, and
- Proposed maintenance schedule for the following year based upon the results of the
- annual monitoring.

A summary of the proposed performance standards for the sites is summarized in **Table 14**. The anticipated schedule for the implementation of the final PRP is included as **Appendix E4**

TABLE 14
RES PERFORMANCE STANDARDS SUMMARY TABLE

| Resource Type | Performance Standard Type | Evaluation | Performance Standard Value | Unit |
|-----------------|---------------------------|---------------------------------|--|-----------|
| Streams | Bank Stability | BEHI Score | <Low | --- |
| | Geomorphic Stability | Visual Observation | No observed vertical or horizontal instability | --- |
| | Large Woody Debris | Cubic meter per Acre | >25% increase | % |
| | Stream Hydrology | Channel/Floodplain Connectivity | Bankfull event per year | # (Count) |
| | Substrate | Pebble Count | D50 particle size remains in the same size class or larger as noted in As-Built | |
| Wetlands | Vegetation | Plot Assessment | Native herbaceous plant coverage will be at least 65% during Year 1 monitoring, 80% during Year 2 monitoring and at least 85% each year thereafter | % |
| | Vegetation | Plot Assessment | Prevalence index value <3.0 | --- |
| | Groundwater Hydrology | Soil Saturation | Saturation within the upper 1' for 12.5% of the growing season | % |

APPENDICES

**APPENDIX A –
PUBLIC NOTICE COPY OF PA BULLETIN**

From: [Bulletin](#)
To: [McLaughlin, Jeanmarie](#)
Cc: [Noss, Nicholas](#); [Hoffman, Nathan](#); [Kaiser, James](#)
Subject: RE: PA Turnpike Commission -- Public Notice (Draft PRP Plans - MS4 Permit)
Date: Tuesday, September 13, 2022 11:19:06 AM

ALERT - This email is from an **External Source**. Be careful opening attachments, clicking links or responding.

Hello Ms. McLaughlin:

Thank you for sending notice PRP Plans – MS4 Permits. As requested, we will publish this in the September 24, 2022 issue of the *Pennsylvania Bulletin*. Take care and have a great day!

Corinne Marut

Editorial Assistant

Legislative Reference Bureau

Pennsylvania Code & Bulletin Office

647 Main Capitol Building

Harrisburg, PA 17120-0033

717-783-1530

cmarut@palrb.us

From: McLaughlin, Jeanmarie <jmclaugh@paturnpike.com>

Sent: Tuesday, September 13, 2022 10:58 AM

To: Bulletin <bulletin@palrb.us>

Cc: Noss, Nicholas <nnoss@paturnpike.com>; Hoffman, Nathan <nhoffman@paturnpike.com>; Kaiser, James <jkaiser@paturnpike.com>

Subject: PA Turnpike Commission -- Public Notice (Draft PRP Plans - MS4 Permit)

Ms. Marut,

Please find attached the Pennsylvania Turnpike Commission's Public Notice for its "[Draft National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Pollution Reduction Plans for the Pennsylvania Turnpike Commission](#)" to be published in the September 24, 2022 issue of the Pennsylvania Bulletin. If you have any questions regarding the Notice, please feel free to contact Nick Noss (717-831-7129) or Nate Hoffman (717-831-7119), I have copied them on this email as well. I believe you spoke with them this morning. We greatly appreciate your help and assistance. If you require any additional information, please let us know.

Jeanmarie McLaughlin

Assistant Counsel IV

Pennsylvania Turnpike Commission

P.O. Box 67676 | Harrisburg, PA 17106-7676

700 S. Eisenhower Blvd. | Middletown, PA 17057

Phone 717.831.7318 | jmclaugh@paturndpike.com

www.paturndpike.com

This email and any attachments are intended for the review and use of the individual(s) to whom it is addressed. If you are not the intended recipient, you are hereby notified that any dissemination, use, transmission or copying of this e-mail is strictly prohibited. If you have received this email in error, please notify the sender immediately and delete the email from your email system.

Draft National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Pollution Reduction Plans for the Pennsylvania Turnpike Commission

Notice is hereby given that the Pennsylvania Turnpike Commission will receive public comment(s) on three proposed Pollution Reduction Plans (PRPs) required for their 2021-2026 National Pollutant Discharge Elimination System (NPDES) Individual Permit to discharge stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) Permit No. PAI139602.

The Pennsylvania Turnpike Commission has developed PRPs for the Chesapeake Bay, Delaware River and Ohio River Watersheds. The PRPs determine existing sediment pollutant loadings associated with stormwater runoff and proposes potential Best Management Practices to reduce the pollutant loads to meet the requirements of the MS4 Permit, for each watershed.

The proposed PRPs can be reviewed online by visiting **<https://www.paturnpike.com/responsibility-matters/clean-water>** then selecting “MS4” at the top of the page and navigating to “MS4 Documentation” under “MS4 Resources”.

Written comments on the PRPs will be accepted for a period of 30 days from the date of this public notice by mail to Mr. James Kaiser, Pennsylvania Turnpike Commission, 700 South Eisenhower Blvd., Middletown, PA 17057 or by e-mail at jkaiser@paturnpike.com. All comments will be tabulated and considered with the final PRPs.

**APPENDIX B –
PTC MS4 CHESAPEAKE BAY DRAINAGE BASIN
RECEIVING SURFACE WATERS TABLE**

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022



| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON-ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|------------------|---------------------------------------|--|----------------------------|--------------------------------|---------------------|---------------------------|---------------------------|----------------------|--|--------------------------|------------------------------|--------------|-----------------|---------------|------------------------------|--|---------------|--------------|----------------|
| 21001 | 40.20871145 | -77.24668992 | Alexander Spring Creek | CWF | No | 457 | 382 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation | Harrisburg, PA | Alexanders Spring Creek | 020503050402 | 02050305000347 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21002 | 40.20724309 | -77.24662864 | Alexander Spring Creek | CWF | Yes | 456 | 382 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation | Harrisburg, PA | Alexanders Spring Creek | 020503050402 | 02050305000347 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21003 | 40.20786858 | -77.24660842 | Alexander Spring Creek | CWF | No | 457 | 382 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation | Harrisburg, PA | Alexanders Spring Creek | 020503050402 | 02050305000347 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21004 | 40.20767281 | -77.24656676 | Alexander Spring Creek | CWF | Yes | 457 | 382 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation | Harrisburg, PA | Alexanders Spring Creek | 020503050402 | 02050305000347 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21005 | 40.20879504 | -77.24628601 | Alexander Spring Creek | CWF | No | 457 | 382 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation | Harrisburg, PA | Alexanders Spring Creek | 020503050402 | 02050305000347 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21006 | 40.20897679 | -77.24549559 | Alexander Spring Creek | CWF | No | 457 | 382 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation | Harrisburg, PA | Alexanders Spring Creek | 020503050402 | 02050305000347 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21007 | 40.21698762 | -77.21852172 | Conodoguinet Creek | WWF | No | <Null> | 383 | Non-Attaining | N/A | Non-Urban | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000213 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21008 | 40.2206874 | -77.20531914 | UNT to Conodoguinet Creek | WWF | No | <Null> | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 020503050003515 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21009 | 40.2211367 | -77.19395374 | Conodoguinet Creek | WWF | No | 463 | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000843 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21010 | 40.22099492 | -77.19341329 | Conodoguinet Creek | WWF | No | 463 | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000843 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21011 | 40.22086153 | -77.19247709 | Conodoguinet Creek | WWF | No | 463 | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000843 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21012 | 40.22097703 | -77.19087099 | Conodoguinet Creek | WWF | No | 463 | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000843 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21013 | 40.22201819 | -77.18969701 | Conodoguinet Creek | WWF | No | 463 | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000843 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21014 | 40.22256356 | -77.18939821 | Conodoguinet Creek | WWF | No | <Null> | 383 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000843 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21015 | 40.22612426 | -77.1757654 | UNT to Conodoguinet Creek | WWF | No | <Null> | 384 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000844 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21016 | 40.2312393 | -77.16926277 | UNT to Conodoguinet Creek | WWF | No | <Null> | 384 | Non-Attaining | N/A | Harrisburg, PA | Wertz Run-Conodoguinet Creek | 020503050403 | 02050305000844 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21017 | 40.21967592 | -77.15762588 | Letort Spring Run | CWF | No | <Null> | 384 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21018 | 40.22500113 | -77.14757839 | Letort Spring Run | CWF | No | <Null> | 384 | Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21019 | 40.22594688 | -77.14618132 | Letort Spring Run | CWF | No | <Null> | 384 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21020 | 40.22806086 | -77.14082562 | Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Non-Urban | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21021 | 40.22823011 | -77.14059619 | Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Non-Urban | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21022 | 40.22824212 | -77.14043876 | Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Non-Urban | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21023 | 40.22854488 | -77.14024958 | Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Non-Urban | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21024 | 40.2290063 | -77.13952866 | Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Non-Urban | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21025 | 40.23311022 | -77.13696575 | Letort Spring Run | CWF | No | <Null> | 385 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305000421 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21026 | 40.22823748 | -77.132212 | UNT to Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305003413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21027 | 40.22824816 | -77.13215457 | UNT to Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305003413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21028 | 40.22780267 | -77.13201617 | UNT to Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305003413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21029 | 40.22783127 | -77.13198017 | UNT to Letort Spring Run | CWF | Yes | 469 | 385 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305003413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21030 | 40.22644 | -77.13142314 | UNT to Letort Spring Run | CWF | No | 470 | 385 | Non-Attaining | N/A | Harrisburg, PA | Letort Spring Run | 020503050404 | 02050305003413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21031 | 40.21314441 | -77.09820383 | Hogestown Run | CWF | No | <Null> | 387 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Hogestown Run | 020503050405 | 02050305000404 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21032 | 40.214856 | -77.09176108 | Hogestown Run | CWF | No | <Null> | 387 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Hogestown Run | 020503050405 | 02050305000404 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21033 | 40.25183966 | -77.08957173 | Trib to Conodoguinet Creek | WWF | No | <Null> | 386 | Non-Attaining | N/A | Non-Urban | Hogestown Run | 020503050406 | 02050305003245 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21034 | 40.21499495 | -77.08309222 | Hogestown Run | CWF | No | 475 | 387 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Hogestown Run | 020503050405 | 02050305000404 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON-ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|------------------|---------------------------------------|--|------------------------------|--------------------------------|---------------------|---------------------------|---------------------------|----------------------|---|--------------------------|-----------------------------|--------------|----------------|---------------|------------------------------|--|---------------|--------------|----------------|
| 21035 | 40.22130939 | -77.03512408 | Trindle Spring Run | CWF | No | <Null> | 389 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Trindle Spring Run | 020503050407 | 02050305000490 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21036 | 40.1997828 | -77.03198935 | Trindle Spring Run | CWF | No | 481 | 388 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Non-Urban | Trindle Spring Run | 020503050407 | 02050305000490 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21037 | 40.19980247 | -77.03193087 | Trindle Spring Run | CWF | No | 481 | 388 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Non-Urban | Trindle Spring Run | 020503050407 | 02050305000490 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21038 | 40.20118664 | -77.03153074 | Trindle Spring Run | CWF | No | 481 | 388 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Trindle Spring Run | 020503050407 | 02050305000490 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21039 | 40.20605436 | -77.02818931 | Trindle Spring Run | CWF | No | <Null> | 388 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Trindle Spring Run | 020503050407 | 02050305000490 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21040 | 40.20293551 | -77.02800863 | Trindle Spring Run | CWF | No | <Null> | 388 | Non-Attaining | Agriculture - Siltation ; Construction - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Trindle Spring Run | 020503050407 | 02050305000490 | Yes | Conodoguinet Creek Watershed | Nutrients ; Siltation ; Organic Enrichment/Low D.O. ; Suspended Solids | Yes | N/A | No WLA for PTC |
| 21041 | 40.20445088 | -76.98646836 | UNT to Cedar Run | CWF | No | <Null> | 390 | Non-Attaining | Urban Runoff/Storm Sewers - Nutrients ; Urban Runoff/Storm Sewers - Siltation ; Urban Runoff/Storm Sewers - Other Habitat Alterations ; Habitat Modification - Flow Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000587 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21042 | 40.19599402 | -76.98213988 | UNT to Cedar Run | CWF | Yes | 487 | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21043 | 40.19599617 | -76.98208502 | UNT to Cedar Run | CWF | Yes | 487 | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21044 | 40.19648871 | -76.98127253 | UNT to Cedar Run | CWF | No | 487 | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21045 | 40.19655612 | -76.98111598 | UNT to Cedar Run | CWF | No | 487 | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21046 | 40.19717817 | -76.98041475 | UNT to Cedar Run | CWF | No | 487 | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21047 | 40.19884595 | -76.97973587 | UNT to Cedar Run | CWF | No | <Null> | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21048 | 40.20010731 | -76.97620367 | UNT to Cedar Run | CWF | No | 487 | 390 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003475 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21049 | 40.20663296 | -76.96769964 | UNT to Cedar Run | CWF | No | <Null> | 391 | Non-Attaining | Urban Runoff/Storm Sewers - Nutrients ; Urban Runoff/Storm Sewers - Siltation ; Urban Runoff/Storm Sewers - Other Habitat Alterations ; Habitat Modification - Flow Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000587 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21050 | 40.19402964 | -76.94887018 | Cedar Run | CWF | No | <Null> | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21051 | 40.20036345 | -76.94713029 | UNT to Cedar Run | CWF | Yes | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003401 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21052 | 40.19989292 | -76.94648913 | UNT to Cedar Run | CWF | Yes | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003401 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21053 | 40.19965417 | -76.94557847 | UNT to Cedar Run | CWF | No | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003401 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21054 | 40.19640817 | -76.94526323 | Cedar Run | CWF | No | <Null> | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21055 | 40.19938248 | -76.94416529 | Cedar Run | CWF | No | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21056 | 40.19950883 | -76.94415946 | Cedar Run | CWF | Yes | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21057 | 40.19950703 | -76.94408659 | Cedar Run | CWF | Yes | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21058 | 40.20015096 | -76.94391506 | Cedar Run | CWF | Yes | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21059 | 40.20012278 | -76.94378211 | Cedar Run | CWF | Yes | 491 | 391 | Non-Attaining | Agriculture - Nutrients ; Agriculture - Siltation ; Agriculture - Other Habitat Alterations | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000585 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21060 | 40.19719593 | -76.93681365 | UNT to Yellow Breeches Creek | CWF | Yes | 492 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003442 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21061 | 40.1971905 | -76.93672166 | UNT to Yellow Breeches Creek | CWF | Yes | 492 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003442 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21062 | 40.19764273 | -76.93623657 | UNT to Yellow Breeches Creek | CWF | Yes | 492 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003442 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21063 | 40.19769977 | -76.93603507 | UNT to Yellow Breeches Creek | CWF | No | 492 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003442 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21064 | 40.19808739 | -76.93583321 | UNT to Yellow Breeches Creek | CWF | No | 492 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003442 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21065 | 40.19725411 | -76.93077058 | Yellow Breeches Creek | CWF | No | 492 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21066 | 40.19547881 | -76.93063551 | UNT to Yellow Breeches Creek | CWF | Yes | 493 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003449 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21067 | 40.19541959 | -76.93034693 | UNT to Yellow Breeches Creek | CWF | No | 493 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003449 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21068 | 40.19597829 | -76.92997429 | UNT to Yellow Breeches Creek | CWF | Yes | 493 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003449 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022



| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|---------------------------------|-----------------------------------|------------------------|---------------------------|---------------------------|-----------------------------|----------------------------------|--------------------------|-----------------------------|--------------|----------------|---------------|-----------|------------|---------------|--------------|-----|
| 21069 | 40.19595953 | -76.92991626 | UNT to Yellow Breeches Creek | CWF | Yes | 493 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003449 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21070 | 40.19691285 | -76.92806195 | Yellow Breeches Creek | CWF | No | 493 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21071 | 40.19754502 | -76.92702049 | Yellow Breeches Creek | CWF | No | 493 | 391 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21072 | 40.19740546 | -76.92345619 | Yellow Breeches Creek | CWF | No | 493 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21073 | 40.19782456 | -76.91788139 | Yellow Breeches Creek | CWF | No | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21074 | 40.19802092 | -76.91781683 | Yellow Breeches Creek | CWF | No | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21075 | 40.19731829 | -76.91732908 | Yellow Breeches Creek | CWF | No | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21076 | 40.19735384 | -76.91684737 | Yellow Breeches Creek | CWF | No | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000289 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21077 | 40.19909678 | -76.91350856 | UNT to Yellow Breeches Creek | CWF | Yes | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000665 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21078 | 40.19903065 | -76.91348973 | UNT to Yellow Breeches Creek | CWF | Yes | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000665 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21079 | 40.19867891 | -76.9133462 | UNT to Yellow Breeches Creek | CWF | Yes | 494 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000665 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21080 | 40.20194852 | -76.90695593 | UNT to Yellow Breeches Creek | CWF | No | 495 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003373 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21081 | 40.20118096 | -76.90659051 | UNT to Yellow Breeches Creek | CWF | Yes | 495 | 392 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003373 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21082 | 40.20116833 | -76.90663476 | UNT to Yellow Breeches Creek | CWF | Yes | 495 | 392 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003373 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21083 | 40.20072546 | -76.90640673 | UNT to Yellow Breeches Creek | CWF | Yes | 495 | 392 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003373 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21084 | 40.20080463 | -76.90637626 | UNT to Yellow Breeches Creek | CWF | Yes | 495 | 392 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003373 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21085 | 40.20256447 | -76.90294252 | UNT to Yellow Breeches Creek | CWF | No | 496 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003355 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21086 | 40.20266861 | -76.90209658 | UNT to Yellow Breeches Creek | CWF | Yes | 496 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003355 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21087 | 40.20269228 | -76.90196356 | UNT to Yellow Breeches Creek | CWF | Yes | 496 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003355 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21088 | 40.21203773 | -76.90176559 | Yellow Breeches Creek | CWF | No | <Null> | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000288 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21089 | 40.20247535 | -76.90120781 | UNT to Yellow Breeches Creek | CWF | Yes | 496 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003355 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21090 | 40.20249066 | -76.90111989 | UNT to Yellow Breeches Creek | CWF | Yes | 496 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003355 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21091 | 40.20692577 | -76.89190272 | UNT to Yellow Breeches Creek | CWF | Yes | 497 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003340 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21092 | 40.20696497 | -76.89188891 | UNT to Yellow Breeches Creek | CWF | No | 497 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003340 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21093 | 40.20645006 | -76.89164563 | UNT to Yellow Breeches Creek | CWF | Yes | 497 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003340 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21094 | 40.20988431 | -76.88827607 | UNT to Yellow Breeches Creek | CWF | No | 498 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003340 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21095 | 40.20997138 | -76.88465748 | Yellow Breeches Creek | CWF | No | 498 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003323 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21096 | 40.20936819 | -76.88462403 | UNT to Yellow Breeches Creek | CWF | Yes | 498 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003323 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21097 | 40.20939375 | -76.88461579 | UNT to Yellow Breeches Creek | CWF | Yes | 498 | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003323 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21098 | 40.21465402 | -76.88427093 | Yellow Breeches Creek | CWF | No | <Null> | 392 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000287 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21099 | 40.21617529 | -76.87431147 | Yellow Breeches Creek | CWF | No | <Null> | 393 | Non-Attaining | Other - Pathogens | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000287 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21100 | 40.21538555 | -76.8719512 | Yellow Breeches Creek | CWF | No | <Null> | 393 | Non-Attaining | Other - Pathogens | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000287 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21101 | 40.20994254 | -76.86804696 | UNT to Yellow Breeches Creek | CWF | No | 500 | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000666 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21102 | 40.20996572 | -76.86800902 | UNT to Yellow Breeches Creek | CWF | No | 500 | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000666 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21103 | 40.21072043 | -76.86739897 | UNT to Yellow Breeches Creek | CWF | No | 500 | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305000666 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21104 | 40.21148344 | -76.85839809 | UNT to Yellow Breeches Creek | CWF | No | <Null> | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003298 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21105 | 40.20651899 | -76.85825799 | UNT to Yellow Breeches Creek | CWF | Yes | 501 | 393 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003329 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON-ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|------------------|---------------------------------------|--|------------------------------|--------------------------------|---------------------|---------------------------|---------------------------|----------------------|--|--------------------------|------------------------------|--------------|----------------|---------------|-----------|------------|---------------|--------------|-----|
| 921105 | 40.20647017 | -76.85839095 | UNT to Yellow Breeches Creek | CWF | Yes | 501 | 393 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003329 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21106 | 40.21113007 | -76.8580285 | UNT to Yellow Breeches Creek | CWF | No | <Null> | 393 | Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003298 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21107 | 40.20673531 | -76.85486833 | UNT to Yellow Breeches Creek | CWF | No | 501 | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003329 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21108 | 40.20606734 | -76.85365061 | UNT to Yellow Breeches Creek | CWF | No | 502 | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003302 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21109 | 40.20569626 | -76.85355016 | UNT to Yellow Breeches Creek | CWF | Yes | 502 | 393 | Non-Attaining | N/A | Harrisburg, PA | Lower Yellow Breeches Creek | 020503050505 | 02050305003302 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21110 | 40.20559777 | -76.85180419 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503050505 | 02050305003341 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21111 | 40.20516676 | -76.8510998 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003341 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21112 | 40.20510834 | -76.85094244 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003341 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21113 | 40.2050228 | -76.85024242 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003341 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21114 | 40.20502215 | -76.85015889 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003341 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21115 | 40.20472639 | -76.84950692 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21116 | 40.20441393 | -76.84849126 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21117 | 40.2041454 | -76.84786383 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21118 | 40.20395421 | -76.84728793 | Marsh Run | WWF | No | 502 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21119 | 40.20352658 | -76.8462423 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21120 | 40.20325364 | -76.84554123 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21121 | 40.20305176 | -76.84501899 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21122 | 40.20285401 | -76.84359635 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21123 | 40.20257086 | -76.84329886 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21124 | 40.20246067 | -76.84293588 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21125 | 40.20238082 | -76.84246663 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000579 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21126 | 40.2021043 | -76.84150567 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21127 | 40.20201112 | -76.84078978 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21128 | 40.2020357 | -76.83966557 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21129 | 40.20188165 | -76.83905568 | Marsh Run | WWF | No | 503 | 393 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21130 | 40.20149893 | -76.83813534 | Marsh Run | WWF | No | 503 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21131 | 40.20120814 | -76.83742744 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21132 | 40.20107475 | -76.83702942 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21133 | 40.20071193 | -76.83616759 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21134 | 40.20034175 | -76.83539443 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21135 | 40.19969446 | -76.83359806 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21136 | 40.19951331 | -76.83241328 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21137 | 40.19917206 | -76.83103392 | Marsh Run | WWF | No | 504 | 394 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Source Unknown - Siltation | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305000578 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21138 | 40.21439926 | -76.79450284 | Buser Run | WWF | Yes | 509 | 395 | Non-Attaining | N/A | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305004404 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022



| SEWERED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON-ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|----------------|---------------------------------------|--|--------------------------|--------------------------------|---------------------|---------------------------|---------------------------|----------------------|---|--------------------------|---------------------------------|--------------|----------------|---------------|-----------|------------|---------------|--------------|-----|
| 21139 | 40.21323826 | -76.79385833 | Buser Run | WWF | Yes | 509 | 395 | Non-Attaining | N/A | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305004404 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21140 | 40.21321577 | -76.79384403 | Buser Run | WWF | Yes | 509 | 395 | Attaining | N/A | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305004404 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21141 | 40.21638484 | -76.78318331 | UNT to Burd Run | WWF | No | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21142 | 40.21420009 | -76.78271697 | UNT to Burd Run | WWF | No | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21143 | 40.21478759 | -76.78270071 | UNT to Burd Run | WWF | Yes | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21144 | 40.21566361 | -76.78260125 | UNT to Burd Run | WWF | Yes | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21145 | 40.21483654 | -76.78252435 | UNT to Burd Run | WWF | Yes | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21146 | 40.21563961 | -76.78242077 | UNT to Burd Run | WWF | Yes | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21147 | 40.21459808 | -76.77943884 | Burd Run | WWF | No | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21148 | 40.21462729 | -76.77888187 | Burd Run | WWF | Yes | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21149 | 40.21505289 | -76.77812331 | Burd Run | WWF | No | 511 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21150 | 40.20954886 | -76.76349453 | UNT to Susquehanna River | WWF | No | <Null> | 395 | Non-Attaining | N/A | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003232 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21151 | 40.21154108 | -76.76235012 | UNT to Susquehanna River | WWF | No | 513 | 395 | Non-Attaining | N/A | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003232 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21152 | 40.21170565 | -76.76206242 | UNT to Susquehanna River | WWF | Yes | 513 | 395 | Non-Attaining | N/A | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003232 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21153 | 40.20963241 | -76.75483534 | UNT to Susquehanna River | WWF | No | 514 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Habitat Modification - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003194 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21154 | 40.21054358 | -76.75422326 | UNT to Susquehanna River | WWF | Yes | 514 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Habitat Modification - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003194 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21155 | 40.21097834 | -76.75401675 | UNT to Susquehanna River | WWF | Yes | 514 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Habitat Modification - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003194 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21156 | 40.21098037 | -76.75388551 | UNT to Susquehanna River | WWF | Yes | 514 | 395 | Non-Attaining | Urban Runoff/Storm Sewers - Cause Unknown ; Habitat Modification - Cause Unknown | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003194 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21157 | 40.20927913 | -76.74925757 | UNT to Susquehanna River | WWF | No | 515 | 396 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation ; Urban Runoff/Storm Sewers - Other Habitat Alterations | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003257 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21158 | 40.21022093 | -76.7486959 | UNT to Susquehanna River | WWF | Yes | 515 | 396 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation ; Urban Runoff/Storm Sewers - Other Habitat Alterations | Harrisburg, PA | Laurel Run-Susquehanna River | 020503051011 | 02050305003257 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21159 | 40.20971442 | -76.73036126 | UNT to Swatara Creek | WWF | Yes | 517 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003167 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21160 | 40.2097306 | -76.73028331 | UNT to Swatara Creek | WWF | Yes | 517 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003167 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21161 | 40.2101373 | -76.73016133 | UNT to Swatara Creek | WWF | Yes | 517 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003167 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21162 | 40.21014609 | -76.73006765 | UNT to Swatara Creek | WWF | Yes | 517 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003167 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21163 | 40.21391802 | -76.72190195 | Swatara Creek | WWF | No | <Null> | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000005 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21164 | 40.21045662 | -76.71862869 | Swatara Creek | WWF | No | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000005 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21165 | 40.21020741 | -76.71824576 | Swatara Creek | WWF | No | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000005 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21166 | 40.20879601 | -76.71659663 | Swatara Creek | WWF | No | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000004 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21167 | 40.20997205 | -76.71650523 | Swatara Creek | WWF | Yes | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000004 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21168 | 40.20955941 | -76.71617583 | Swatara Creek | WWF | No | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21169 | 40.20936929 | -76.71482398 | UNT to Swatara Creek | WWF | No | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21170 | 40.20963064 | -76.71317756 | UNT to Swatara Creek | WWF | Yes | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21171 | 40.20959253 | -76.71283865 | UNT to Swatara Creek | WWF | Yes | 518 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21172 | 40.209463 | -76.71239219 | UNT to Swatara Creek | WWF | No | 519 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21173 | 40.2096649 | -76.711104561 | UNT to Swatara Creek | WWF | Yes | 519 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21174 | 40.21006033 | -76.70984851 | UNT to Swatara Creek | WWF | Yes | 519 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21175 | 40.2100672 | -76.70889838 | UNT to Swatara Creek | WWF | No | 519 | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305003150 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022



| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|-----------------------|-----------------------------------|------------------------|---------------------------|---------------------------|-----------------------------|----------------------------------|--------------------------|---|--------------|----------------|---------------|-----------|------------|---------------|--------------|-----|
| 21176 | 40.20404573 | -76.70673818 | Iron Run | WWF | No | <Null> | 396 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000418 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21177 | 40.20365195 | -76.7013019 | Iron Run | WWF | No | <Null> | 397 | Non-Attaining | N/A | Non-Urban | Swatara Creek-Susquehanna River | 020503050906 | 02050305000418 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21178 | 40.20562883 | -76.69230789 | Iron Run | WWF | Yes | 521 | 397 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305000419 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21179 | 40.20646489 | -76.69141465 | Iron Run | WWF | No | 521 | 397 | Non-Attaining | N/A | Non-Urban | Swatara Creek-Susquehanna River | 020503050906 | 02050305000419 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21180 | 40.20171384 | -76.68541677 | UNT to Iron Run | WWF | No | <Null> | 397 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305001088 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21181 | 40.2034937 | -76.68107197 | UNT to Iron Run | WWF | No | 522 | 397 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305001088 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21182 | 40.20362482 | -76.68093009 | UNT to Iron Run | WWF | No | 522 | 397 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305001088 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21183 | 40.20429285 | -76.67933118 | UNT to Iron Run | WWF | Yes | 522 | 397 | Non-Attaining | N/A | Harrisburg, PA | Swatara Creek-Susquehanna River | 020503050906 | 02050305001088 | N/A | N/A | N/A | N/A | N/A | N/A |
| 21184 | 40.20476447 | -76.6792734 | UNT to Iron Run | WWF | Yes | 522 | 397 | Non-Attaining | N/A | Non-Urban | Swatara Creek-Susquehanna River | 020503050906 | 02050305001088 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22001 | 40.23650325 | -76.28105497 | Segloch Run | EV (EXCEPTIONAL VALUE) | Yes | 567 | 399 | Non-Attaining | N/A | Non-Urban | Middle Creek | 020503060902 | 02050306001416 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22002 | 40.2359767 | -76.28073057 | Segloch Run | EV (EXCEPTIONAL VALUE) | Yes | 567 | 399 | Non-Attaining | N/A | Non-Urban | Middle Creek | 020503060902 | 02050306001416 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22003 | 40.23337754 | -76.27890714 | Segloch Run | EV (EXCEPTIONAL VALUE) | No | <Null> | 399 | Non-Attaining | N/A | Lancaster, PA | Middle Creek | 020503060902 | 02050306001416 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22004 | 40.22988191 | -76.2589149 | Middle Creek | TSF | No | <Null> | 399 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Middle Creek | 020503060902 | 02050306000453 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22005 | 40.24116265 | -76.25227026 | Middle Creek Trib | TSF | No | 570 | 400 | Attaining | N/A | Lancaster, PA | Middle Creek | 020503060902 | 02050306001413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22006 | 40.24082339 | -76.25025541 | Middle Creek Trib | TSF | Yes | 571 | 400 | Non-Attaining | N/A | Non-Urban | Middle Creek | 020503060902 | 02050306001413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22007 | 40.24039362 | -76.24879054 | Middle Creek Trib | TSF | No | 571 | 400 | Non-Attaining | N/A | Non-Urban | Middle Creek | 020503060902 | 02050306001413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22008 | 40.23977062 | -76.24795674 | Middle Creek Trib | TSF | No | 571 | 400 | Non-Attaining | N/A | Non-Urban | Middle Creek | 020503060902 | 02050306001413 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22009 | 40.23915988 | -76.24673849 | Middle Creek Trib | TSF | No | <Null> | 400 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Middle Creek | 020503060902 | 02050306000453 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22010 | 40.24101696 | -76.24491 | Middle Creek | TSF | No | 571 | 400 | Attaining | N/A | Non-Urban | Middle Creek | 020503060902 | 02050306000454 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22011 | 40.24375201 | -76.23563389 | Middle Creek Trib | TSF | Yes | 572 | 400 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Middle Creek | 020503060902 | 02050306004501 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22012 | 40.2462276 | -76.21394721 | Indian Run | TSF | Yes | 575 | 400 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306000509 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22013 | 40.2457717 | -76.21393589 | Indian Run | TSF | Yes | 575 | 400 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306000509 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22014 | 40.24504266 | -76.21384362 | Indian Run | TSF | No | 575 | 400 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306000509 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22015 | 40.24628748 | -76.21379664 | Indian Run | TSF | No | 575 | 400 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Cocalico Creek-Conestoga River | 020503060904 | 02050306000509 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22016 | 40.24343966 | -76.2114515 | Indian Run | TSF | No | <Null> | 401 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306000509 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22017 | 40.24530713 | -76.18622863 | UNT to Indian Run | TSF | No | 578 | 401 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306004495 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22018 | 40.24534462 | -76.18575159 | UNT to Indian Run | TSF | Yes | 578 | 401 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306004495 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22019 | 40.24533597 | -76.18457496 | UNT to Indian Run | TSF | Yes | 578 | 401 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306004495 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22020 | 40.24537066 | -76.18377303 | UNT to Indian Run | TSF | Yes | 578 | 401 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306004495 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22021 | 40.24099679 | -76.16553864 | UNT to Indian Run | TSF | No | <Null> | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306001409 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22022 | 40.24417108 | -76.16264915 | UNT to Indian Run | TSF | Yes | 580 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306001409 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22023 | 40.24456256 | -76.16244213 | UNT to Indian Run | TSF | Yes | 580 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306001409 | N/A | N/A | N/A | N/A | N/A | N/A |
| 922023 | 40.24455362 | -76.16241828 | UNT to Indian Run | TSF | Yes | 580 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Cocalico Creek-Conestoga River | 020503060904 | 02050306001409 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22024 | 40.24067591 | -76.14285896 | Cocalico Creek | WWF | No | 583 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22025 | 40.24097255 | -76.14176106 | Cocalico Creek | WWF | Yes | 583 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22026 | 40.24121963 | -76.1416171 | Cocalico Creek | WWF | Yes | 583 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22027 | 40.24143398 | -76.14118609 | Cocalico Creek | WWF | No | 583 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22028 | 40.24217076 | -76.14075879 | Cocalico Creek | WWF | No | 583 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000181 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22029 | 40.23120707 | -76.13164623 | Little Cocalico Creek | TSF | No | <Null> | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000516 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|---------------------------|-----------------------------------|------------------------|---------------------------|---------------------------|-----------------------------|--|--------------------------|--------------------------------------|--------------|-----------------|---------------|-----------|------------|---------------|--------------|-----|
| 22030 | 40.22550132 | -76.1315426 | Cocalico Creek | WWF | No | <Null> | 402 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22031 | 40.23584871 | -76.1310078 | Little Cocalico Creek | TSF | No | 584 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22032 | 40.23716389 | -76.13067183 | Little Cocalico Creek | TSF | Yes | 584 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22033 | 40.23769771 | -76.13065399 | Little Cocalico Creek | TSF | Yes | 584 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22034 | 40.23696234 | -76.13062829 | Little Cocalico Creek | TSF | No | 584 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22035 | 40.2365803 | -76.13049906 | Little Cocalico Creek | TSF | No | 584 | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22036 | 40.23824407 | -76.13033717 | Little Cocalico Creek | TSF | Yes | 584 | 402 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22037 | 40.22982159 | -76.13033785 | Little Cocalico Creek | TSF | No | <Null> | 402 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000516 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22038 | 40.22369633 | -76.12976694 | Cocalico Creek | WWF | No | <Null> | 402 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 02050306000180 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22039 | 40.22485066 | -76.10893495 | Stony Run | WWF | No | 587 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22040 | 40.22484027 | -76.10757766 | Stony Run | WWF | No | 587 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22041 | 40.22466146 | -76.10613909 | Stony Run | WWF | No | 587 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22042 | 40.22479565 | -76.10499408 | Stony Run | WWF | No | 587 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22043 | 40.22475748 | -76.10474632 | Stony Run | WWF | No | 587 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22044 | 40.22466673 | -76.10403446 | Stony Run | WWF | No | 588 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22045 | 40.22487207 | -76.10203105 | Stony Run | WWF | Yes | 588 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Lancaster, PA | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22046 | 40.22524591 | -76.10179665 | Stony Run | WWF | Yes | 588 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Non-Urban | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22047 | 40.22531898 | -76.10173391 | Stony Run | WWF | Yes | 588 | 403 | Non-Attaining | Crop Related Agric - Nutrients ; Grazing Related Agric - Siltation ; Urban Runoff/Storm Sewers - Cause Unknown | Non-Urban | Little Cocalico Creek-Cocalico Creek | 020503060901 | 020503060000492 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22048 | 40.21188738 | -76.09188778 | UNT to Little Muddy Creek | WWF | No | <Null> | 403 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Muddy Creek | 020503061101 | 02050306004518 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22049 | 40.21130237 | -76.08980257 | UNT to Little Muddy Creek | WWF | No | <Null> | 403 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Muddy Creek | 020503061101 | 02050306004518 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22050 | 40.21506262 | -76.07194012 | Little Muddy Creek | WWF | No | 591 | 404 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Muddy Creek | 020503061101 | 02050306004499 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22051 | 40.2150497 | -76.07175568 | Little Muddy Creek | WWF | Yes | 591 | 404 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Muddy Creek | 020503061101 | 02050306004499 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22052 | 40.21525516 | -76.07119474 | Little Muddy Creek | WWF | Yes | 591 | 404 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Little Muddy Creek | 020503061101 | 02050306001371 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22053 | 40.21591681 | -76.07049998 | Little Muddy Creek | WWF | Yes | 591 | 404 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Little Muddy Creek | 020503061101 | 02050306004499 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22054 | 40.21588284 | -76.07043283 | Little Muddy Creek | WWF | Yes | 591 | 404 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Little Muddy Creek | 020503061101 | 02050306001371 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22055 | 40.21656171 | -76.06974707 | Little Muddy Creek | WWF | No | 592 | 404 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Little Muddy Creek | 020503061101 | 02050306001371 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22056 | 40.21224181 | -76.05510442 | UNT to Muddy Creek | WWF | Yes | 593 | 404 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306001370 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22057 | 40.20910815 | -76.03482848 | UNT to Muddy Creek | WWF | No | 595 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22058 | 40.20908192 | -76.0318395 | UNT to Muddy Creek | WWF | No | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22059 | 40.20942194 | -76.03042816 | UNT to Muddy Creek | WWF | No | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22060 | 40.20956318 | -76.02975392 | UNT to Muddy Creek | WWF | Yes | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22061 | 40.20952269 | -76.02926384 | UNT to Muddy Creek | WWF | Yes | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22062 | 40.20950857 | -76.02867417 | UNT to Muddy Creek | WWF | Yes | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22063 | 40.20933584 | -76.02751996 | UNT to Muddy Creek | WWF | No | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22064 | 40.20939596 | -76.02640836 | UNT to Muddy Creek | WWF | Yes | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22065 | 40.20922558 | -76.02557757 | UNT to Muddy Creek | WWF | Yes | 596 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22066 | 40.2088134 | -76.0251567 | UNT to Muddy Creek | WWF | No | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Non-Urban | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22067 | 40.20770884 | -76.02194246 | UNT to Muddy Creek | WWF | Yes | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4
Chesapeake Bay Drainage Basin
RECEIVING WATERS TABLE
8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|-------------------------|---|------------------------|---------------------------|---------------------------|-----------------------------|---|--------------------------|---|--------------|----------------|---------------|-------------------------------|-------------|---------------|--------------|----------------|
| 22068 | 40.2076464 | -76.0217779 | UNT to Muddy Creek | WWF | Yes | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306004498 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22069 | 40.20344287 | -76.02159309 | Muddy Creek | TSF | No | <Null> | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000466 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22070 | 40.20737741 | -76.02148975 | UNT to Muddy Creek | TSF | Yes | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000466 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22071 | 40.20784314 | -76.02118057 | Muddy Creek | TSF | Yes | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000466 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22072 | 40.20780303 | -76.02117265 | Muddy Creek | TSF | Yes | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000466 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22073 | 40.2067052 | -76.02107611 | Muddy Creek | TSF | No | 597 | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000466 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22074 | 40.1961937 | -76.02127241 | Muddy Creek | TSF | No | <Null> | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000464 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22075 | 40.20084864 | -76.02093009 | Muddy Creek | TSF | No | <Null> | 405 | Non-Attaining | Source Unknown - Pathogens | Lancaster, PA | Muddy Creek | 020503061102 | 02050306000466 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22076 | 40.18951611 | -76.01629501 | UNT to Muddy Creek | HQ-CWF (HIGH QUALITY- COLD WATER FISHES) | No | <Null> | 405 | Non-Attaining | Grazing Related Agric - Nutrients ; Grazing Related Agric - Siltation | Non-Urban | Muddy Creek | 020503061102 | 02050306001365 | N/A | N/A | N/A | N/A | N/A | N/A |
| 22077 | 40.1904687 | -76.00318634 | UNT to Muddy Creek | HQ-TSF (HIGH QUALITY- TROUT STOCKING) | No | 600 | 405 | Attaining | Grazing Related Agric - Nutrients ; Grazing Related Agric - Siltation | Non-Urban | Muddy Creek | 020503061102 | 02050306001365 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23001 | 41.29338327 | -75.77113907 | UNT to Gardner Creek | CWF | No | <Null> | 407 | Non-Attaining | N/A | Non-Urban | City of Wilkes-Barre-Mill Creek | 020501070202 | 02050107002745 | Yes | Susquehanna River Metals | Metals | Yes | N/A | No WLA for PTC |
| 23002 | 41.31198882 | -75.74951192 | Mill Creek | CWF | No | 1123 | 407 | Non-Attaining | Urban Runoff/Storm Sewers - Flow Alterations ; Road Runoff - Cause Unknown | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004157 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23003 | 41.31334145 | -75.748656 | Mill Creek | CWF | Yes | 1123 | 407 | Non-Attaining | Urban Runoff/Storm Sewers - Flow Alterations ; Road Runoff - Cause Unknown | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004157 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23004 | 41.31962047 | -75.80061341 | Susquehanna River | WWF | No | <Null> | 408 | Non-Attaining | Abandoned Mine Drainage - Metals | Scranton, PA | City of Wilkes-Barre-Susquehanna River | 020501070205 | 02050107001373 | N/A | Susquehanna River PCB | PCB | N/A | N/A | N/A |
| 23005 | 41.32091697 | -75.74868809 | Mill Creek | CWF | No | <Null> | 409 | Non-Attaining | Urban Runoff/Storm Sewers - Flow Alterations ; Road Runoff - Cause Unknown | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004157 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23006 | 41.32454672 | -75.73658525 | Lidy Creek | CWF | No | <Null> | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23007 | 41.32492522 | -75.73510638 | Lidy Creek | CWF | No | <Null> | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23008 | 41.32767025 | -75.72487663 | Lidy Creek | CWF | Yes | 1127 | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23009 | 41.32769095 | -75.72487144 | Lidy Creek | CWF | Yes | 1127 | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23010 | 41.32795658 | -75.72562013 | Lidy Creek | CWF | Yes | 1127 | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23011 | 41.32817734 | -75.72695592 | Lidy Creek | CWF | No | 1127 | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23012 | 41.32824225 | -75.7278375 | Lidy Creek | CWF | No | 1126 | 409 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001014 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23013 | 41.33626961 | -75.71134013 | UNT to Spring Brook | HQ-CWF (HIGH QUALITY- COLD WATER FISHES) | Yes | 1129 | 409 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107002698 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23014 | 41.33656172 | -75.71063595 | UNT to Spring Brook | HQ-CWF (HIGH QUALITY- COLD WATER FISHES) | Yes | 1129 | 409 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107002698 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23015 | 41.34035926 | -75.70647977 | UNT to Spring Brook | HQ-CWF (HIGH QUALITY- COLD WATER FISHES) | Yes | 1129 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107002698 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23016 | 41.3421708 | -75.70648823 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23017 | 41.3444766 | -75.70801971 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23018 | 41.34644723 | -75.70928783 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23019 | 41.34654898 | -75.70929008 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23020 | 41.34680901 | -75.70937721 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23021 | 41.34706408 | -75.7094578 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23022 | 41.3472884 | -75.70962358 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23023 | 41.34751866 | -75.70990532 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23024 | 41.34774313 | -75.71023301 | Spring Brook | CWF | Yes | 1130 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23025 | 41.34955464 | -75.71181158 | Spring Brook | CWF | No | 1131 | 410 | Non-Attaining | N/A | Scranton, PA | Spring Brook | 020501070108 | 02050107000363 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |

PTC MS4

Chesapeake Bay Drainage Basin

RECEIVING WATERS TABLE

8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|--------------------------|-----------------------------------|------------------------|---------------------------|---------------------------|-----------------------------|--|--------------------------|------------------------------------|--------------|----------------|---------------|----------------------------|-------------|---------------|--------------|----------------|
| 23026 | 41.35111338 | -75.70934497 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Land Development - Water/Flow Variability ; Upstream Impoundment - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107004154 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23027 | 41.3521703 | -75.71156705 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Land Development - Water/Flow Variability ; Upstream Impoundment - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107004154 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23028 | 41.35259424 | -75.7133569 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Land Development - Water/Flow Variability ; Upstream Impoundment - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107000362 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23029 | 41.35260454 | -75.7121873 | Stafford Meadow Brook | CWF | Yes | 1131 | 410 | Non-Attaining | Land Development - Water/Flow Variability ; Upstream Impoundment - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107004154 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23030 | 41.3530093 | -75.71384029 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Source Unknown - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107000362 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23031 | 41.35328889 | -75.71454169 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Land Development - Water/Flow Variability ; Upstream Impoundment - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107000362 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23032 | 41.35387894 | -75.71460996 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Source Unknown - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107000362 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23033 | 41.35406089 | -75.71490478 | Stafford Meadow Brook | CWF | No | 1131 | 410 | Non-Attaining | Source Unknown - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107000362 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23034 | 41.35440835 | -75.71539496 | Stafford Meadow Brook | CWF | No | 1132 | 410 | Non-Attaining | Source Unknown - Cause Unknown | Scranton, PA | Spring Brook | 020501070108 | 02050107000362 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23035 | 41.36024535 | -75.72373252 | Lackawanna River | CWF | No | <Null> | 410 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23036 | 41.36132568 | -75.72404648 | Lackawanna River | CWF | No | <Null> | 410 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23037 | 41.36508726 | -75.72345507 | Lackawanna River | CWF | No | <Null> | 410 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23038 | 41.36848689 | -75.72183844 | Lackawanna River | CWF | No | 1134 | 410 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23039 | 41.36918596 | -75.72190937 | Lackawanna River | CWF | No | 1134 | 410 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23040 | 41.37235644 | -75.72212377 | Lackawanna River | CWF | No | 1134 | 411 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23041 | 41.37509823 | -75.72027098 | Lackawanna River | CWF | Yes | 1135 | 411 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23042 | 41.37598421 | -75.71941853 | Lackawanna River | CWF | No | 1135 | 411 | Non-Attaining | Urban Runoff/Storm Sewers - Pathogens ; Combined Sewer Overflow - Pathogens | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000109 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23043 | 41.38533566 | -75.73121649 | UNT to Saint Johns Creek | CWF | No | 1136 | 411 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107002604 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23044 | 41.38562479 | -75.73157626 | UNT to Saint Johns Creek | CWF | No | 1136 | 411 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107002604 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23045 | 41.38622362 | -75.73228204 | UNT to Saint Johns Creek | CWF | No | 1137 | 411 | Non-Attaining | N/A | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107002604 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23046 | 41.3869649 | -75.73349343 | Saint Johns Creek | CWF | No | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001015 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23047 | 41.38864783 | -75.73377659 | Saint Johns Creek | CWF | Yes | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107001015 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23048 | 41.39067864 | -75.73346609 | Saint Johns Creek | CWF | Yes | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23049 | 41.39123245 | -75.73306918 | Saint Johns Creek | CWF | Yes | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23050 | 41.39185223 | -75.73282333 | Saint Johns Creek | CWF | Yes | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23051 | 41.39245768 | -75.73257717 | Saint Johns Creek | CWF | Yes | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23052 | 41.39255154 | -75.7324997 | Saint Johns Creek | CWF | Yes | 1137 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23053 | 41.39300493 | -75.73162462 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23054 | 41.39378039 | -75.73133839 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23055 | 41.39400162 | -75.7320743 | UNT to Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Non-Urban | Lackawanna River-Susquehanna River | 020501070110 | 02050107001017 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23056 | 41.39406293 | -75.73127935 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23057 | 41.39452648 | -75.7312284 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Non-Urban | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23058 | 41.39514286 | -75.73097848 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |

PTC MS4

Chesapeake Bay Drainage Basin

RECEIVING WATERS TABLE

8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|--------------------------|-----------------------------------|------------------------|---------------------------|---------------------------|-----------------------------|---|--------------------------|------------------------------------|--------------|----------------|---------------|----------------------------|-------------|---------------|--------------|----------------|
| 23059 | 41.3959389 | -75.73076979 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23060 | 41.39619143 | -75.73070809 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23061 | 41.39645742 | -75.7306318 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23062 | 41.39651307 | -75.7306074 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23063 | 41.39732956 | -75.72997943 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23064 | 41.39753126 | -75.72972442 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23065 | 41.39778052 | -75.7293056 | Saint Johns Creek | CWF | No | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23066 | 41.39832446 | -75.72899531 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23067 | 41.39849686 | -75.72900953 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23068 | 41.39936358 | -75.72913083 | Saint Johns Creek | CWF | Yes | 1138 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23069 | 41.3996943 | -75.72888393 | Saint Johns Creek | CWF | Yes | 1139 | 411 | Non-Attaining | Abandoned Mine Drainage - Siltation ; Abandoned Mine Drainage - Flow Alterations | Scranton, PA | Lackawanna River-Susquehanna River | 020501070110 | 02050107004153 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23070 | 41.41468456 | -75.70985827 | Lucky Run | CWF | No | <Null> | 412 | Non-Attaining | N/A | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107001011 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23071 | 41.41550978 | -75.71031181 | Lucky Run | CWF | No | <Null> | 412 | Non-Attaining | N/A | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107001011 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23072 | 41.41645004 | -75.71285518 | Lucky Run | CWF | No | <Null> | 412 | Non-Attaining | N/A | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107001011 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23073 | 41.41709974 | -75.7137402 | Lucky Run | CWF | No | 1142 | 412 | Non-Attaining | N/A | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107001011 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23074 | 41.41927585 | -75.71631901 | Lucky Run | CWF | Yes | 1142 | 412 | Non-Attaining | N/A | Non-Urban | City of Scranton-Lackawanna River | 020501070109 | 02050107001011 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23075 | 41.41931215 | -75.71625141 | Lucky Run | CWF | Yes | 1142 | 412 | Non-Attaining | N/A | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107001011 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23076 | 41.42232325 | -75.69208712 | Keyser Creek | CWF | No | <Null> | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23077 | 41.42499331 | -75.71030116 | Lindy Creek | CWF | Yes | 1143 | 412 | Non-Attaining | N/A | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107001010 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23078 | 41.42530788 | -75.71099681 | Lindy Creek | CWF | Yes | 1143 | 412 | Non-Attaining | N/A | Non-Urban | City of Scranton-Lackawanna River | 020501070109 | 02050107001010 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23079 | 41.42531654 | -75.71098389 | Lindy Creek | CWF | Yes | 1143 | 412 | Non-Attaining | N/A | Non-Urban | City of Scranton-Lackawanna River | 020501070109 | 02050107001010 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23080 | 41.42555337 | -75.71062321 | UNT to Lindy Creek | CWF | Yes | 1143 | 412 | Non-Attaining | N/A | Non-Urban | City of Scranton-Lackawanna River | 020501070109 | 02050107002552 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23081 | 41.42578288 | -75.71038894 | UNT to Lindy Creek | CWF | Yes | 1143 | 412 | Non-Attaining | N/A | Non-Urban | City of Scranton-Lackawanna River | 020501070109 | 02050107002552 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23082 | 41.42584879 | -75.71031666 | UNT to Lindy Creek | CWF | Yes | 1143 | 412 | Non-Attaining | N/A | Non-Urban | City of Scranton-Lackawanna River | 020501070109 | 02050107002552 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23083 | 41.43527524 | -75.69917598 | Keyser Creek | CWF | No | 1145 | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23084 | 41.42844234 | -75.68996448 | Keyser Creek | CWF | No | <Null> | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23085 | 41.43380291 | -75.69574693 | Keyser Creek | CWF | No | <Null> | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23086 | 41.42711178 | -75.68780718 | Keyser Creek | CWF | No | <Null> | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23087 | 41.43637556 | -75.70065663 | Keyser Creek | CWF | No | 1145 | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23088 | 41.43752469 | -75.70173465 | Keyser Creek | CWF | Yes | 1145 | 412 | Non-Attaining | Abandoned Mine Drainage - Cause Unknown ; Abandoned Mine Drainage - Metals ; Abandoned Mine Drainage - pH | Scranton, PA | City of Scranton-Lackawanna River | 020501070109 | 02050107000298 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23090 | 41.45148667 | -75.6857994 | South Branch Leach Creek | TSF | No | 1147 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002504 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23091 | 41.45151385 | -75.68573197 | South Branch Leach Creek | TSF | No | 1147 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002504 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23092 | 41.45167321 | -75.68600033 | South Branch Leach Creek | TSF | No | 1147 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002504 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23093 | 41.45173719 | -75.68713694 | South Branch Leach Creek | TSF | Yes | 1147 | 413 | Non-Attaining | N/A | Non-Urban | Leggetts Creek | 020501070105 | 02050107002504 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23094 | 41.45174508 | -75.68721235 | South Branch Leach Creek | TSF | Yes | 1147 | 413 | Non-Attaining | N/A | Non-Urban | Leggetts Creek | 020501070105 | 02050107002504 | N/A | N/A | N/A | N/A | N/A | N/A |

PTC MS4

Chesapeake Bay Drainage Basin

RECEIVING WATERS TABLE

8/31/2022

| SEWERSHED NUMBER | OUTFALL LATITUDE (Decimal Degrees) | OUTFALL LONGITUDE (Decimal Degrees) | STREAM NAME | DESIGNATED USE (Chapter 93) | WITHIN PTC BOUNDARY | MAP NUMBER (100 Scale) | MAP NUMBER (500 Scale) | NON- ATTAINING STATUS | POLLUTANT NAME (Source-Cause) | URBANIZED AREA (2010) | HUC12 NAME | HUC12 CODE | REACH CODE | Approved TMDL | TMDL NAME | TMDL CAUSE | TMDL SPECIFIC | TMDL GENERAL | WLA |
|---------------------|--|---|--------------------------|-----------------------------------|------------------------|---------------------------|---------------------------|-----------------------------|--|--------------------------|----------------|--------------|----------------|---------------|----------------------------|-------------|---------------|--------------|----------------|
| 23095 | 41.45746017 | -75.68334478 | Leach Creek | TSF | No | <Null> | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002502 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23096 | 41.45772529 | -75.68365936 | Leach Creek | TSF | No | 1148 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002504 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23097 | 41.45783762 | -75.68374693 | Leach Creek | TSF | No | 1148 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002502 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23098 | 41.45797131 | -75.68382417 | Leach Creek | TSF | No | 1148 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002502 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23099 | 41.4580517 | -75.68373771 | Leach Creek | TSF | No | 1148 | 413 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002502 | N/A | N/A | N/A | N/A | N/A | N/A |
| 23100 | 41.47111415 | -75.70050507 | Summit Lake Creek | TSF | No | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Non-Urban | Leggetts Creek | 020501070105 | 02050107002484 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23101 | 41.4717569 | -75.70257768 | Summit Lake Creek | TSF | No | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002484 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23102 | 41.47230035 | -75.70308695 | Summit Lake Creek | TSF | No | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Non-Urban | Leggetts Creek | 020501070105 | 02050107002484 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23103 | 41.47253219 | -75.70305258 | Summit Lake Creek | TSF | No | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Non-Urban | Leggetts Creek | 020501070105 | 02050107002484 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23104 | 41.4729003 | -75.70330314 | Summit Lake Creek | TSF | Yes | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002484 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23105 | 41.47324709 | -75.70438628 | Summit Lake Creek | TSF | Yes | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Non-Urban | Leggetts Creek | 020501070105 | 02050107002484 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23106 | 41.47327167 | -75.70439613 | Summit Lake Creek | TSF | Yes | 1151 | 414 | Non-Attaining | Highway, Road, Bridge Const. - Siltation ; Upstream Impoundment - Thermal Modifications | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002486 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23107 | 41.47435748 | -75.70385069 | UNT to Summit Lake Creek | TSF | No | 1151 | 414 | Non-Attaining | N/A | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002486 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23108 | 41.47961774 | -75.68698057 | UNT to Summit Lake Creek | TSF | Yes | 1156 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Water/Flow Variability ; Small Residential Runoff - Flow Alterations ; Hydromodification - Cause Unknown | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002476 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23109 | 41.48092516 | -75.68236164 | Leggetts Creek | CWF | No | 1156 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000305 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23110 | 41.48149857 | -75.68195562 | Leggetts Creek | CWF | No | 1156 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000306 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23111 | 41.48267835 | -75.68119058 | Leggetts Creek | CWF | No | 1155 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000306 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23112 | 41.48375676 | -75.69052635 | UNT to Summit Lake Creek | TSF | Yes | 1153 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Water/Flow Variability ; Small Residential Runoff - Flow Alterations ; Hydromodification - Cause Unknown | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002471 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23113 | 41.4838149 | -75.69056755 | UNT to Summit Lake Creek | TSF | Yes | 1153 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Water/Flow Variability ; Small Residential Runoff - Flow Alterations ; Hydromodification - Cause Unknown | Scranton, PA | Leggetts Creek | 020501070105 | 02050107002471 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23114 | 41.48458622 | -75.68038153 | UNT to Leggetts Creek | CWF | No | 1155 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000307 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23115 | 41.48562763 | -75.6804673 | UNT to Leggetts Creek | CWF | No | 1155 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000307 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23116 | 41.48640918 | -75.68043214 | UNT to Leggetts Creek | CWF | No | 1155 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000307 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23117 | 41.48738754 | -75.68031012 | UNT to Leggetts Creek | CWF | No | 1155 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000307 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |
| 23118 | 41.48928041 | -75.68127669 | UNT to Leggetts Creek | CWF | No | 1154 | 414 | Non-Attaining | Urban Runoff/Storm Sewers - Siltation | Scranton, PA | Leggetts Creek | 020501070105 | 02050107000307 | Yes | Lackawanna River Watershed | Metals ; pH | Yes | N/A | No WLA for PTC |

APPENDIX C – MS4 MAP LAYERS AND DATA SOURCES

**PENNSYLVANIA TURNPIKE
COMMISSION**
MS4 Map Layers and Data
Sources



| LAYER | SOURCE |
|------------------------------|---|
| 2010 Urbanized Area | PA DEP (Referenced to US Census Bureau) |
| Basemap | Microsoft Bing Aerial photography |
| BMP -Existing | Skelly and Loy, Inc. |
| Discharge Point | Skelly and Loy, Inc. |
| Discharge Point Other | Skelly and Loy, Inc. |
| Elevation Data (contours) | PA DCNR |
| Flow Arrows | Skelly and Loy, Inc. |
| Inlets | PTC Record Drawings, Skelly and Loy, Inc. |
| Inlets - Other | PTC Record Drawings, Skelly and Loy, Inc. |
| Intake Points | PTC Record Drawings, Skelly and Loy, Inc. |
| Intake Points-Other | PTC Record Drawings, Skelly and Loy, Inc. |
| Lakes | Pennsylvania Fish and Boat Commission |
| Manholes | PTC Record Drawings, Skelly and Loy, Inc. |
| PTC Boundary | PTC Record Drawings, Skelly and Loy, Inc. |
| Municipal Boundaries | Penn DOT |
| NWI (Wetlands) | US Fish and Wildlife Service |
| Observation Points | Skelly and Loy, Inc. |
| Outfall - Impaired | PTC Record Drawings, Skelly and Loy, Inc. |
| Outfall - Unimpaired | PTC Record Drawings, Skelly and Loy, Inc. |
| Parcels | PTC |
| Pipes | PTC Record Drawings, Skelly and Loy, Inc. |
| Pipes-Other | PTC Record Drawings, Skelly and Loy, Inc. |
| Planning Area | Skelly and Loy, Inc. |
| Proposed BMPs | Skelly and Loy, Inc. |
| Proposed Drainage Area | Skelly and Loy, Inc. |
| Rain Traces | Skelly and Loy, Inc. |
| Storm Sewershed - Impaired | Skelly and Loy, Inc. |
| Storm Sewershed - Unimpaired | Skelly and Loy, Inc. |
| Stream | PA DEP |
| Stream Impaired | PA DEP |
| Surface Water Conveyance | PTC Record Drawings, Skelly and Loy, Inc. |

- The projection of information shown on the Maps is NAD 1983 State Plane Pennsylvania South US Feet

APPENDIX D – MAPSHED URBAN AREA TOOL RESULTS

D1

Planning Area Existing Loads

MapShed Results

ALEXANDERS SPRING CREEK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\HBG



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 2 | 163.60 | 81.80 | 1.20 | 0.61 | 0.40 | 0.19 |
| Cropland | 2 | 1659.00 | 829.50 | 9.30 | 4.63 | 1.70 | 0.85 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 5 | 444.00 | 88.80 | 4.80 | 0.96 | 0.40 | 0.08 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 17 | 241.40 | 14.20 | 5.80 | 0.34 | 0.70 | 0.04 |
| MD Mixed | 12 | 835.20 | 69.60 | 20.00 | 1.67 | 2.00 | 0.17 |
| HD Mixed | 12 | 836.40 | 69.70 | 20.00 | 1.67 | 2.00 | 0.17 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | Source Weighting |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 2551.41 | | 1.3 | | 0.5 | 0.018 |
| Groundwater | | | | 218.5 | | 2.1 | 0.005 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 50 | 6731.0 | | 280.9 | | 9.8 | |

Print

Export to JPEG

Exit

MapShed Results

WERTZ – CONODOGUINET CREEK
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\HBG



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 2 | 1599.80 | 799.90 | 9.10 | 4.57 | 1.50 | 0.76 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 12 | 1263.60 | 105.30 | 11.90 | 0.99 | 1.10 | 0.09 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 27 | 372.60 | 13.80 | 9.20 | 0.34 | 1.10 | 0.04 |
| MD Mixed | 12 | 768.00 | 64.00 | 16.00 | 1.33 | 1.80 | 0.15 |
| HD Mixed | 20 | 1280.00 | 64.00 | 26.60 | 1.33 | 3.00 | 0.15 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 55434.46 | | 27.7 | | 9.5 | 0.016 |
| Groundwater | | | | 429.4 | | 4.7 | 0.004 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 73 | 60718.5 | | 529.9 | | 22.7 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

LETORT SPRING RUN PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\HBG_



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 12 | 920.40 | 76.70 | 7.20 | 0.60 | 2.00 | 0.17 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 12 | 961.20 | 80.10 | 11.30 | 0.94 | 0.80 | 0.07 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 37 | 488.40 | 13.20 | 12.60 | 0.34 | 1.50 | 0.04 |
| MD Mixed | 40 | 2680.00 | 67.00 | 57.20 | 1.43 | 6.40 | 0.16 |
| HD Mixed | 30 | 2010.00 | 67.00 | 42.90 | 1.43 | 4.80 | 0.16 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 19206.46 | | 9.6 | | 3.3 | 0.015 |
| Groundwater | | | | 450.2 | | 5.0 | 0.010 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 131 | 26266.5 | | 591.0 | | 23.8 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

HOGESTOWN RUN PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\HBG_V

Watershed Totals Municipality Loads Regulated Loads Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 2 | 27.60 | 13.80 | 0.70 | 0.34 | 0.10 | 0.04 |
| MD Mixed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Mixed | 2 | 133.60 | 66.80 | 2.90 | 1.44 | 0.30 | 0.15 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 815.34 | | 0.4 | | 0.2 | 0.002 |
| Groundwater | | | | 44.4 | | 0.4 | 0.001 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 4 | 976.5 | | 48.4 | | 1.0 | |

Source Weighting

Print Export to JPEG Exit

MapShed Results

TRINDLE SPRING RUN PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\HBG



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 10 | 671.00 | 67.10 | 9.20 | 0.92 | 0.60 | 0.06 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 62 | 812.20 | 13.10 | 21.10 | 0.34 | 2.50 | 0.04 |
| MD Mixed | 7 | 457.10 | 65.30 | 9.70 | 1.39 | 1.10 | 0.15 |
| HD Mixed | 25 | 1632.50 | 65.30 | 34.80 | 1.39 | 3.80 | 0.15 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 13907.77 | | 7.0 | | 2.3 | 0.012 |
| Groundwater | | | | 309.3 | | 3.5 | 0.009 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 104 | 17480.6 | | 391.1 | | 13.8 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

LOWER YELLOW BREECHES CREEK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\lower



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|----------------|------------------|-----------------|----------------------|-----------------|----------------------|------------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 10 | 1057.00 | 105.70 | 3.90 | 0.39 | 1.10 | 0.11 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 10 | 112.00 | 11.20 | 0.60 | 0.06 | 0.10 | 0.01 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 25 | 3190.00 | 127.60 | 19.30 | 0.77 | 2.30 | 0.09 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 77 | 1024.10 | 13.30 | 25.40 | 0.33 | 3.10 | 0.04 |
| MD Mixed | 67 | 4200.90 | 62.70 | 88.40 | 1.32 | 9.40 | 0.14 |
| HD Mixed | 77 | 4827.90 | 62.70 | 101.60 | 1.32 | 10.80 | 0.14 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 7 | 438.90 | 62.70 | 9.20 | 1.32 | 1.00 | 0.14 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| | | | | | | Source Weighting | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 887353.58 | | 443.7 | | 132.7 | 0.016 |
| Groundwater | | | | 865.1 | | 12.2 | 0.010 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 273 | 902204.4 | | 1557.2 | | 172.7 | |

Print

Export to JPEG

Exit

MapShed Results

LAUREL RUN – SUSQUEHANNA RIVER
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Laurel



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 2 | 20.00 | 10.00 | 0.10 | 0.06 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 7 | 802.90 | 114.70 | 5.20 | 0.74 | 0.50 | 0.07 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 37 | 473.60 | 12.80 | 12.20 | 0.33 | 1.50 | 0.04 |
| MD Mixed | 94 | 5987.80 | 63.70 | 129.70 | 1.38 | 14.10 | 0.15 |
| HD Mixed | 32 | 2038.40 | 63.70 | 44.20 | 1.38 | 4.80 | 0.15 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 762773.71 | | 381.4 | | 105.8 | 0.013 |
| Groundwater | | | | 509.6 | | 8.7 | 0.011 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 172 | 772096.4 | | 1082.4 | | 135.4 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

SWATARA CREEK – SUSQUEHANNA RIVER
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Swat



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 10 | 1700.00 | 170.00 | 8.80 | 0.88 | 1.10 | 0.11 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 10 | 134.00 | 13.40 | 3.30 | 0.33 | 0.40 | 0.04 |
| MD Mixed | 20 | 1264.00 | 63.20 | 26.00 | 1.30 | 2.80 | 0.14 |
| HD Mixed | 15 | 948.00 | 63.20 | 19.50 | 1.30 | 2.10 | 0.14 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 2 | 126.60 | 63.30 | 2.60 | 1.30 | 0.30 | 0.14 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 53768.58 | | 26.9 | | 8.2 | 0.006 |
| Groundwater | | | | 201.4 | | 2.7 | 0.003 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 57 | 57941.2 | | 288.5 | | 17.6 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

MIDDLE CREEK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Lanc



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 5 | 946.50 | 189.30 | 6.30 | 1.25 | 0.80 | 0.15 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 15 | 243.00 | 16.20 | 6.00 | 0.40 | 0.60 | 0.04 |
| MD Mixed | 7 | 494.20 | 70.60 | 12.30 | 1.75 | 1.30 | 0.19 |
| HD Mixed | 2 | 140.80 | 70.40 | 3.50 | 1.75 | 0.40 | 0.19 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 9003.42 | | 4.5 | | 1.5 | 0.007 |
| Groundwater | | | | 167.1 | | 1.9 | 0.002 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 29 | 10827.9 | | 199.7 | | 6.5 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

COCALICO CREEK – CONESTOGA RIVER
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Lanc



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 12 | 2192.40 | 182.70 | 14.90 | 1.24 | 1.80 | 0.15 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 17 | 268.60 | 15.80 | 6.80 | 0.40 | 0.70 | 0.04 |
| MD Mixed | 22 | 1553.20 | 70.60 | 32.30 | 1.47 | 3.70 | 0.17 |
| HD Mixed | 15 | 1059.00 | 70.60 | 22.10 | 1.47 | 2.60 | 0.17 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 31446.55 | | 15.7 | | 5.5 | 0.010 |
| Groundwater | | | | 270.4 | | 2.9 | 0.004 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 66 | 36519.8 | | 362.2 | | 17.2 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

LITTLE COCALICO CREEK – COCALICO CREEK
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Lanc



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 7 | 1544.90 | 220.70 | 7.10 | 1.02 | 1.10 | 0.15 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 15 | 244.50 | 16.30 | 6.00 | 0.40 | 0.60 | 0.04 |
| MD Mixed | 22 | 1566.40 | 71.20 | 35.60 | 1.62 | 4.00 | 0.18 |
| HD Mixed | 30 | 2136.00 | 71.20 | 48.60 | 1.62 | 5.40 | 0.18 |
| LD Residential | 2 | 32.60 | 16.30 | 0.80 | 0.40 | 0.10 | 0.04 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 65707.29 | | 32.9 | | 10.4 | 0.015 |
| Groundwater | | | | 583.9 | | 7.3 | 0.005 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 20.4 | | 0.0 | 0.002 |
| Totals | 76 | 71231.7 | | 735.3 | | 28.9 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

LITTLE MUDDY CREEK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Lanc



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 12 | 1632.00 | 136.00 | 5.90 | 0.49 | 1.70 | 0.14 |
| Cropland | 7 | 14455.00 | 2065.00 | 43.00 | 6.14 | 10.10 | 1.44 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 15 | 3514.50 | 234.30 | 15.80 | 1.05 | 2.40 | 0.16 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 27 | 442.80 | 16.40 | 10.80 | 0.40 | 1.10 | 0.04 |
| MD Mixed | 35 | 2485.00 | 71.00 | 65.50 | 1.87 | 7.00 | 0.20 |
| HD Mixed | 25 | 1775.00 | 71.00 | 46.80 | 1.87 | 5.00 | 0.20 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | Source Weighting |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 35563.09 | | 17.8 | | 5.6 | 0.041 |
| Groundwater | | | | 714.7 | | 9.0 | 0.019 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 121 | 59867.4 | | 920.3 | | 41.9 | |

Print

Export to JPEG

Exit

MapShed Results

MUDDY CREEK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Lanc



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 7 | 1709.40 | 244.20 | 7.50 | 1.07 | 1.20 | 0.17 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 22 | 354.20 | 16.10 | 8.80 | 0.40 | 0.90 | 0.04 |
| MD Mixed | 15 | 1078.50 | 71.90 | 24.50 | 1.63 | 2.70 | 0.18 |
| HD Mixed | 37 | 2660.30 | 71.90 | 60.30 | 1.63 | 6.70 | 0.18 |
| LD Residential | 2 | 32.20 | 16.10 | 0.80 | 0.40 | 0.10 | 0.04 |
| MD Residential | 2 | 143.60 | 71.80 | 3.30 | 1.63 | 0.40 | 0.18 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 63932.73 | | 32.0 | | 10.3 | 0.033 |
| Groundwater | | | | 675.1 | | 8.1 | 0.007 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 23.1 | | 0.0 | 0.003 |
| Totals | 85 | 69910.9 | | 835.4 | | 30.4 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

CITY OF WILKES BARRE – MILL CREEK
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Scra



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 2 | 109.20 | 54.60 | 0.30 | 0.16 | 0.10 | 0.05 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 2 | 26.20 | 13.10 | 0.70 | 0.35 | 0.10 | 0.04 |
| MD Mixed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Mixed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 1028.47 | | 0.5 | | 0.1 | 0.000 |
| Groundwater | | | | 0.0 | | 0.0 | 0.000 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 4 | 1163.9 | | 1.5 | | 0.3 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

CITY OF WILKES BARRE – SUSQUEHANNA
RIVER PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Scraper



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|----------------|------------------|-----------------|----------------------|-----------------|----------------------|------------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 5 | 582.00 | 116.40 | 5.20 | 1.04 | 0.40 | 0.08 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 7 | 91.00 | 13.00 | 2.50 | 0.35 | 0.30 | 0.04 |
| MD Mixed | 15 | 1032.00 | 68.80 | 24.30 | 1.62 | 2.70 | 0.18 |
| HD Mixed | 30 | 2064.00 | 68.80 | 48.60 | 1.62 | 5.40 | 0.18 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| | | | | | | Source Weighting | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 32119.83 | | 16.1 | | 4.1 | 0.005 |
| Groundwater | | | | 185.6 | | 4.3 | 0.005 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 57 | 35888.8 | | 282.3 | | 17.2 | |

Print

Export to JPEG

Exit

MapShed Results

LACKAWANNA RIVER – SUSQUEHANNA
RIVER PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Scra



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 5 | 46.50 | 9.30 | 0.60 | 0.12 | 0.10 | 0.01 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 20 | 2328.00 | 116.40 | 20.80 | 1.04 | 1.40 | 0.07 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 42 | 529.20 | 12.60 | 14.70 | 0.35 | 1.70 | 0.04 |
| MD Mixed | 27 | 1768.50 | 65.50 | 40.20 | 1.49 | 4.30 | 0.16 |
| HD Mixed | 32 | 2096.00 | 65.50 | 47.70 | 1.49 | 5.10 | 0.16 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 65524.18 | | 32.8 | | 8.1 | 0.017 |
| Groundwater | | | | 430.5 | | 11.4 | 0.019 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 126 | 72292.4 | | 587.3 | | 32.1 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

SPRING BROOK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Scra



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 2 | 29.60 | 14.80 | 0.30 | 0.14 | 0.00 | 0.00 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 10 | 1847.00 | 184.70 | 11.80 | 1.18 | 1.10 | 0.11 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 10 | 141.00 | 14.10 | 3.50 | 0.35 | 0.40 | 0.04 |
| MD Mixed | 2 | 133.80 | 66.90 | 3.50 | 1.74 | 0.40 | 0.18 |
| HD Mixed | 15 | 1003.50 | 66.90 | 26.10 | 1.74 | 2.70 | 0.18 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 39476.23 | | 19.7 | | 5.0 | 0.012 |
| Groundwater | | | | 390.2 | | 9.2 | 0.006 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 39 | 42631.1 | | 455.1 | | 18.8 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

CITY OF SCRANTON – LACKAWANNA RIVER
PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\R12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Scranton



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 12 | 100.80 | 8.40 | 1.40 | 0.12 | 0.10 | 0.01 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 10 | 887.00 | 88.70 | 11.40 | 1.14 | 0.60 | 0.06 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 22 | 281.60 | 12.80 | 7.70 | 0.35 | 0.90 | 0.04 |
| MD Mixed | 10 | 675.00 | 67.50 | 15.10 | 1.51 | 1.70 | 0.17 |
| HD Mixed | 52 | 3510.00 | 67.50 | 78.50 | 1.51 | 8.80 | 0.17 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HD Residential | 2 | 135.00 | 67.50 | 3.00 | 1.51 | 0.30 | 0.17 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 85722.23 | | 42.9 | | 10.5 | 0.009 |
| Groundwater | | | | 275.4 | | 7.7 | 0.008 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 108 | 91311.6 | | 435.4 | | 30.6 | |

Source Weighting

Print

Export to JPEG

Exit

MapShed Results

LEGGETTS CREEK PLANNING AREA

Select input data file: W:\Projects\2012 Projects and Proposals\12-0564.015 PTC MS4\MapShed\Ches-Mapshed-Runfiles\Scra



Watershed Totals

Municipality Loads

Regulated Loads

Unregulated Loads

View loads for municipality: (87280)

| Source | Source Area (ac) | Sediment | | Nitrogen | | Phosphorus | |
|-----------------------|------------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| | | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) | Total Load (lb) | Loading Rate (lb/ac) |
| Hay/Pasture | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Cropland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 12 | 189.60 | 15.80 | 1.70 | 0.14 | 0.10 | 0.01 |
| Wetland | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Disturbed | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Turfgrass | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Open Land | 15 | 2536.50 | 169.10 | 17.30 | 1.15 | 1.70 | 0.11 |
| Bare Rock | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sandy Areas | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Unpaved Roads | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LD Mixed | 22 | 292.60 | 13.30 | 7.70 | 0.35 | 0.90 | 0.04 |
| MD Mixed | 17 | 1060.80 | 62.40 | 28.40 | 1.67 | 3.10 | 0.18 |
| HD Mixed | 37 | 2305.10 | 62.30 | 61.80 | 1.67 | 6.70 | 0.18 |
| LD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MD Residential | 2 | 124.60 | 62.30 | 3.30 | 1.67 | 0.40 | 0.18 |
| HD Residential | 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water | 0 | | | | | | |
| Farm Animals | | | | 0.0 | | 0.0 | 0.000 |
| Tile Drainage | | 0.00 | | 0.0 | | 0.0 | 0.000 |
| Stream Bank | | 133333.52 | | 66.7 | | 17.9 | 0.019 |
| Groundwater | | | | 415.4 | | 7.8 | 0.016 |
| Point Sources | | | | 0.0 | | 0.0 | 0.000 |
| Septic Systems | | | | 0.0 | | 0.0 | 0.000 |
| Totals | 105 | 139842.7 | | 602.3 | | 38.6 | |

Source Weighting

Print

Export to JPEG

Exit

D2

Land Use Distribution Summary

LAND USE DISTRIBUTION SUMMARY
PTC MS4 PLANNING AREA
(ACRES)



| LAND USE | | WATERSHED NAME | | | | | | | | | | | | | | | | | | | Total Chesapeake Bay Basin |
|---------------------------------|-----------------------------------|----------------------------|----------------------------------|-------------------|---------------|--------------------|--------------------------------|----------------------------------|-------------------------------------|--------------|------------------------------------|--|--------------------|-------------|-------------------------------------|--|--|--------------|---------------------------------------|----------------|-------------------------------|
| MAPSHED NAME | CAST NAME | Alexanders Spring Creek | Wertz Run- Conodoguinet Creek | Letort Spring Run | Hogestown Run | Trindle Spring Run | Lower Yellow Breeches Creek | Laurel Run- Susquehanna River | Swatara Creek- Susquehanna River | Middle Creek | Cocalico Creek- Conestoga River | Little Cocalico Creek- Cocalico Creek | Little Muddy Creek | Muddy Creek | City of Wilkes-Barre- Mill Creek | City of Wilkes-Barre- Susquehanna River | Lackawanna River- Susquehanna River | Spring Brook | City of Scranton- Lackawanna River | Leggetts Creek | |
| Hay/Pasture | Pasture | 2 | 0 | 12 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| Cropland | Double Cropped Land | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Forest | True Forest | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 12 | 12 | 43 |
| Wetland | Non-tidal Floodplain Wetland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disturbed | Regulated Construction | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Turfgrass | MS4 Turfgrass | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Open Land | Mixed Open | 5 | 12 | 12 | 0 | 10 | 25 | 7 | 10 | 5 | 12 | 7 | 15 | 7 | 0 | 5 | 20 | 10 | 10 | 15 | 187 |
| Bare Rock | Non-Regulated Buildings and Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sandy Areas | Non-Regulated Buildings and Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unpaved Roads | No Equivalent | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Low-Density (LD) Mixed | MS4 Buildings and Other | 17 | 27 | 37 | 0 | 62 | 77 | 37 | 10 | 15 | 17 | 15 | 27 | 22 | 2 | 7 | 42 | 10 | 22 | 22 | 468 |
| Medium Density (MD) Mixed | MS4 Buildings and Other | 12 | 12 | 40 | 0 | 7 | 67 | 94 | 20 | 7 | 22 | 22 | 35 | 15 | 0 | 15 | 27 | 2 | 10 | 17 | 424 |
| High-Density (HD) Mixed | MS4 Buildings and Other | 12 | 20 | 30 | 2 | 25 | 77 | 32 | 15 | 2 | 15 | 30 | 25 | 37 | 0 | 30 | 32 | 15 | 52 | 37 | 488 |
| Low-Density (LD) Residential | MS4 Buildings and Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Medium Density (MD) Residential | MS4 Buildings and Other | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 13 |
| High-Density (HD)Residential | MS4 Buildings and Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| Water | Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | | 50 | 73 | 131 | 2 | 104 | 273 | 172 | 57 | 29 | 66 | 76 | 121 | 85 | 4 | 57 | 126 | 39 | 108 | 105 | 1678 |

**APPENDIX E –
BMP CONCEPT DESIGN AND
SUPPORT INFORMATION**

E1

Project Location Map

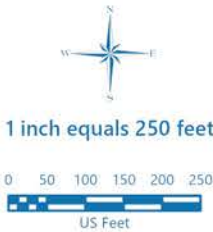


**Figure 2:
Project Location Map**

UNT Susquehanna River (BMP-4)

Lower Swatara Township,
Dauphin County

- Map Key**
- Contours (2ft)
 - Local Roads
 - Project Streams (2,537.80 LF +/-)
 - Conservation Area (7.96 AC +/-)
 - Parcel of Interest
 - Adjacent Parcels



- References**
1. Parcel data are provided as-is from the county GIS department. Boundaries are illustrated here for assessment purposes only and do not constitute survey-quality information.
 2. Stream lines within the project limits were delineated in the field by qualified RES staff.
 3. Contours are derived from 0.7m-resolution USGS 3DEP LiDAR (2016).
 4. The background orthomosaic basemap is from PEMA (2018).
 5. Map data are projected onto the NAD83 State Plane PA South (ft) planar reference system.



E2

**UNT to Susquehanna River (BMP-4)
Existing Conditions Photographs**

UNT to Susquehanna River (BMP-4)



Photo 1



Photo 2



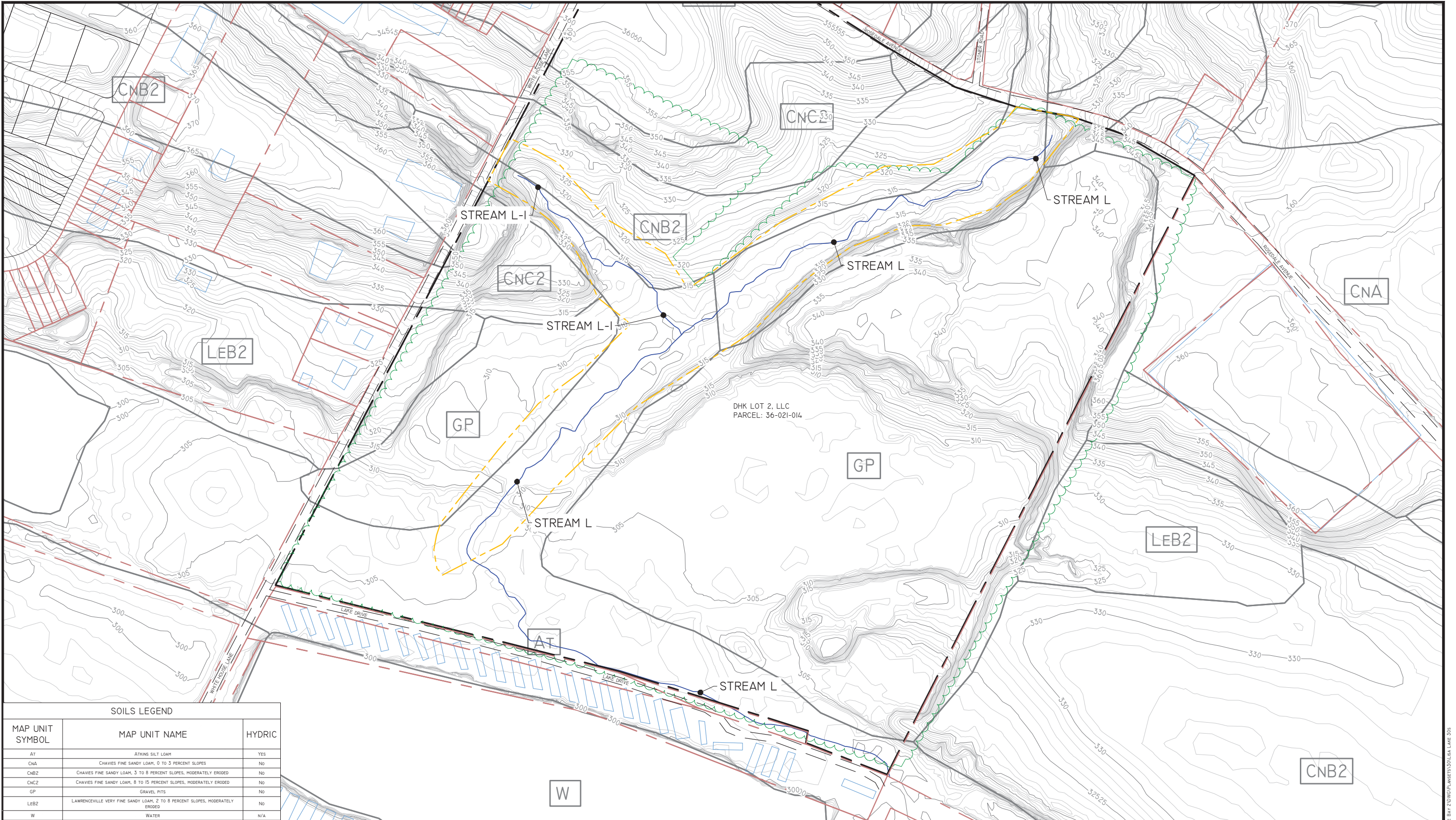
Photo 3



Photo 4

E3

Conceptual BMP Design Plan



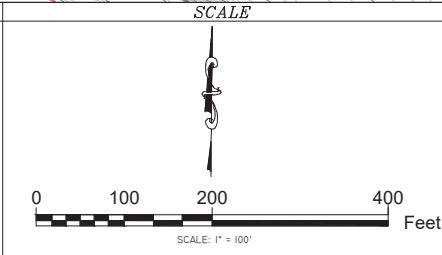
| SOILS LEGEND | | |
|-----------------|--|--------|
| MAP UNIT SYMBOL | MAP UNIT NAME | HYDRIC |
| AT | ATKINS SILT LOAM | YES |
| CNA | CHAVIES FINE SANDY LOAM, 0 TO 3 PERCENT SLOPES | NO |
| CNC2 | CHAVIES FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED | NO |
| CNC2 | CHAVIES FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED | NO |
| GP | GRAVEL PITS | NO |
| LEB2 | LAWRENCEVILLE VERY FINE SANDY LOAM, 2 TO 8 PERCENT SLOPES, MODERATELY ERODED | NO |
| W | WATER | N/A |

| REVISIONS | | | |
|-----------|-------------|------|----|
| NO. | DESCRIPTION | DATE | BY |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| LEGEND | |
|----------------------------|-----|
| PROPERTY BOUNDARY | --- |
| ADJACENT PROPERTY BOUNDARY | --- |
| SITE PROTECTION BOUNDARY | --- |
| EXISTING THALWEG | --- |
| EXISTING WETLANDS | --- |
| EXISTING STRUCTURES | --- |
| ROAD | --- |
| TREE LINE | --- |
| EXISTING MAJOR CONTOUR | --- |
| EXISTING MINOR CONTOUR | --- |

| NOTES | |
|-------|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

| SEAL | |
|------|--|
| | |
| | |
| | |
| | |
| | |
| | |
| | |



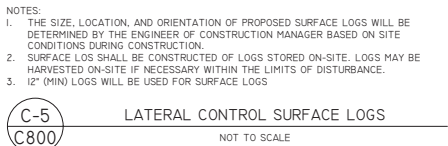
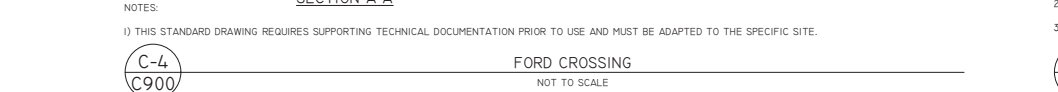
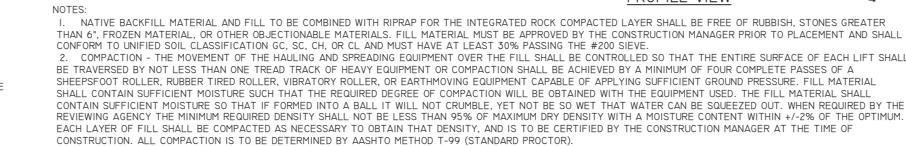
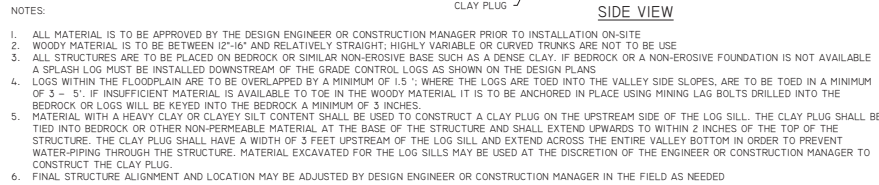
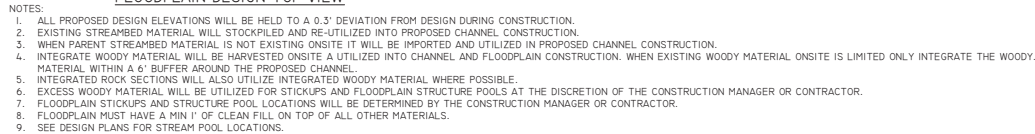
RESOURCE ENVIRONMENTAL SOLUTIONS
317 EAST CARSON ST. SUITE 242
PITTSBURGH PA 15219
WWW.RES.US

TELEPHONE: (412) 249-2435
EMAIL: HKALK@RES.US

CHESAPEAKE BAY MSA SEDIMENT REDUCTION
PROJECT CONCEPTUAL BMP DESIGN PLAN
BMP 4 EXISTING CONDITIONS

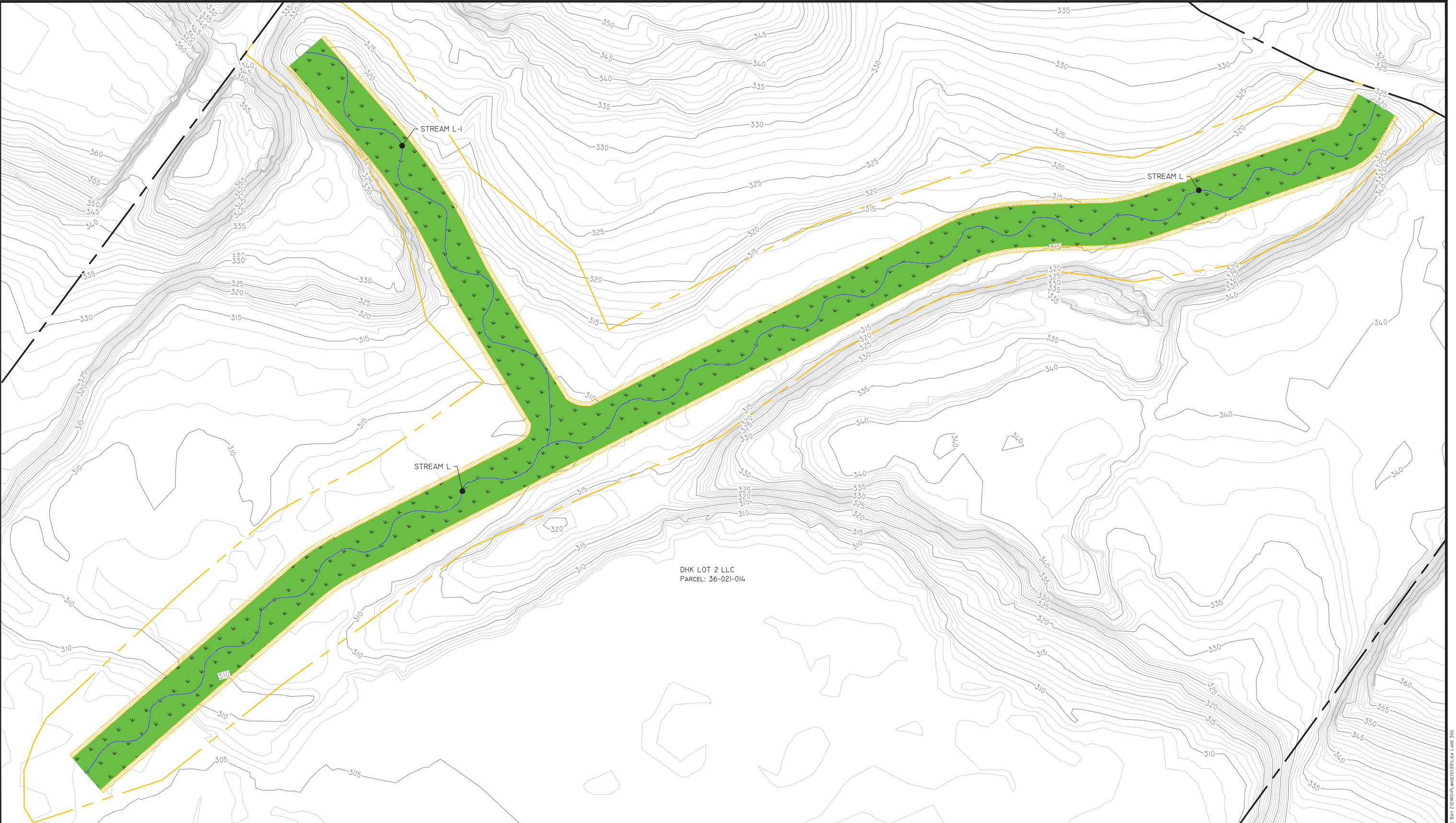
| | | |
|--------------|-------------------|------------------------|
| DRAWN BY: | WP | PENNSYLVANIA |
| CHECKED BY: | NH | DAUPHIN COUNTY |
| APPROVED BY: | HR | LOWER SWATARA TOWNSHIP |
| DATE: | November 10, 2021 | SHEET: C100 |

PROJECT NO: 105217
105217



[illegible]

\\FSCAD\PROJECTS\105247-PEN\DOT MS4 - CHESAPEAKE BAY 2\DWG\PLAN\SETS\30\LSA LAKE 30S

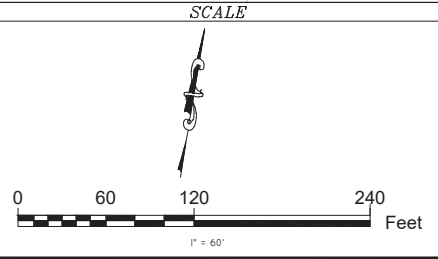


| REVISIONS | | | |
|-----------|-------------|------|----|
| NO. | DESCRIPTION | DATE | BY |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

| LEGEND | |
|------------------------------|-------|
| PROPERTY BOUNDARY | --- |
| SITE PROTECTION BOUNDARY | - - - |
| MAJOR CONTOUR | --- |
| MINOR CONTOUR | --- |
| WETLAND RESTORATION PLANTING | ■ |
| WETLAND RESTORATION SEEDING | ▼ |
| LIVE STAKING | ■ |
| UPLAND RESTORATION SEEDING | ■ |

| NOTES |
|-------|
| |
| |
| |
| |
| |
| |

| SEAL |
|------|
| |
| |
| |
| |
| |
| |



RESOURCE ENVIRONMENTAL SOLUTIONS

33 TERMINAL WAY, SUITE W445A
PITTSBURGH PA 15219
WWW.RES.US

TELEPHONE: (412) 249-2435

EMAIL: HKALK@RES.US

CHESAPEAKE BAY MS4 SEDIMENT REDUCTION PROJECT

BMP 4 SITE RESTORATION PLAN STREAM L & L-1

| | | |
|--------------|-------------------|--|
| DRAWN BY: | WP | PENNSYLVANIA |
| CHECKED BY: | NH | DAUPHIN COUNTY LOWER SWARTARA TOWNSHIP |
| APPROVED BY: | HK | SHEET: C900 |
| DATE: | NOVEMBER 10, 2021 | PROJECT NO: 105217 |

PLANTING DETAIL NOTES:

A. GENERAL:

1. PLANT DETAILS ARE INCORPORATED INTO THIS SPECIFICATION BY REFERENCE.

2. QUALITY ASSURANCE

- 2.1. SUPPLIER CERTIFICATION: THE SUPPLIER OF ALL SEEDS AND/OR VEGETATION SHALL CERTIFY THAT ORIGIN OF THE SEEDS FROM WHICH THE PLANTS OR SEEDS WERE PRODUCED IS FROM THE EASTERN OR CENTRAL PORTIONS OF THE U.S. PRIOR TO PLANTING.
- 2.2. INSTALLER QUALIFICATIONS: ENGAGE AN EXPERIENCED INSTALLER, WHO HAS SUCCESSFULLY COMPLETED RESTORATION PLANTING PROJECTS SIMILAR IN SIZE AND COMPLEXITY TO THIS PROJECT.
- 2.3. INSTALLER'S FIELD SUPERVISION: INSTALLER TO MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR ON THE PROJECT SITE WHEN PLANTING IS IN PROGRESS.

3. PLANT MATERIALS

3.1. PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS AND SPECIES INDICATED ON THE CONSTRUCTION DRAWINGS.

4. ALL PLANT MATERIALS AND WORK SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 2004 AMERICAN STANDARD FOR NURSERY STOCK. ALL SEEDS MUST MEET APPLICABLE STATE AND FEDERAL REGULATIONS AND MUST INCLUDE LABELING INDICATING SUPPLIER, FORMULATION, GERMINATION RATES AND SEED DATE. LABELS FROM ALL SEED INSTALLED ARE TO BE KEPT AND SUPPLIED TO OWNER AT COMPLETION OF PROJECT.

DO NOT MAKE SUBSTITUTIONS UNLESS APPROVED BY THE PROJECT MANAGER. REQUESTS FOR SUBSTITUTIONS MUST BE MADE IN WRITING TO THE PROJECT MANAGER AND APPROVED TO INSTALLATION. INCLUDE REASONS WHY THE SUBSTITUTIONS ARE BEING REQUESTED.

6. PROJECT ENGINEER MAY INSPECT PLANT MATERIALS EITHER AT PLACE OF GROWTH OR ON SITE DURING PLANTING ACTIVITIES, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. MATERIAL FOUND TO BE UNACCEPTABLE WILL BE REJECTED AND THE CONTRACTOR WILL BE REQUIRED TO SUPPLY REPLACEMENT MATERIAL WITHIN TIME FRAME (I.E., 1 WEEK). REJECTED MATERIAL SHALL BE IMMEDIATELY REMOVED FROM PROJECT SITE. UNACCEPTABLE MATERIAL IS DEFINED AS THE FOLLOWING:

- 6.1. PLANTS WITH BENT TRUNKS OR MULTIPLE LEADERS, UNLESS CHARACTERISTIC FOR THE SPECIES;
- 6.2. PLANTS WITH DISEASED TRUNKS, STEMS, OR LEAVES;
- 6.3. PLANTS WITH PEST-INFESTED TRUNKS, STEMS, OR LEAVES;
- 6.4. PLANTS OF INSUFFICIENT SIZE;
- 6.5. PLANTS WITH WRONG SPECIES/SUB-SPECIES; AND
- 6.6. PLANTS HAVING ROOT GIRDLING IN THE CONTAINER.

7. DELIVERY, STORAGE, AND HANDLING

7.1. PROTECT BARK, BRANCHES, AND ROOT SYSTEMS FROM SUN SCALD, DRYING, SWEATING, WHIPPING, AND OTHER HANDLING AND TYING DAMAGE. DO NOT BEND OR BIND-TIE TREES OR SHRUBS IN SUCH A MANNER AS TO DESTROY THEIR NATURAL SHAPE. PROVIDE PROTECTIVE COVERING OF PLANTS DURING DELIVERY. DO NOT DROP PLANTS DURING DELIVERY.

7.2. DELIVER PLANT MATERIALS AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, FOLLOW STORAGE INSTRUCTIONS AS SHOWN IN TUBELING TREE PLANTING DETAIL.

7.3. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS UNTIL PLANTING TIME.

7.4. SEED: SEED SHOULD BE CLEAN AND DRY. DO NOT USE SEED THAT HAS BECOME MOIST DURING DELIVERY OR STORAGE. IF SEED NEEDS TO BE TEMPORARILY STORED IT SHOULD BE STORED IN A COOL, DRY PLACE.

8. PROJECT CONDITIONS

8.1. EXAMINE THE SUB-GRADE AND TOPSOIL, AND VERIFY THE ELEVATIONS PRIOR TO INSTALLING PLANT ON SEED MATERIAL. ALL SOIL AMENDMENTS AND CONDITIONING SHALL BE COMPLETED PRIOR TO SEEDING AND PLANT MATERIAL INSTALLATION. DO NOT PROCEED WITH THE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED IN A MANNER ACCEPTABLE TO THE INSTALLER.

8.2. CALL PENNSYLVANIA ONE CALL SYSTEM AT 1-800-242-1776, 72 HOURS PRIOR TO ANY EXCAVATION. DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE AS REQUIRED.

9. PLANTING AND SEEDING RESTRICTIONS

9.1. PLANTS SHALL BE PLANTED DURING UNFROZEN SOIL CONDITIONS SEPTEMBER 15TH - MAY 15TH. PLANT INSTALLATION OUTSIDE OF THIS TIME PERIOD SHALL NOT OCCUR UNLESS APPROVED BY THE PROJECT CONSTRUCTION MANAGER AND MAY REQUIRE ADDITIONS TO THE SCOPE OF WORK, SUCH AS WATERING REGIMES, AND ADDITIONAL PLANT QUANTITIES.

9.2. SEEDING SHALL BE COMPLETED DURING SEPTEMBER 15-MAY 15 TO THE GREATEST EXTENT POSSIBLE. DORMANT WINTER SEEDING SHALL NOT BE CONDUCTED WITH MORE THAN 2" OF SNOW ON THE GROUND AT THE TIME OF SEEDING. DUE TO THE SCHEDULE OF THE PROJECT, SOME PERMANENT SEEDING OUTSIDE THIS TIME PERIOD WILL BE NECESSARY. THE CONTRACTOR WILL BE RESPONSIBLE FOR REMEDIAL SEEDING IN UNDER-PERFORMING AREAS DUE TO SEEDING OUTSIDE OF THIS TIME PERIOD. A COVER CROP SHALL BE SOWN AT THE TIME OF PERMANENT SEEDING TO PROVIDE QUICKER GERMINATION AND STABILIZATION PER THE PLAN SHEETS.

9.3. THESE LIMITS MAY NOT BE MODIFIED UNLESS APPROVED BY THE PROJECT ENGINEER IN ADVANCE, WITH THE RISK OF SURVIVAL BORNE SOLELY BY THE CONTRACTOR.

10. WARRANTY

10.1. WARRANTY PERIOD IS FOR ONE (1) YEAR AFTER DATE OF FINAL ACCEPTANCE AND COVERS DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH, EXCEPT FOR DEFECTS RESULTING FROM NEGLECT BY OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND CONTRACTOR'S CONTROL.

10.2. CONTRACTOR SHALL GUARANTEE A MINIMUM SURVIVAL RATE FOR THE WARRANTY PERIOD OF 85% FOR BALLED AND BURLAPPED, CONTAINER GROWN, AND TUBELINGS, AND 75% FOR BARE ROOT AND LIVE STAKES.

10.3. IF SURVIVAL RATES ARE LESS THAN THE ABOVE WARRANTY RATES, THE CONTRACTOR SHALL REPLACE THE QUANTITY OF DEFECTIVE OR DEAD PLANTS UP TO THE ORIGINAL CONSTRUCTION DRAWING SPECIFIED PLANT QUANTITY. WARRANTY PLANTINGS SHALL OCCUR WITHIN THE NEXT PLANTING WINDOW (SEPTEMBER 15TH - JUNE 15TH, EXCLUDING FROZEN SOIL CONDITIONS) FOLLOWING THE END OF THE APPLICABLE WARRANTY PERIOD.

10.4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY DURING THE WARRANTY PERIOD TO PROVIDE WRITTEN NOTICE OF ANY MAINTENANCE PRACTICE TO THE OWNER, WHICH IN THEIR OPINION WILL AFFECT THE GUARANTEE IF NOT REMEDIED PROMPTLY. THE PROJECT ENGINEER WILL RENDER AN OPINION OF ANY CONFLICT IF NECESSARY.

II. MAINTENANCE

II.1. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL THROUGH FINAL ACCEPTANCE AND WARRANTY PERIOD.

B. EXECUTION:

INSTALL PLANT MATERIALS IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS OF THE CONSTRUCTION DRAWINGS FOLLOWING THE ADDITION OF SOIL AMENDMENTS, SEEDING, AND INSTALLATION OF APPLICABLE EROSION CONTROL FABRIC.

I. CONTAINER GROWN MATERIAL

I.1. PLANTING OF CONTAINER GROWN MATERIAL SHALL OCCUR IN ACCORDANCE WITH LOCATIONS AND/OR PATTERNS SPECIFIC TO THE CONSTRUCTION DRAWINGS.

I.2. PLANTING HOLES SHALL BE AT LEAST TWICE THE DIAMETER AND DUG TO THE SAME DEPTH AS THE CONTAINER IN WHICH THEY ARE GROWN. DO NOT REMOVE PLANT MATERIAL FROM CONTAINER UNTIL IMMEDIATELY BEFORE INSTALLATION. EXAMINE THE ROOTS TO SEE IF THEY ARE POT BOUND. CAREFULLY SEPARATE ANY POT BOUND OR CRAMPED ROOTS AND SPREAD THEM OUT WHEN PLACING THE PLANT WITHIN THE HOLE SO THAT THE ROOTS CAN GROW WITHOUT FURTHER CONSTRICTION OF THE ROOT BALL.

I.3. SET PLANT MATERIALS PLUMB AND CENTERED WITHIN HOLE, ENSURING THAT THE TOP OF THE ROOT BALL IS SLIGHTLY ELEVATED ABOVE THE SURROUNDING SOIL ELEVATIONS. BACKFILL AROUND ROOT BALL WITH SUITABLE NATIVE SOIL, MAINTAINING PLUMB, AND GENTLY TAMPING BACKFILL LAYERS TO ELIMINATE VOIDS. WATER 15 BACKFILL LAYERS TO THE POINT OF SOIL SATURATION.

I.4. FOLLOWING THE BACKFILLING, ADD EXISTING SOIL TO BRING THE FINAL GRADE IN THE PLANTING HOLE TO THE SURROUNDING SOIL SURFACE. RAKE THE UNUSED EXISTING SOIL OUTSIDE THE PLANTING HOUSE, TAKING CARE NOT TO MOUND THE SOIL OR TO SIGNIFICANTLY ALTER THE EXISTING GRADES.

2. BAREROOT AND TUBELING MATERIAL

2.1. IT SHOULD BE ANTICIPATED THAT THE SOIL MAY BE COMPACTED MORE THAN OPTIMAL FOR PLANTING AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RIP SOIL TO ASSURE OPTIMAL PLANTING CONDITION. SOIL SHALL BE RIPPED TO A DEPTH OF 9-12".

2.2. BAREROOT MATERIAL SHALL BE TREATED WITH ROOT DIP ACCORDING TO THE MANUFACTURER'S RECOMMENDATION PRIOR TO PLANTING. MATERIALS SHALL BE PLANTED IMMEDIATELY OR OTHERWISE STORED PER THE MANUFACTURER'S RECOMMENDATIONS.

3. LIVE STAKE MATERIAL

3.1. LIVE STAKE MATERIAL SHALL BE KEPT MOIST ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. DO NOT ALLOW THE LIVE STAKES TO DRY OUT PRIOR TO INSTALLATION.

3.2. MATERIAL SHALL BE PLANTED ACCORDING TO THE DETAIL PROVIDED. THE USE OF A PUNCH/PLANTING BAR, AUGER, REBAR, OR WATER-JET MAY BE USED TO PRE-DRILL HOLE IF NECESSARY. TAMP SOIL AROUND STAKE FOLLOWING INSTALL.

4. SEEDING

4.1. SEEDING SHALL OCCUR AS SHOWN ON THE PLANTING PLAN. IN ACCORDANCE WITH THE CURRENT VERSION OF THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL SEED SHALL BE APPLIED PRIOR TO INSTALLATION OF ANY EROSION CONTROL FABRIC. AREAS APPLIED WITH HERBICIDE MAY BE SEED 7 DAYS AFTER APPLICATION.

4.2. SOW SEED WITH A SPREADER OR A HYDROSEED MACHINE WITH MANUFACTURER RECOMMENDED BINDING AGENT, IN AREAS WITH DENSE EXISTING VEGETATION, INSTALL SEED WITH A NATIVE NO-TILL DRILL SEEDER. DO NOT BROADCAST DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH. EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.

4.3. DO NOT USE WET SEED OR SEED THAT IS MOULDY OR OTHERWISE DAMAGED IN TRANSIT OR STORAGE.

4.4. SOW SEED PRIOR TO INSTALLATION OF EROSION CONTROL FABRIC WHERE APPLICABLE.

4.5. IF BROADCAST, ROLL SEED 10 TIMES LIGHTLY, AND WATER WITH A FINE SPRAY.

4.6. PROTECT SEED 10 TIMES AGAINST EROSION BY SPREADING STRAW MULCH IMMEDIATELY FOLLOWING COMPLETION OF SEEDING OPERATIONS IF OTHER EROSION CONTROL MEASURES ARE NOT OTHERWISE SPECIFIED. SPREAD UNIFORMLY AT A RATE OF 2 TONS PER ACRE (90 LB. PER 1,000 S.F.) TO FORM A CONTINUOUS BLANKET OVER SEED 10 TIMES. SPREAD BY HAND, BLOWER, OR OTHER SUITABLE EQUIPMENT. ANCHOR STRAW MULCH BY CRIMPING INTO TOPSOIL BY SUITABLE MECHANICAL EQUIPMENT.

4.7. STRAW EROSION CONTROL BLANKET IS A SUITABLE ALTERNATIVE TO BE USED INSTEAD OF BLOWN OR CRIMPED STRAW.

5. LOCATION

5.1. ALL PLANT MATERIAL IS TO BE INSTALLED AS SHOWN ON THE PLANTING PLANS FOR THE PROTOTYPE.

5.2. UPLAND TREE PLANTINGS ARE TO BE INSTALLED IN A 9'X9' GRID PATTERN.

5.3. FLOODPLAIN PLANTINGS ARE TO BE INSTALLED IN A CLUMPED FASHION WITH A MINIMUM OF 3' SPACING BETWEEN PLANTS. PLANTS ARE TO BE INSTALLED BASED UPON THE HYDROLOGIC TOLERANCES AND SITE CONDITIONS AFTER CONSTRUCTION IS COMPLETED.

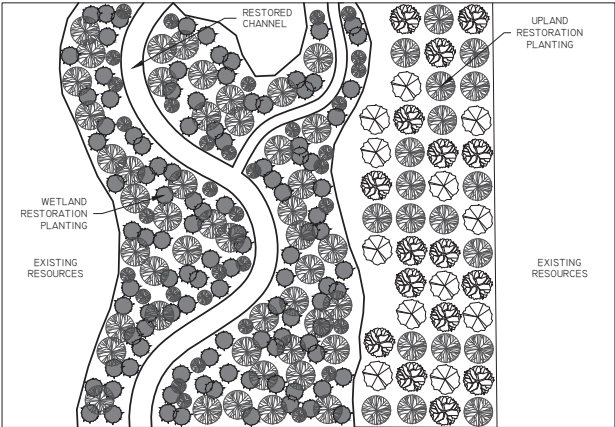
5.4. ALL LIVE STAKES ARE TO BE INSTALLED ALONG STREAM BANKS, POOLS, AND FLOODPLAIN POOLS BASED UPON SPACING INDICATED IN THE PLANTING PLAN SPECIES LIST.

CARE OF SEEDLING UNTIL PLANTED

SEEDLINGS SHOULD BE PLANTED IMMEDIATELY. IF IT IS NECESSARY TO STORE MOSS-PACKED SEEDLINGS FOR MORE THAN 2 WEEKS, ONE PINT OF WATER PER PKG. SHOULD BE ADDED. IF CLAY-TREATED, DO NOT ADD WATER TO PKG. PACKAGES MUST BE SEPARATED TO PROVIDE VENTILATION TO PREVENT "HEATING". SEPARATING PACKAGES WITH WOOD STRIPS AND STORE OUT OF THE WIND IN A SHADED, COOL, (NOT FREEZING) LOCATION.

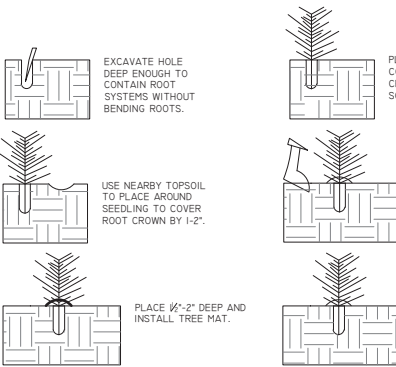
CARE OF SEEDLING DURING PLANTING

WHEN PLANTING, ROOTS MUST BE KEPT MOIST UNTIL TREES ARE IN THE GROUND. DO NOT CARRY SEEDLINGS IN YOUR HAND EXPOSED TO THE AIR AND SUN. KEEP MOSS-PACKED SEEDLINGS IN A CONTAINER PACKED WITH WET MOSS OR FILLED WITH THICK MUDDY WATER. COVER CLAY-TREATED SEEDLINGS WITH WET BURLAP ONLY.

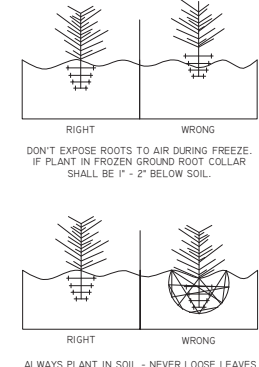


RESTORATION PLANTING DETAIL

NOT TO SCALE

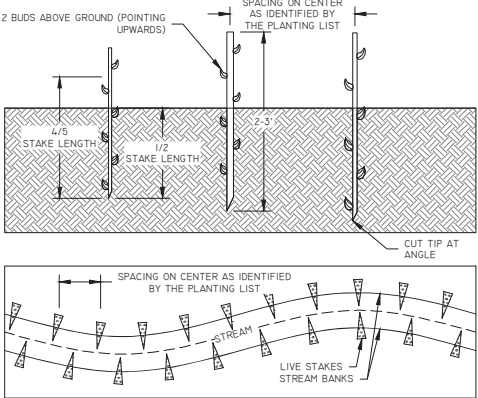


CONTAINER & TUBELING PLANTING DETAIL



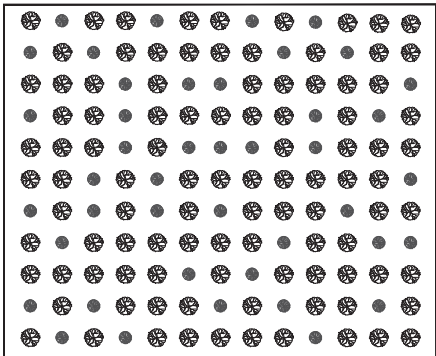
LIVE STAKES

NOT TO SCALE

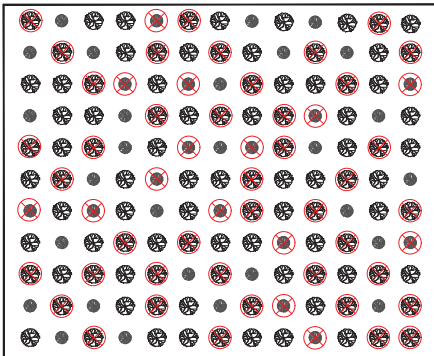


NOTES:

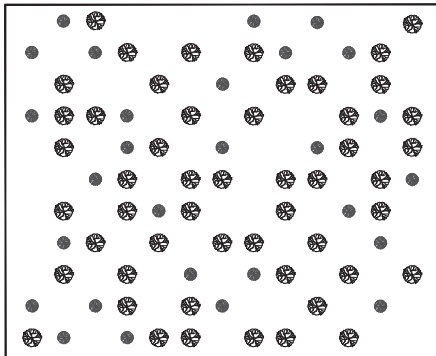
1. LIVE STAKES MUST BE BETWEEN 1/2" TO 2" IN DIAMETER AND MUST BE 2' TO 3' LONG.
2. CUT THE STAKES WITH AN ANGLE ON THE BOTTOM AND SQUARE ON THE TOP, WITH THE BUDS POINTING UPWARD.
3. TRIM ALL SIDE BRANCHES CLEANLY SO THE CUTTING IS ONE STEM.
4. STAKES MUST BE STORED IN A COOL AND MOIST PLACE TO KEEP THEM ALIVE AND DORMANT.
5. DRIVE STAKES PERPENDICULAR TO THE GROUND WITH RUBBER HAMMER AT LEAST 1/2 TO 3/4 OF THE TOTAL STAKE LENGTH. KEEP AT LEAST 2 BUDS ABOVE GROUND SURFACE.
6. DO NOT USE SPLIT STAKES.



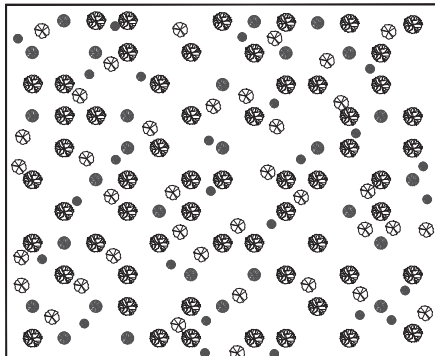
PLANTS WILL BE PLANTED ONCE CONSTRUCTION IS COMPLETE IN A GRID STYLE PATTERN. PLANTING LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION OF PLANTS ON THE SITE WILL BE SUBJECT TO SITE CONDITIONS AT THE TIME OF PLANTING.



ASSUMING A MORTALITY RATE OF ABOUT 40% WILL OCCUR WITHIN THE BEGGING LIFE CYCLE OF THE SITE, CAUSING THE GRID PATTERN TO DISSIPATE. ACTUAL MORTALITY TO BE VERIFIED DURING MONITORING.



RE-PLANT SUPPLEMENTAL TREE AND SHRUB SPECIES IN A RANDOM PATTERN TO RETURN THE SITE TO THE REQUIRED DENSITIES PER ACRE.



REPLANTING WILL OCCUR UNTIL THE SITE RETURNS TO THE REQUIRED DENSITIES PER ACRE AND THE SITE HAS BEEN CLOSED OUT

MATRIX PLANTING PLAN DETAIL

NOT TO SCALE

| REVISIONS | | | | LEGEND | | | | NOTES | | | | SEAL | | | | SCALE | | | | RESOURCE ENVIRONMENTAL SOLUTIONS | | | |
|-----------|-------------|------|----|----------|-------|--------------------|-----------------|-------|--|--|--|------|--|--|--|-------|--|--|--|---|---------------------------|---------------------|--|
| NO. | DESCRIPTION | DATE | BY | TUBELING | SHRUB | REPLANTED TUBELING | REPLANTED SHRUB | | | | | | | | | | | | | 33 TERMINAL WAY, SUITE W445A PITTSBURGH PA 15219 WWW.RES.US | TELEPHONE: (412) 249-2435 | EMAIL: HKALK@RES.US | |
| | | | | | | | | | | | | | | | | | | | | CHESAPEAKE BAY MS4 SEDIMENT REDUCTION PROJECT | | | |
| | | | | | | | | | | | | | | | | | | | | SITE RESTORATION DETAILS | | | |
| | | | | | | | | | | | | | | | | | | | | DRAWN BY: WP | | | |
| | | | | | | | | | | | | | | | | | | | | CHECKED BY: NH | | | |
| | | | | | | | | | | | | | | | | | | | | APPROVED BY: HK | | | |
| | | | | | | | | | | | | | | | | | | | | DATE: November 10, 2021 | | | |
| | | | | | | | | | | | | | | | | | | | | SHEET: C901 | | | |
| | | | | | | | | | | | | | | | | | | | | PROJECT NO: 105217 | | | |
| | | | | | | | | | | | | | | | | | | | | PENNSYLVANIA | | | |
| | | | | | | | | | | | | | | | | | | | | CHESTER COUNTY | | | |
| | | | | | | | | | | | | | | | | | | | | MULTIPLE TOWNSHIPS | | | |



E4

Anticipated Project Schedule



Page 1

E5

Example Site Protection Instrument (SPI)

DECLARATION OF RESTRICTIVE COVENANT FOR CONSERVATION

This DECLARATION OF RESTRICTIVE COVENANTS FOR CONSERVATION ("Declaration") is made and entered into as of [date] by and between FIRST PENNSYLVANIA RESOURCE, L.L.C., a Pennsylvania limited liability company, with a business address at 33 Terminal Way, Pittsburgh, PA 15219 ("Grantee") and _____, an [individual/corporation/other organization] with a mailing address at [_____] ("Grantor").

RECITALS

WHEREAS, Grantor owns certain real estate located in _____ County(ies), Pennsylvania, consisting of _____ acres, more or less, as described more specifically in **Exhibit A** hereto (the "Property"); and

WHEREAS, Grantee is a Pennsylvania company in the business of stream and wetland mitigation in the Commonwealth of Pennsylvania; and

WHEREAS, the Grantor has agreed to make a _____ acre portion of the Property, delineated in **Exhibit B**, where certain [stream and/or] wetland resources exist or may be created and/or enhanced (the "Conservation Area"), subject to this Declaration; and

WHEREAS, the Grantor agrees to the creation of the Conservation Area described herein and intends that the Conservation Area shall be preserved and maintained in perpetuity in an enhanced or natural condition, which will include functioning [streams and/or] wetlands; and

WHEREAS, the Conservation Area, or a portion thereof, is intended to be used in the future as mitigation for impacts to waters of the United States and/or waters of the Commonwealth of Pennsylvania authorized under U.S. Army Corps of Engineers ("Corps" to include any successor agency) or Pennsylvania Department of Environmental Protection ("PADEP" to include any successor agency) permit(s). Before, or at the time a Corps or PADEP permit or verification or a Mitigation Banking Instrument approves using this Conservation Area as mitigation: (1) the Mitigation Plan approved/required by such permit or Banking Instrument must contain a legal description of the portion of the Conservation Area to be used as mitigation or a Mitigation Bank; and (2) Grantee must record an addendum to this Declaration containing a legal description of the portion of the Conservation Area associated with each permit or Mitigation Bank, which references the applicable Corps and/or PADEP permit/verification number(s) or Mitigation Bank Site Name and any associated Corps/PADEP authorization/approval number(s). A form of the addendum to be used is attached to this Declaration as **Exhibit C**; and

WHEREAS, in recognition of the continuing benefit to the Property, and for the protection of waters of the United States and scenic, resource, environmental, and general property values, the Grantor and Grantee have agreed to place certain restrictive covenants on the Property, in order that the Conservation Area shall remain substantially in its natural condition forever; and

WHEREAS, the Grantor and Grantee agree and acknowledge that this Declaration, including the rights authorized to Grantee herein, shall be assignable and transferrable to Grantee's subsequent heirs, successors, and assigns, [if Holder known: including the _____]; and

[If Holder known: WHEREAS, the _____, a 501(c)(3) tax-exempt entity registered with the Bureau of Charitable Organizations of the Pennsylvania Department of State, is a holder of this Declaration] and

WHEREAS, this Declaration is constructed and covenanted to meet the requirements for conservation easements under the Pennsylvania Conservation and Preservation Easements Act, Act 29 of 2001, and as amended thereafter; and

NOW, THEREFORE, for good and valuable consideration and in consideration of the mutually held interests in enhancement and preservation of the environment, as well as the terms, conditions, and restrictions contained herein, and pursuant to the laws of the Commonwealth of Pennsylvania, Grantor does agree to the following terms and conditions:

A. PURPOSE

The purpose of this Declaration is:

- (1) To preserve, protect, and enhance the native flora, fauna, soils, water table, aquifer, drainage patterns, wetland resources and other related environmental functions and values of the Conservation Area;
- (2) To maintain the natural view shed of the Conservation Area in its native, enhanced, scenic and open condition;
- (3) To assure that the Conservation Area, including its air space, streams and other aquatic resources on or beneath the Conservation Area, and including, but not limited to, subsurface aquifers, springs, and the water table, will be maintained in perpetuity in its natural condition, as that may be enhanced, as provided herein; and
- (4) To prevent any use of the Conservation Area that threatens to or will impair, interfere with, or otherwise negatively affect its natural resource functions and values.

Grantor and Grantee [If known: and Holder] intend and agree that this Declaration will confine the use of the Conservation Area to such activities as are consistent with the purposes set forth herein.

B. ACCESS

In order to achieve the purposes of this Declaration, the following rights are created in accordance with Pennsylvania law:

(1) The Grantee shall have the right and Grantor acknowledges the right of [the holder(s) of this Declaration,] the Corps, the PADEP, and other government agencies with legal authority to enter upon the Property for purposes related to this Declaration, to inspect the Conservation Area at reasonable times to monitor compliance with this Declaration. Except in cases of a threat of a physical or public safety emergency, such entry shall, when practicable, be upon reasonable prior notice to Grantor or its successors and assigns, and such entry shall not unreasonably interfere with the Grantor's or its successors' and assigns' use and quiet enjoyment of the Property.

(2) The Grantor, Grantee, [holder(s) of this Conservation Declaration,] the Corps, the PADEP and other government agencies with legal authority to enter upon the Property for purposes related to this Declaration, each shall have the right to enter upon the Property to access the Conservation Area at reasonable times and upon prior notice to the Grantor; and upon notice and written approval by the Corps may take appropriate environmental or conservation management measures within the Conservation Area consistent with the terms and purposes of this Declaration, including, but not limited to:

- (a) planting of native vegetation (i.e. trees, shrubs, grasses, and forbs); and
- (b) restoring, altering or maintaining the topography, hydrology, drainage, structural integrity, streambed(s), streambank(s), water quantity, water quality, any relevant feature of a stream, wetland, water body, or vegetative buffer within the Conservation Area.

(3) The Grantor and Grantee, [holder(s) of this Declaration], the Corps, PADEP, and other government agencies with legal authority to enter upon the Property for purposes related to this Declaration, shall each have the right to enforce the terms of this Declaration by appropriate legal proceedings in accordance with applicable law so as to prevent any activity on or use of the Property that is inconsistent with the purposes of this Declaration and to require the restoration of such areas or features of the Conservation Area that may be impaired or damaged by an inconsistent activity or use.

C. DURATION

This Declaration shall remain in effect in perpetuity, shall run with the land regardless of ownership or use, and is binding upon and shall inure to the benefit of the Grantor and Grantee's [if known – and holder's] heirs, executors, administrators, successors, representatives, devisees, and assigns, as the case may be, as long as said party shall have any interest in any portion(s) of the Conservation Area.

D. RESTRICTIONS

Any activity in or use of the Conservation Area that is inconsistent with the purposes of this Declaration by the Grantor; subsequent property owner(s); and the personal representatives, heirs, successors, and assigns of either the Grantor or subsequent property owner(s), is prohibited. Without limiting the generality of the foregoing, and except when an approved purpose under B.(2) above, or as necessary to accomplish mitigation approved under the any permit(s) reliant upon this Declaration, the following activities and uses are expressly prohibited in, on, over, or under the Conservation Area, subject to the express terms and conditions below:

(1) **Structures.** The construction of man-made structures including, but not limited to, the construction, removal, placement, preservation, maintenance or alteration of any buildings, roads, utility lines, billboards, or other advertising. This restriction does not include deer stands, bat boxes, bird nesting boxes, bird feeders, duck blinds, and the placement of signs for safety purposes or boundary demarcation.

(2) **Demolition.** The demolition of fencing structures constructed by the Grantee for the purpose of demarcation of the Conservation Area or for public safety.

(3) **Soils.** The removal, excavation, disturbance, or dredging of soil, sand, peat, gravel, or aggregate material of any kind; or any change in the topography of the land, including any discharges of dredged or fill material, ditching, extraction, drilling, driving of piles, mining or excavation of any kind.

(4) **Drainage.** The drainage or disturbance of any aquifer, the surface water level or the water table.

(5) **Waste or Debris.** The storage, dumping, depositing, abandoning, discharging, or releasing of any gaseous, liquid, solid, or hazardous waste substance, materials or debris of whatever nature on, in, over, or underground or into surface or ground water.

(6) **Non-Native Species.** The planting or introduction of non-native or invasive species.

(7) **Herbicides, Insecticides, and Pesticides.** The use of herbicides, insecticides, or pesticides, or other chemicals, except for as may be necessary to control invasive species that threaten the natural character of the Conservation Area. State-approved municipal application programs necessary to protect public health and welfare are not included in this prohibition.

(8) **Removal of Vegetation.** The mowing, cutting, pruning, removal; disturbance, destruction, or collection of any trees, shrubs, or other vegetation, except for pruning, cutting or removal for:

- a) safety; or
- b) control in accordance with accepted scientific forestry management practices for diseased or dead vegetation; or
- c) control of non-native species and noxious weeds; or
- d) scientific nature study.

(9) **Agricultural Activities.** Unless currently used for agricultural or similarly related purposes, the conversion of, or expansion into, any portion of the Conservation Area for use of agricultural, horticultural, aquacultural, silvicultural, livestock production or grazing activities. This prohibition also includes conversion from one type of these activities to another (e.g. from agricultural to silvicultural).

(10) **Subdivision of Conservation Area.** Subdivision of real property within the Conservation Area into multiple parcels.

(11) **Other.** Other acts, uses, excavation, or discharges, which adversely affect fish or wildlife habitat or the preservation of lands, waterways, or other aquatic resources mentioned herein and located within the Conservation Area.

E. INSPECTION, ENFORCEMENT AND ACCESS RIGHTS

As set forth in Section B, above, the Grantee, holder(s) of this Declaration, the Corps, PADEP and other government agencies with legal authority to enter upon the Property for purposes related to this Declaration have the right to enter the Property to observe the Conservation Area and to take actions necessary to verify compliance with and to enforce this Declaration. When practicable, such entry shall be upon prior reasonable notice to the property owner. No violation of this Declaration shall result in a forfeiture or reversion of title. In any enforcement action, an enforcing agency shall be entitled to a complete restoration for any violation, as well as other authorized judicial remedies such as civil penalties. Nothing herein shall be interpreted to limit the right of the Corps to modify, suspend, or revoke any permit issued or authorized by Corps.

F. RECORDING AND EXECUTION BY PARTIES

Within thirty (30) calendar days of execution of this Agreement, the Grantee shall record this Declaration in the County office where land records are retained and shall provide proof of recordation to Grantor, the Corps, and PADEP within ten (10) business days of execution. Further, if anticipated activities in the Conservation Area are agreed upon for future phases of the site, as set forth in Section H (Reserved Rights) herein, the Grantee must submit plans to the Corps and PADEP for review and approval prior to any work in the Conservation Area.

G. NOTICE OF TRANSFER OF PROPERTY INTERESTS

No transfer of the rights set forth in this Declaration, or action to void or modify this Declaration, including transfer of title to or establishment of any other legal claims over the Conservation Area or the underlying Property it occupies, shall occur without sixty (60) calendar days' prior written notice to the Corps and the PADEP.

H. RESERVED RIGHTS

(1) This Declaration will not prevent the Grantor, or any subsequent owner of the Property and/or portions of the Property, from making use of the area(s) outside of the Conservation Area or from uses that are consistent with the purposes of this Declaration, including, but not limited to the following:

(a) **Existing Agreements.** Uses that Grantor is required to allow under valid, existing, recorded agreements are permitted, to the extent they do not interfere with, threaten, or degrade the Conservation Area and only to the extent they are consistent with the purposes of this Declaration. The Grantor[, holder(s) hereof,] and any holders of easements or other property rights for the operation and maintenance of pre-existing or project-related structures or infrastructure, such as roads, utilities, drainage ditches, or stormwater facilities that are present on, over, or under the Conservation Area, reserve the right, within the terms and conditions of their permits, agreements, and the law, to continue with such operation and maintenance. All pre-existing or approved project-related structures or infrastructure, if any, shall be shown on the accompanying plat map or approved plan and attached to this Declaration as **Exhibit D**.

(b) **Subsequent Agreements Allowing Subsurface Activity.** Subject to review by Grantee [if holder known – and holder of this Declaration], and only to the extent they are consistent with the purposes of this Declaration, agreements for the extraction of natural gas (regardless of source) or oil, and injection or release of water and other substances to facilitate such extraction, but excluding injection wells subject to state or federal underground injection control programs. The activities subject to such agreement may only occur at subterranean depths at which there can be no impairment of or detectable impact to water quality or quantity, native flora, fauna, soils, water table, aquifer, drainage patterns, and other related environmental functions and values of the Property, or on other resources described in this Declaration. No surface activities or uses, incident to such extraction are permitted in the Conservation Area. Grantor and Grantee shall provide the Corps and PADEP notice of Grantor's intent to enter into an agreement allowing subsurface activities at least sixty (60) days prior to executing the agreement.

(2) If the success of a compensatory mitigation project required or authorized by the Corps and PADEP requires any related or unanticipated infrastructure modifications, utility relocation, drainage ditches, or stormwater controls within the identified Conservation Area, or if a situation requires measures to remove threat to life or property within the identified Conservation Area, said activities must be approved in writing by the Corps and PADEP subject to terms and conditions set forth in the written approval. Approval is subject to the Corps's and PADEP's discretion. If approved, said activities must be identified on an amended **Exhibit D** and must be recorded and specifically noted as an "amendment" and copies of the recorded **Amended Exhibit D** must be provided to the Corps and PADEP within sixty (60) days of Corps approval. Approval of said activity by the Corps is in addition to any Clean Water Act, Section 404 permit, or other authorization, which may be required in order to legally implement said activity. The Grantor and Grantee accept the obligation to place any other and/or subsequent responsible party on reasonable prior notice of their need to request such Corps approval.

(3) **Enhancements, Maintenance and Repair.** This Declaration is not intended to prohibit future necessary or desired maintenance, repair, or enhancements to the

Property, where such actions are approved by the Corps and PADEP as appropriate, either through an approved mitigation plan (Section K below) or by a separate permit.

[I. The Grantor has mortgaged the Property subject to this Declaration. The lender has executed Subordination of Mortgage instruments related to the parcels subject of this Declaration for the sole purpose of subordinating their respective liens, dignity and priority interests to this Declaration. The executed Subordination of Mortgage instruments are attached hereto as **Exhibit E**: Mortgage Subordination Documents, and incorporated fully herein.]

J. SEVERABILITY

If any portion of this Declaration, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this instrument, or application of such provision to persons or circumstances other than those as to which it is found to be invalid, shall not be affected thereby.

K. MITIGATION

If the work required by a mitigation plan approved by the Corps and PADEP, including maintenance or remedial work, occurs within the Conservation Area, then the Grantee is allowed to construct and undertake the mitigation work in accordance with an authorized mitigation plan.

L. ASSIGNMENT

The Grantee [If Holder exists: and/or Holder each] is authorized to assign or transfer its rights and obligations under this Declaration to an organization that is a qualified organization under Section 170(h) of the Internal Revenue Code at the time of transfer.

M. COAL RIGHTS NOTICE

The following notice is given to and accepted by Grantor for the purpose and with the intention of compliance with the requirements of the Pennsylvania Conservation and Preservation Easements Act. Nothing herein shall imply the presence or absence of workable coal seams or the severance of coal interests from the Property.

NOTICE:

THIS DECLARATION may impair the development of coal interests including workable coal seams or coal interests which have been severed from the Property.

IN WITNESS WHEREOF, intending to be legally bound, the Parties have executed this Declaration the day and year first above written.

GRANTOR:

WITNESS:

HOLDER:

By: _____

GRANTEE :

First Pennsylvania Resource, L.L.C.
a Pennsylvania limited liability company

By: Resource Environmental Solutions,
LLC, its sole manager

By: _____
Name: _____
Title: _____

WITNESS:

WITNESS:

COMMONWEALTH OF PENNSYLVANIA :
 : SS
COUNTY OF _____ :

On _____, before me, a Notary Public for the Commonwealth aforesaid, personally appeared _____, known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have set my hand and official seal.

Notary Public
My commission expires:

[SEAL]

COMMONWEALTH OF PENNSYLVANIA :
 : SS
COUNTY OF _____ :

On _____, before me, a Notary Public for the Commonwealth aforesaid, personally appeared _____, who acknowledged himself/herself to be the _____ of the _____ known to me or satisfactorily proven to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I have set my hand and official seal.

Notary Public
My commission expires:

[SEAL]

COMMONWEALTH OF PENNSYLVANIA :
 : SS
COUNTY OF _____ :

On _____, before me, a Notary Public for the Commonwealth aforesaid, personally appeared _____, who acknowledged himself/herself to be the _____ of Resource Environmental Solutions, LLC, as manager of First Pennsylvania Resource, L.L.C., a Pennsylvania limited liability company, and that s/he, in the capacity set forth above, on behalf of the Grantee, being authorized to do so, executed, in my presence, the foregoing Declaration for the purposes herein contained.

IN WITNESS WHEREOF, I have set my hand and official seal.

Notary Public
My commission expires:

[SEAL]

**APPENDIX F –
PUBLIC REVIEW COMMENTS**

APPENDIX F
PUBLIC REVIEW COMMENTS

Space reserved for public comments.