

# YORK COUNTY REGIONAL CHESAPEAKE BAY POLLUTANT REDUCTION PLAN (2018-2023)

SUBMITTED TO PA DEP SEPTEMBER 15, 2017  
(REVISED AND RESUBMITTED OCTOBER 10, 2017)



PREPARED BY THE YORK COUNTY PLANNING COMMISSION AND  
HERBERT, ROWLAND & GRUBIC, INC IN COOPERATION WITH THE  
REGIONAL CBPRP MUNICIPAL STEERING COMMITTEE

FUNDED THROUGH THE USACE SECTION 22 PROGRAM, YORK COUNTY, AND THE  
YORK COUNTY COMMUNITY FOUNDATION



## York County Regional Chesapeake Bay Pollutant Reduction Plan (CBPRP) Participants

Carroll Township*	Mount Wolf Borough*
Chanceford Township***	New Salem Borough***
Conewago Township***	Newberry Township*
Dallastown Borough*	North York Borough*
Dillsburg Borough*	Penn Township*
Dover Borough***	Railroad Borough
Dover Township*	Red Lion Borough*
Fairview Township*	Spring Garden Township*
Felton Borough***	Spring Grove Borough**
Franklintown Borough***	Springettsbury Township*
Glen Rock Borough	Springfield Township*
Goldsboro Borough***	West Manchester Township*
Hallam Borough***	West Manheim Township*
Hanover Borough*	West York Borough*
Hellam Township***	Windsor Borough*
Jackson Township*	Windsor Township*
Jacobus Borough***	Wrightsville Borough***
Lewisberry Borough***	Yoe Borough*
Loganville Borough***	York City*
Lower Windsor Township***	York County***
Manchester Borough*	York Township*
Manchester Township*	York Haven Borough***
Monaghan Township*	

\*MS4 Permittee – Regional CBPRP meeting Permit requirement

\*\*MS4 Permittee – Submitting Individual Municipal CBPRP

\*\*\*MS4Permittee – Received Advanced Waiver approval letter from DEP



**YORK COUNTY REGIONAL  
CHESAPEAKE BAY POLLUTANT REDUCTION PLAN  
(2018 – 2023)**

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## Introduction

This Chesapeake Bay Pollutant Reduction Plan (CBPRP) represents a regional effort by York County municipalities to meet a component of the Pennsylvania Department of Environmental Protection (PADEP) Municipal Separate Storm Sewer (MS4) permitting requirements. More specifically, the permitting requirements covered by this plan include Pollutant Reduction Plans (PRPs) for stormwater discharges to local surface waters impaired for nutrients and/or sediment, and Chesapeake Bay Pollutant Reduction Plans (CBPRPs) for stormwater discharges to surface waters located within the Chesapeake Bay watershed. As a regional plan, this CBPRP addresses both the local impairment PRP and CBPRP pollutant loading reduction requirements.

This document was prepared following the guidance provided in the Pennsylvania Department of Environmental Protection (DEP) document 3800-PM-BCW0100k: National Pollutant Discharges Elimination Systems (NPDES) Stormwater Discharges from Small Municipal Septate Storm Sewer Systems Pollutant Reduction Plan (PRP) Instructions (rev. 3/2017).

There are 45 participants, including 44 municipalities and the County of York. Forty-three (43) of the participants are designated MS4s. However, 16 of the 43 MS4 participants received Advanced Waiver Approval from PADEP, which exempts them from submitting any required PRPs with their NOI. The remaining two (2) municipalities are non-MS4s. Per the Intergovernmental Cooperation Agreement for implementation of the Regional CBPRP, the participants are collectively the York County Stormwater Consortium (YCSWC). A complete list of participating municipalities and the MS4 status is provided in Appendix I.

## Section A: Public Participation

A complete copy of this Regional CBPRP was made available for public review at the York County Planning Commission (YCPC) office and posted on the YCPC website from July 19, 2017, through August 18, 2017. The availability of the document was publicized in the *Harrisburg Patriot-News*, on July 18, 2017. The published public notice contained a brief description of the plan, the dates and locations at which the plan was available for review by the public, the length of time provided for the receipt of written comments, and the date/time/location of the public meeting. A copy of the public notice and proof of publication is included in Appendix II.

A public meeting was held on August 9, 2017, at the West Manchester Township Municipal Building (380 East Berlin Road, York, Pennsylvania) to present an overview of the Regional CBPRP to the public. Comments and questions received during the meeting, as well as the responses provided, are included in Appendix II.

Additionally, public comments were accepted for 30 days following the publication date of the public notice. A copy of all public comments received, together with the record of consideration, is included in Appendix II.

Changes made to the plan as a result of public comment are noted in Appendix II.



## Section B: Map

The Planning Area Map shows the impaired streams, planning area, and watershed boundaries located within York County. The regional CBPRP Planning Area consists of the 2010 Census Urbanized Area for York County and the area that topographically drains into it as delineated using two (2) foot contours. It covers approximately 136,000 acres and encompasses portions of the County's four (4) primary watersheds (Codus Creek, Conewago Creek, Kreutz-Muddy Creek, and Yellow Breeches Creek). No areas were parsed from the planning area. For the Regional CBPRP, the planning area and storm sewershed are synonymous. This approach was developed in consultation with PADEP.

Appendix III contains the Planning Area Map, Land Use by Watershed Maps, and the proposed BMP Location Map. Land Use maps are provided by watershed in order to demonstrate the varying landscape of the planning area. By and large, the urbanized area is overlaid on the most intensive land uses and is coincident with impaired streams. Proposed BMPs are shown at the planning area and watershed level.

## Section C: Pollutants of Concern

Portions of the four (4) primary watersheds in the Planning Area (Yellow Breeches Creek, Conewago Creek, Codorus Creek, and Kreutz-Muddy Creek) are impaired. The pollutants of concern for each watershed were determined by referencing the PADEP’s Pollutant Aggregation Suggestions for MS4 Requirements Table (Municipal) (rev. 5/9/2017) provided in Appendix IV. As there are multiple impaired stream segments located within the planning area, this plan addresses impairments and pollutants of concern on a watershed basis rather than by individual stream (Table 1).

**Table 1. Pollutants of Concern by Planning Watershed**

Planning Area Watershed	Pollutants of Concern
Yellow Breeches Creek	Chesapeake Bay (Nutrients/Sediment); Fishing Creek (Siltation); Unnamed Tributaries to Fishing Creek (Nutrients); Fishers Run (Siltation); Big Spring Run (Siltation); Stoney Run (Siltation); Unnamed Tributaries to the Yellow Breeches (Siltation); Marsh Run (Siltation)
Conewago Creek	Chesapeake Bay (Nutrients/Sediment); Plum Creek (Siltation); Honey Run (Siltation); Bennett Run (Siltation); Little Conewago Creek (Siltation); North Branch Bermudian Creek (Nutrients, Siltation); South Branch Conewago Creek (Siltation); Unnamed Tributaries to Bermudian Creek (Nutrients, Siltation);
Codorus Creek	Chesapeake Bay (Nutrients/Sediment); Codorus Creek (Siltation); South Branch Codorus Creek (Nutrients); Mill Creek (Siltation); Barshinger Creek (Siltation); Inner Creek (Siltation); Unnamed Tributaries to Codorus Creek (Nutrients); Oil Creek (Nutrients, Siltation); Gitts Run (Siltation)
Kreutz-Muddy Creek	Chesapeake Bay (Nutrients/Sediment); North Branch Muddy Creek (Siltation); Pine Run (Siltation); Fishing Creek (Siltation); Unnamed Tributaries to Kreutz-Muddy Creek (Siltation)

According to the guidance provided in the PRP instructions, the assumption can be made that meeting the sediment reduction goal will also result in achievement of the nutrient reduction goals. Therefore, from this point forward, this plan references sediment as the pollutant of concern.

## Section D: Determine Existing Loading for Pollutants of Concern

### D.1 Existing Pollutant Load Calculation

In consultation with PADEP, it was determined that, for purposes of calculating existing pollutant loading for the Regional CBPRP, the impervious and pervious developed land acreages listed in the PRP Instruction<sup>1</sup> for York County would be applicable. Using the Simplified Method<sup>2</sup>, the impervious and pervious developed land acres were multiplied by the Developed Land Loading Rates for York County<sup>3</sup> to determine the existing baseline pollutant loading for sediment (TSS) (Table 2).

**Table 2. Existing Baseline Pollutant Loading**

York County Developed Land		Developed Land Pollutant Loading Rate	Existing Baseline Pollutant Load <sup>3</sup>
Category	Acres	TSS (lbs/ac/yr)	TSS (lbs/yr)
Pervious	40,374.8	220.4	8,898,606
Impervious	10,330.7	1,614.15	16,675,299
<b>Total</b>	<b>50,705.5</b>		<b>25,573,905</b>

In addition to determining the pollutant load for the Regional CBPRP Planning Area, the approximate pollutant loads for each of the four (4) primary watersheds were determined. This determination was made by estimating the developed land acreage within the applicable portion of each watershed and calculating the percent of the total County Developed Land contained within each watershed. These percentages were correlated to the total existing baseline pollutant load to determine the approximate pollutant load associated with each watershed (Table 3).

**Table 3. Approximate Pollutant Loading by Planning Watershed**

Watershed	Percent of Total County Developed Land	Approximate Pollutant Load
		TSS (lbs/yr)
Yellow Breeches Creek	16%	3,916,191
Conewago Creek	20%	5,172,747
Codorus Creek	46%	11,870,647
Kreutz-Muddy Creek	18%	4,614,320
<b>Total</b>		<b>25,573,905</b>

<sup>1</sup> PADEP Document 3800-PM-BCW0100k, PRP Instructions Attachment B “Developed Land Loading Rates for PA Counties” (Rev. 3/2017)

<sup>2</sup> PADEP Document 3800-PM-BCW0100k, PRP Instructions Attachment C, “Chesapeake Bay PRP Example Using DEP Simplified Method” (Rev. 3/2017)

## D.2 Baseline Adjustment for Previously Implemented BMPs

Multiple water quality BMP installation projects were constructed prior to completion of this CBPRP and continue to function as designed. These BMPs are being claimed as credit to reduce the existing baseline loading for sediment (Table 4). They are largely attributed to land development projects that were required to complete NPDES-related BMPs to comply with Chapter 102 requirements and independent municipal capital improvement projects.

**Table 4. Adjusted Baseline Pollutant Loading**

Baseline	Pollutant Load
	TSS (lbs/yr)
Baseline Pollutant Loading	25,573,905
Installed BMP Reduction	1,134,067
<b>Adjusted Baseline</b>	<b>24,439,838</b>

A summary of the BMPs installed within each participating municipality and corresponding pollutant load reduction is provided (Appendix V). The BMP summary table was generated by tabulating the existing BMP data submitted by each of the participating municipalities (also included in Appendix V). The existing BMPs were organized by type to determine the total impervious and pervious land areas treated by each type of BMP within each participating municipality. These BMP types and corresponding treatment areas were input into the Chesapeake Bay Facility Assessment Tool (BayFAST)<sup>4</sup> to develop an existing BMP scenario. The pollutant load output from each municipal existing BMP scenario was compared with the baseline pollutant load to determine the pollutant load reduction associated with each municipality's existing BMPs.

More detailed information regarding the design, construction, operation and maintenance requirements, and confirmation that operation and maintenance is occurring for each BMP is on file at the municipal building in the jurisdiction where the BMP is located, as required by MS4 permit conditions. Additionally, the installed BMP list in Appendix V includes BMP information from two (2) non-municipal permittees, PennDOT and the Defense Distribution Center, Susquehanna. As these non-municipal permittees contain facilities within York County on which BMPs have been installed, the pollutant load reductions associated with these BMPs were also determined using BayFAST and are being counted as a reduction from York County's baseline pollutant loading.

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<sup>4</sup> USEPA Chesapeake Bay Program, Chesapeake Bay Facility Assessment Scenario Tool (BayFAST)

## Section E: Select BMPs to Achieve the Minimum Required Reductions in Pollutant Loading

### **E.1 Pollutant Reduction Requirements**

York County includes municipalities regulated by PAG-13 General Permit, Appendix E (nutrients and/or sediment in stormwater discharges to impaired waterways), as well as municipalities regulated by Appendix D (nutrients and sediment in stormwater discharges to waters in the Chesapeake Bay watershed). Appendix E impairments based on siltation or total suspended solids (TSS) require a minimum 10% TSS reduction and impairments based on nutrients require a minimum 5% total phosphorus (TP) reduction. The pollutants of concern for Appendix D are TSS, TP, and total nitrogen (TN), with required loading reductions of 10%, 5%, and 3%, respectively. However, it is presumed that within the overall Bay watershed, the TP and TN goals will be achieved when a 10% reduction in sediment is achieved<sup>5</sup>. Likewise, for this Regional CBPRP, it is presumed that by targeting the placement of BMPs in impaired portions of the planning area watersheds and meeting the overall CBPRP 10% TSS reduction, the nutrient reductions of the impaired watersheds regulated by Appendix E are also met. Therefore, only the required 10% TSS reduction is calculated herein as a required load reduction for the Regional CBPRP (Table 5).

**Table 5. Required York County Regional CBPRP Pollutant Reduction Goal**

Planning Area Load Reduction	Developed Land (acres)	Pollutant Load
		TSS (lb/yr)
York County Adjusted Baseline	50,706	24,439,838
Required Reduction Percentage		10%
<b>Load Reduction Goal</b>		<b>2,443,984</b>

### **E.2 Proposed BMPs**

This section outlines the BMP implementation strategy developed to achieve the required pollutant load reduction goal of 2,443,984 lbs/year of sediment. Identification of proposed BMPs were determined from review of project ideas submitted by participating municipalities, project site visits, and conversations with municipal secretaries/managers and MS4 staff, as well as steering committee meeting input, and outreach meetings.

The following factors were considered when evaluating which projects to include in the plan: anticipated cost effectiveness, location relative to an impaired waterway, treatment of a significant drainage area, ability to be grouped with similar projects for design and construction cost savings, and location within the planning area. The chosen projects represent the most cost-effective strategy to achieve the greatest pollutant load reduction. From this evaluation, six (6) BMP types are proposed to be implemented to meet the sediment pollutant goal (Table 6). These BMP types represent a diverse and cost-effective approach to meet the required reduction goals for the Chesapeake Bay, while also improving the quality of local impaired waterways.

<sup>5</sup> This assumption is stated in the PADEP Document 3800-PM-BCW0100k, PRP Instructions (Rev. 3/2017)

**Table 6. Proposed BMP Summary by BMP Type**

Proposed BMP Type (# of projects)*	Total Drainage Area (acres)	Total Length (ft)	Area (acres)	Pollutant Load Reduction TSS (lbs/yr)
Stream Restoration (33)	n/a	53,785	n/a	2,447,081
Detention Basin/Swale Retrofits (24)	348	n/a	n/a	164,241
Tree Planting/Riparian Buffers (11)	n/a	n/a	21	8,480
Water Re-Use (1)	n/a	n/a	n/a	30,440
Reconstructed Wetlands (4)	n/a	n/a	7.5	88,222
Infiltration BMPs (4)	36	n/a	2.9	15,254
<b>Total</b>				<b>2,753,718</b>

\* As reflected under Project Type on Tables 8 A-D and 9 A-D.

The pollutant loading reductions for each proposed BMP were calculated in terms of pounds per year of sediment using the BayFAST modeling tool. The majority of the anticipated sediment reductions are attributed to projects that directly restore streambanks (Appendix VI).

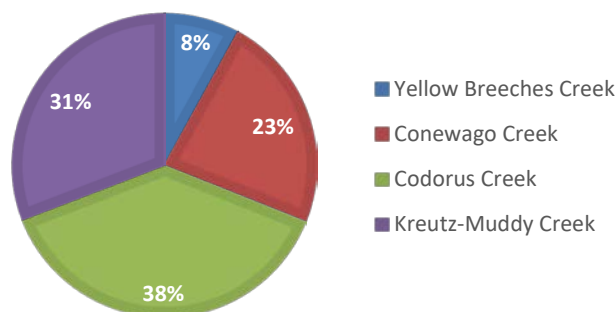
In order to encourage the equitable distribution of BMP projects throughout the Planning Area and meet the intent of the PAG-13 pollutant reduction planning requirements, projects are located throughout the four (4) primary watersheds in the Planning Areas. The BMP project distribution is shown below (Table 7 and Figure 1).

**Table 7. Anticipated Pollutant Load Reduction by Planning Area Watershed**

Planning Area Watershed	% of Planning Area Developed Land	BMP Pollutant Load Reduction (TSS lbs/yr)	% of Total Reduction
Conewago Creek	20%	609,774	23%
Yellow Breeches Creek	16%	210,269	8%
Kreutz-Muddy Creek	18%	815,622	31%
Codorus Creek	46%	1,006,527	38%
<b>Total</b>		<b>2,642,192</b>	<b>100%</b>

The watershed with the greatest anticipated pollutant load reduction, the Codorus Creek, also has the greatest portion of regulated developed land. Similarly, the lowest amount of reduction, and the watershed with the least amount of regulated developed land, occurs within the Yellow Breeches Creek.

**Figure 1. Percent of Total Reduction by Planning Area Watershed**



**E.2.1 Local-Level BMPs**

The groundwork for this Regional Chesapeake Bay Pollutant Reduction Plan (CBPRP) was laid in 2014 when the initial York County Regional CBPRP<sup>6</sup> was completed. The 2014 plan was approved by PADEP by way of letter dated August 31, 2015. It has been implemented and reported on annually during the 2013 PAG-13 permit term. During development of the BMP planning strategy for this plan, participants of the 2014 plan were asked to determine the status of unconstructed BMP projects in that Plan. Additionally, ideas for new BMP projects were solicited from all participants. Projects were prioritized by municipal leaders for inclusion in this plan (Tables 8A – 8D).

**Table 8A. Local-Level BMP Summary List by Watershed (Conewago Creek)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Reduction TSS (lbs/yr)
4	West Manchester Tree Planting (Little Conewago Conserv. Area)	West Manchester Twp.	Tree Planting	n/a	n/a	4	495
5	West Manchester Bioswale	West Manchester Twp.	Swale Retrofit	n/a	7.8	0.73	2,341
6	Manhaven Manor Retrofit	Manchester Boro.	Basin Retrofit	n/a	5.56	0.4	1,669
13	Wyngate Detention Basin	Dover Twp.	Basin Retrofit	n/a	40	0.49	12,034
14	Dover Twp. Community Center	Dover Twp.	Basin Retrofit	n/a	20.1	0.78	6,047
17	Poplar Street Swale Retrofit	Hanover Boro.	Swale Retrofit	n/a	32.4	0.5	13,503
19	Homewood Streambank Restoration (Plum Run)	Penn Twp.	Stream Restoration	500	n/a	n/a	22,440
76	Danielle & Willipa Drives (Little Conewago Creek)	Dover Twp.	Stream Restoration	800	n/a	n/a	35,904
<b>Total</b>							<b>94,433</b>

<sup>6</sup> York County Regional Chesapeake Bay Pollutant Reduction Plan (April 2014), prepared by YCPC in cooperation with the Center for Watershed Protection

**Table 8B. Local-Level BMP Summary List by Watershed (Yellow Breeches)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Reduction TSS (lbs/yr)
15	Emily Lane Stormwater Pond	Fairview Twp.	Basin Retrofit	n/a	7.02	0.4	2,104
34	138 South York Street (Fishing Creek)	Goldsboro Boro.	Riparian Buffer	n/a	n/a	4.83	1,717
57	138 South York Street (Fishing Creek)	Goldsboro Boro.	Stream Restoration	1,700	n/a	n/a	76,296
<b>Total</b>							<b>80,117</b>

**Table 8C. Local-Level BMP Summary List by Watershed (Kreutz-Muddy Creek)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Reduction TSS (lbs/yr)
9	Penn Oak Park (UNT Kreutz Creek)	Springettsbury Twp.	Stream Restoration	1,160	n/a	n/a	52,061
10	Stonewood Park (UNT Kreutz Creek)		Stream Restoration	1,000	n/a	n/a	44,880
11	Camp Security Park (UNT Kreutz Creek)		Stream Restoration	1,120	n/a	n/a	50,266
29	Riverfront Park GI Plan (Bioretention Basin 1)	Wrightsville Boro.	Bioretention	n/a	22.6	0.2	9,415
65	Fishing Creek Study Stream Restoration	Windsor Boro.	Riparian Buffer/ Stream Restoration	6,700	n/a	n/a	300,696
77	Beaver Street Restoration Swale	Hallam Boro.	Swale Retrofit	79.5	n/a	n/a	35,680
			Wetland Restoration	n/a	n/a	2.0	1,908
78	Restoration of Kreutz Creek	Hallam Boro.	Stream Restoration	6,000	n/a	n/a	269,280
79	Riverfront Park GI Plan (Bioretention Basin 2, Bioswale 2)	Wrightsville Boro.	Bioretention/ Bioswale	n/a	11.9	0.1	4,875
80	Prison Property SW Facility Upgrade (UNT Kreutz Creek)	Springettsbury Twp. (York Co. Project)	Basin Retrofits	n/a	35	1.1	10,533
83	Stream/Drainage Improvement - Lions Club Property (Fishing Creek)	Windsor Boro.	Stream Restoration	285	n/a	n/a	12,791
84	Milner Heights Basin Retrofit	Windsor Twp.	Basin Retrofit	n/a	42	1.0	12,649
<b>Total</b>							<b>805,034</b>



**Table 8D. Local-Level BMP Summary List by Watershed (Codorus Creek)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Reduction TSS (lbs/yr)
2	Center Street Streambank Restoration (Oil Creek)	Penn Twp.	Stream Restoration	1,600	n/a	n/a	71,808
12	York City Industrial Park Basin	York City	Basin Retrofit	n/a	39	2.28	11,738
16	Stillmeadow Park Restoration (UNT Codorus Creek)	Manchester Twp.	Stream Restoration	2,100	n/a	n/a	94,248
			Wetland Restoration	n/a	200+	3	55,604
			Stream Restoration	1,000	n/a	n/a	44,880
			Wetland Restoration	n/a	80+	1.5	11,260
			Basin Retrofit	n/a	40	0.6	12,064
			Basin Retrofit	n/a	20	0.7	6,017
			Tree Planting	n/a	n/a	0.25	85
			Basin Retrofit	n/a	5.5	0.4	1,647
			Basin Retrofit	n/a	7	0.5	2,102
Stream Restoration	750	n/a	n/a	33,660			
18	Springettsbury Municipal Campus	Springettsbury Twp.	Basin Retrofit	n/a	15	0.45	4,512
22	York Twp. Pond Retrofit	York Twp.	Basin Retrofit	n/a	5	0.3	1,498
25	Dauberton HOA Basin Retrofit	Manchester Boro.	Basin Retrofit	n/a	5.5	0.6	1,647
26	Dallastown Basin Retrofit	Dallastown Boro.	Basin Retrofit	n/a	5.5	1	1,647
46	Lincoln Park (UNT Willis Run)	York City	Stream Restoration	515	n/a	n/a	23,113
47	Memorial Park (Poor House Run)		Stream Restoration	2,150	n/a	n/a	96,492
48	Farquhar Park/Kiwanis Lake (UNT Willis Run)		Stream Restoration	3,900	n/a	n/a	175,032
68	Queenswood Improvements (UNT Mill Creek)	York Twp.	Stream Restoration	1,100	n/a	n/a	49,368
81	Horace Mann Ave. BMP # 1	Red Lion Boro.	Bioretention	n/a	1.9	0.13	779
82	Ensminger Dr. Swale Rehabilitation	Springfield Twp.	Swale Retrofit	200	n/a	n/a	20,110
<b>Total</b>							<b>719,311</b>

**E.2.2 Regional BMPs**

The regional BMP projects include projects with multiple BMP components, projects that span across several municipalities, and/or projects associated with significant partnerships (Tables 9A – 9D). These projects are capable of treating larger drainage areas and are more cost effective.

**Table 9A. Regional BMP Summary List by Watershed (Conewago Creek)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Load Reduction TSS (lbs/yr)
7	Musser Run Stream Restoration	Manchester Boro.	Forest Buffer	n/a	n/a	0.8	284
8			Stream Restoration	1,200	n/a	n/a	53,856
24	Dover Twp./West Manchester Twp. Stream Restoration (Little Conewago Creek, UNT Little Conewago Creek)	Dover Twp.	Stream Restoration (Dover Twp. Park, Little Conewago Creek)	1,000	n/a	n/a	44,880
			Forest Buffer (Dover Twp. Park)	n/a	n/a	0.8	284
			Stream Restoration (Dover Twp. Property, Little Conewago Creek)	1,000	n/a	n/a	44,880
		West Manchester Twp.	Stream Restoration (Little Conewago Creek Conserv. Area, Little Conewago Creek)	2,280	n/a	n/a	102,326
			Stream Restoration (Little Conewago Creek Conserv. Area, UNT Little Conewago Creek)	1,230	n/a	n/a	55,202
			Stream Restoration (W Manchester Twp. Property, Little Conewago Creek)	1,800	n/a	n/a	80,784
50	Dover Township Park (Old Golf Course) Fox Run Restoration	Dover Twp.	Stream/Restoration (Fox Run)	1,880	n/a	n/a	84,374
			Stream/Restoration (UNT Fox Run)	1,080	n/a	n/a	48,470
<b>Total</b>							<b>515,340</b>

**Table 9B. Regional BMP Summary List by Watershed (Yellow Breeches)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Load Reduction TSS (lbs/yr)
21	Red Land High School Stream Restoration (UNT Fishing Creek)	Fairview Twp.	Stream Restoration (Redland High School)	1,700	n/a	n/a	76,296
			Stream Restoration (PA American Water Easement)	1,200	n/a	n/a	53,856
<b>Total</b>							<b>130,152</b>

**Table 9C. Regional BMP Summary List by Watershed (Kreutz-Muddy Creek Breeches)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Load Reduction TSS (lbs/yr)
23	East York P3 (Twp./ County/ Private) (UNT Kreutz Creek)	Springettsbury Twp.	Stream Restoration (Springettes Oak Park)	1,900	n/a	n/a	85,272
			Basin Retrofit (Concord Bus. Park)	n/a	13	0.21	3,911
			Basin Retrofit (Concord Office Ctr. East)	n/a	1.02	0.14	304
			Basin Retrofit (Concord Office Ctr. West)	n/a	1.13	0.18	340
			Basin Retrofit (York County Home)	n/a	0.5	0.05	144
			Bioretention (York County Home)	n/a	0.63	0.04	185
			Stream Restoration (York County Home)	700	n/a	n/a	31,416
			Forest Buffer (York County Home)	n/a	n/a	1.53	543
<b>Total</b>						<b>122,115</b>	

**Table 9D. Regional BMP Summary List by Watershed (Codorus Creek)**

Project Name		Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Load Reduction TSS (lbs/yr)
20	York Twp. Private Property Owner Project (UNT Mill Creek)	York Twp.	Reconstructed Wetland	n/a	70	1	19,450
			Forested Buffer	n/a	n/a	5.5	1,956
			Stream Restoration	1,200	n/a	n/a	53,856
30	York County Solid Waste and Refuse Center	Manchester Twp.	Water Re-use	n/a	n/a	n/a	30,440
35	BMP #1 (Little Creek)	Jackson Twp.	Riparian Forest Buffer	n/a	n/a	1.65	584
59			Stream/Floodplain Restoration	800	n/a	n/a	35,904
36	BMP #2 (UNT W Br Codorus)	Jackson Twp.	Riparian Forest Buffer	n/a	n/a	4.48	1,593
60			Stream Restoration	1,325	n/a	n/a	59,466
37	BMP #3 (Little Creek)	Jackson Twp.	Riparian Forest Buffer	n/a	n/a	2.65	939
61			Stream/Floodplain Restoration	1,850	n/a	n/a	83,028
<b>Total</b>						<b>287,216</b>	

### ***E.2.3 Project Schedule and Project Descriptions***

A Project Schedule and project description sheets for the proposed BMP projects are included in Appendix VII. Unless otherwise noted, the proposed BMP projects have not been fully designed. The project descriptions are conceptual and intended for planning purposes. Proposed projects have been evaluated in terms of preliminary feasibility and anticipated pollutant load reductions in order to meet the goals of this plan. The proposed BMPs will be designed in accordance with the Pennsylvania BMP Manual design guidance and all local ordinances. Additionally, as many of the proposed projects include stream restoration, all proposed stream restoration projects will be designed in accordance with the requirements listed in DEP's stream restoration guidance<sup>7</sup>. Additional details and calculations for each proposed project developed during the design and implementation project phases will be documented in the Annual MS4 Status Reports.

### ***E.2.4 Shortlist BMP Projects***

In addition to the regional and local projects listed above, several other potential BMP projects were evaluated during the development of this Regional CBPRP. However, during project evaluation, these projects were deemed to be a lower priority than the projects chosen for inclusion in the plan. These projects were shortlisted and removed from the plan. Although not officially part of the CBPRP, the shortlisted projects are included for reference in Appendix VIII. Should unforeseen circumstances arise which prevent any of the local or regional projects listed above from being implemented, it is anticipated that a project from the shortlist will be used to replace the eliminated project.

## **E.3 Partnerships**

Non-municipal MS4s and industrial permittees were not parsed out of this plan. As a result, stormwater management BMP accomplishments of other NPDES permit holders can also count toward meeting the Regional CBPRP pollutant reduction goals, provided that they meet pollutant reduction plan criteria.

### ***E.3.1 PennDOT Partnership***

This planning strategy does not cite any PennDOT projects as planned projects contributing to the planning goal. However, it is understood that through the Regional CBPRP, participating municipalities are eligible to take credit in the Annual MS4 Status Reports for PennDOT projects. PennDOT partnership projects may be accomplished through one of two ways for the Regional CBPRP:

#### **Municipal Coordination**

PennDOT will prepare a guidebook to inform municipalities in Sediment-Impaired Watersheds in urbanized areas of opportunities to support their own pollution reduction goals through partnering on future highway projects. PennDOT will provide a draft of this guidebook to DEP for review and comment during the first year of coverage under the permit. PennDOT will distribute the guidebook to municipalities through planning partners, PennDOT's website, and Local Technical Assistance Program training. PennDOT and the municipality will share any reductions achieved through partnership projects, provided the municipality either contributes funding or agrees to perform the long-term operation and maintenance responsibilities for the additional or enhanced stormwater controls.

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<sup>7</sup> PADEP, "Consideration of Stream Restoration Projects in Pennsylvania for Eligibility as an MS4 Best Management Practice" (June 22, 2017)

As part of the Annual MS4 Status Reports submitted under this permit, PennDOT will provide a list of actions taken by the department to support municipalities in achieving their PRP goals in Sediment Impaired Watersheds in urbanized areas.

#### York County Pilot Project

PennDOT seeks to purchase Chesapeake Bay Sediment Reduction credits in certain subwatersheds of the Codorus Creek watershed of York County, PA, as part of a U.S Environmental Protection Agency (EPA) approved Supplemental Environmental Project (SEP). The purpose of the SEP is to undertake an environmentally beneficial project that would not otherwise be associated with the typical environmental mitigation obligations required for PennDOT construction projects. The York County Pilot Project will serve to evaluate an alternative procurement method to streamline efforts in reducing erosion rates and controlling sediment deposits in the Codorus Creek watershed, with special emphasis on Mill Creek and an unnamed tributary north of the US 30 interchange. PennDOT can leverage this partnership and collaboration through implementation of this SEP whereby both PennDOT and the Consortium will report the nutrient reduction credits in the Annual MS4 Status Report. Should the bid and project be successful, PennDOT would use this procurement mechanism on a larger scale in implementing future sediment reduction loading requirements.

#### ***E.3.2 Kinsley Properties Partnership***

Kinsley Properties is a York County-employer and major landholder that owns and operates a number of stormwater BMPs, some of which are programmed for retrofits in this regional plan. Should the initial detention basin retrofits be successful, it is anticipated that an on-going partnership may occur, expanding the potential for additional stormwater retrofits and potential construction cost savings. Should additional BMPs be constructed in partnership with Kinsley Properties during the implementation phase of this plan, they will be reported through the Annual MS4 Status Report.

#### ***E.3.3 Defense Distribution Center, Susquehanna Installed BMPs during the Permit Term***

The Defense Distribution Center, Susquehanna, operated by the United States Department of Defense (DoD), has NPDES permit coverage for MS4 regulations. To that end, similar pollutant reduction goals are to be achieved during the 2018 permit term. This planning strategy does not, specifically, cite any DoD projects as planned projects contributing to the planning goal. However, it is understood that through the Regional CBPRP, participating municipalities are eligible to take credit in the Annual MS4 Status Report for DoD projects constructed on the Defense Distribution Center, Susquehanna site. The estimated pollutant load reduction goal anticipated to be achieved by the DoD Facility is included in Appendix VI.

#### ***E.3.4 PA Turnpike Commission Installed BMPs during the Permit Term***

Similar to PennDOT, the Pennsylvania Turnpike Commission operates roadways within York County. It is anticipated that any transportation agency projects that include stormwater management BMPs, meeting pollutant reduction plan criteria, will be creditable to the Regional CBPRP.

## **E.4 Other Reportable BMPs**

Notwithstanding that the Regional CBPRP outlines enough planned projects to meet the County-wide pollutant reduction goal, pollutant reduction planning requirements are also intended to be met through municipal actions and approvals. Examples of BMP reporting opportunities are described below. Any permit-eligible BMP documentation for pollutant reductions will be accepted for inclusion in the Annual MS4 Status Reports.

### ***E.4.1 Stormwater Inlet Cleaning***

As part of on-going MS4 maintenance, several municipalities within York County routinely remove solids from their MS4s. However, at this time, no pollutant reduction has been allotted to storm sewer system solids removal because tracking of this removed material has not been to the degree required to accurately calculate the pollutant load reduction as described in the PADEP BMP effectiveness values table<sup>8</sup>. It is anticipated that municipalities that track inlet cleaning in accordance with DEP requirements will report those activities to the York County Planning Commission for inclusion in the Annual MS4 Status Reports. The reported reduction will contribute toward meeting the sediment reduction five (5)-year goal.

### ***E.4.2 Land Development BMPs Installed On Sites with Less than One Acre of Disturbance***

To the extent that local municipal ordinances require the installation of stormwater BMPs at construction sites where land disturbance will be less than one-acre, those BMPs can be reported to the York County Planning Commission for inclusion in the Annual MS4 Status Reports and the reported reductions will contribute toward the sediment reduction five-year goal.

### ***E.4.3 Street Sweeping***

Municipalities that regularly conduct street sweeping (at least 25 times per year) may use this practice for pollutant load reduction credit as long as street sweeping is conducted in accordance with the minimum standards outlined in the Chesapeake Bay Program expert panel report for street sweeping<sup>9</sup> and the guidance provided on the BMP Effectiveness Values Table<sup>10</sup> is used to calculate the corresponding pollutant load reduction. The reported reduction will contribute toward meeting the sediment reduction five (5)-year goal.

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<sup>8</sup> PADEP Document 3800-PM-BCW010m, NPDES Stormwater Discharges from Small MS4s BMP Effectiveness Values (Rev. 5/2016)

<sup>9</sup> Chesapeake Bay Program Expert Panel, *Recommendation of the Expert Panel to Define Removal Rates for Street and Storm Drain Cleaning Practices*(5/26/2016)

<sup>10</sup> PADEP Document 3800-PM-BCW010m, NPDES Stormwater Discharges from Small MS4s BMP Effectiveness Values (Rev. 5/2016)

## Section F: Identify Funding Mechanisms

The Regional CBPRP identifies 45 projects to be completed during the permit cycle with an estimated cost of \$ 15.9 million. The total estimated project costs were discounted by 20% based on the following factors: currently funded projects being included in this plan, municipal in-kind services, regional project cost efficiencies, other funding sources or grants being awarded to projects, public-private partnership opportunities, installation of BMPs on projects less than one (1) acre in size. With a discount applied for the above listed factors, the total estimated project costs were reduced to \$ 13 million.

The Plan will be implemented by the participating municipalities through an Intergovernmental Cooperation Agreement (ICA) that is executed by the governing body of each participant. The ICA identifies the participants, the administering agency, the funding mechanism, the governance structure, and other details for implementation of the Plan. The agreed upon funding mechanism for implementing the BMP projects is a cost share formula that includes the population based on the 2010 U.S. Census, the linear miles of impaired streams, and the acres of impervious coverage. Participating municipalities with an MS4 permit share the cost to design, permit, and construct the projects, while the participating municipalities who receive a waiver and those that are non-permit holders share the administrative costs to implement the plan. The formula and the costs for each municipality to participate in the plan are included in the ICA (Appendix IX).

Further, it is anticipated that grants will be applied for in support of specific projects and that those cost savings will be shared by the participants. Potential grant sources include, but are not limited to:

- Pennsylvania Infrastructure Investment Authority (PENNVEST)
- Growing Greener Plus
- PADEP
- Pennsylvania Department of Conservation and Natural Resources (DCNR), applicable if stormwater BMPs are combined with a DCNR-priority project
- Commonwealth Finance Agency – Act 13 – Watershed Restoration and Protection Program
- Pennsylvania Infrastructure Bank, applicable if stormwater BMPs are combined with a PennDOT-priority project
- National Fish and Wildlife Foundation (NFWF)
- Exelon Habitat Improvement Program funds through the PA Fish and Boat Commission and the York County Conservation District
- United States Army Corp of Engineers (USACE)
- Federal Emergency Management Agency (FEMA)/Pennsylvania Emergency Management Agency (PEMA)
- PennDOT Transportation Alternatives Program



## **Section G: BMP Operations and Maintenance (O&M)**

All stormwater BMP projects installed under this Regional CBPRP will be subject to the applicable municipal Stormwater Management (SWM) Ordinance that has been adopted in accordance with the York County Act 167 Plan and, if applicable, to grant agreement requirements. The SWM Ordinance required that SWM BMPs be inspected, at a minimum, annually for the first five (5) years, once every three (3) years thereafter, and during or immediately after the cessation of a ten (10)-year or greater storm.

The Operation and Maintenance (O&M) responsibilities for each stormwater BMP project must be included in a SWM BMP O&M Agreement or Plan, as applicable. The Agreement or Plan is subject to approval by the municipal governing body in which the project is located. Additionally, if the project is located on private land, the landowner must convey an easement to the municipality to assure access for periodic inspections by the municipality and maintenance, if necessary. As required by the PRP Instructions<sup>11</sup>, O&M activities will be reported in the Annual MS4 Status Reports.

Generally, the activities involved with O&M for each BMP type proposed in the plan, are in accordance with the PADEP Stormwater BMP Manual (Table 10). As projects are designed during the implementation of the plan, it is expected that O&M notes will be provided for long-term completion and for documentation purposes. The frequency of O&M Activities will be in accordance with the compliant municipal Act 167 Stormwater Management Ordinance.

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<sup>11</sup> PADEP Document 3800-PM-BCW0100k, PRP Instructions (Rev. 3/2017)

**Table 10. General BMP O&M Plan**

BMP	O&M Activities	Responsible Party	Frequency
Stream Restoration	Inspection	Landowner or other assigned party	In accordance with compliant municipal Act 167 Stormwater Management Ordinance
	Revegetation (replanting, replacement of dead, or impaired vegetation)		
	Repairs to streambank armoring structures		
	Removal of nuisance aquatic vegetation/ woody debris		
Riparian Buffer	Inspection		
	Watering		
	Mowing/Weed Control		
	Invasive Species Removal		
Reconstructed Wetland	Inspection		
	Revegetation (replanting, replacement of dead, or impaired vegetation)		
	Repairs to streambank armoring structures		
	Removal of nuisance aquatic vegetation/ woody debris		
Detention Basin Retrofit	Inspection		
	Pruning/Weeding		
	Cut Down Perennial Planting/ Detritus Removal		
	Re-spread Mulch		
	Watering		
Bioretention Basin	Inspection		
	Pruning/Weeding		
	Cut Down Perennial Planting/Detritus Removal		
	Re-spread or Replenish Mulch		
	Watering		

APPENDIX I

Municipal Participants with MS4 Status



**York County Regional CBPRP Participants**

Municipality		NPDES Permit No.
Carroll	Township	PAG133548
Chanceford	Township	New*
Conewago	Township	PAG133593*
Dallastown	Borough	PAG133676
Dillsburg	Borough	PAG133560
Dover	Borough	PAG133583*
Dover	Township	PAG133656
Fairview	Township	PAG133557
Felton	Borough	New*
Franklintown	Borough	PAG133691*
Glen Rock	Borough	Non-regulated
Goldsboro	Borough	PAG133665*
Hallam	Borough	PAG133654*
Hanover	Borough	New
Hellam	Township	PAG133589*
Jackson	Township	PAG133671
Jacobus	Borough	PAG133647*
Lewisberry	Borough	PAG133624*
Loganville	Borough	PAG133669*
Lower Windsor	Township	PAG133626*
Manchester	Borough	PAG133586
Manchester	Township	PAG133674
Monaghan	Township	PAG133562
Mount Wolf	Borough	PAG133675
New Salem	Borough	PAG133687*
Newberry	Township	PAG133561
North York	Borough	PAG133581
Penn	Township	New
Railroad	Borough	Non-regulated
Red Lion	Borough	PAG133651
Spring Garden	Township	PAG133576
Spring Grove	Borough	New
Springettsbury	Township	PAG133594
Springfield	Township	PAG133652
West Manchester	Township	PAG133655
West Manheim	Township	New
West York	Borough	PAG133649
Windsor	Borough	PAG133673
Windsor	Township	PAG133685
Wrightsville	Borough	PAG133685*
Yoe	Borough	PAG133657
York	City	PAG133596
York	County	PAG133650**/**
York	Township	PAG133595
York Haven	Borough	PAG133672*

\* Received Advanced Waiver Approval Letter from PADEP

\*\* Not on Requirements Table for 2018 Permit



**APPENDIX II**

**Public Participation Documentation**





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

The screenshot shows the York County Planning Commission website. The top navigation bar includes links for HOME, ABOUT, DIVISIONS, MEETINGS, EMPLOYMENT, and FAQ, along with a Facebook icon and the phone number (717) 771-9870. The main header features the YCPC logo and a search bar. A secondary navigation bar lists various departments: Land Use, Transportation, Housing, Environment, Community Development, Data & Mapping, Services A to Z, and Reports & Documents. The breadcrumb trail reads: Home > Divisions > Long Range Planning > Stormwater. The main content area is titled "York County Stormwater Information" and includes a "What is Stormwater?" section with a definition and a "MS4 (Municipal Separate Storm Sewer Systems)" section with links to a permit, annual report, and information about the Chesapeake Bay Pollution Reduction Plan. A left sidebar lists various divisions, with "Stormwater" highlighted.

The screenshot shows the York County Planning Commission website's "Documents" page. The top navigation bar is identical to the previous screenshot. The breadcrumb trail reads: Home > Reports & Documents. The main content area features a large image of the "ADMINISTRATIVE CENTER" sign. Below the image, the "Documents" section includes a brief description of the commission's reporting and a list of documents. The list includes: Regional Chesapeake Bay Pollution Reduction Plan, Regional Chesapeake Bay Pollution Reduction Plan 2018 - DRAFT, Regional Chesapeake Bay Pollution Reduction Plan Annual Progress Report, and Report on Congestion. A search filter is visible, showing "ALPHABETICAL", "BY DEPARTMENT / CATEGORY", and "SHOW ALL" options, with a letter "R" highlighted in the alphabetical list. A "Please select an item." message is displayed next to the document list.

PUBLIC NOTICE  
YORK COUNTY REGIONAL CHESAPEAKE BAY POLLUTANT REDUCTION PLAN

On behalf of municipalities participating in the York County Regional Chesapeake Bay Pollutant Reduction (CBPRP), the York County Planning Commission will accept **public comments** related to the Plan beginning on **July 19, 2017, and extending through August 18, 2017**. The Regional CBPRP was prepared to meet the requirements of the Municipal Separate Storm Sewer (MS4) permit with the PA Department of Environmental Protection (DEP). It includes an estimate of the baseload of pollutants that are discharged to streams in the planning area; the required pollutant reductions as identified by PA DEP; proposed stormwater improvement projects to achieve the minimum required pollutant reductions; the project sponsors, partners, and probable funding sources; and ongoing operation and maintenance responsibilities for the projects.

The Regional CBPRP will be available for public review Monday through Friday between the hours of 8:00 am and 4:30 pm at the York County Planning Commission (YCPC), located on the third floor of the County Administrative Center, 28 East Market Street, York, PA. The Plan will also be available for public review on the YCPC website [www.ycpc.org](http://www.ycpc.org). Comments must be provided in writing to the attention of Lindsay Gerner, YCPC Senior Planner, at the above address or submitted via email to [LGerner@ycpc.org](mailto:LGerner@ycpc.org). Comments will also be accepted at a **Public Meeting** to be held at **6:00 pm on August 9, 2017**, at the West Manchester Township Municipal Building, 380 East Berlin Road, York, PA.

The municipalities participating in the Regional CBPRP include the County of York; City of York; Townships of Carroll, Chanceford, Conewago, Dover, East Manchester, Fairview, Heidelberg, Hellam, Jackson, Lower Windsor, Manchester, Monaghan, Newberry, North Hopewell, Penn, Spring Garden, Springettsbury, Springfield, West Manchester, West Manheim, Windsor, and York; and the Boroughs of Dallastown, Dillsburg, Dover, Felton, Franklintown, Glen Rock, Goldsboro, Hallam, Hanover, Jacobus, Lewisberry, Loganville, Manchester, Mount Wolf, New Salem, North York, Railroad, Red Lion, Spring Grove, West York, Windsor, Wrightsville, Yoe, York Haven, and Yorkana.



# The Patriot News

## LEGAL AFFIDAVIT

AD#: 0008269297

Commonwealth of Pennsylvania,) ss  
County of Cumberland)

Dwayne Connor being duly sworn, deposes that he/she is principal clerk of PA Media Group; that The Patriot News is a public newspaper published in the city of Mechanicsburg, with general circulation in Cumberland and Dauphin and surrounding counties, and this notice is an accurate and true copy of this notice as printed in said newspaper, was printed and published in the regular edition and issue of said newspaper on the following date(s):

**The Patriot News 07/18/2017**

Principal Clerk of the Publisher

COMMONWEALTH OF PENNSYLVANIA  
NOTARIAL SEAL  
Crystal B. Rosensteel, Notary Public  
Susquehanna Twp., Dauphin County  
My Commission Expires June 27, 2020  
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Sworn to and subscribed before me this 18th day of July 2017

Notary Public

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Dover, Felton, Franklintown, Glen Rock, Goldsboro, Hallam, Hanover, Jacobus, Lewisberry, Loganville, Manchester, Mount Wolf, New Salem, North York, Railroad, Red Lion, Spring Grove, West York, Windsor, Wrightsville, Yoe, York Haven, and Yorkana.

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**AUGUST 9, 2017**  
West Manchester  
Township Municipal  
Building

**YORK COUNTY  
REGIONAL  
CHESAPEAKE BAY  
POLLUTANT  
REDUCTION PLAN  
PUBLIC  
MEETING**



US Army Corps of Engineers



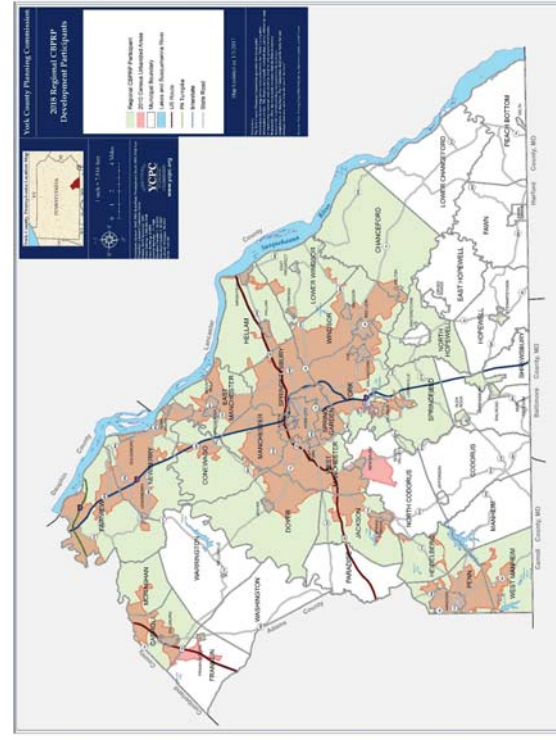
# AGENDA

- Regional Approach
- Participants
- Overview of the Regional CBPRP
- Next Steps
- Public Comment



# REGIONAL APPROACH

- All Municipalities Invited to Participate
- No Parsing
- Projects Located on Impaired Waterways
- One Plan (save on cost of developing multiple plans)
- Bigger Planning Area + Larger Pot of Combined Money = Better Projects and More Pollutant Reductions
- Funding Available when Needed
- Predictable Expense for Municipalities to Budget



## EXISTING POLLUTANT LOADING

### Sediment (TSS)

- Loose Particles of clay, silt, and sand
- Generated by natural weathering, accelerated erosion from development, and resuspension of previously eroded sediments stored in stream corridors
- Excess TSS affects stream flows, degrades water quality, and negatively affects local and downstream habitats

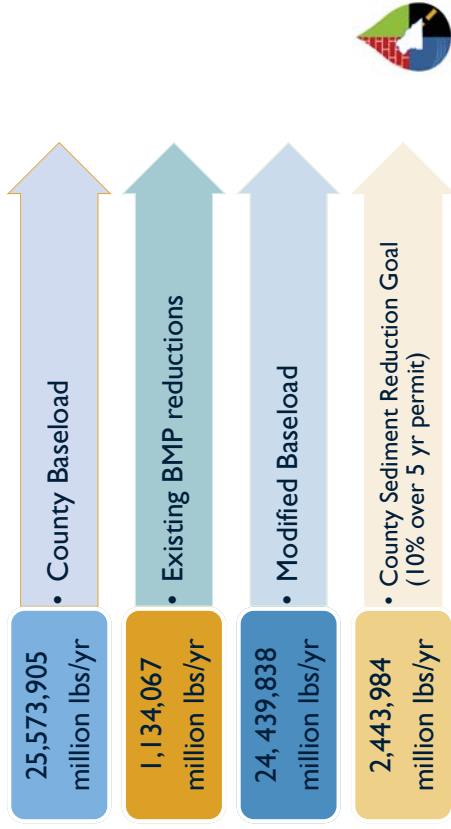
### Sediment Measurement- “lbs/yr”

- Mass per unit area per unit time
- Model-based measure of water quality
- Not a literal pounds removed



Chesapeake Bay (2011)  
Sediment transported after  
Hurricane Irene & T.S. Lee

## COUNTY SEDIMENT BASELOAD



## YORK COUNTY REGIONAL CHESAPEAKE BAY POLLUTANT REDUCTION PLAN

- Introduction
- Section A-Public Participation
- Section B-Map
- Section C-Pollutants of Concern
- Section D-Determine Existing Loading for Pollutants of Concern
- Section E-Select BMPs to Achieve the Minimum Required Reductions in Pollutant Loading
- Section F-Identify Funding Mechanisms
- Section G-BMP Operations and Maintenance (O&M)



## YORK COUNTY REGIONAL CHESAPEAKE BAY POLLUTANT REDUCTION PLAN - APPENDICES

- Appendix I- MS4 Permittee List
- Appendix II- Public Participation Documentation
- Appendix III- Planning Area Maps
- Appendix IV- Municipal MS4 Requirements
- Appendix V- Existing Pollutant Loading Calculations
- Appendix VI- Proposed BMP Pollutant Load Reduction Sample Calculations
- Appendix VII- Intergovernmental Cooperation Agreement



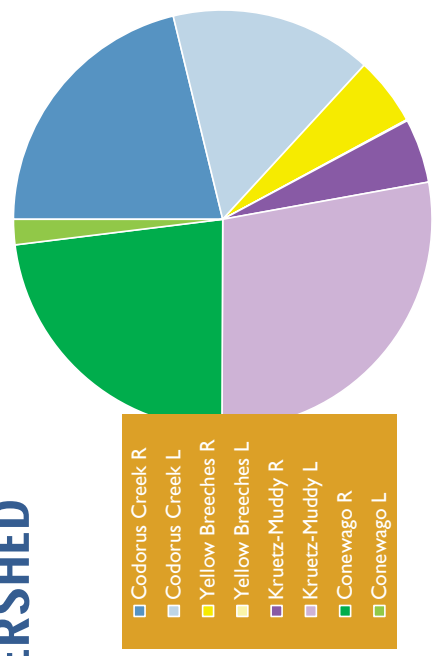
## BMP TYPES

- **Local Level BMPs**
  - Contained in one municipality
  - Managed by one municipality
  - Approximately 32 projects reducing 1,500,000 lbs/yr of TSS
- **Regional Level BMPs**
  - Contained in several municipalities and/or projects associated with significant partnership
  - Approximately 17 projects reducing 1,140,000 lbs/yr of TSS

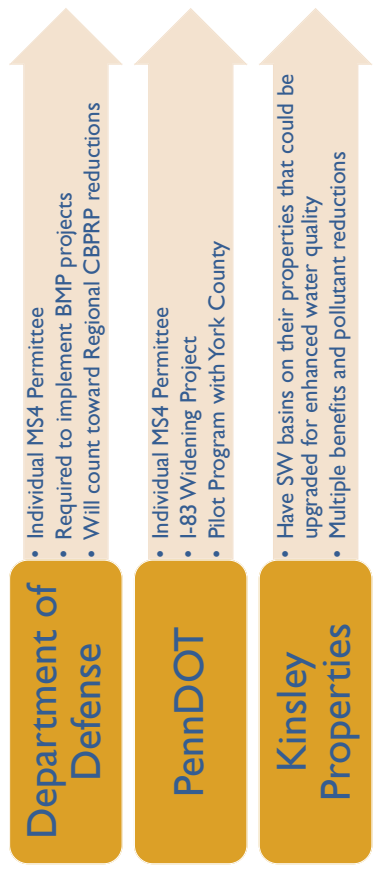
**BMP examples:** stream restoration, riparian buffer, basin retrofit, bioretention, bioswales, wetland restoration



## COMBINED PROJECTS BY WATERSHED



## P3 OPPORTUNITIES



## GOALS ACHIEVED

- Chesapeake Bay PRP requirements
- Local Impairment PRP requirements
- Improved local water quality
- Rigid flexibility for implementation
  - Annual project progress
  - Continued local project inclusion in Plan



## NEXT STEPS

- Review Public Comments  
– comment period ends August 18<sup>th</sup>
- Municipalities approve and execute ICA
- Submit Plan to PA DEP

## PUBLIC COMMENT



## REGIONAL CBPRP PUBLIC MEETING COMMENTS RECEIVED & RESPONSES PROVIDED

1. Alan Vanderslott (West York Borough) – Regarding the map of participants, how is who's in and who's out determined? For example, why isn't Peach Bottom Township a participant?

**Response:** Although the Regional CBPRP is a requirement for MS4 Permit holders, all 72 municipalities were invited to participate. PA DEP designates municipalities located wholly or partially within a 2010 urbanized area (UA), as designated by the US Census Bureau, as MS4s. Peach Bottom Township does not include any urbanized area. The majority of participants are MS4s. Outside the UA, there are requirements related to agriculture, but those requirements are on farmers, not municipalities. Farmers are required to prepare and implement conservation plans to reduce pollutants and improve water quality.

2. Alan Vanderslott (West York Borough) – Are there any regulations on businesses?

**Response:** They must comply with local stormwater management ordinances, which include water quality requirements.

3. Gary Milbrand (York Township) – Add page numbers to the Table of Contents.

**Response:** Page numbers will be added when the Plan is finalized.

4. Gary Milbrand (York Township) – The location coordinates for Project #22 in York Township are incorrect.

**Response:** The correct latitude is 39.957922 and the longitude is -76.664798.

5. Gary Milbrand (York Township) – In Appendix IX, Attachment A of the Intergovernmental Cooperation Agreement lists municipal contributions. What happens if more money than needed to meet the 10% sediment is collected OR if an insufficient amount is collected?

**Response:** The Agreement contains provisions to address both situations. It allows for the contribution amounts to be decreased if the Consortium is on track to meet the pollutant reduction requirements ahead of schedule and to be increased if additional funding is necessary to avoid a Permit violation. Any decreases or increases would be based on the funding formula.

6. Alan Vanderslott (West York Borough) – York County appears to be unique in its regional approach. I am thankful for the County's effort.



**Response:** The regional approach has worked well over the past 3 years and has proven to be cost effective and efficient.

7. Monica Love (West Manchester Township) – It would be beneficial to have more private entities as partners. Could the County help frame the ask for municipalities to approach private entities, such as industrial permittees, to become a partner? They could be approached to update basins or retrofit/construct other low hanging fruit BMPs.

**Response:** The York County Planning Commission would be willing to assist municipalities. Increasing the number of partners could reduce the cost burden on municipalities. If PA DEP imposed stormwater requirements on industrial permittees, it would be an incentive for them to partner.

## REGIONAL CBPRP WRITTEN PUBLIC COMMENTS

**Commenter(s)** identified that pollutant baseload calculations did not include the Plan's entire Planning Area acreage. It was pointed out that the PRP Instructions (Appendix B) accounted for 50,706 acres of developed York County. This developed land for York County was used to calculate the entire Planning Area's baseload, ignoring approximately 85,000 additional acres of undeveloped land in the Planning Area's baseload calculations. As a result, it was stated that an erroneously low baseload was calculated for the entire Planning Area.

**Response:** In 2013, York County MS4 municipalities developed the York County Regional Chesapeake Bay Pollutant Reduction Plan to meet the MS4 Permit requirement. It proved to be a more cost effective and efficient approach to implement BMPs to achieve water quality improvement. Thus, in order to meet increased requirements of the 2018 MS4 permit, York County immediately undertook the development of a Regional Chesapeake Bay Pollutant Reduction Plan upon PAG-13 finalization.

May 2016 - PA DEP released the 2018 MS4 Permit requirements. They were reviewed by York County to determine whether a multi-municipal approach was still feasible. After consultation with PA DEP, it was determined that a multi-municipal approach could be accomplished. The PRP instructions included Developed Land Loading Rates /Urbanized Pervious and Impervious Acreages in the Chesapeake Bay Watershed for PA Counties (Attachment B). However, due to the amount of coordination and communication required to facilitate a plan with 51 potential municipal participants, the process had to commence very quickly.

Summer/Fall, 2016 – PA DEP conducted training on the new MS4 permit requirements, including completing and submitting the NOI and preparation of PRP and TMDL plans.

August 2016 – York County municipalities were provided information about the new PRP requirements and how a multi-municipal approach could be accomplished. The feasibility, reduction requirements, rough costs of the multi-municipal approach were estimated based on the Developed Land Loading Rates and Acreages in the PRP instructions.

September through November 2016 – Municipalities were asked to decide whether they wanted to participate in the multi-municipal plan development based on the above estimates.

September through December, 2016 - Municipalities gathered information on completed BMP projects that could be used as credit toward reducing the regional baseload estimated by calculating loading rates and acreages from Attachment B of the PRP Instructions published with the final MS4 Permit. Municipalities generated a list of carryover projects, as well as new projects, including preliminary cost estimates, to be considered for the 2018 CBPRP.

January 2017 – PA DEP released Statewide MS4 Land Cover Estimates. After reviewing this information, the discrepancy between the Developed Land Loading Rates/Acreages and the new information was discovered.

February 2017 – York County met with PA DEP to discuss options on how to proceed given that the municipalities committed to a regional approach based on the numbers in the PRP instructions. Our understanding (since BMPs were efficiency based and DEP stated baseload calculations would not impact number of BMPs required to reduce pollutant load by 10%) was that we could proceed with a baseload for the Regional Plan development based on the Developed Land Loading Rates/Acreages in the PRP instructions. However, we would only propose projects on impaired stream reaches and stream restoration projects would be calculated at a delivered to the Bay rate of 45#/foot as opposed to the 115#/foot edge of stream rate provided in BayFAST.

Cost scenarios were refined with the municipalities.

March through May 2017 – Project lists were finalized, a funding proposal was finalized, the intergovernmental cooperation agreement was drafted and the draft plan was prepared.

June and July 2017 – The intergovernmental cooperation agreement was edited and finalized with the municipal solicitors and municipalities began the ordinance advertisement and adoption process.

To date:

- 48 municipalities are participating and contributing \$13 million over 5 years to leverage other funding and in-kind services to construct 32 local projects and 13 regional projects for a total of 45 BMPs in York County (which include approximately 10 miles of urban stream restoration);
- Partnerships with non-municipal MS4s and industrial permittees (PennDOT, DoD, and Kinsley Construction) have been developed to implement BMP projects that are not included in the calculated reductions.

We believe that due to the timing of the release of information, we have drafted a plan that will achieve the necessary sediment reductions and water quality improvements. Despite the other constraints imposed on our plan (conservative pollutant reduction value for stream restoration projects, limiting projects to impaired streams only, and not including other partner projects), we will meet or exceed the sediment reduction goals of the larger acreage planning area.

However, in order to reconcile the discrepancy in the planning area and baseload calculation acreage numbers, York County proposes that within the first 18 months after plan submission, the plan will be revised to reflect the final municipal participants. The Planning Area and the Base Pollutant Loading numbers will be reconciled using BayFAST modeling software utilizing acreages and loading rates delivered to the edge of stream and, at a minimum, a reduction of 115#/foot for stream restoration projects. In addition, stream restoration projects will be evaluated/designed using the expert panel protocol, which may yield a greater pollutant reduction rate than 115#/foot. Further, there are numerous completed stream restoration projects in York County that have documented sediment reduction values on average of 200#/foot or more using such protocol (see Estimating Volume, Nutrient Content, and Rates of Stream Bank Erosion of Legacy Sediment in the Piedmont Valley and Ridge Physiographic Provinces, Southeastern and

Central PA: A report to the Pennsylvania Department of Environmental Protection, submitted January, 2007 and revised September 13, 2007 by Robert Walter, Ph. D., Dorothy Merritts, Ph. D., and Mike Rahnis, M.Sc. and the Codorus Creek Watershed Assessment Reports erosion rate data attached).

**Commenter(s)** requested that an explanation be provided for the different sets of information for the "Proposed BMP Summary Sheets" in the electronic version of the plan available for review on the York County Planning Commission website.

**Response:** Several uncompleted projects from the 2013 CBPRP were carried over and included in the 2018 CBPRP. The black text is information from the project summary sheets generated for the 2013 Plan. The red text reflects updated project information utilizing the BayFAST reporting tool and BayFAST modeling runs. All project summary sheets have been updated to the same format based on the BayFAST project-reporting tool and BayFAST modeling runs.

**Commenter(s)** noted that a BMP Implementation Schedule was missing from the plan.

**Response:** An Implementation Schedule has been developed and included in Appendix VII of the final submission of the Plan.

**Commenter(s)** noted that plan is very detailed, need to clean up the bay for future generation to enjoy, know that the bay is cleaner but needs to improve, one recommendation is to have farmers keep cows out of the streams that run through farms, also ask the public to work with leaders of these projects to reduce labor cost, thanks.

**Response:** Comment not applicable to current Regional CBPRP effort due to Sector Strategy for stormwater management and cleaning up the Bay.

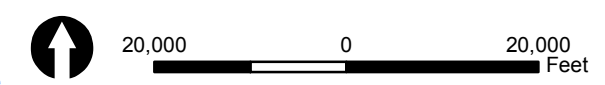
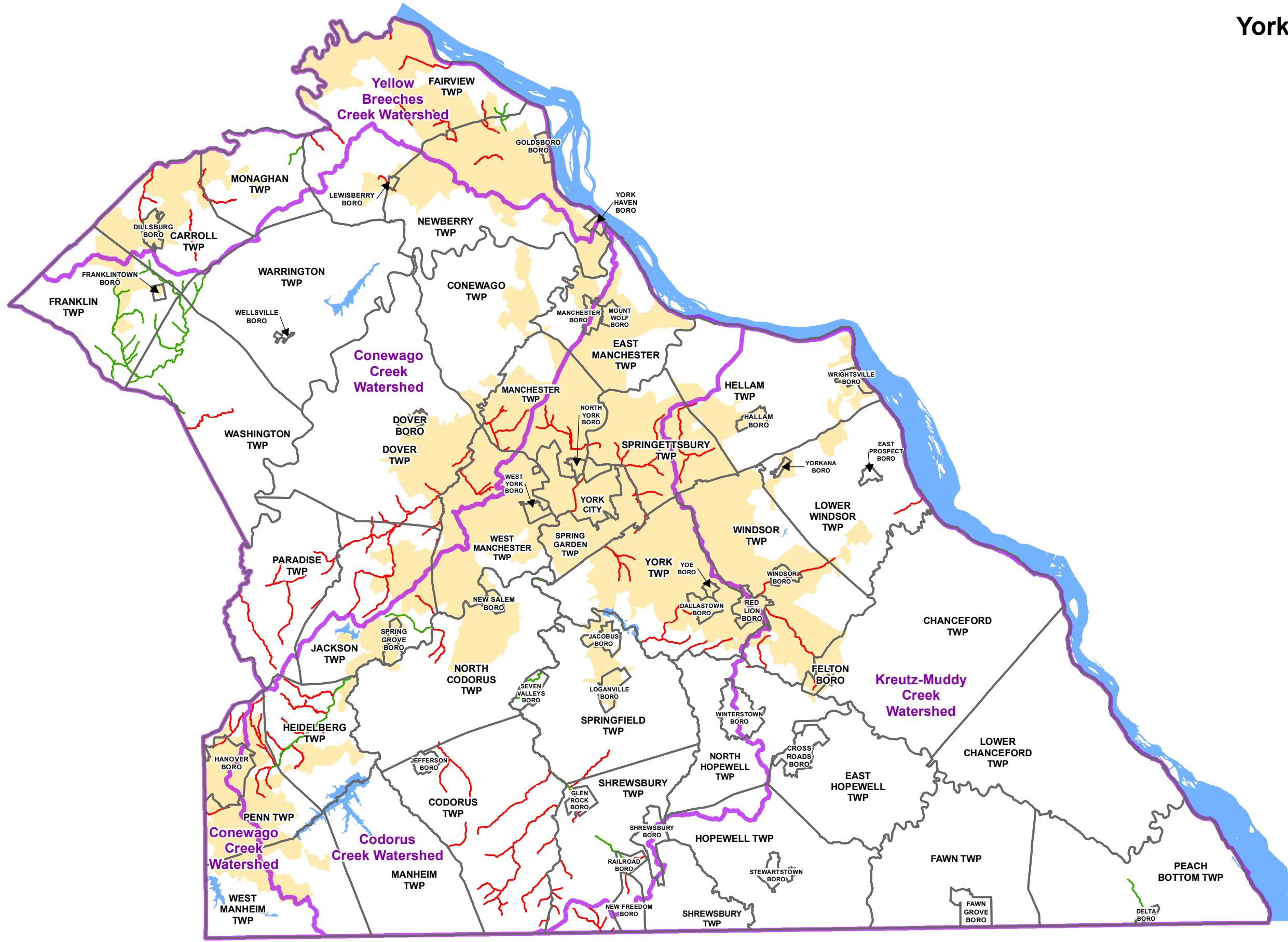
APPENDIX III

Planning Area Maps



# York County Regional CBPRP Planning Area Map York County, Pennsylvania

- Sediment Impaired Stream
- Nutrient Impaired Stream
- Municipal Boundary
- Planning Area
- Watershed Boundary



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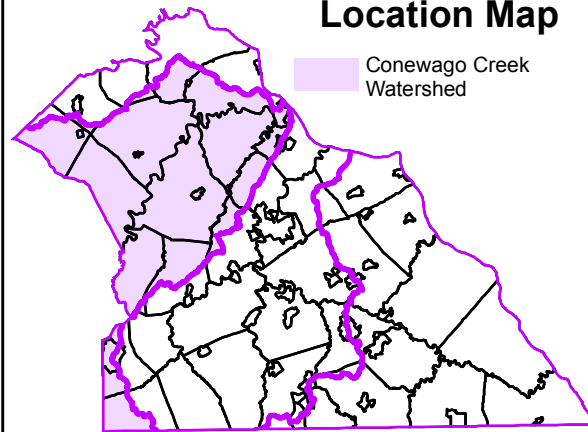
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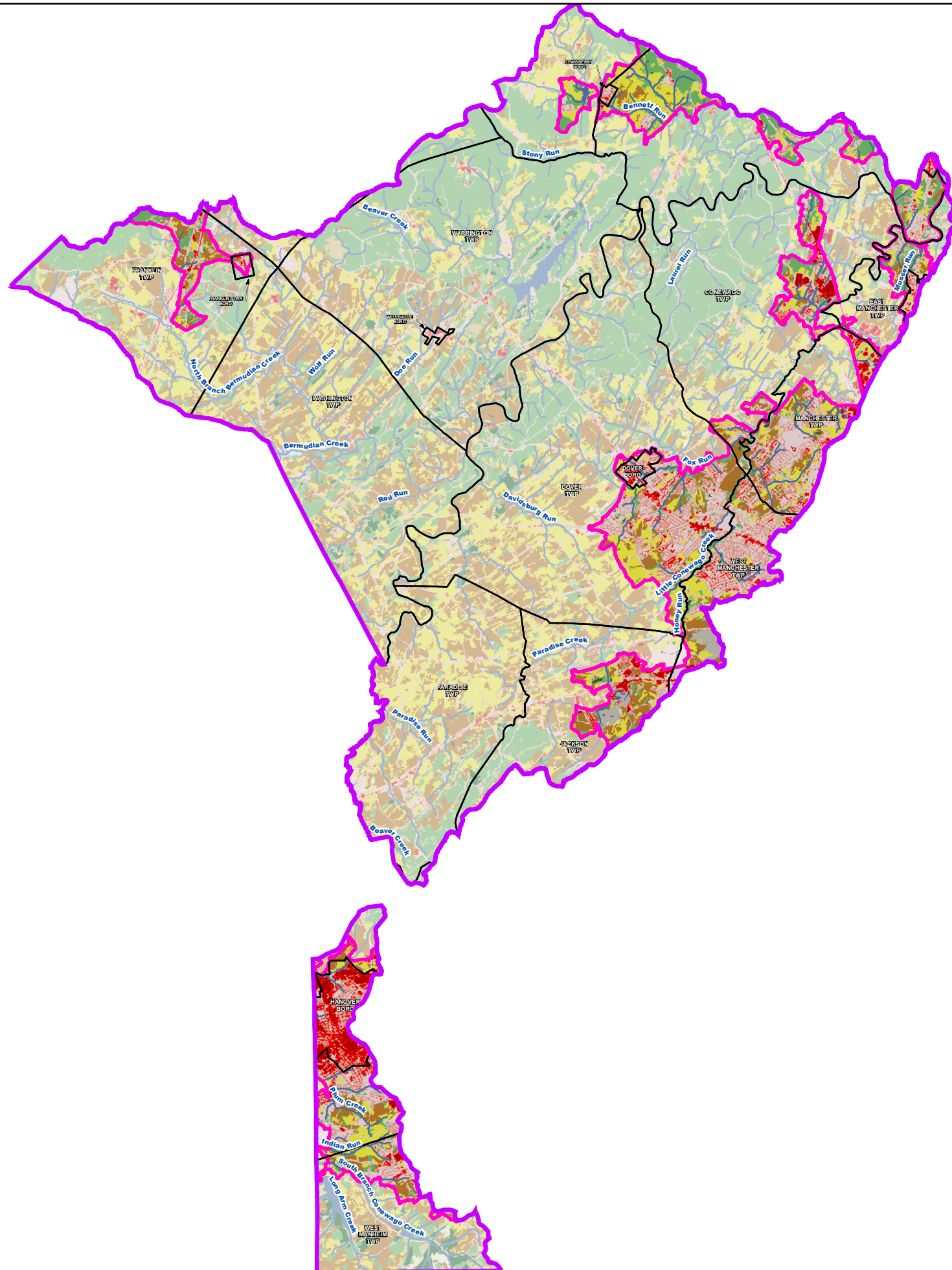


### Location Map

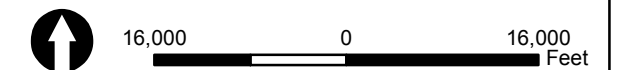
Conewago Creek Watershed



# York County Regional CBPRP Land Use Map Conewago Creek Watershed York County, Pennsylvania



- Municipal Boundary
- Planning Area
- Watershed Boundary
- Land Use (2011, Revised 2014)**
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands



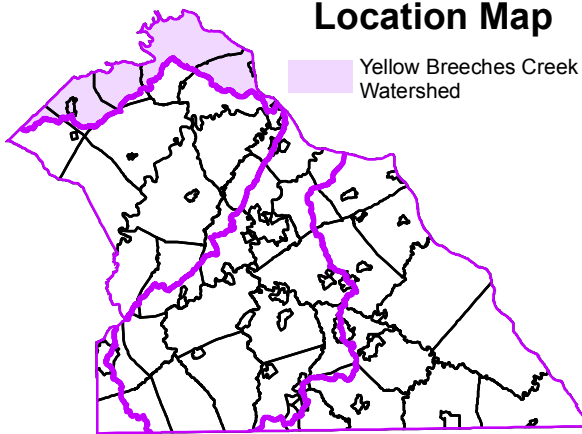
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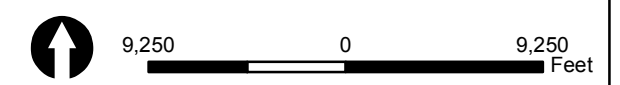
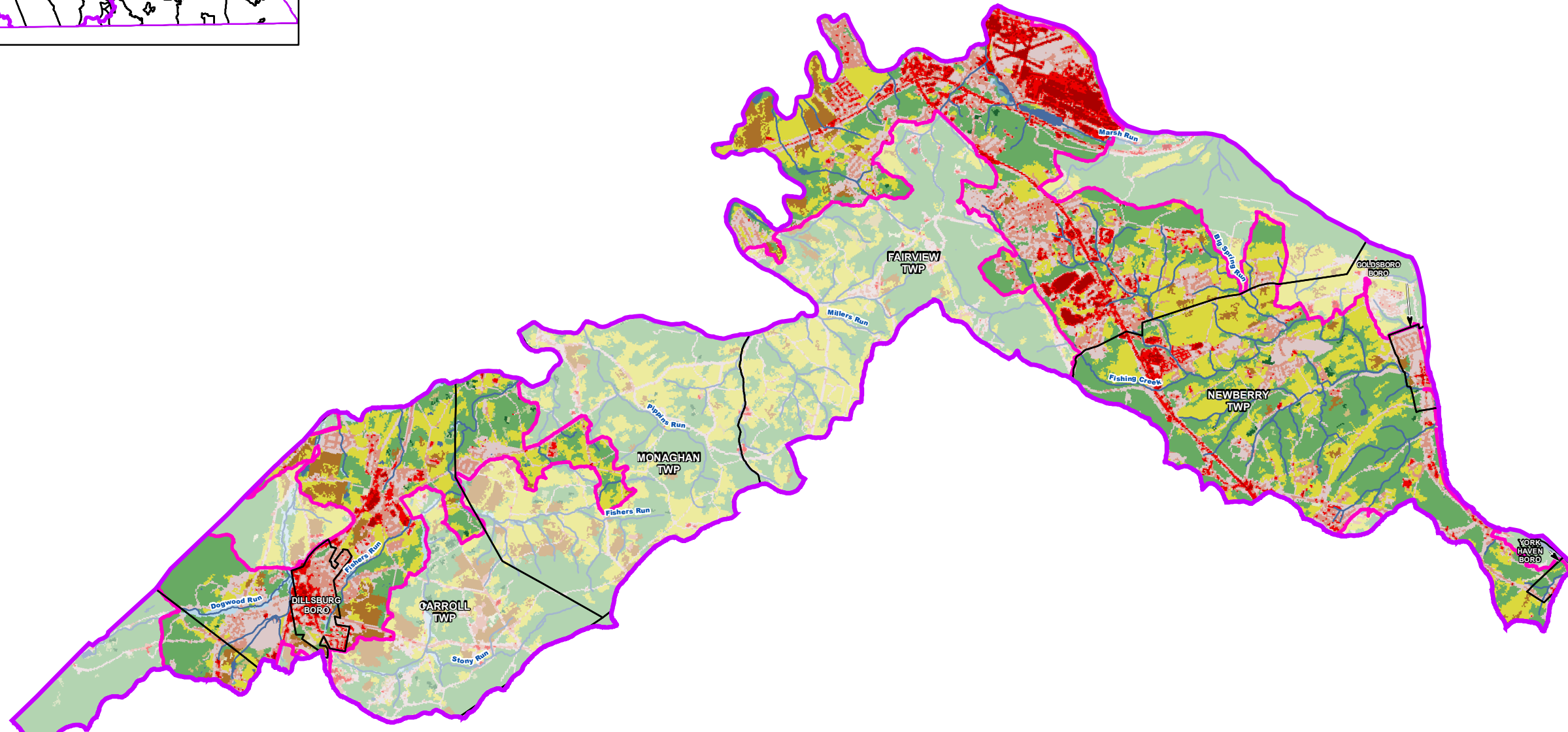
### Location Map

Yellow Breeches Creek Watershed



# York County Regional CBPRP Land Use Map Yellow Breeches Creek Watershed York County, Pennsylvania

- Municipal Boundary
- Planning Area
- Watershed Boundary
- Land Use (2011, Revised 2014)**
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands



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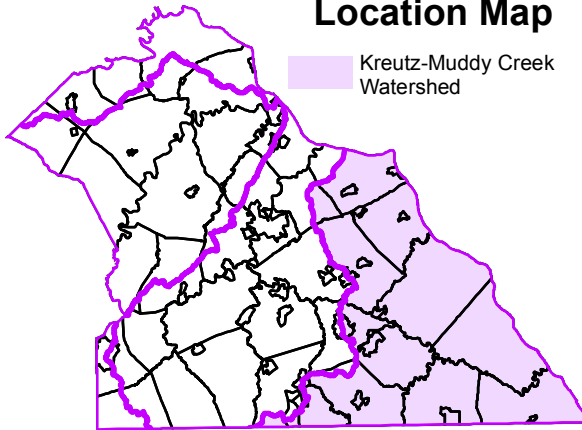
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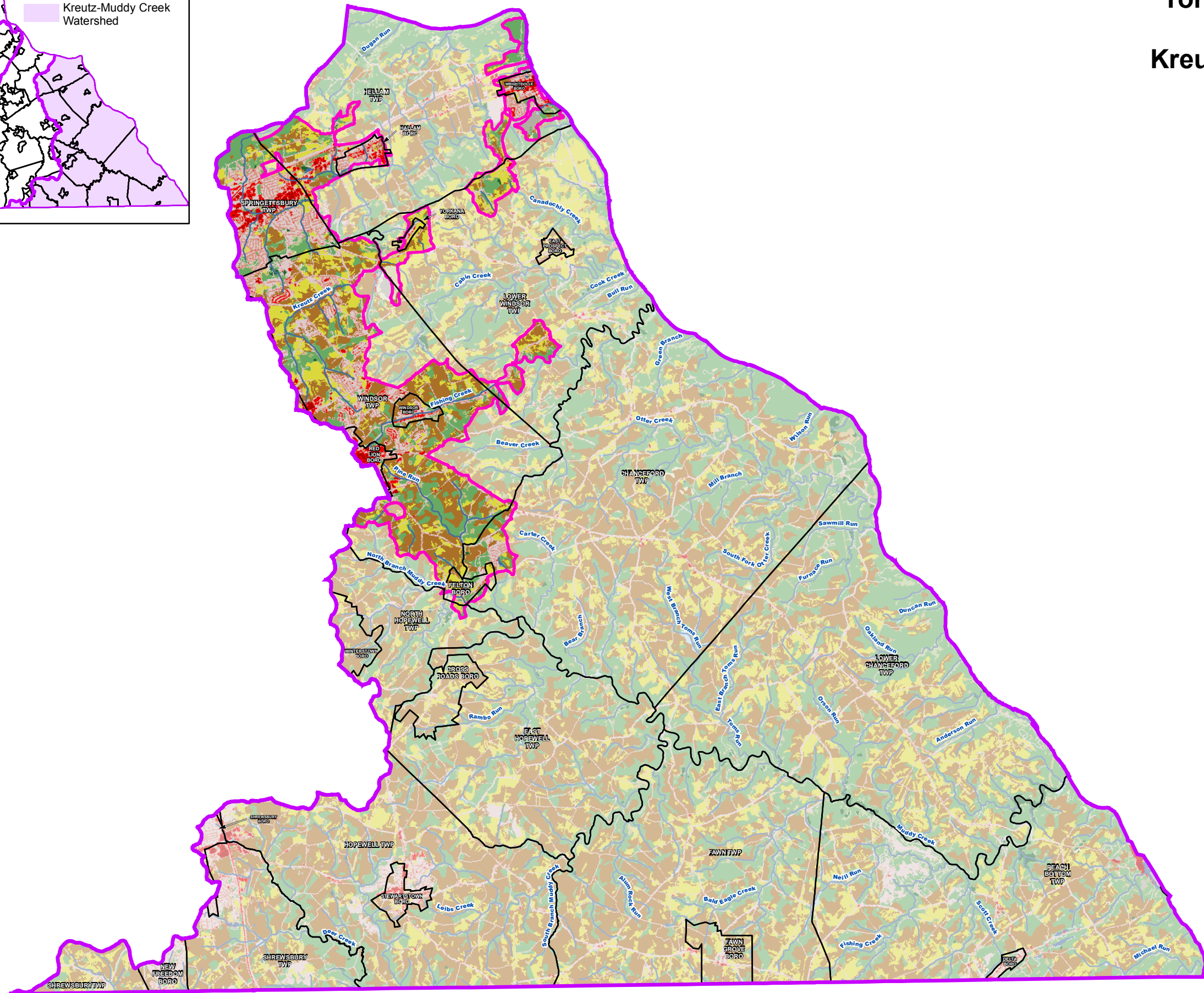


### Location Map

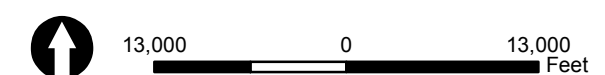
Kreutz-Muddy Creek Watershed



# York County Regional CBPRP Land Use Map Kreutz-Muddy Creek Watershed York County, Pennsylvania



- Municipal Boundary
- Planning Area
- Watershed Boundary
- Land Use (2011, Revised 2014)**
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands



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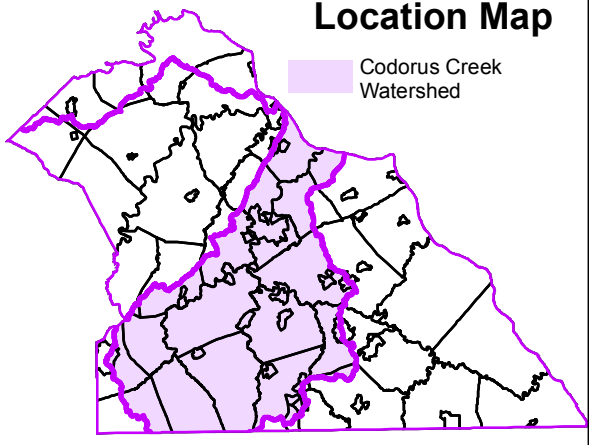
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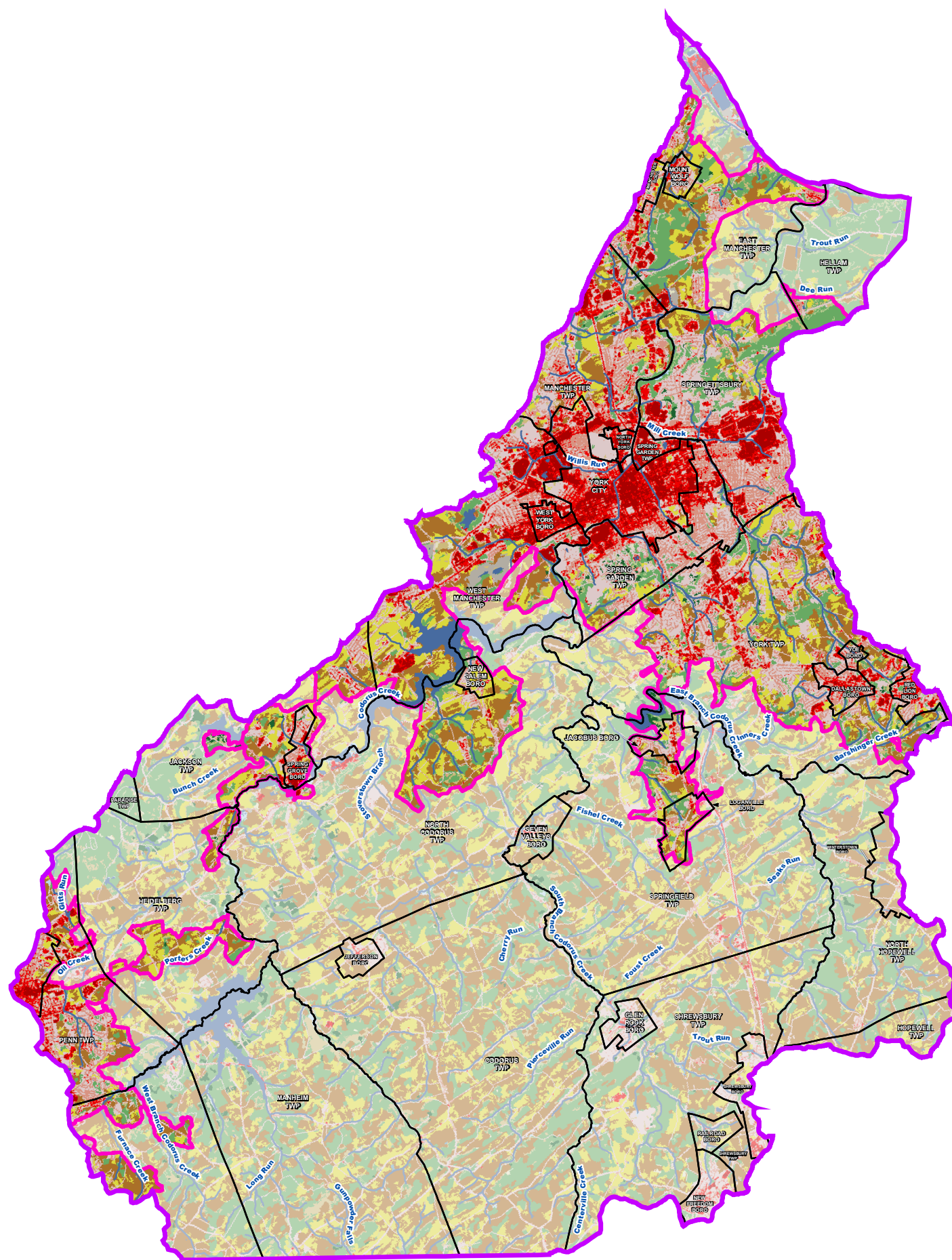


### Location Map

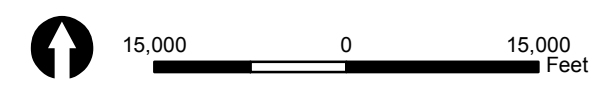
Codorus Creek Watershed



# York County Regional CBPRP Land Use Map Codorus Creek Watershed York County, Pennsylvania



- Municipal Boundary
- Planning Area
- Watershed Boundary
- Land Use (2011, Revised 2014)**
- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land (Rock/Sand/Clay)
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture/Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands



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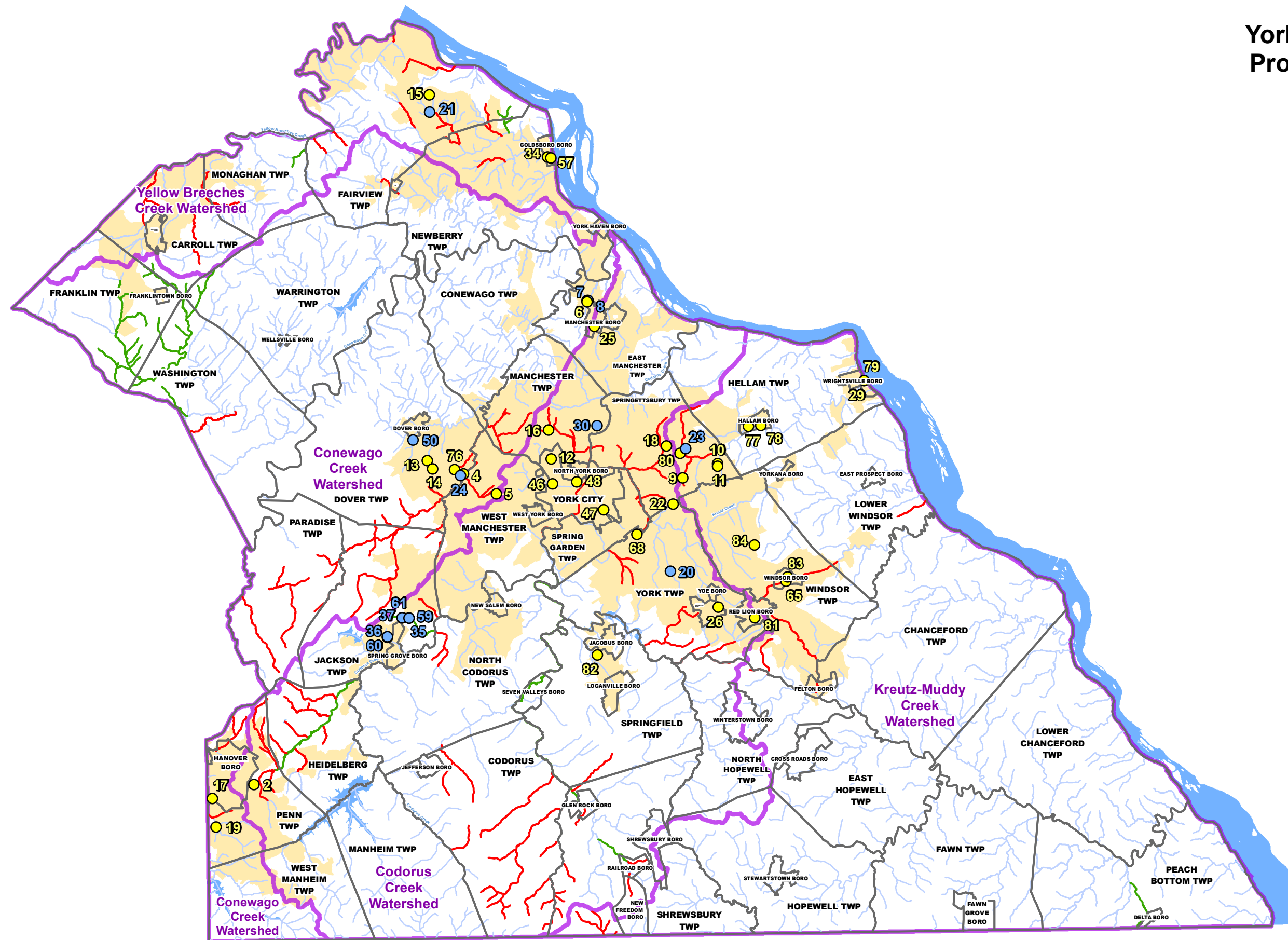
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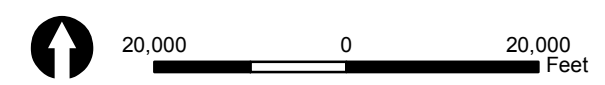




# York County Regional CBPRP Proposed BMP Location Map York County, Pennsylvania



- Local Project
- Regional Project
- Sediment Impaired Stream
- Nutrient Impaired Stream
- Non-Impaired Stream
- Planning Area
- Municipal Boundary
- Watershed Boundary



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APPENDIX IV

Municipal MS4 Requirements



**Pollutants of Concern by Municipality**

Municipality	MS4 Permit Required?	Impaired Downstream Waters	Requirement(s)
Carroll Township	Yes	Chesapeake Bay Nutrients\Sediment, Dogwood Run, Fishers Run, Stony Run	Appendix D-Siltation\Nutrients, Appendix E-Organic Enrichment/Low D.O., Siltation, Suspended Solids
Chanceford Township	Yes*	Chesapeake Bay Nutrients\Sediment, Pine Run	Appendix D-Siltation\Nutrients, Appendix E-Siltation
Conewago Township	Yes*	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation\Nutrients
Dallastown Borough	Yes	Chesapeake Bay Nutrients\Sediment, East Branch Codorus Creek, South Branch Codorus Creek, Barshinger Creek, Mill Creek	Appendix D-Siltation\Nutrients, Appendix E-Nutrients, Siltation, Suspended Solids
Dillsburg Borough	Yes	Chesapeake Bay Nutrients\Sediment, Dogwood Run, Stony Run	Appendix D-Siltation\Nutrients, Appendix E-Organic Enrichment/Low D.O., Siltation, Suspended Solids
Dover Borough	Yes*	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation\Nutrients
Dover Township	Yes	Chesapeake Bay Nutrients\Sediment, Honey Run, Little Conewago Creek	Appendix D-Siltation\Nutrients, Appendix E-Siltation
Fairview Township	Yes	Chesapeake Bay Nutrients\Sediment, Unnamed Tributaries to Yellow Breeches Creek, Yellow Breeches Creek, Big Spring Run, Fishing Creek, Marsh Run, Susquehanna River, Unnamed Tributaries to Fishing Creek	Appendix D-Siltation\Nutrients, Appendix E-Nutrients, Siltation
Felton Borough	Yes*	Chesapeake Bay Nutrients\Sediment; Pine Run - Siltation	Appendix D-Siltation\Nutrients, Appendix E-Siltation
Franklintown Borough	Yes*	Chesapeake Bay Nutrients\Sediment, North Branch Bermudian Creek, Unnamed Tributaries to North Branch Bermudian Creek	Appendix D-Siltation\Nutrients, Appendix E-Nutrients, Siltation
Glen Rock Borough	No	n/a	
Goldsboro Borough	Yes*	Chesapeake Bay Nutrients\Sediment, Susquehanna River	Appendix D-Siltation\Nutrients
Hallam Borough	Yes*	Chesapeake Bay Nutrients\Sediment, Susquehanna River	Appendix D-Siltation\Nutrients

<b>Municipality</b>	<b>MS4 Permit Required?</b>	<b>Impaired Downstream Waters</b>	<b>Requirement(s)</b>
Hanover Borough	Yes	Chesapeake Bay Nutrients\Sediment, Plum Creek, South Branch Conewago Creek	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Siltation
Hellam Township	Yes*	Chesapeake Bay Nutrients\Sediment, Susquehanna River	Appendix D-Siltation\nutrients
Jackson Township	Yes	Chesapeake Bay Nutrients\Sediment, Little Conewago Creek, Codorus Creek, Unnamed Tributaries to Codorus Creek,	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Suspended Solids
Jacobus Borough	Yes*	Chesapeake Bay Nutrients\Sediment, Codorus Creek, East Branch Codorus Creek, South Branch Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Siltation, Suspended Solids
Lewisberry Borough	Yes*	Chesapeake Bay Nutrients\Sediment, Bennet Run	Appendix D-Siltation\nutrients, Appendix E-Siltation
Loganville Borough	Yes*	Chesapeake Bay Nutrients\Sediment, East Branch Codorus Creek, South Branch Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Suspended Solids
Lower Windsor Township	Yes*	Chesapeake Bay Nutrients\Sediment, Fishing Creek, Susquehanna River	Appendix D-Siltation\nutrients, Appendix E-Siltation
Manchester Borough	Yes	Chesapeake Bay Nutrients\Sediment, Musser Run	Appendix D-Siltation\nutrients, Appendix E-Suspended Solids
Manchester Township	Yes	Chesapeake Bay Nutrients\Sediment, Little Conewago Creek, Codorus Creek, Unnamed Tributaries to Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
Monaghan Township	Yes	Chesapeake Bay Nutrients\Sediment, Fishers Run, Stony Run	Appendix D-Siltation\nutrients, Appendix E-Organic Enrichment/Low D.O., Siltation
Mount Wolf Borough	Yes	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation\nutrients
New Salem Borough	Yes*	Chesapeake Bay Nutrients\Sediment, Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Siltation
Newberry Township	Yes	Big Spring Run, Chesapeake Bay Nutrients\Sediment, Susquehanna River, Unnamed Tributaries to Fishing Creek, Bennett Run	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Siltation

Municipality	MS4 Permit Required?	Impaired Downstream Waters	Requirement(s)
North York Borough	Yes	Chesapeake Bay Nutrients\Sediment, Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
Penn Township	Yes	Chesapeake Bay Nutrients\Sediment, Plum Creek, South Branch Conewago Creek, Gitts Run, Oil Creek	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Siltation
Railroad Borough	No	n/a	
Red Lion Borough	Yes	Chesapeake Bay Nutrients\Sediment, East Branch Codorus Creek, Mill Creek, Pine Run, Fishing Creek	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Siltation
Spring Garden Township	Yes	Chesapeake Bay Nutrients\Sediment, Codorus Creek, Mill Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
Spring Grove Borough	Yes	Chesapeake Bay Nutrients\Sediment	Appendix D-Siltation\nutrients
Springettsbury Township	Yes	Chesapeake Bay Nutrients\Sediment, Susquehanna River, Unnamed Tributaries to Kreutz Creek, Codorus Creek, Mill Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
Springfield Township	Yes	Chesapeake Bay Nutrients\Sediment, East Branch Codorus Creek, South Branch Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Nutrients, Siltation, Suspended Solids
West Manchester Township	Yes	Chesapeake Bay Nutrients\Sediment, Honey Run, Little Conewago Creek, Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
West Manheim Township	Yes	Chesapeake Bay Nutrients\Sediment, South Branch Conewago Creek	Appendix D-Siltation\nutrients, Appendix E-Siltation
West York Borough	Yes	Chesapeake Bay Nutrients\Sediment, Codorus Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
Windsor Borough	Yes	Chesapeake Bay Nutrients\Sediment, Fishing Creek	Appendix D-Siltation\nutrients, Appendix E-Siltation
Windsor Township	Yes	Chesapeake Bay Nutrients\Sediment, Fishing Creek, Susquehanna River, Unnamed Tributaries to Kreutz Creek, North Branch Muddy Creek, Pine Run	Appendix D-Siltation\nutrients, Appendix E-Siltation

Municipality	MS4 Permit Required?	Impaired Downstream Waters	Requirement(s)
Wrightsville Borough	Yes*	Chesapeake Bay Nutrients\Sediment, Susquehanna River	Appendix D-Siltation\nutrients
Yoe Borough	Yes	Chesapeake Bay Nutrients\Sediment, Mill Creek	Appendix D-Siltation\nutrients, Appendix E-Siltation
York City	Yes	Chesapeake Bay Nutrients\Sediment, Codorus Creek, Mill Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Siltation
York County	Yes*	n/a	
York Township	Yes	Barshinger Creek, Chesapeake Bay Nutrients\Sediment, East Branch Codorus Creek, Inners Creek, South Branch Codorus Creek, Codorus Creek, Mill Creek	Appendix D-Siltation\nutrients, Appendix E-Excessive Algal Growth, Nutrients, Siltation, Suspended Solids
York Haven Borough	Yes*	Chesapeake Bay Nutrients \Sediment	Appendix D-Siltation\nutrients

\* Received Advanced Waiver Approval Letter from PADEP



APPENDIX V

Existing Pollutant Loading Calculations



**Baseline Reduction for Installed BMPs (Summary Table)**

Permittee	BMP Type	Drainage Area (acres)		Total Area		Pollutant Load Reduction TSS (lbs/yr)
		Impervious	Pervious	Acres	Ln Ft	
Carroll Twp.	Infiltration Trench	1.16	0.00			27,832
	Detention Pond/Basin	1.40	26.20			
	Bioretention	0.44	0.00			
	Vegetated Swale	4.92	6.09			
	Infiltration Basin/Bed	7.37	7.38			
	Rooftop Disconnection	0.07	0.00			
	Amended Soil	1.30	31.31			
	Water Quality Filters	0.50	0.43			
	Landscape Restoration	0.32	2.32			
Dillsburg Boro	Pervious Pavement w/ Infiltration Bed	2.48	0.78			8,400
	Dry Extended Detention Basin	1.85	0.38			
	Subsurface Infiltration Bed	1.26	0.10			
	Extended Detention	1.85	0.38			
	Water Quality Filters	0.81	0.24			
	Rain Garden/Infiltration Bed	0.10	0.30			
	Vegetated Swale	0.00	0.13			
	Landscape Restoration	0.00	1.00			
	Soil Amendments & Restoration	0.00	0.15			
	Infiltration Berm & Retentive Grading	0.40	0.91			
	Disconnection from Storm Sewers	0.12	0.00			
Dover Twp.	Infiltration Bed	3.36	0.01			15,157
	Detention Basin	7.48	2.03			
	Underground Retention Basin	0.70	0.28			
	Vegetated Swale	0.25	0.13			
	Rain Garden/Infiltration Bed	0.89	0.67			
	Seepage Pit	0.74	0.00			
East Manchester	Infiltration Bed	1.05	1.49			61,603
	Wet Pond	21.56	9.69			
	Infiltration Trench	0.44	0.89			
	Vegetated Swale	2.27	2.18			
	Bioretention	1.53	0.89			
	Dry Extended Detention Basin	32.84	13.84			
Fairview Twp.	Infiltration Basin	12.80	25.62			25,816
	Subsurface SWM/BMP	1.20	0.98			
Hanover Boro	Wetlands			0.25		4,087
	Detention Basin	3.71	5.15			
	Sedimentation Basin	26.81	70.73			
Hellam Twp.	Rain Garden	1.15	1.17			8,005
	Infiltration	3.60	4.79			

Permittee	BMP Type	Drainage Area (acres)		Total Area		Pollutant Load Reduction TSS (lbs/yr)
		Impervious	Pervious	Acres	Ln Ft	
Manchester Twp.	Infiltration Bed	10.89	4.29			70,196
	Detention Basin	38.73	87.56			
	Underground Retention Basin	4.40	1.89			
	Rain Garden	0.12	0.07			
	Vegetated Swale	2.02	1.23			
Monaghan Twp.	Infiltration Bed/Trench	3.54	2.88			7,494
	Porous Pavement	0.29	0.06			
	Detention Basin	0.13	0.08			
	Rain Garden/Bioretenion	0.59	0.50			
	Vegetated Swale	0.21	0.57			
Mount Wolf Boro	Stream Restoration	0.65	0.00		235	10,869
	Wet Pond	0.35	0.05			
Newberry Twp.	Dry Extended Detention Basin	1.17	3.13			41,680
	Vegetated Swale	0.90	1.40			
	Water Quality Filters	4.60	0.00			
	Landscape Restoration	0.00	0.80			
	Soil Amendments & Restoration	0.00	18.50			
	Infiltration Bed	3.30	1.25			
	Rain Garden/Bioretenion	1.50	1.49			
	Wet Pond/Retention Basin	24.29	8.60			
Penn Twp.	Soil Amendments	1.26	3.36	2.67		50,238
	Vegetated Swale	1.90	1.35	0.08		
	Rain Garden/Bioretenion	1.26	0.30			
	Infiltration Basin	14.08	16.33			
	Water Quality Filter	5.33	28.75			
	Dry Extended Detention Basin	2.20	6.71			
	Riparian Buffer Restoration	0.68	1.13	1.81		
	Infiltration Trench	1.10	0.12			
	Dry Well/Seepage Pit	1.46	0.00			
	Pavement Disconnect	0.50	0.00			
	Infiltration Basin	2.33	4.50			
	Landscape Restoration	0.00	1.30	0.60		
	Street Sweeping	4.40	0.00			
Spring Grove Boro	Subsurface Storage Facility	0.15	0.00			14,890
	Pervious Pavement Infiltration Bed	1.10	0.00			
	Infiltration Basin	2.95	9.59			
	Vegetated Swale	0.85	6.25			
	Wet Pond/Retention Basin	0.75	6.36			
	Dry Detention Basin	15.40	84.90			

Permittee	BMP Type	Drainage Area (acres)		Total Area		Pollutant Load Reduction TSS (lbs/yr)
		Impervious	Pervious	Acres	Ln Ft	
Springettsbury Twp.	Detention Basin	48.68	45.15			179,140
	Infiltration Basin	33.98	20.34			
	Bioretention Basin	40.22	24.48			
	Infiltration Trench	6.08	8.42			
	Underground Detention Basin	6.56	6.15			
	Rain Garden	4.65	3.94			
	Vegetated Swale	0.64	2.95			
West Manchester Twp.	Bioretention Basin	11.60	30.11			123,812
	Infiltration Bed	19.84	11.44			
	Seepage Pit/Pervious Pavement	2.66	1.94			
	Seepage Pit/basin	35.09	18.66			
	Basin/Amended soils	12.25	5.68			
West Manheim Twp.	Infiltration Bed	5.26	7.00			17,076
	Porous Pavement	0.09	0.00			
	Infiltration Basin	4.10	9.96			
	Vegetated Swale	0.10	2.20			
Windsor Boro	Stream Restoration	187.20	576.31		500	124,001
Windsor Twp.	Dry Well/Seepage Pit	6.77	0.36			26,967
	Rain Garden Bioretention	0.67	0.14			
	Infiltration Trench	0.35	0.64			
	Subsurface Infiltration Bed	0.87	0.19			
	Infiltration Basin	5.63	25.77			
	Infiltration Trench w/ Water Quantity Filter	0.16				
York City	Subsurface Infiltration Bed	0.09	0.00			65,192
	Water Quality Filter	7.85	4.35			
	Underground Rate Control Facility	4.87	2.77			
	Street Sweeping	1.79	0.00			
	Dry Detention Basin	46.63	35.20			
	Filter Strip	1.00	0.12			
	Runoff Capture and Reuse	0.60	0.08			
	Infiltration Basin	1.00	1.31			
	Downspout filter	0.30	0.00			
	Infiltration Trench	0.89	1.59			
Rain Garden/Bioretention	2.61	1.82				
York County	Stream Restoration				1,190	66,099
	Vegetated Swale	10.80	6.29			

Permittee	BMP Type	Drainage Area (acres)		Total Area		Pollutant Load Reduction TSS (lbs/yr)
		Impervious	Pervious	Acres	Ln Ft	
York Twp.	Dry Extended Detention	9.94	19.27			56,908
	Water Quality Filter	10.70	10.41			
	Subsurface Infiltration Bed	17.92	17.04			
	Rain Garden / Bioretention Bed	2.19	3.42			
	Vegetated Swale	2.54	2.54			
	Snout	1.98	1.98			
	Level Spreader	0.00	1.23			
	Riparian Forest Buffer	2.86	27.69	11.69		
Defense Distribution Center, Susquehanna	Permeable Pavers	0.23				43,402
	Vegetated Swale	9.17				
	Bioretention Facility	7.09				
	Channel/Bank Stabilization				52.5	
	Riparian Buffer Strip	52.50				
	Bioswale	4.20				
	Dry Extended Detention Basin	21.31				
	Infiltration Basin	7.62				
	Wet Pond	5.02				
Green Roof	2.70					
PennDOT	Dry Detention Basin	93.35	0.00	0.59		85,203
	Infiltration Basin	7.39	30.79	0.41		
	Bioretention	3.15	9.77	0.21		
	Infiltration Berm	10.54	40.56	0.19		
	Infiltration Trench	9.65	59.06	0.27		
	Vegetated Swale w/ Check Dams	233.69	140.18	0.29		
	Vegetated Swale	451.12	280.36	0.11		
	Bioretention w/ Underdrain	0.10	0.13	0.01		
<b>Total</b>						<b>1,134,067</b>

\* Pollutant load reductions calculated through BayFAST



BMP Type/Description (DEP Manual)	Location				Installation		O&M					Drainage Area (acres)		BMP Information			
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)	
<b>Fairview Township - Paul Rodrigo (717) 901-5298</b>																	
<b>Pa Turnpike Project</b>																	
Infiltration Basin	Fairview Twp.	Lower Susquehanna	40°12'14"	(-76°51'20")	2016	PAG02006715031	See Sheet 1		Yes	JMT/PATC	0.00	0.69	9,947				
<b>Holiday Inn Express</b>																	
Subsurface SWM/BMP Facility	Fairview Twp.	Yellow Breeches	40°13'0.32"N	76°52'39.37"W	2015	PAG02006713002	See Sheet 2		Yes		1.20	0.98	2,425				
<b>Woodbridge Farms PH 10 &amp; 11</b>																	
Infiltration Basin	Fairview Twp.	Fishing Creek	40°10'43.68"N	76°48'15.11"W	2016		See Sheet 3		Yes		4.83	16.46	12,590				
<b>Fed Ex Ground-Truck Parking</b>																	
Infiltration Basin	Fairview Twp.	UNT to Fishing Creek	40°9'55.64"N	76°50'12.47"W	2011	PAG2006711035	See Sheet 4		Yes		3.91	2.59	209,947				
Vegetated Swale	Fairview Twp.	UNT to Fishing Creek	40°9'56.70"N	76°50'16.13"W	2013	PAG2006711035	See Sheet 4		Yes				164,438				
<b>Fed Ex Ground-Employee Parking</b>																	
Susquehanna Sports Center	Fairview Twp.	UNT to Fishing Creek					See Sheet 5										
Infiltration Basin	Fairview Twp.	Yellow Breeches	40°12'49.78"N	76°53'5.06"W	2014	PAG02006712052	See Sheet 6		Yes		176,854 ft2	256,132 ft2	346,302				
<b>Hanover Borough -</b>																	
Created wetlands	Hanover Boro	Codorus	39.812894	-76.968795	2015	PAG02-0067-03-054R-1	mowing	moderate	yes		7.71155	7.71155	10,752.70				
detention basin	Hanover Boro	Codorus	39.811537	-76.971509	2016	PAG-02-0067-11-038R	mowing	moderate	yes		2.17595	2.17595	11,432.90				
sedimentation basin	Hanover Boro / Private	Conewago	39.826747	-76.992137	2010	PAG02-0067-04-069R	mowing	moderate	yes		24.365	24.365	134,346.9				
sedimentation basin	Hanover Boro / Private	Conewago	39.827535	-76.988567	2010	PAG02-0067-04-069R	mowing	moderate	yes		2.4405	46.3695	18,499.80				
detention basin	Hanover Boro / Private	Conewago	39.820265	-76.975569	2016	PAG02006714058	mowing	moderate	yes		1.539	2.973	15606.9				
<b>Hellam Township - Chris Eaton (717) 434-1300</b>																	
Bio Retention Basin (2) and Grass lined swale	Hellam Twp	Kreutz Creek	40.010852	-76.59727	Nov-15	PAG02006708010R	Inspection	Quarterly	11/26/2016	Yes			0.57	1.98	7931	N/A	
Grass Lined Swale	Hellam Twp	Kreutz Creek	40.001734	-76.623258	10/14/2016	N/A	Inspection	Quarterly	10/14/2016	Yes			0.01	0.01	N/A	N/A	
Subsurface Infiltration	Hellam Twp	Kreutz Creek	40.008079	-76.632003	11/3/2016	N/A	Inspection	Quarterly	11/3/2016	Yes			0.06	0.033	N/A	N/A	
Bio Swale (5)	Hellam Twp	Kreutz Creek	40.02795	-76.61929	7/16/2016	N/A	Inspection	Quarterly		Yes			1.54	32.87	5952 Sq. Ft	N/A	
Stream Bank Restoration (58)	Hellam Twp	Susquehanna	40.03977	-76.53804	4/30/2015	PAGP-03-67-14-114 PAGP-04-67-14-113	Inspection	Quarterly		Yes			0.09	0.07	N/A	80 Feet	
Rain Garden	Hellam Twp	Kreutz Creek	40.01273	-76.59267	5/31/2014	N/A	Inspection	Quarterly	11/23/2016	Yes			0.032	0.003	138 sq. feet	N/A	
Retention Basin (Public Works)	Hellam Twp	Kreutz Creek	40.014309	-76.581661	2010	PAG2006708035	Inspection	Monthly	11/23/2016	Yes			6.01	3.78	15763 Sq. Ft	N/A	
Bio Retention Basin (2) and Grass lined swale	Hellam Twp	Kreutz Creek	40.010852	-76.59727	Nov-15	PAG02006708010R	Inspection	Quarterly	11/26/2016	Yes			0.57	1.98	7931	N/A	
Grass Lined Swale	Hellam Twp	Kreutz Creek	40.001734	-76.623258	10/14/2016	N/A	Inspection	Quarterly	10/14/2016	Yes			0.01	0.01	N/A	N/A	
Subsurface Infiltration	Hellam Twp	Kreutz Creek	40.008079	-76.632003	11/3/2016	N/A	Inspection	Quarterly	11/3/2016	Yes			0.06	0.033	N/A	N/A	
Bio Swale (5)	Hellam Twp	Kreutz Creek	40.02795	-76.61929	7/16/2016	N/A	Inspection	Quarterly		Yes			1.54	32.87	5952 Sq. Ft	N/A	
Stream Bank Restoration (58)	Hellam Twp	Susquehanna	40.03977	-76.53804	4/30/2015	PAGP-03-67-14-114 PAGP-04-67-14-113	Inspection	Quarterly		Yes			0.09	0.07	N/A	80 Feet	
Rain Garden	Hellam Twp	Kreutz Creek	40.01273	-76.59267	5/31/2014	N/A	Inspection	Quarterly	11/23/2016	Yes			0.032	0.003	138 sq. feet	N/A	
Retention Basin (Public Works)	Hellam Twp	Kreutz Creek	40.014309	-76.581661	2010	PAG2006708035	Inspection	Monthly	11/23/2016	Yes			6.01	3.78	15763 Sq. Ft	N/A	
<b>Manchester Township - BJ Treglia (Engineer/CSD) 717-814-4517 (direct) BJT@csdavidson.com</b>																	
Infiltration Bed	Manchester Township	Codorus Creek	39.995879	-76.733567	2011	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes			0.5	0.22				
Basin	Manchester Township	Codorus Creek	39.995549	-76.733172	2011	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes			0.128	0.59			
Basin	Manchester Township	Little Conewago Creek	40.032464	-76.756826	2015	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes			18.7	12.46			
Infiltration Bed	Manchester Township	Codorus Creek	40.036816	-76.735591	2015	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes			2.47	1.33				
Infiltration Bed	Manchester Township	Codorus Creek	40.28992	-76.73419	2015	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes			0.446	0				
Basin	Manchester Township	Codorus Creek	39.991573	-76.74204	2015	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes			1.5	13.74			
Basin	Manchester Township	Codorus Creek	40.00546	-76.719156	2016	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes			0.12	1.68			



BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information			
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)
Manchester Township - continued																
Basin	Manchester Township	Codorus Creek	40.019305	-76.718088	2015	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		1.6	0.54			
Basin	Manchester Township	Codorus Creek	40.019617	-76.719727	2015	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		0.35	0.32			
Vegetated Swale	Manchester Township	Codorus Creek	40.020044	-76.71808	2015	Yes, but not available	Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation). Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed. Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade. Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is dry to avoid rutting. Inspect for litter; remove prior to mowing. Inspect for uniformity in cross-section and longitudinal slope, correct as needed. Inspect swale inlet and outlet for signs of erosion or blockage, correct as needed. Maintenance to be done as needed: Plant alternative grass species in the event of unsuccessful establishment. Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming. Rototill and replant swale if draw down time is more than 48 hours. Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified. Water during dry periods, fertilize, and apply pesticide only when absolutely necessary. Winter conditions also necessitate additional maintenance concerns, which include the following: Immediately after the spring melt, remove residuals (e.g. sand) and replace damaged vegetation without disturbing remaining vegetation. If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the impacts of deicing agents. Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid products or as pretreated salt. Use salt-tolerant vegetation in swales. (adapted from 363-0300-002 / Dec 30, 2006, pgs 95-96)	Maintenance activities to be done annually and within 48 hours after every major storm event (> 1 inch rainfall depth)	Yes		0.055	0.185				
Vegetated Swale	Manchester Township	Codorus Creek	40.019513	-76.718026	2015	Yes, but not available	Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation). Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed. Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade. Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is dry to avoid rutting. Inspect for litter; remove prior to mowing. Inspect for uniformity in cross-section and longitudinal slope, correct as needed. Inspect swale inlet and outlet for signs of erosion or blockage, correct as needed. Maintenance to be done as needed: Plant alternative grass species in the event of unsuccessful establishment. Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming. Rototill and replant swale if draw down time is more than 48 hours. Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified. Water during dry periods, fertilize, and apply pesticide only when absolutely necessary. Winter conditions also necessitate additional maintenance concerns, which include the following: Immediately after the spring melt, remove residuals (e.g. sand) and replace damaged vegetation without disturbing remaining vegetation. If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the impacts of deicing agents. Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid products or as pretreated salt. Use salt-tolerant vegetation in swales. (adapted from 363-0300-002 / Dec 30, 2006, pgs 95-96)	Maintenance activities to be done annually and within 48 hours after every major storm event (> 1 inch rainfall depth)	Yes		1.6	0.54				
Vegetated Swale	Manchester Township	Codorus Creek	40.004273	-76.716511	2012	Yes, but not available	Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation). Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed. Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade. Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is dry to avoid rutting. Inspect for litter; remove prior to mowing. Inspect for uniformity in cross-section and longitudinal slope, correct as needed. Inspect swale inlet and outlet for signs of erosion or blockage, correct as needed. Maintenance to be done as needed: Plant alternative grass species in the event of unsuccessful establishment. Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming. Rototill and replant swale if draw down time is more than 48 hours. Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified. Water during dry periods, fertilize, and apply pesticide only when absolutely necessary. Winter conditions also necessitate additional maintenance concerns, which include the following: Immediately after the spring melt, remove residuals (e.g. sand) and replace damaged vegetation without disturbing remaining vegetation. If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the impacts of deicing agents. Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid products or as pretreated salt. Use salt-tolerant vegetation in swales. (adapted from 363-0300-002 / Dec 30, 2006, pgs 95-96)	Maintenance activities to be done annually and within 48 hours after every major storm event (> 1 inch rainfall depth)	Yes		0.192	0.248				

BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information				
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Activities	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)
Manchester Township - continued																	
Vegetated Swale	Manchester Township	Codorus Creek	40.00461	-76.717578	2012	Yes, but not available	Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation). Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed. Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade. Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is dry to avoid rutting. Inspect for litter; remove prior to mowing. Inspect for uniformity in cross-section and longitudinal slope, correct as needed. Inspect swale inlet and outlet for signs of erosion or blockage, correct as needed. Maintenance to be done as needed: Plant alternative grass species in the event of unsuccessful establishment. Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming. Rototill and replant swale if draw down time is more than 48 hours. Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified. Water during dry periods, fertilize, and apply pesticide only when absolutely necessary. Winter conditions also necessitate additional maintenance concerns, which include the following: Immediately after the spring melt, remove residuals (e.g. sand) and replace damaged vegetation without disturbing remaining vegetation. If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the impacts of deicing agents. Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid products or as pretreated salt. Use salt-tolerant vegetation in swales. (adapted from 363-0300-002 / Dec 30, 2006, pgs 95-96)	Annually and after any major rainfall event		Yes		0.096	0.114				
Basin	Manchester Township	Little Conewago Creek	40.02485	-76.762604	2012	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		2.88	15.4				
Basin	Manchester Township	Little Conewago Creek	40.023167	-76.761096	2015	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		3.414	14.47				
Underground Retention Basin	Manchester Township	Codorus Creek	39.982938	-76.726693	2011	Yes, but not available	1. Inspect all water quality inlets at least once every 30 days for the first year after the York County Conservation District certifies that the site has achieved permanent stabilization. 2. Create, maintain, and make available upon request written inspection reports of all water quality inspections. Those reports shall record dates and depths of all rain events of 0.5 inches or greater, depths of grit and sediment captured in each inlet, and description of floatable debris and oils on the surface of the captured water. 3. After the first year mentioned in 1, inspect all water quality inlets at least once every six months or more often, if the manufacturer recommends based upon the inspection reports. 4. Have all accumulated grit sediment, floatable debris and oils removed from each quality inlet: whenever a spill or other incident causes a larger than normal accumulation of pollutants in the inlet; at least every six months; whenever sediment accumulates to within 6 inches of the snout bottom; or whenever floatable debris and oil clogs form a layer greater than 3 inches thick. 5. Have pollutants removed from water quality inlets using a vacuum truck. 6. Obtain, maintain, and make available upon request documentation that pollutants removed from water quality inlets are handled and disposed of in accordance with all requirements of all applicable local, state, and federal laws, regulations, and policies. 7. Inspect and have maintained the snout hoods at least once every year: inspect the anti-siphon vent and access hatch; gently rod with a flexible wire and flush the vent; open and close the access hatch; check to assure the hood is neither cracked nor broken; check to assure that all bolts hold the hood firmly against the inlet wall; check to assure that the gasket forms a water tight seal between the hood and inlet wall; and continue inspection reporting pursuant to 1 and 2. (from Design Plans, Sheet # C-4)			Yes		4.403	1.887				
Basin	Manchester Township	Codorus Creek	40.012048	-76.732396	2015	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		1.33	0.64				
Vegetated Swale	Manchester Township	Codorus Creek	40.012388	-76.73283	2015	Yes, but not available	Inspect and correct erosion problems, damage to vegetation, and sediment and debris accumulation (address when > 3 inches at any spot or covering vegetation). Inspect vegetation on side slopes for erosion and formation of rills or gullies, correct as needed. Inspect for pools of standing water; dewater and discharge to an approved location and restore to design grade. Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cuttings in a local composting facility; mow only when swale is dry to avoid rutting. Inspect for litter; remove prior to mowing. Inspect for uniformity in cross-section and longitudinal slope, correct as needed. Inspect swale inlet and outlet for signs of erosion or blockage, correct as needed. Maintenance to be done as needed: Plant alternative grass species in the event of unsuccessful establishment. Reseed bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming. Rototill and replant swale if draw down time is more than 48 hours. Inspect and correct check dams when signs of altered water flow (channelization, obstructions, erosion, etc.) are identified. Water during dry periods, fertilize, and apply pesticide only when absolutely necessary. Winter conditions also necessitate additional maintenance concerns, which include the following: Immediately after the spring melt, remove residuals (e.g. sand) and replace damaged vegetation without disturbing remaining vegetation. If roadside or parking lot runoff is directed to the swale, mulching and/or soil aeration/manipulation may be required in the spring to restore soil structure and moisture capacity and to reduce the impacts of deicing agents. Use nontoxic, organic deicing agents, applied either as blended, magnesium chloride-based liquid products or as pretreated salt. Use salt-tolerant vegetation in swales. (adapted from 363-0300-002 / Dec 30, 2006, pgs 95-96)	Annually and after any major rainfall event		Yes		0.08	0.14				
Basin	Manchester Township	Codorus Creek	40.024663	-76.73299	2016	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		0.96	0.56				
Basin	Manchester Township	Codorus Creek	39.993134	-76.748181	2014	Yes, but not available	General Inspection	Annually and after any major rainfall event		Yes		7.75	27.1				

BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information			
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)
Manchester Township - continued																
Infiltration Bed	Manchester Township	Little Conewago Creek	40.029464	-76.746356	2015	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		0.092	0				
Infiltration Bed	Manchester Township	Codorus Creek	40.031282	-76.729366	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		2.2					
Infiltration Bed	Manchester Township	Codorus Creek	40.031037	-76.729245	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		1.19					
Infiltration Bed	Manchester Township	Codorus Creek	40.031021	-76.728338	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		0.08					
Infiltration Bed	Manchester Township	Codorus Creek	40.032784	-76.728719	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		1.648	0.446				

BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information			
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)
Manchester Township - continued																
Infiltration Bed	Manchester Township	Codorus Creek	40.03273	-76.729738	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		0.489	1.23				
Infiltration Bed	Manchester Township	Codorus Creek	40.032519	-76.730496	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		0.668	0.208				
Infiltration Bed	Manchester Township	Codorus Creek	40.03129	-76.730494	2016	Yes, but not available	1. INSPECT SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEAN OUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. 2. REMOVE SEDIMENT, TRASH AND OTHER DEBRIS FROM SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS, CLEANOUTS, RAIN GUTTERS, ROOF LEADERS, INLET STRUCTURES, AND AREAS DRAINING TO BEDS. IMMEDIATELY IMPLEMENT NEEDED REPAIRS OR ACTIONS 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL, INSPECT SUBSURFACE INFILTRATION BED CLEANOUTS, AND/OR GRASS AREAS TO DETERMINE IF THEY DRAIN WITHIN 72 HOURS 4. MAINTAIN SUBSURFACE INFILTRATION BED (S.I.B.) GRASS AREAS IN GOOD CONDITION, GRASS STABILIZATION (I.E. > 75% UNIFORM PERENNIAL 3"-6" GRASS COVERAGE.) IMMEDIATELY STABILIZE BARE SPOTS OR ERODED AREAS. RESTRICT MOWING FOR AT LEAST 72 HOURS AFTER STORM/RAINFALL EVENTS 5. RESTRICT VEHICULAR OR OTHER EQUIPMENT TRAFFIC ON INFILTRATION AREAS TO ONLY THAT NECESSARY FOR MOWING OR BMP REPAIRS 6. PROHIBIT STORAGE OF HAZARDOUS MATERIALS ON SUBSURFACE INFILTRATION BED, GRASS AREAS OR ON AREAS THAT DRAIN TO BEDS	1. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 2. AT LEAST TWICE EACH YEAR AND AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL 3. AFTER STORM EVENTS EXCEEDING 1 INCH OF RAINFALL	Yes		1.11	0.853				
Underground Basin	Manchester Township	Willis Run	39.984602	-76.736069	2014	Yes, but not available	1. Inspect all water quality inlets at least once every 30 days for the first year after the York County Conservation District certifies that the site has achieved permanent stabilization. 2. Create, maintain, and make available upon request written inspection reports of all water quality inspections. Those reports shall record dates and depths of all rain events of 0.5 inches or greater, depths of grit and sediment captured in each inlet, and description of floatable debris and oils on the surface of the captured water. 3. After the first year mentioned in 1, inspect all water quality inlets at least once every six months or more often, if the manufacturer recommends based upon the inspection reports. 4. Have all accumulated grit sediment, floatable debris and oils removed from each quality inlet: whenever a spill or other incident causes a larger than normal accumulation of pollutants in the inlet; at least every six months; whenever sediment accumulates to within 6 inches of the snout bottom; or whenever floatable debris and oil clogs form a layer greater than 3 inches thick. 5. Have pollutants removed from water quality inlets using a vacuum truck. 6. Obtain, maintain, and make available upon request documentation that pollutants removed from water quality inlets are handled and disposed of in accordance with all requirements of all applicable local, state, and federal laws, regulations, and policies. 7. Inspect and have maintained the snout hoods at least once every year: inspect the anti-siphon vent and access hatch; gently rod with a flexible wire and flush the vent; open and close the access hatch; check to assure the hood is neither cracked nor broken; check to assure that all bolts hold the hood firmly against the inlet wall; check to assure that the gasket forms a water tight seal between the hood and inlet wall; and continue inspection reporting pursuant to 1 and 2. (from Design Plans, Sheet # C-4)		Yes		0.29	0.06				
Rain Garden	Manchester Township	Willis Run	39.984952	76.735589	2014	Yes, but not available	1. While vegetation is being established, pruning and weeding may be required. 2. Detritus (waste or debris) shall be removed on an as needed basis. 3. Topsoil (8" min) shall be placed as shown. Seed per permanent seeding specifications to fully vegetate the rain garden. Maintain full vegetative cover at all times. 4. Inspect tow times per year for sediment buildup, erosion, vegetative conditions, etc. 5. During periods of extended drought, watering may be required. 6. Inspect vegetation to evaluate health twice a year. 7. Dead or drying shrubs must be replaced immediately. Inspect shrubs twice per year to evaluate health. 8. Inspect stone trench for signs of sediment buildup. If top layer of stone becomes clogged with sediment, remove stone and geotextile layer. Replace geotextile. Clean stone and replace. The owner of the property shall be responsible for ensuring the appropriate rain garden is installed per the approved plan. The municipal engineer or his designee may inspect the facility during construction. The owner of said lot will be responsible for all routine maintenance of the facility.		Yes		0.12	0.07				

BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information				
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Activities	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)
<b>Monaghan Township - Vicki Aycock @ Pennoni Associates, Inc. (717) 620-5968</b>																	
Porous Pavement	Monaghan Twp	Yellow Breeches Creek	40.138414	-76.985950	2012	PAG 2002107029	See recorded plan set.	See recorded plan set.		Yes	Owner - Christ Lutheran Church	0.29	0.06	5,000.00	N/A	N/A	N/A
Detention/Infiltration	Monaghan Twp	Yellow Breeches Creek	40.138414	-76.985950	2012	PAG 2002107029	See recorded plan set.	See recorded plan set.		Yes	Owner - Christ Lutheran Church	0.58	0.22	8,214.00	N/A	N/A	N/A
Detention Basin	Monaghan Twp	Yellow Breeches Creek	40.138414	-76.985950	2012	PAG 2002107029	See recorded plan set.	See recorded plan set.		Yes	Owner - Christ Lutheran Church	0.13	0.08	128.00	N/A	N/A	N/A
Rain Garden/Bioretenion & Infiltration Bed	Monaghan Twp	Yellow Breeches Creek	40.152461	-76.991475	2012	PAG02006714044 (?)	See recorded plan set.	See recorded plan set.		Yes	Messiah College	0.32	0.20	3,180.00	N/A	N/A	N/A
Stone Trench & Infiltration Bed	Monaghan Twp	Yellow Breeches Creek	40.152461	-76.991475	2012	PAG02006714044 (?)	See recorded plan set.	See recorded plan set.		Yes	Messiah College	0.30	0.08	2,445.00	N/A	N/A	N/A
Rain Garden/Bioretenion & Infiltration Bed	Monaghan Twp	Yellow Breeches Creek	40.152461	-76.991475	2012	PAG02006714044 (?)	See recorded plan set.	See recorded plan set.		Yes	Messiah College	0.26	0.15	2,400.00	N/A	N/A	N/A
Rain Garden/Bioretenion & Infiltration Bed	Monaghan Twp	Yellow Breeches Creek	40.152461	-76.991475	2012	PAG02006714044 (?)	See recorded plan set.	See recorded plan set.		Yes	Messiah College	0.01	0.15	2,400.00	N/A	N/A	N/A
Vegetated Swale	Monaghan Twp	Yellow Breeches Creek	40.152461	-76.991475	2012	PAG02006714044 (?)	See recorded plan set.	See recorded plan set.		Yes	Messiah College	0.21	0.57	500.00	N/A	N/A	N/A
Infiltration Trench	Monaghan Twp	Yellow Breeches Creek	40.152761	-76.986650	2014	PAG02006714044	See recorded plan set.	See recorded plan set.		Yes	Messiah College	2.42	2.37	24,635.00	N/A	N/A	29,562
Infiltration Trench	Monaghan Twp	Yellow Breeches Creek	40.152761	-76.986650	2014	PAG02006714044	See recorded plan set.	See recorded plan set.		Yes	Messiah College	0.24	0.21	10,350.00	N/A	N/A	5,175
<b>Mount Wolf Borough- Christopher T, Owens (717) 741-4621</b>																	
Stream Restoration	Mt. Wolf Boro	Hartman Run	40.063366	76.709491	2012	NA	Perimeter mowing	as necessary		Yes	Georgia-Pacific, LLC	0.65	0	3000	235	12.5	
Wet Pond	Mt. Wolf Boro	Hartman Run	40.068091	76.704662	2011	PAG 20066711026	visual inspection	annually		Yes	Mt. Wolf Borough	0.35	0.05	12000			
<b>Newberry Township - Vicki Aycock @ Pennoni (717) 620-5968</b>																	
Infiltration Basin	Newberry Twp	Conewago Creek	40.133706	-76.803644	Aug-16	N/A	See recorded plan set.	See recorded plan set.		Yes	Rutter Properties, LP	0.82	0.92	3,075	N/A	N/A	
<b>Penn Township - Eric Bortner, P.E. (717) 476-7111</b>																	
6.7.3 / Soil Amendment	Penn Twp.	Plum Creek	39.772531	-76.987381	October 25, 2016	PAG-02-0067-16-024	Inspected by Landowner	Annually >=10 yr Storm		Yes	St. Joseph Church Class Room Addition	0.636	1.206	7,679			
6.4.8 / Vegetated Swale 6.7.3 / Soil Amendment	Penn Twp.	Plum Creek	39.771611	-76.988731	October 25, 2016	PAG-02-0067-16-024	Inspected by Landowner	Annually >=10 yr Storm		Yes	St. Joseph Church Class Room Addition	0.189	0.272	3,240			
6.6.4 / Water Quality Filter 6.6.3 / Dry Extended Detention Basin 6.7.1 / Riparian Buffer Restoration	Penn Twp.	Oil Creek	39.827880	-76.957961	September 17, 2015	PAG-02-0067-11-052R	Inspected by Landowner	Annually >=10 yr Storm		Yes	Yazoo Mills Inc.	1.5193	1.2673	3,514			
6.6.3 / Dry Extended Detention Basin 6.7.1 / Riparian Buffer Restoration	Penn Twp.	Oil Creek	39.828336	-76.957922	September 17, 2015	PAG-02-0067-11-052R	Inspected by Landowner	Annually >=10 yr Storm		Yes	Yazoo Mills Inc.	0.6801	5.4453	22,527			
6.7.1 Riparian Buffer Restoration	Penn Twp.	Oil Creek	39.828039	-76.958439	September 17, 2015	PAG-02-0067-11-052R	Inspected by Landowner	Annually >=10 yr Storm		Yes	Yazoo Mills Inc.		0.5854	80,756			168' x 480'
5.9.1 / Street Sweeping	Penn Twp.	Plum Creek			varies	PAG-02-0067-03-021R-2	By HOA	Twice Annually		Yes	High Pointe, LLC. High Pointe at Rojen Farms - North	3.4					
6.4.4 / Infiltration Trench	Penn Twp.	Plum Creek	39.772117	-76.972917	October 25, 2016	PAG-02-0067-03-021R-2	Inspected by HOA	Annually >=10 yr Storm		Yes	High Pointe, LLC. High Pointe at Rojen Farms - North		0.4	2,050			1,845
6.4.6 / Dry Well/Seepage Pit	Penn Twp.	Plum Creek			varies	PAG-02-0067-03-021R-2	Inspected by Landowner	Annually >=10 yr Storm		Yes	High Pointe, LLC. High Pointe at Rojen Farms - North	1.2		20,329			
6.4.7 / Constructed Filter	Penn Twp.	Plum Creek	39.771314	-76.975958	October 25, 2016	PAG-02-0067-03-021R-2	Inspected by Landowner	Annually >=10 yr Storm		Yes	High Pointe, LLC. High Pointe at Rojen Farms - North	3.4	27	3,601			
6.7.2 / Landscape Restoration	Penn Twp.	Plum Creek			varies	PAG-02-0067-03-021R-2	Inspected by Landowner	Annually >=10 yr Storm		Yes	High Pointe, LLC. High Pointe at Rojen Farms - North		0.9	90,470			
6.7.2 / Landscape Restoration	Penn Twp.	Plum Creek			varies	PAG-02-0067-03-021R-2	Inspected by Landowner	Annually >=10 yr Storm		Yes	High Pointe, LLC. High Pointe at Rojen Farms - North		0.4	40,209			
6.4.4 / Infiltration Trench	Penn Twp.	Oil Creek	39.797525	-76.957519	October 25, 2016	PAG-02-0067-06-014R	Inspected by Landowner	Annually >=10 yr Storm		Yes	Pinebrook Villas, LLC Phase II	0.096		1,350			1,620
6.4.5 / Rain Garden/Bioretenion	Penn Twp.	Oil Creek	39.797753	-76.957711	October 25, 2016	PAG-02-0067-06-014R	Inspected by Landowner	Annually >=10 yr Storm		Yes	Pinebrook Villas, LLC Phase II	0.31		10,053			
6.4.2 / Infiltration Basin	Penn Twp.	Oil Creek	39.823461	-76.955706	May 25, 2016	PAG-02-0067-15-018	Inspected by Landowner	Annually >=10 yr Storm		Yes	Apio, Inc.	5.917	4.836	26,438			
6.4.8 / Vegetated Swale	Penn Twp.	Oil Creek	39.822361	-76.955106	May 25, 2016	PAG-02-0067-15-018	Inspected by Landowner	Annually >=10 yr Storm		Yes	Apio, Inc.			3,680			
6.7.3 / Soil Amendment	Penn Twp.	Oil Creek	39.822361	-76.955106	May 25, 2016	PAG-02-0067-15-018	Inspected by Landowner	Annually >=10 yr Storm		Yes	Apio, Inc.			116,479			
6.4.5 / Rain Garden/Bioretenion	Penn Twp.	Oil Creek	39.826161	-76.958017	August 12, 2016	PAG-02-0067-15-072	Inspected by Landowner	Annually >=10 yr Storm		Yes	D & R Bean, LLC	0.9	0.3	8,036			
6.4.8 / Vegetated Swale 6.4.4 / Infiltration Trench+A48	Penn Twp.	Oil Creek	39.825322	-76.963981	January 8, 2016	PAG-02-0067-14-039	Inspected by Landowner	Annually >=10 yr Storm		Yes	Legacy 92, LLC	1.6	0.8	2,870			574
5.8.2 / Pavement Disconnect	Penn Twp.	Oil Creek			January 8, 2016	PAG-02-0067-14-039	Inspected by Landowner	Annually >=10 yr Storm		Yes	Legacy 92, LLC		0.5				
5.9.1 / Street Sweeping	Penn Twp.	Oil Creek			varies	PAG-02-0067-14-039	By Landowner	Twice Annually		Yes	Legacy 92, LLC		1.0				
6.4.2 / Infiltration Basin	Penn Twp.	Oil Creek	39.781119	-76.955403	October 25, 2016	PAG-02-0067-14-059	Inspected by HOA	Annually >=10 yr Storm		Yes	J.A. Myers Homes, LLC Mustang Heights	1.4228	4.4982	2,747			
6.4.3 / Infiltration Bed	Penn Twp.	Oil Creek			varies	PAG-02-0067-14-059	Inspected by Landowner	Annually >=10 yr Storm		Yes	J.A. Myers Homes, LLC Mustang Heights	0.9052		17,544			
6.4.5 / Rain Garden/Bioretenion	Penn Twp.	Oil Creek			varies	PAG-02-0067-14-059	Inspected by Landowner	Annually >=10 yr Storm		Yes	J.A. Myers Homes, LLC Mustang Heights	0.0545		483			
6.7.2 / Landscape Restoration	Penn Twp.	Oil Creek				PAG-02-0067-14-059	Inspected by Landowner	Annually >=10 yr Storm			J.A. Myers Homes, LLC Mustang Heights						
6.6.4 Water Quality Filter 1 6.4.8 / Vegetated Channel 1 6.4.2 / Infiltration Basin 1 6.7.3 / Soil Amendment	Penn Twp.	Oil Creek	39.813081	-76.947617	October 25, 2016	PAG-02-0067-15-045	Inspected by Landowner	Annually >=10 yr Storm		Yes	Hanover Brands, Inc. Wastewater Treatment Plant	0.409	0.481	7,601			849
6.4.8 / Vegetated Channels 2&3 6.6.4 / Water Quality Filters 2&3 6.7.3 / Soil Amendment	Penn Twp.	Oil Creek	39.811983	-76.946864	October 25, 2016	PAG-02-0067-15-045	Inspected by Landowner	Annually >=10 yr Storm		Yes	Hanover Brands, Inc. Wastewater Treatment Plant	0.115	0.282				
6.4.2 / Infiltration Basin 1 6.7.3 / Soil Amendment	Penn Twp.	Oil Creek	39.813483	-76.947400	October 25, 2016	PAG-02-0067-15-045	Inspected by Landowner	Annually >=10 yr Storm		Yes	Hanover Brands, Inc. Wastewater Treatment Plant	0.047	1.095				





BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information				
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)	
<b>Springettsbury Township - continued</b>																	
Infiltration Trench #1	Springettsbury Twp	Mill	39.976242	-76.675328	8/11/2010	PAG02006709048	12/YR MIN.	11/4/2010	YES	PRIVATE	0.150	0.000	1326	N/A	N/A	1101.6	
Infiltration Trench #2	Springettsbury Twp	Mill	39.975997	-76.675200	8/11/2010	PAG02006709048	12/YR MIN.	11/4/2010	YES	PRIVATE	0.154	0.000	1424	N/A	N/A	1182.6	
Infiltration Trench #3	Springettsbury Twp	Mill	39.975997	-76.675064	8/11/2010	PAG02006709048	12/YR MIN.	11/4/2010	YES	PRIVATE	0.166	0.000	1534	N/A	N/A	1274.1	
Infiltration Trench #4	Springettsbury Twp	Mill	39.975875	-76.674950	8/11/2010	PAG02006709048	12/YR MIN.	11/4/2010	YES	PRIVATE	0.213	0.000	1943	N/A	N/A	1605.8	
UG Infiltration Basin	Springettsbury Twp	Mill	39.973767	-76.681819	12/12/2007	N/A	4/YR MIN.	12/12/2007	YES	PRIVATE	0.380	0.130	1062	N/A	N/A	4779	
Rain Garden	Springettsbury Twp	Kreutz	39.979796	-76.631964	6/10/2014	N/A	2/YR MIN.	6/10/2014	YES	PRIVATE	0.294	1.700	1633	N/A	N/A	N/A	
U.G. Detention Basin	Springettsbury Twp	Mill	39.976691	-76.676691	3/31/2014	N/A	4/YR MIN.	3/31/2014	YES	PRIVATE	1.029	0.279	6018	N/A	N/A	18055	
Detention Swale #3	Springettsbury Twp	Mill	39.976579	-76.670476	3/31/2014	N/A	4/YR MIN.	3/31/2014	YES	PRIVATE	0.259	0.066	1633	N/A	N/A	N/A	
Infiltration Trench	Springettsbury Twp	Mill	39.971447	-76.666593	9/15/2014	N/A	2/YR MIN.	9/15/2014	YES	PRIVATE	0.079	0.000	639	N/A	N/A	1449	
Infiltration Trench	Springettsbury Twp	Mill	39.973055	-76.688375	10/17/2013	N/A	2/YR MIN.	10/17/2013	YES	PRIVATE	0.090	0.000	504	N/A	N/A	1008	
Infiltration Trench	Springettsbury Twp	Mill	39.973729	-76.672131	4/20/2015	N/A	4/YR MIN.	4/20/2015	YES	PRIVATE	0.415	0.088	4591	N/A	N/A	14922	
Infiltration Trench	Springettsbury Twp	Mill	39.926156	-76.668295	8/11/2011	N/A	2/YR MIN.	8/11/2011	YES	PRIVATE	0.517	0.163	2304	N/A	N/A	8064	
Infiltration Trench	Springettsbury Twp	Mill	39.981453	-76.703500	8/30/2012	N/A	4/YR MIN.	8/30/2012	YES	PRIVATE	0.075	0.155	152	N/A	N/A	489	
Infiltration Trench	Springettsbury Twp	Mill	39.981427	-76.703222	1/30/2016	N/A	4/YR MIN.	1/30/2016	YES	PRIVATE	0.044	0.196	152	N/A	N/A	489	
Infiltration Trench	Springettsbury Twp	Mill	39.981407	-76.702937	1/30/2016	N/A	4/YR MIN.	1/30/2016	YES	PRIVATE	0.044	0.197	152	N/A	N/A	489	
<b>West Manchester Township - Zane Williams (717) 792-3505</b>																	
BIO - Dairy Queen	West Manchester Twp	Willis Run	39.979816	-76.76066	11/28/2012			See recorded plan set.	twice a year	7/28/2016	yes	OWNER / WMTWP	0.58	0.41	2150		
BIO, BASIN - York Rail	West Manchester Twp	Codorus Creek	39.94731	-76.775847	7/21/2014	PAG 02-0067-12-019		See recorded plan set.	4 times year/annually	2014	yes	OWNER / WMTWP	1.874	4.24	36808		
INFILTRATION BASINS - WYSD Wallace Elem.	West Manchester Twp	L. Conewago	39.978717	-76.788944	12/1/2015	PAG 02-0067-13-048		See recorded plan set.	as need / annually/ every Syrs.		yes	OWNER / WMTWP	1.67	1	10548		
BIO, BASINS WITH AMENDMENT SOILS - 1600 Colony Rd.- Columbia Gas	West Manchester Twp	Willis Run	39.972889	-76.778864	7/21/2015	PAG 02-0067-13-039		See recorded plan set.	4 times yr. / twice a year		yes	OWNER / WMTWP	5.25	22.86	26677		
SEEPAGE PIT, PERVIOUS PAVEMENT - 581 Manchester Ct.	West Manchester Twp	Codorus Creek	39.951217	-76.786311	3/31/2015	PAG 02-0067-13-041		See recorded plan set.	twice a year	7/21/2016	yes	OWNER / WMTWP	2.66	1.94	36195		
SUBSURFACE INFILTRATION BASINS - WYSD - High School	West Manchester Twp	Codorus Creek	39.959844	-76.76983	1/28/2015	PAG 02-0067-14-008		See recorded plan set.	twice a year		yes	OWNER / WMTWP	6.57	1.68	25037		
INFILTRATION BASINS - Dollar General	West Manchester Twp	Honey Run	39.9281	-76.832667	10/29/2014	PAG 02-0067-14-033		See recorded plan set.	4 times year/ twice a year		yes	WMTWP	0.47	0.26	4136		
INFILTRATION BASINS - YATA	West Manchester Twp	Codorus Creek	39.944933	-76.793817	16-Sep	PAG 02-0067-14-048		See recorded plan set.	quarterly/annually		yes	OWNER/WMTWP	9.22	8.5	99706		
SEEPAGE PIT - 600 Highland	West Manchester Twp	Codorus Creek	39.959793	-76.760962	6/30/2015			See recorded plan set.	4 times per year	6/30/2016	yes	OWNER / WMTWP	0.14		2250		
SEEPAGE BED/BASIN - Normandie Ridge	West Manchester Twp	L. Conewago	39.984338	-76.778703	2015	PAG 02-0067-10-001R		See recorded plan set.	twice a year		yes	OWNER / WMTWP	0.3	0.23	1259		
FORE BAY/ SEEPAGE BASIN - 325 S. Salem Church Rd.	West Manchester Twp	Honey Run	39.934209	-76.821962	16-Oct	PAG 02-0067-14-067		See recorded plan set.	annually, twice a year		yes	OWNER / WMTWP	29.786	16.814	90529		
BASIN / AMENDMENT SOILS - West Manchester Town Center	West Manchester Twp	Willis Run	39.966773	-76.772165	16-Nov	PAG 02-0067-13-010-1		See recorded plan set.	twice a year		twice a year	OWNER / WMTWP	12.25	5.68	94989		
SEEPAGE BED - Athletic Club	West Manchester Twp	Willis Run	39.975476	-76.771206	7/5/2016			See recorded plan set.	annually	7/6/2016	yes	OWNER / WMTWP	0.06		2926		
SEEPAGE BED - Giambalvo	West Manchester Twp	W. Branch Codorus Creek	39.929754	-76.82733	8/28/2015	PAG 02-0067-15-023		See recorded plan set.	twice a year	9/1/2015	yes	OWNER / WMTWP	1.61	0.78	7500		
SEEPAGE BED / WATER QUALITY SWALES - 551 Manchester Ct.	West Manchester Twp	Codorus Creek	39.949872	-76.785121	2015	PAG 02-0067-15-046		See recorded plan set.	monthly/ as needed	7/21/2016	yes	OWNER / WMTWP	3.19	0.84	7125		
BIO RETENTION - York Propane	West Manchester Twp	Codorus Creek	39.943775	-76.771055	2008			See recorded plan set.	annually	8/26/2016	yes	OWNER / WMTWP	3.9	2.6	19338		
INFILTRATION TRENCH - Church of Open Door	West Manchester Twp	Codorus Creek	39.968721	-76.783006	12/8/2014	PAG 02-0067-07-071		See recorded plan set.	as needed	6/2/2016	yes	OWNER / WMTWP	1.91		56050		
<b>West Manheim Township - Chris Toms, Engineer (717) 814-4566 cwt@csdavidson.com</b>																	
Infiltration Bed	West Manheim Township	Indian Run	39.76342	-76.96142	20/10/2015	PAG02006715063		Inspection	twice per year and after major storm events greater than 1 inch	30/10/2015	Yes	ANCB	0.08	0.2295		1050	
Infiltration Bed	West Manheim Township	Indian Run	39.763566	-76.960569	20/10/2015	PAG02006715063		Inspection	twice per year and after major storm events greater than 1 inch	30/10/2015	Yes	ANCB	0.321	0.08		3288	
Infiltration Bed	West Manheim Township	Indian Run	39.766673	-76.961392	3/8/2015	PAG02006715025		Inspection	twice per year and after major storm events greater than 1 inch	3/8/2015	Yes	Peoples Bank	0.496	0.409		9471	
Pervious Pavement	West Manheim Township	Indian Run	39.76674	-76.960895	3/8/2015	PAG02006715025		Inspection	twice per year and after major storm events greater than 1 inch	3/8/2015	Yes	Peoples Bank	0.087		3790		
Infiltration Bed	West Manheim Township	South Branch Conewago Creek	39.759832	-76.983987	11/5/2016	could not find		Inspection	twice per year and after major storm event	11/5/2016	Yes	Hanover YMCA	0.563	3.548		11580	
Infiltration Bed	West Manheim Township	South Branch Conewago Creek	39.759652	-76.983353	11/5/2016	could not find		Inspection	twice per year and after major storm event	11/5/2016	Yes	Hanover YMCA	0.822	0.309		7200	
Infiltration Bed	West Manheim Township	South Branch Conewago Creek	39.759242	-76.984372	11/5/2016	could not find		Inspection	twice per year and after major storm event	11/5/2016	Yes	Hanover YMCA	0.644	0		3480	
Infiltration Bed	West Manheim Township	South Branch Conewago Creek	39.758894	-76.983379	11/5/2016	could not find		Inspection	twice per year and after major storm event	11/5/2016	Yes	Hanover YMCA	1.706	1.356		10080	
Basin	West Manheim Township	South Branch Conewago Creek	39.759123	-76.984435	11/5/2016	could not find		Inspection	Four times per year and after major storm events greater than 2 inches	11/5/2016	Yes	Hanover YMCA	4.097	9.958	33002		
Infiltration Bed	West Manheim Township	West Branch Codorus Creek	39.744325	-76.9026	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0.1	0.1		4211	
Infiltration Bed	West Manheim Township	West Branch Codorus Creek	39.745407	-76.903362	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0.1	0.4		2613	
Infiltration Bed	West Manheim Township	West Branch Codorus Creek	39.746012	-76.902616	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0.03	0.37		3447	
Infiltration Bed	West Manheim Township	West Branch Codorus Creek	39.746292	-76.902864	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0.2	0.1		5520	
Infiltration Bed	West Manheim Township	West Branch Codorus Creek	39.74653	-76.9036	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0.2	0.1		2640	
Vegetated Swale	West Manheim Township	West Branch Codorus Creek	39.74555	-76.902724	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0.1	0.4	2096		
Vegetated Swale	West Manheim Township	West Branch Codorus Creek	39.746774	-76.902408	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0	0.4	400		
Vegetated Swale	West Manheim Township	West Branch Codorus Creek	39.746917	-76.903184	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0	0.7	400		
Vegetated Filter Strip	West Manheim Township	West Branch Codorus Creek	39.7469683	-76.90265	22/09/2015	PAG02006714038		Inspection	twice per year and after major storm events greater than 2 inches	22/09/2015	Yes	Patricia Kulacki	0	0.7	3000		
<b>Windsor Borough - John Runge - Gordon L. Brown &amp; Associates, Inc. (717)741-4621</b>																	
Fishing Cr. Stream Rest	Windsor Boro	Susquehanna	39.91571	-76.58159	8&9/2016	N/A		Pending	Bi-annual		Yes	Windsor Boro	187.2	576.31	1400	Approx.500' 10'x400'	0







BMP Type/Description (DEP Manual)	Location				Installation		O&M					Drainage Area (acres)		BMP Information			
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Activities	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)
<b>York Township - continued</b>																	
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.92673687	-76.71809813	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	1.05ac	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.92653327	-76.71784974	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	42689 sq ft	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.9258536	-76.71776296	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	40075 sq ft	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.92602255	-76.71768209	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	1.73ac	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.9262112	-76.71767821	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	17424 sq ft	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.92567712	-76.71886089	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	12632 sq ft	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.92567888	-76.71859351	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	16117 sq ft	both				
6.6.4 - Water Quality Filter	York Township	200 - Unnamed Tributary Codorus Creek	39.92568198	-76.71837448	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	29/08/2015	Yes	Property Owner of...	20473 sq ft	both				
6.4.8 - Vegetated Swale	York Township	200 - Unnamed Tributary Codorus Creek	39.92666312	-76.71732444	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	31/08/2015	Yes	Property Owner of...	4.80ac	both				
6.4.8 - Vegetated Swale	York Township	200 - Unnamed Tributary Codorus Creek	39.92567789	-76.71906655	30/04/2012	PAG2006708075	Per O&M agr.	Per O&M agr.	31/08/2015	Yes	Property Owner of...	12632 sq ft	both				
						Note- The BMPs are only for the Specialty Hospital portion of the property. Sum Drainage area is for entire site.					Sum of 19 above =	24	28.4				
6.4.3 - Subsurface Infiltration Bed	York Township	East Branch Codorus Creek	39.9095042	-76.70236933	31/05/2012	PAG2006711050	Per O&M agr.	Per O&M agr.	27/10/2015	Yes	Property Owner of...	0.73	0.19				
6.6.4 - Water Quality Filter	York Township	East Branch Codorus Creek	39.90969584	-76.70224358	31/05/2012	PAG2006711050	Per O&M agr.	Per O&M agr.	27/10/2015	Yes	Property Owner of...	~15246					
6.6.4 - Water Quality Filter	York Township	East Branch Codorus Creek	39.90956384	-76.702612	31/05/2012	PAG2006711050	Per O&M agr.	Per O&M agr.	27/10/2015	Yes	Property Owner of...	~24394					
6.6.4 Snout	York Township	300 - Unnamed Tributary Codorus Creek	39.9407511	-76.69099546	12/3/2012	E&S only	Per O&M agr.	Per O&M agr.	12/3/2012	Yes	Property of owner...	~15246 sq.ft.					
6.6.4 Snout	York Township	300 - Unnamed Tributary Codorus Creek	39.93995711	-76.69079151	12/3/2012	E&S only	Per O&M agr.	Per O&M agr.	12/3/2012	Yes	Property of owner...	1.46 A					
SWM Facility #1 is a 6.6.X modify existing Detention Basin	York Township	300 - Unnamed Tributary Codorus Creek	39.94234294	-76.6917115	12/3/2012	E&S only	Per O&M agr.	Per O&M agr.	12/3/2012	Yes	Property of owner...	4.72 A					
Facility #2 is a 6.4.2 Infiltration Basin 6.6X detention Basin	York Township	300 - Unnamed Tributary Codorus Creek	39.94140566	-76.69133297	12/3/2012	E&S only	Per O&M agr.	Per O&M agr.	12/3/2012	Yes	Property of owner...	~1.93 A					
6.6.4 Snout	York Township	300 - Unnamed Tributary Codorus Creek	39.9414928	-76.69155161	12/3/2012	E&S only	Per O&M agr.	Per O&M agr.	12/3/2012	Yes	Property of owner...	1.77 A					
6.6.4 Snout	York Township	300 - Unnamed Tributary Codorus Creek	39.94157091	-76.69123461	12/3/2012	E&S only	Per O&M agr.	Per O&M agr.	12/3/2012	Yes	Property of owner...	16,533 sq ft					
6.4.2 - Infiltration Basin	York Township	Barshinger Creek	39.890795	-76.604288	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	0	6.65	8730			
6.4.3 - Subsurface Infiltration Bed	York Township	Barshinger Creek	39.890579	-76.604318	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	4.92 ac	#NAME?	20251			
6.4.5 - Rain Garden / BioRetention Bed	York Township	Barshinger Creek	39.890565	-76.603171	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	0	0.85				
6.4.5 - Rain Garden / BioRetention Bed	York Township	Barshinger Creek	39.890322	-76.603415	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	0	0.38				
6.8.1- Level Spreader	York Township	Barshinger Creek	39.890453	-76.603019	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	0	0.85				
6.8.1- Level Spreader	York Township	Barshinger Creek	39.89033	-76.603052	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	0	0.38				
6.7.1 - Riparian Forest Buffer	York Township	Barshinger Creek	39.889566	-76.602826	10/11/2011	PAG2006710037	Per O&M agr.	Per O&M agr.	13/05/2016	Yes	Property Owner of...	2.861	27.69	509260			
6.6.4 - Water Quality Filter (sum of 6)	York Township	Unnamed Tributary Mill Creek	39.931756	-76.68565	1/5/2015	PAG02006712043	Per O&M agr.	Per O&M agr.	1/5/2015	Yes	Property Owner of...	0.648	0.111	NA			
6.4.3 - Subsurface Infiltration Bed (Sum of 2)	York Township	Unnamed Tributary Mill Creek	39.931756	-76.68565	1/5/2015	PAG02006712043	Per O&M agr.	Per O&M agr.	1/5/2015	Yes	Property Owner of...	0.981	0.145				7199
Street Sweeping	York Township	Unnamed Tributary Mill Creek	39.931756	-76.68565	1/5/2015	PAG02006712043	Per O&M agr.	Per O&M agr.	1/5/2015	Yes	Property Owner of...	0.648	0	27578.88			
Street Sweeping	York Township	Unnamed Tributary Mill Creek	39.931756	-76.68565	1/5/2015	PAG02006712043	Per O&M agr.	Per O&M agr.	1/5/2015	Yes	Property Owner of...	0.037	0	1574.72			
6.4.3 - Subsurface Infiltration Bed	York Township	Unnamed Tributary Mill Creek	39.929436	-76.694533	1/5/2015	PAG02006712049	Per O&M agr.	Per O&M agr.	1/5/2016	Yes	Property Owner of...	0.71	0.31				12634
6.4.3 - Subsurface Infiltration Bed	York Township	Unnamed Tributary Mill Creek	39.929436	-76.694533	1/5/2015	PAG02006712049	Per O&M agr.	Per O&M agr.	1/5/2015	Yes	Property Owner of...	3.29	1.16				5280
6.6.4 - Water Quality Filter (sum of 8)	York Township	Unnamed Tributary Mill Creek	39.929436	-76.694533	1/5/2015	PAG02006712049	Per O&M agr.	Per O&M agr.	1/5/2015	Yes	Property Owner of...	various	various	97% of site sum.			
6.4.3 - Subsurface Infiltration Bed	York Township	Unnamed Tributary Mill Creek	39.932464	-76.684384	1/9/2016	PAG02006712049	Per O&M agr.	Per O&M agr.	1/9/2016	Yes	Property Owner of...	0.36	0.1	5500			3762
6.4.3 - Subsurface Infiltration Bed	York Township	Unnamed Tributary Mill Creek	39.932464	-76.684384	1/9/2016	PAG02006712049	Per O&M agr.	Per O&M agr.	1/9/2016	Yes	Property Owner of...	0.33	0.15	1690			3086
6.4.3 - Subsurface Infiltration Bed	York Township	Unnamed Tributary Mill Creek	39.932464	-76.684384	1/9/2016	PAG02006712049	Per O&M agr.	Per O&M agr.	1/9/2016	Yes	Property Owner of...	0.61	0.06	6497			6678
6.4.3 - Subsurface Infiltration Bed	York Township	Unnamed Tributary Mill Creek	39.932464	-76.684384	1/9/2016	PAG02006712049	Per O&M agr.	Per O&M agr.	1/9/2016	Yes	Property Owner of...	0.31	0.5	4347			2991
											Sum of 3 above =	1.6	0.81				16517
6.4.2 - Infiltration Basin 1b	York Township	Unnamed Tributary Codorus Creek	39.938517	-76.695407	23/12/2013	PAG2006708030	Per O&M agr.	Per O&M agr.	23/12/2013	Yes	Property Owner of...	0.27	0.235				13299
6.6.3 - Dry Extended Detention Basin 1A	York Township	Unnamed Tributary Codorus Creek	39.938517	-76.695407	23/12/2013	PAG2006708030	Per O&M agr.	Per O&M agr.	23/12/2013	Yes	Property Owner of...	1.71	0.46				
6.6.3 - Dry Extended Detention Basin 3	York Township	Unnamed Tributary Codorus Creek	39.938517	-76.695407	23/12/2013	PAG2006708030	Per O&M agr.	Per O&M agr.	23/12/2013	Yes	Property Owner of...	0.88	0.787			includes dry ext. above -->	17329
5.9.1 - Streetsweeping	York Township	Unnamed Tributary Codorus Creek	39.938517	-76.695407	23/12/2013	PAG2006708030	Per O&M agr.	Per O&M agr.	23/12/2013	Yes	Property Owner of...		1.6 assumed				

BMP Type/Description (DEP Manual)	Location				Installation		O&M				Drainage Area (acres)		BMP Information									
	Municipality	Watershed	Latitude	Longitude	Date	NPDES Permit #	Activities	Frequency	Last Inspection Date	BMP Functioning?	Responsible person/agency for inspections	Impervious	Pervious	BMP Surface Area (SF)	Stream Restoration Length (LF)	Stream Buffer Width & Length (LF)	Trench L/W/D (CF)					
<b>Department of Defense - Larry Dolinger</b>																						
Sediment Trap II, Bldg. 87	location information is withheld due to security concerns				1995	PAG-13 3590	per BMP manual	per BMP manual	3/9/2015	yes	Larry Dolinger	1.1	1.9	0.330	Acres-Feet							
Rip Rap Bank Stabilization																						
Rip Rap Swale E. Bldg. 57																						
Swale W of Bldg. 2001																						
Riparian Buffer Zone around Marsh Run Landfill Site																						
Permeable Paver H Ave																						
Permeable Paver G Ave.																						
Swale N of Bldg. 789																						
Permeable Paver parking area Circle Drive																						
Mifflin Drive, from the North Gate to Cherry Lane																						
Stormwater Detention Basin N of BLDG 89, B1									2014	PAG-13 3590	per BMP manual	per BMP manual	9/18/2014	yes	Larry Dolinger	12.9	1.2	1.600	Acres-Feet			
Stormwater Sediment Trap, Bldg 780 TS Above ID 19									2014	PAG-13 3590	per BMP manual	per BMP manual	9/18/2014	yes	Larry Dolinger	0.5	0.0	0.055	Acres-Feet			
Stormwater Detention, S. of Bldg. 789																						
Pond B2									2014	PAG-13 3590	per BMP manual	per BMP manual	9/18/2014	yes	Larry Dolinger	3.0	3.7	1.180	Acres-Feet			
Bio retention areas 1-4 at Bldg. 2055									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	1.0	0.3	0.140	Acres			
Reinforced Turf Driveway 1 and 2 at Bldg. 2055									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.0	0.1	0.010	Square feet			
Gravel Mechanical Yard at Bldg. 2055									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.0	0.1	0.010	Square feet			
Bioswale - D1, D2 at Bldg 780									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.1	0.4	0.051	Linear Feet			
Bio retention area at Bldg. 780									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.7	0.8	0.160	Acres			
Underground Infiltration System - 20,000CF Tanks 1-3 and HQ									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	4.1	2.0	0.670	Cubic Feet			
Wet Ponds A10 Detention at HQ Bldg.									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.0	0.0	0.000	Acres			
Wet Ponds A20 Detention at HQ Bldg.									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.0	0.0	0.000	Acres			
Wet Ponds C10 Detention at HQ Bldg.									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.9	0.3	0.140	Acres			
Wet Ponds C20 Detention at HQ Bldg.									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	2.6	1.2	0.420	Acres			
Green Roof at HQ Bldg									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.0	2.7	0.300	Acres			
East of the visitor center parking lot, recieves runoff from inspection canopy access drive									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.3	0.2	0.056	Acres			
Vegetated swales draining into bioretention facility west of Mission Drive improvements									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.1	0.7	0.097	Acres			
Smaller bioretention facility west of Mission Drive improvements									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.2	0.3	0.051	Acres			
West of EDC Building									2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger	0.3	0.7	0.107	Acres			
Rip Rap bank protection around Marsh Run Landfill Site																						
Sediment Trap II, Bldg. 789									2009	PAG-13 3590	per BMP manual	per BMP manual	3/9/2015	yes	Larry Dolinger			1.8	1.925	Acres-Feet		
Sediment Trap I, Bldg. 789									2009	PAG-13 3590	per BMP manual	per BMP manual	3/9/2015	yes	Larry Dolinger			1.2	0.1265	Acres-Feet		
Swale G1									2009	PAG-13 3590	per BMP manual	per BMP manual	3/9/2015	yes	Larry Dolinger			1.2	0.1265	Linear Feet		
Swale E1					2009	PAG-13 3590	per BMP manual	per BMP manual	3/9/2015	yes	Larry Dolinger			1.8	0.1925	Linear Feet						
Swale S of Ball Field and BLDG 412																						
Impervious Urban Surface Reduction from parking lot area at new Bldg. 2055					2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger		0.0	1	N/A							
Wet Ponds and Wetlands Detention at Bldg. 780					2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger		0.0		Acres							
Bioswale - C1 at Bldg 780					2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger		0.0		Linear Feet							
Hydrodynamic Separator at Bldg. 780					2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger		0.0		N/A							
Street Sweeping Site Wide					2015	PAG-13 3590	per BMP manual	per BMP manual	8/1/2015	yes	Larry Dolinger		0.0		N/A							

APPENDIX VI

Pollutant Load Reduction Sample Calculations



## Simplified Method and BayFAST Calculation Comparison Stream Restoration

### BayFAST Baseline Calculation (No BMP Scenario)

**BayFAST**

About BayFAST | Facilities | Scenarios | Costs | Scenario Worksheets | Scenario Results | Log Out | Edit Profile

**Baseline Summary Results**

Description: no BMPs  
Facility: 2017.2.8\_York County UA (ONLY Attach B Areas)  
Date Created: 2/8/2017 11:35:00 AM

Download Results | Compare Scenarios

**Total Loads**

Load Type	Lbs Nitrogen Edge of Stream	Lbs Nitrogen Delivered	Lbs Phosphorus Edge of Stream	Lbs Phosphorus Delivered	Lbs Sediment Edge of Stream	Lbs Sediment Delivered
Landuse	1,124,858.0	792,307.5	20,840.8	8,315.4	25,561,309.0	10,253,596.5
Septic	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total:</b>	<b>1,124,858.0</b>	<b>792,307.5</b>	<b>20,840.8</b>	<b>8,315.4</b>	<b>25,561,309.0</b>	<b>10,253,596.5</b>

### BayFAST Sample Calculation: Stream Restoration (100 ft)

**BayFAST**

About BayFAST | Facilities | Scenarios | Costs | Scenario Worksheets | Scenario Results | Log Out | Edit Profile

**Sample Stream Restoration Summary Results**

Description: 100 ft  
Facility: 2017.2.8\_York County UA (ONLY Attach B Areas)  
Date Created: 2/8/2017 11:35:00 AM

Download Results | Compare Scenarios

**Total Loads**

Load Type	Lbs Nitrogen Edge of Stream	Lbs Nitrogen Delivered	Lbs Phosphorus Edge of Stream	Lbs Phosphorus Delivered	Lbs Sediment Edge of Stream	Lbs Sediment Delivered
Landuse	1,124,850.5	792,302.2	20,834.0	8,312.7	25,556,821.0	10,251,802.3
Septic	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total:</b>	<b>1,124,850.5</b>	<b>792,302.2</b>	<b>20,834.0</b>	<b>8,312.7</b>	<b>25,556,821.0</b>	<b>10,251,802.3</b>

**Baseline Load (25,561,309 lbs) – Scenario (25,556,821 lbs) = BMP Reduction (4,488 lbs)**

### Simplified Method Calculation

BMP Type	Length (ft)	BMP Effectiveness (lbs/ft/yr)	Pollutant Load Reduction (lbs/yr)
Stream Restoration	100	44.88	4,488

**Defense Distribution Center, Susquehanna Anticipated Load Reduction**  
 Fairview Township, York County

The U.S. Department of Defense (DoD) owns and operates one facility within York County. This facility, the Defense Distribution Center, Susquehanna is an 868-acre facility located in Fairview Township. It is regulated by a separate MS4 permit: PAG-133590. In accordance with the MS4 permit, it assumed that this facility will achieve the following pollutant reduction goal during the 5-year permit goal.

**Defense Distribution Center, Susquehanna Anticipated Pollutant Load Reduction - 48,180 lbs TSS**

The following calculation demonstrates how this pollutant load reduction was estimated.

Facility Name	Area		Drainage Area Characteristics (Fairview Twp.)				Loading Rate (lbs/yr)		Total Load (lbs/yr)
	Total Acres	UA Acres	% Imperv.	Imperv. (acres)	% Pervious	Pervious (acres)	Imperv.	Pervious	
Defense Distribution Center, Susquehanna	868	789	28%	221	72%	568	1614.15	220.4	481,803

DoD Facility Total Load TSS lbs/yr:	481,803
Required Reduction:	<u>10%</u>
<b>Load reduction anticipated to be achieved during permit term</b>	<b>48,180 lbs TSS</b>

When achieved, this pollutant load reduction will be applied towards achieving the overall pollutant reduction goal for York County.



**APPENDIX VII**

**Proposed BMP Project Schedule and Summary Sheets**



## **Regional CBPRP Project Schedule**

The implementation schedule for the projects identified in this Regional CBPRP is bounded by the MS4 Permit requirement of a five (5) year completion window. The municipal funding contributions are also based on this timeframe per the Intergovernmental Cooperation Agreement. Non-municipal funding, such as grants and donations, will supplement the municipal money to put the projects on the ground and meet the pollutant reduction goals. The guaranteed collection of funding through annual municipal contributions will enable the expeditious completion of projects. The implementation schedule consists of several strategies that will guide the process.

- Several projects, carried over from the current Regional CBPRP, are in various stages of design, permitting, or construction. These projects are either fully funded or only need minimal gap funding. The initial focus will be on completion of these projects in the first one (1) to two (2) years.
- Another category of projects anticipated to be completed early in the permit cycle is ones needing no permits and/or very little formal design. Several basin retrofits, a tree-planting project, and riparian buffers fit into this category.
- The remaining/bulk of the projects, the majority of which are stream restorations, will take an aggressive “plan of attack” in order to achieve the five (5) year completion date. It is impracticable to assume a detailed schedule for completion of these projects, as the five (5) year horizon will require a strategy using methods uncommon in many municipal project implementation processes. This strategy must be flexible and manageable, and it must be implemented in parallel for multiple projects. Components of this strategy include:
  - Using a design/build technique that will enable multiple projects to be bid simultaneously for complete implementation is planned. A single contractor would be awarded the bid to tackle all phases of the projects. This technique will be used for BMP projects of a like type located in multiple municipalities or a single municipality. Design/build is more efficient and cost effective than the traditional bid process.
  - Directing early municipal contributions toward the design and permitting of projects located on public land or on private land (with executed landowner agreements). Project sponsors will seek outside funding in parallel for construction. If outside funding is not obtained, construction funds will be available from the municipal contributions.

- Securing necessary landowner agreements to implement projects located on private land.
- Seeking private contractors, through a public/private partnership, who may be willing to complete projects without immediate compensation, knowing that the Intergovernmental Cooperation Agreement ensures the collection of a specified amount of money over a five-year period. They would be putting their private money upfront to jumpstart project implementation.
- Pursuing the feasibility of obtaining a watershed permit from DEP. Such a permit would enable an expedited implementation schedule and be particularly beneficial to regional projects.

Overall, the project completion schedule is guided by the approximately \$13 million dollars that will be collected in equal installments over five (5) years to complete the projects identified in the Plan within those five (5) years. The strategy set forth above will be implemented by the participating municipalities acting as one York County Stormwater Consortium. They will communicate and cooperate to get the job done. However, permitting has had the largest influence upon implementing projects to date. Having permits issued in a timely manner during the course of the 2018-2023 Permit will be necessary to meet the pollutant reduction goals.

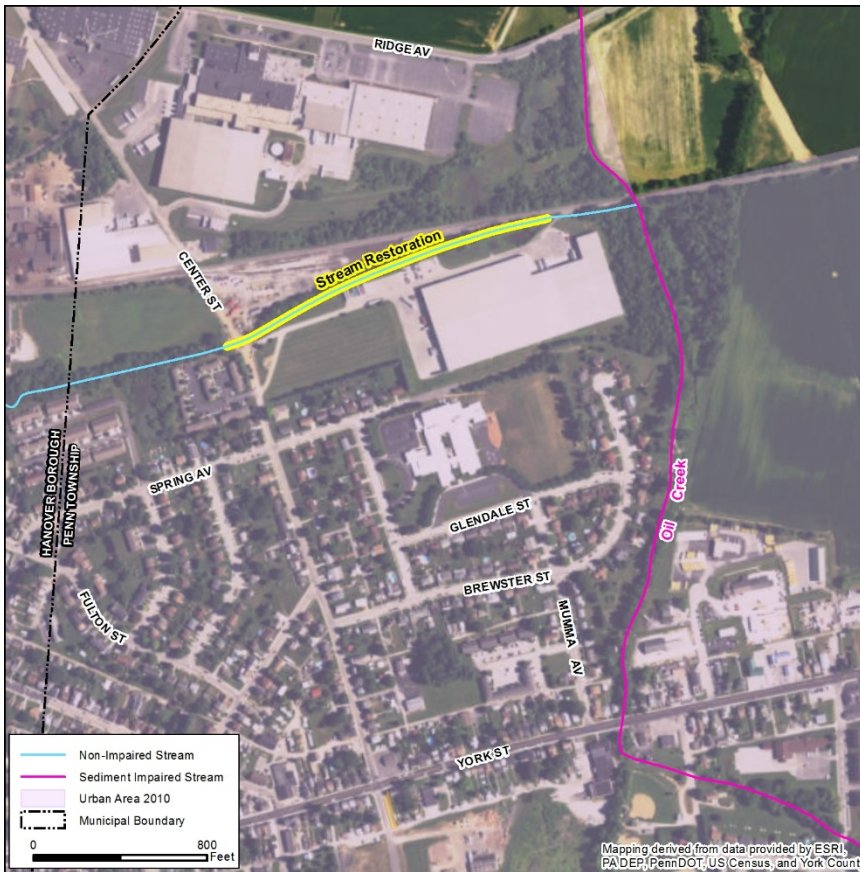
In addition, to implementing the specific projects set forth on Tables 8A-8D and 9A-9D, stormwater BMP partnerships with PennDOT and the Defense Distribution Center, Susquehanna, which are both non-municipal MS4s, as well as with Kinsley properties and other industrial permittees, will be pursued. Non-municipal MS4s and industrial permittees were not parsed out of the Regional CBPRP.

On the following Project Summary Sheets, the Secured Funding includes grants or other funding secured for the project. It does not include any funding to be provided by the York County Stormwater Consortium to implement the Regional CBPRP.

# Center Street Streambank Restoration

Stream Restoration

Penn Twp.

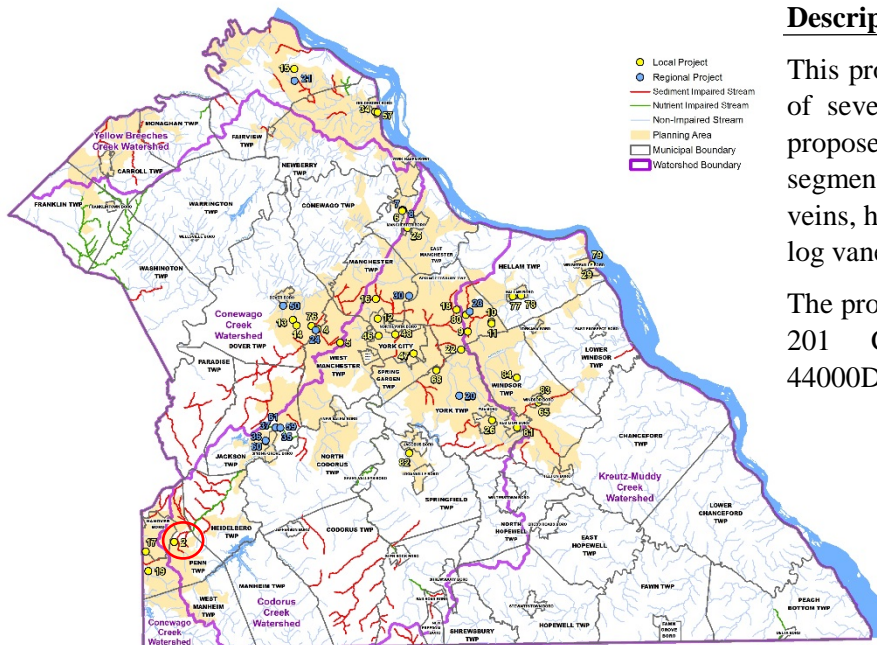


## General

Ownership:	Public
Secured Funding:	No
Designs:	Yes
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Trib to Oil Creek (TSS)
Stream Restoration Length (ft):	1,600
Cost (\$)	480,000

## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	71,808
Cost (\$) / lb	6.68



## Description

This project will stabilize approximately 1,600 feet of severely eroded streambank. The project also proposes to enhance the habitat of the stream segment through the implementation of log and rock veins, habitat boulders, cross rock veins, and J-hook log vanes.

The project is located on private property located at 201 Center Street, Hanover (parcel ID 4400DD0039L).

## Notes

Aquatic Resource Restoration Company (ARRC) is the contractor for the project. Application for a GP-3 Permit was submitted to PA DEP.

# West Manchester Tree Planting

Tree Planting  
West Manchester Twp.

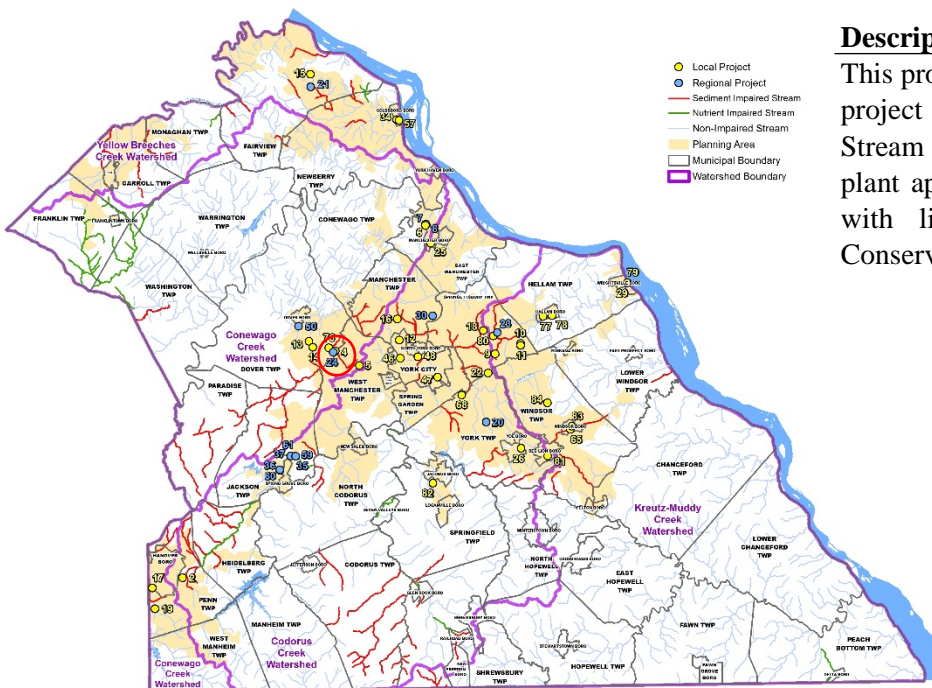


## General

Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Impaired Stream:	Little Conewago Creek (TSS) Unnamed Trib to Little Conewago Creek (TSS)
Tree planting area:	
Length (ft)	2,400 ft
Area (acres)	4 ac
Cost (\$)	3,120

## Pollutant Load Reduction TSS (lbs/yr)

Tree Planting	495
Cost (\$) / lb	6.30



## Description

This project will occur in the vicinity of regional project 24 (Dover Twp./West Manchester Twp. Stream Restoration). This project proposes to plant approximately 2,400-linear feet of stream with live stakes in the Little Conewago Conservation Area.

## Notes

## West Manchester Bioswale

Swale Retrofit  
 West Manchester Twp.



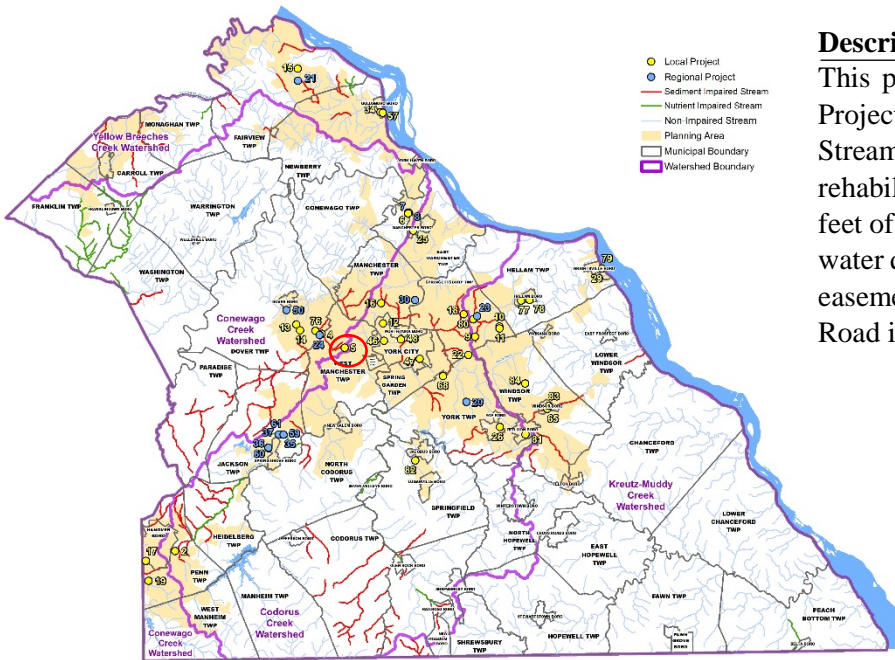
### General

Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Trib to Little Conewago Creek (TSS)

Bioswale Restoration:	
Drainage Area (acres):	7.8
Cost (\$)	22,039

### Pollutant Load Reduction TSS (lbs/yr)

Bioswale Retrofit	2,341
Cost (\$) / lb	9.41



### Description

This project is located upstream from regional Project 24 (Dover Twp./West Manchester Twp. Stream Restoration). This project will rehabilitate and upgrade approximately 17,000 feet of existing swale into a bioswale to improve water quality. The existing swale is located in an easement between Topaz Road and Sapphire Road in West Manchester Twp.

### Notes

# Manhaven Manor Retrofit

Basin Retrofit  
 Manchester Boro



## General

Ownership:	Private
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	No
Closest downstream impaired waterway:	Musser Run (TSS)

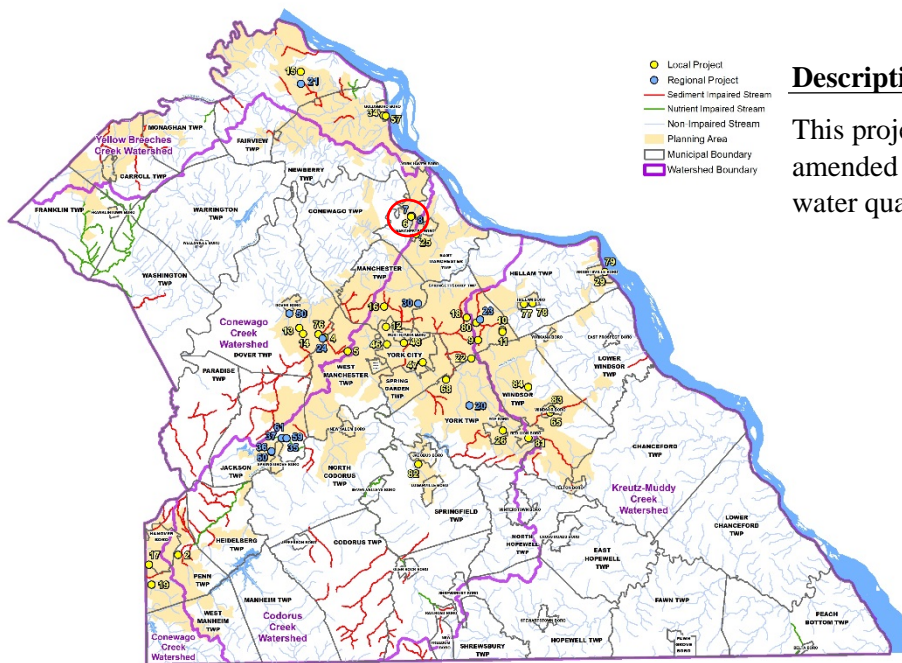
## Basin Retrofit

Basin footprint (acres)	0.4
Basin drainage area (acres)	5.56

Cost (\$)	12,000
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	1,669
Cost (\$) / lb	7.19



## Description

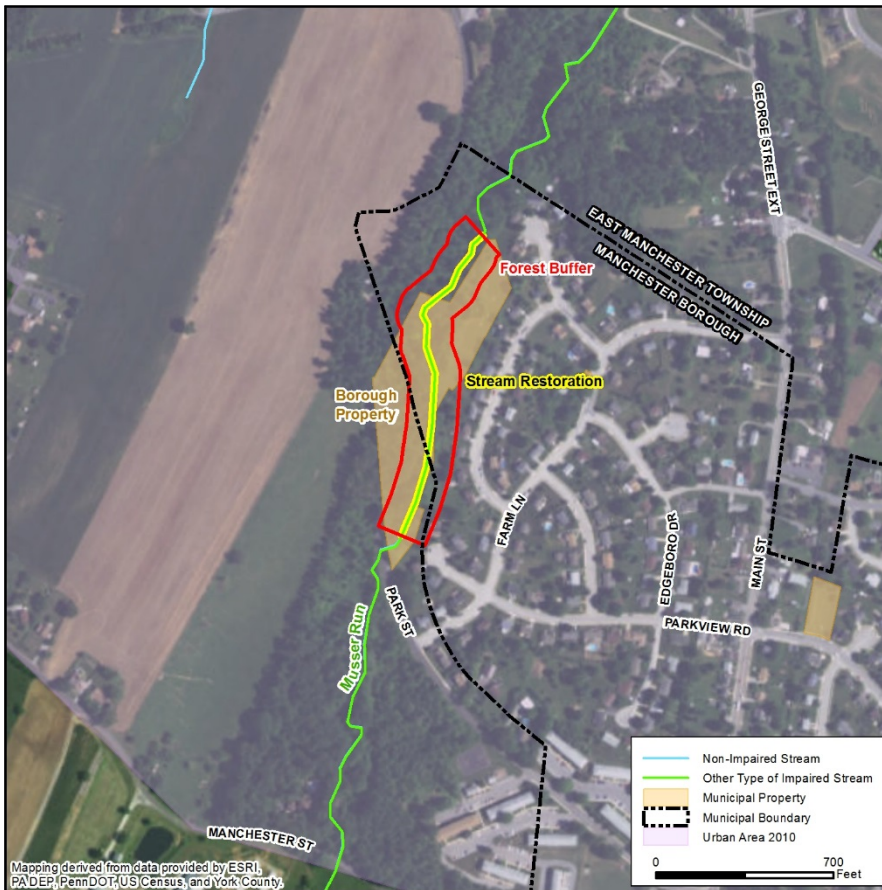
This project will retrofit the existing basin with amended soils and plantings to provide additional water quality benefits.

## Notes



# Musser Run Stream Restoration

Stream Restoration/Forest Buffer  
Manchester Borough



## General

Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Impaired Stream:	Musser Run (TSS)

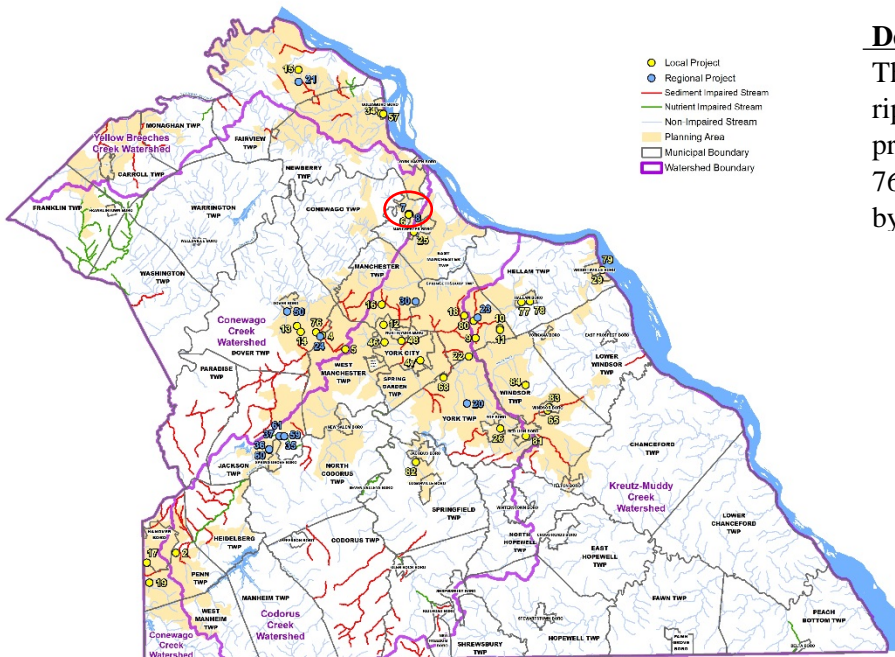
(8) Stream Restoration (ft):	1,200
(7) Forest Buffer (acres):	0.8

Cost (\$)	360,000
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## Pollutant Load Reduction

	TSS (lbs/yr)
(8) Stream Restoration:	53,856
(7) Riparian Buffer:	<u>284</u>
Total	54,140

Cost (\$) / lb	6.65
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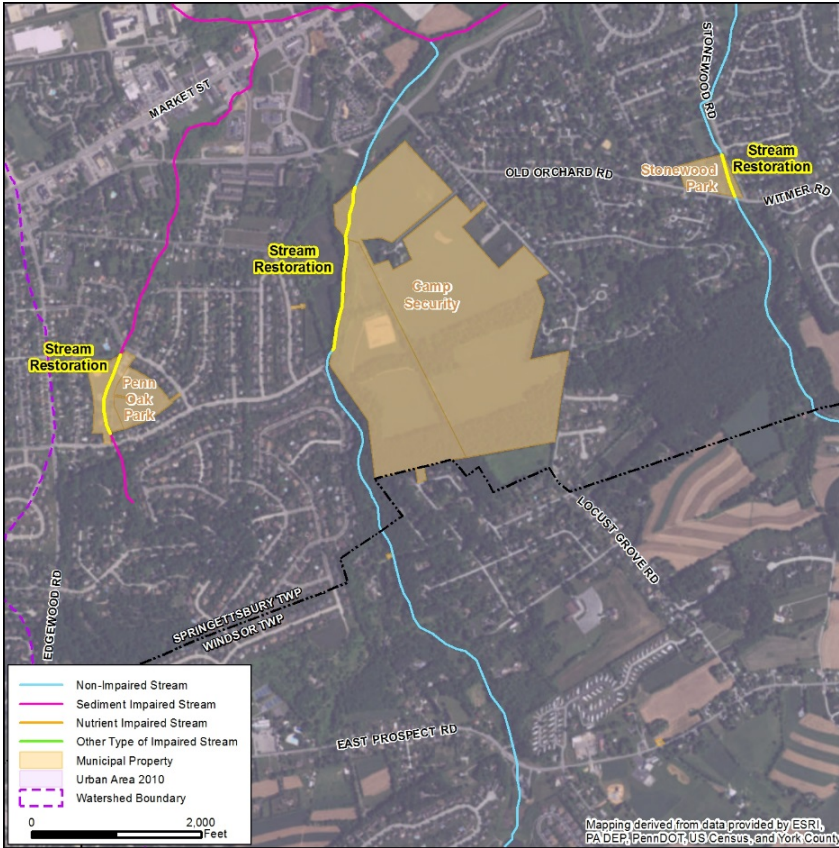
## Description

This project includes stream restoration and riparian buffer planting along Musser Run. The project area is located within property parcel ID 76000010051P000000 (Crossings Way) owned by Manchester Boro.

## Notes

# Springettsbury Township Park Stream Restorations

Stream Restoration  
 Springettsbury Twp.



## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Tributaries to Kreutz Creek (TSS)

Stream Restoration Length (ft):	
(9) Penn Oak Park Trib.	1,160
(10) Stonewood Park Trib.	1,000
(11) Camp Security Park Trib.	<u>1,120</u>
Total	3,280 ft

Cost (\$) 984,000

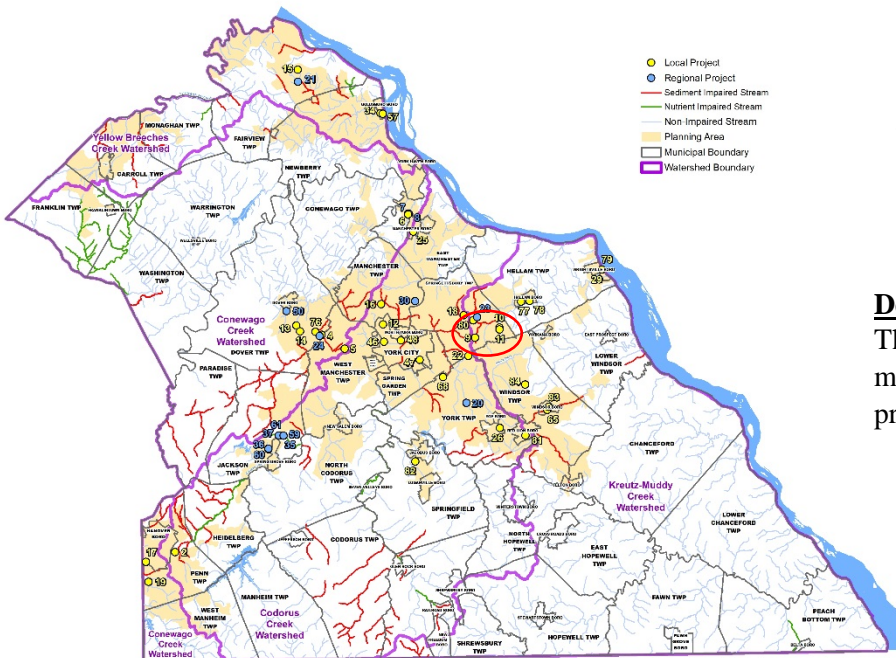
## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	
(9) Penn Oak Park Trib.	52,061
(10) Stonewood Park Trib.	44,880
(11) Camp Security Park Trib.	<u>50,266</u>
Total	147,207

Cost (\$) / lb 6.68

## Description

This project includes streambank stabilization measures at three (3) municipal-owned park properties within Springettsbury Township.



## Notes

# York City Industrial Park Basin

Basin Retrofit  
 York City



## General

Ownership:	Private
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	UNT to Codorus Creek (TSS)

## Basin Retrofit

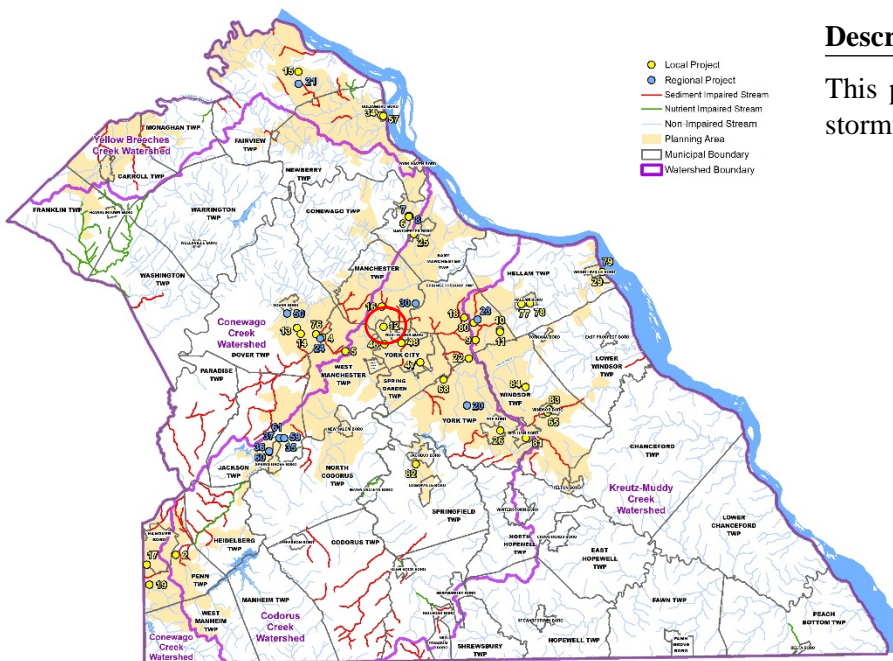
Basin footprint (acres)	2.28
Basin drainage area (acres)	11,738

Cost (\$)	68,400
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	11,738
------------------------------	--------

Cost (\$) / lb	5.83
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## Description

This project will retrofit an existing rate control stormwater basin.

## Notes

Ownership issues and maintenance responsibility would need to be resolved with the design work to provide a solid O&M plan post-construction work.

# Wyngate Detention Basin

Basin Retrofit  
Dover Township



## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	Unnamed Trib to Fox Run (TSS)

## Basin Retrofit

Basin footprint (acres)	0.49
Basin drainage area (acres)	40

Cost (\$)	14,700
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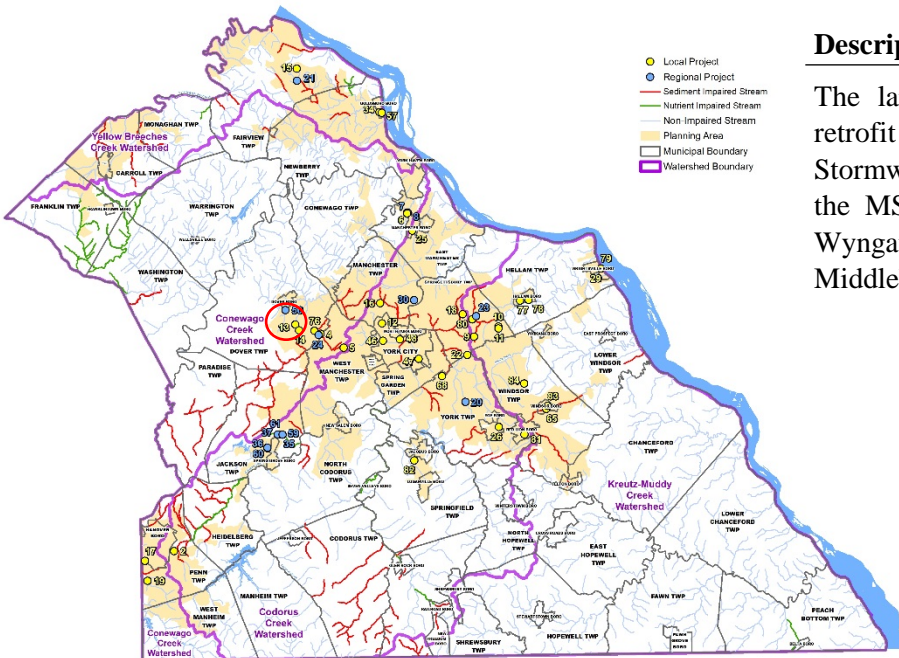
## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	12,034
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Cost (\$)/lb	1.22
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## Description

The large drainage area associated with this basin retrofit project is due to the layout of the MS4. Stormwater from the following streets is conveyed via the MS4 to the detention basin: Rock Creek Drive, Wyngate Road, Dunbarton Drive, Tower Drive, and Middleboro Road.



## Notes

# Dover Township Community Center

Basin Retrofits  
Dover Township



## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	Unnamed Trib to Little Conewago Creek (TSS)

Basin Retrofit (acres)	
Basin A footprint	0.4
Basin B footprint	<u>0.38</u>
Total	0.78

Total drainage area to basins (acres)	20.1
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Cost (\$)	23,400
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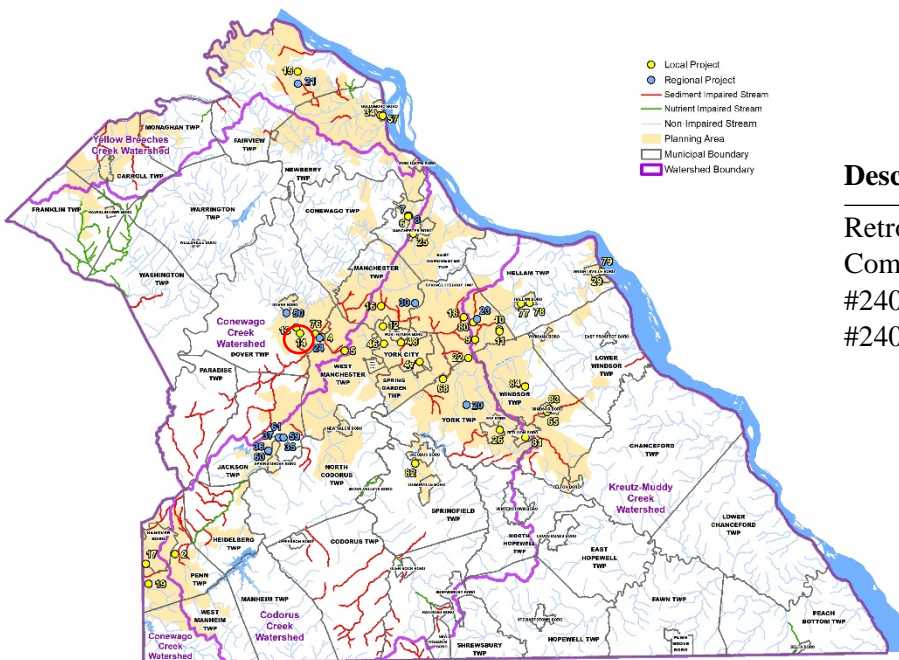
## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	6,047
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Cost (\$) / lb	3.87
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## Description

Retrofit of two existing basins at the Dover Township Community Center. The west basin is on parcel ID #24000JG0081D0 and the east basin in on parcel ID #24000300001A0.



## Notes

Both basin retrofits are located on public land. The west basin is 50' x 350' and the east basin is 70' x 235' for a combined basin footprint of 33,950 sq. ft. or 0.78 acres.

# Emily Lane Stormwater Pond

Basin Retrofit

Fairview Township



## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Yellow Breeches Creek
NPDES Permit req.:	No
Closest downstream impaired waterway:	Unnamed Trib to Fishing Creek (TSS)

## Basin Retrofit

Basin footprint (acres)	0.4
Basin drainage area (acres)	7.02

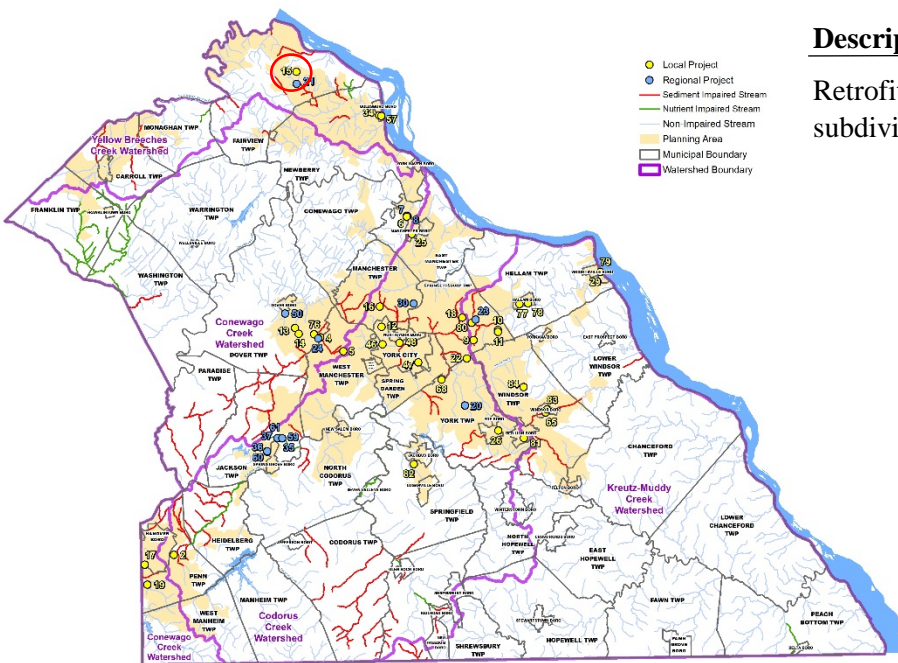
Cost (\$)	12,000
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	2,104
Cost (\$)/lb	5.70

## Description

Retrofit a stormwater pond that is the BMP for a small subdivision.



## Notes

# Stillmeadow Park Restoration

Stream Restoration, Wetland Restoration, Basin Retrofits, Tree Planting  
 Manchester Township



## General

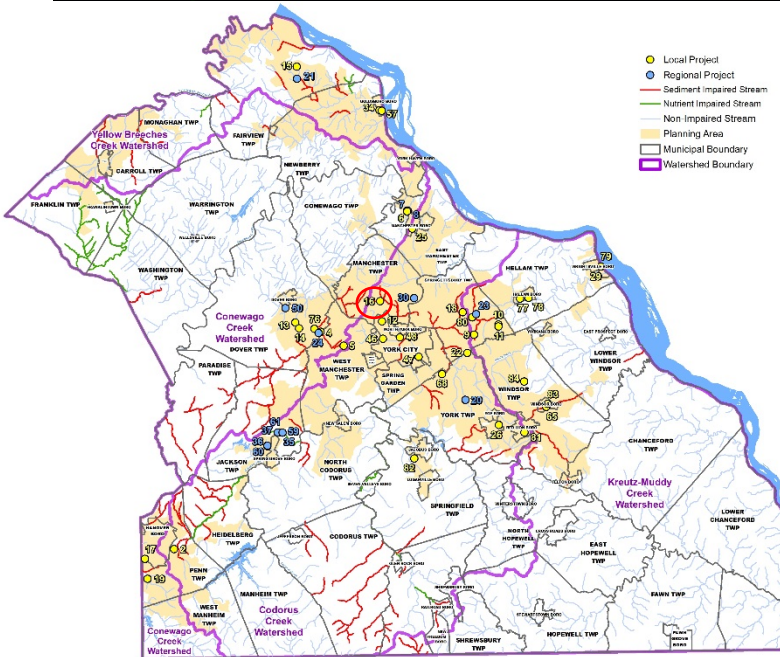
Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	UNT to Codorus Creek (TSS)
Stream Restoration Length (ft):	
Segment 1 - park property	2,100
Segment 2 - downstream from park (partially private property)	1,000
Segment 3 - north of park (partially private property)	750
Wetland Restoration (acres):	
Pocket 1 - park property	3.0
Pocket 2 - downstream from park (partially private property)	1.5
Tree Planting (acres):	
Planting area - park property	0.25
Basin Retrofit (acres):	
Upstream Basin - private property	0.6
South Basin - private property	0.7
Park Basin - park property	0.4
Church Basin - private property	0.5

Cost (\$) 2,348,841

## Pollutant Load Reduction TSS (lbs/yr):

Stream Restoration Segment 1	94,248
Stream Restoration Segment 2	44,880
Stream Restoration Segment 3	33,660
Wetland Pocket 1	55,604
Wetland Pocket 2	11,260
Tree Planting	85
Basin Retrofit (Upstream)	12,064
Basin Retrofit (South)	6,017
Basin Retrofit (Park)	1,647
Basin Retrofit (Church)	2,102
<b>Total</b>	<b>261,567</b>

Cost (\$) / lb 8.98

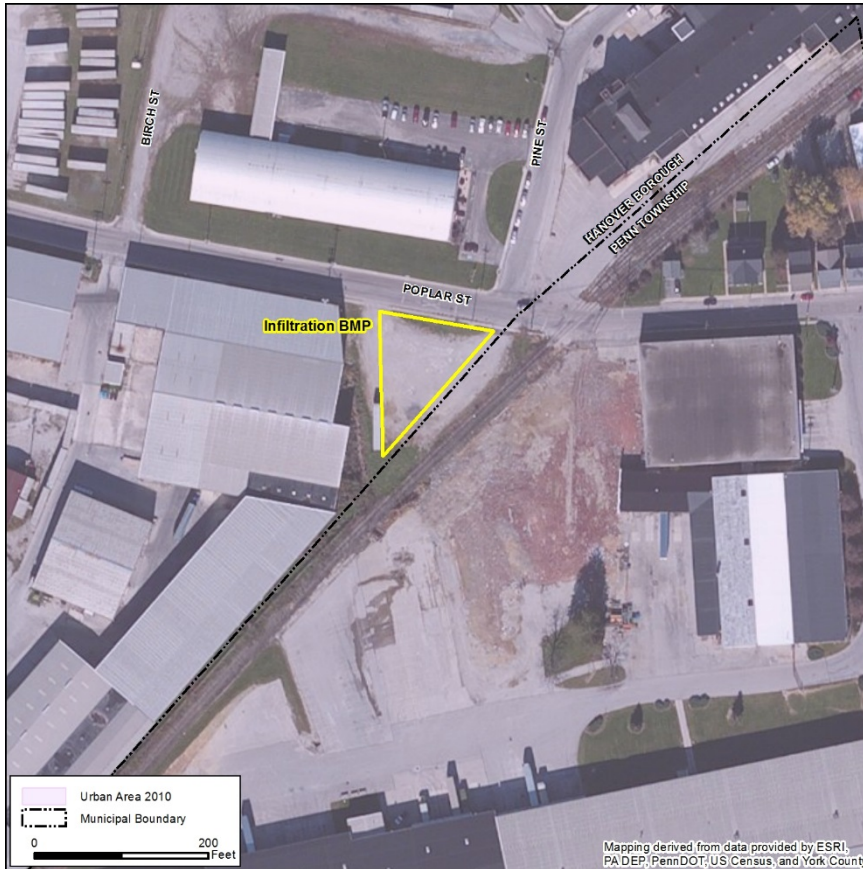


## Description

The Stillmeadow Park Restoration project will include: three (3) segments of stream restoration along two (2) unnamed tributaries to the Codorus Creek, two (2) wetland restoration areas along the Codorus Creek tributary that runs through Stillmeadow Park, an area of tree planting, and four (4) detention basin retrofits. The basin retrofits will retrofit existing basins with bioretention features including amended soils and plantings to improve water quality.

# Poplar Street Swale Retrofit

Swale Retrofit  
Hanover Boro



## General

Ownership:	Private
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	No
Closest downstream impaired waterway:	Plum Creek (TSS)

## Infiltration BMP

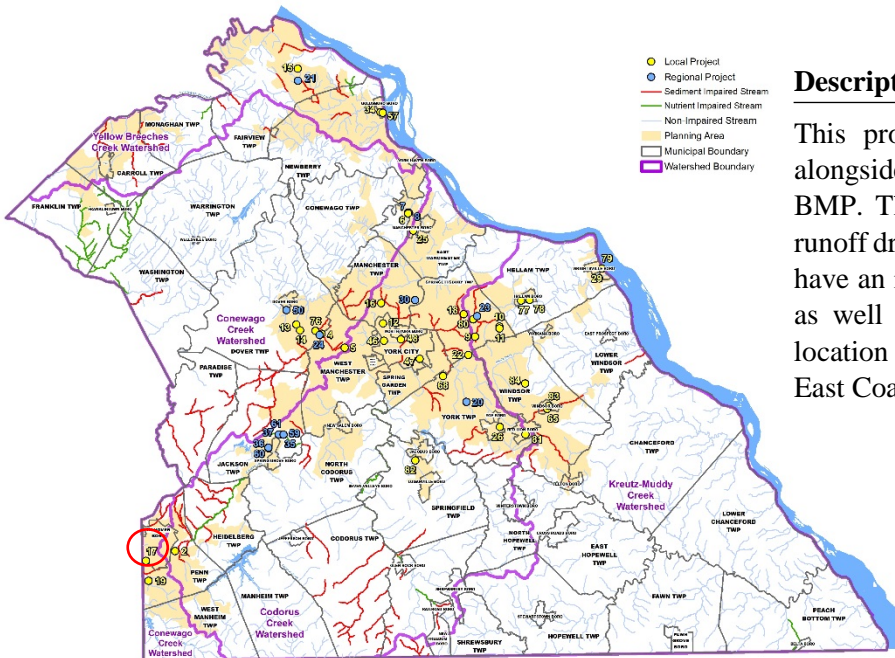
BMP footprint (acres)	0.5
BMP drainage area (acres)	32.4

Cost (\$)	15,000
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	13,503
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Cost (\$) / lb	1.11
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## Description

This project will replace an existing swale located alongside a borough-owned building with an infiltration BMP. The existing swale is undersized to handle the runoff draining to the site. The new infiltration BMP will have an increased storage capacity to alleviate flooding as well as provide water quality benefits. The BMP location is Parcel ID: 670000901970000000 owned by East Coast Commercial Real Estate LLC.

## Notes





# Homewood Streambank Restoration

Stream Restoration  
 Penn Twp.



## General

Ownership: Private  
 Secured Funding: No  
 Designs: Yes  
 Watershed: Conewago Creek  
 NPDES Permit req.: Yes  
 Impaired Stream: Unnamed Trib to Plum Run (pathogens)

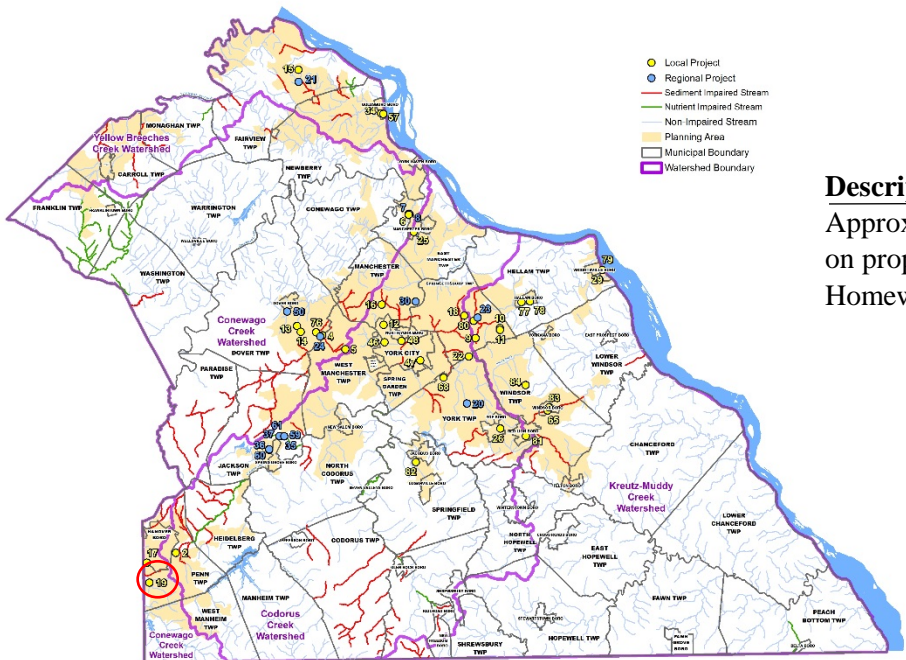
Stream Restoration Length (ft):  
 Homewood at Hanover 500

Cost (\$) 150,000

## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr): 22,440

Cost (\$) / lb 6.68



## Description

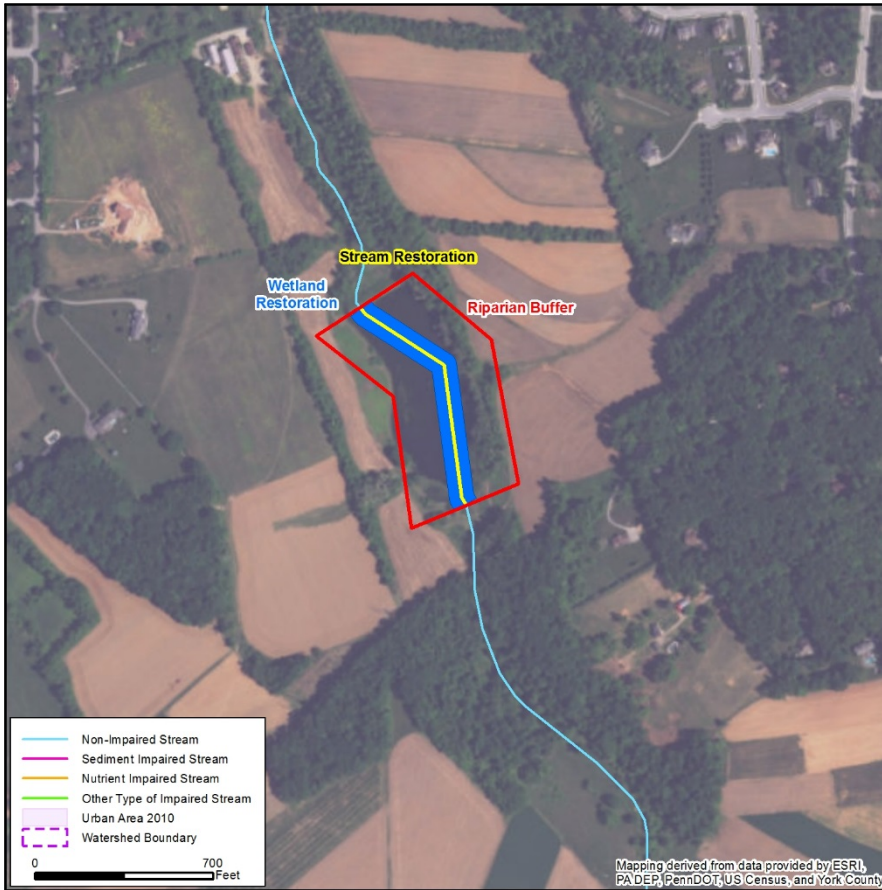
Approximately 500 feet of stream will be restored on property parcel ID # 44000CD0080A owned by Homewood at Hanover Inc.

## Notes

Aquatic Resources Restoration Company (ARRC) is the contractor for the project. Application for a permit was submitted to PA DEP.

# York Twp. Private Property Owner Project

Kehm Run Stream Restoration/Reconstructed Wetland/Forested Riparian Buffer  
 York Twp.



## General

Ownership: Private  
 Secured Funding: No  
 Designs: No  
 Watershed: Codorus Creek  
 NPDES Permit req: Yes  
 Stream Name: Unnamed Trib to Mill Creek (non-impaired)

Closest downstream impaired stream: Mill Creek (TSS)  
 Distance from project site: 2.5 miles

Stream Restoration Length (ft): 1,200  
 Riparian Buffer Area (acres): 5.5  
 Reconstructed Wetland Area (acres): 1  
 Drainage Area to Reconstructed Wetland Area (acres): 70

Cost (\$) 970,588

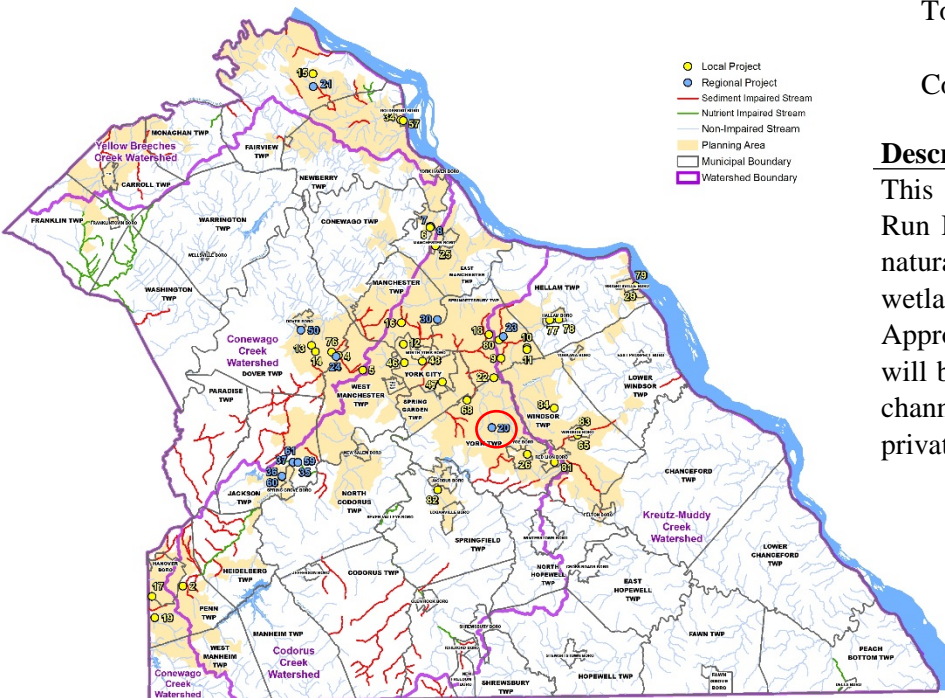
## Pollutant Load Reduction TSS (lbs/yr)

Stream Restoration: 53,856  
 Riparian Buffer: 1,956  
 Reconstructed Wetland: 19,450  
 Total: 75,262

Cost (\$) / lb 12.90

## Description

This project is the removal of the Kehm Run Dam. After the dam is removed, the natural drainage pathways (stream and wetland areas) will be restored. Approximately 5.5 acres of riparian buffer will be installed along the restored stream channel. This project is located entirely on private property.



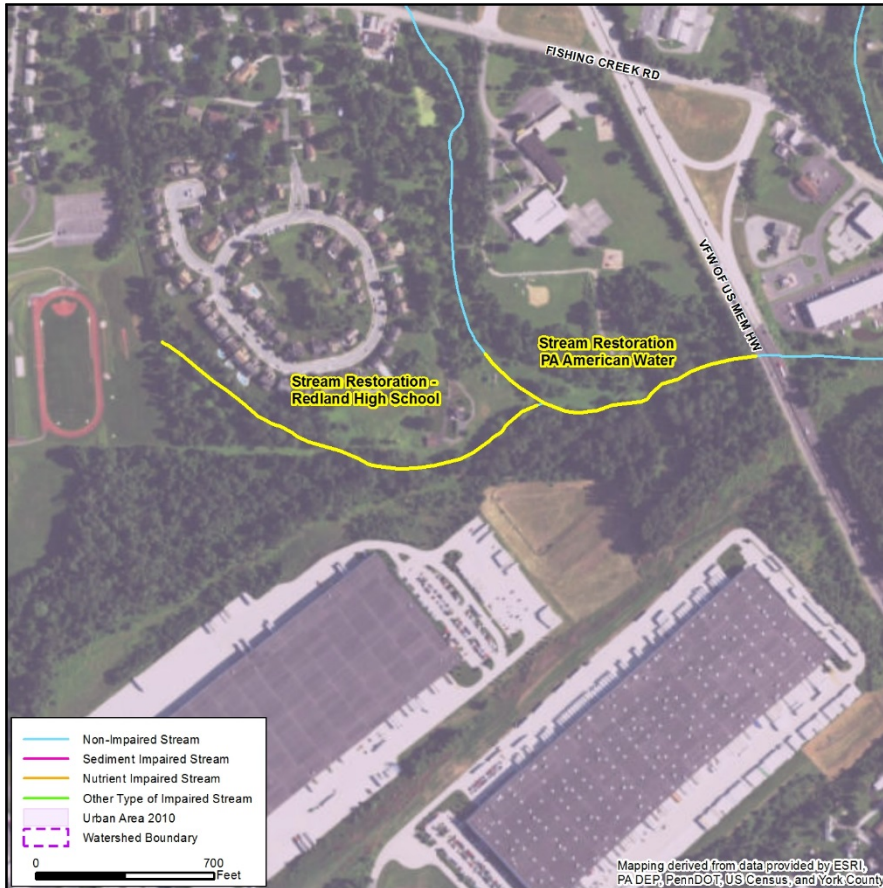
## Notes

The PA Fish and Boat Commission has agreed to pay for project design once construction funds are secured. American Rivers applied for a Growing Greener Grant.

# Red Land High School Stream Restoration

Stream Restoration

Fairview Twp.



## General

Ownership: Public/Private  
 Secured Funding: No  
 Designs: No  
 Watershed: Yellow Breeches Creek  
 NPDES Permit req.: Yes  
 Stream Name: Unnamed Trib to Fishing Creek (non-impaired)

Closest downstream impaired stream: Unnamed Trib Fishing Creek (TSS)  
 Distance from project site: 0.15 miles

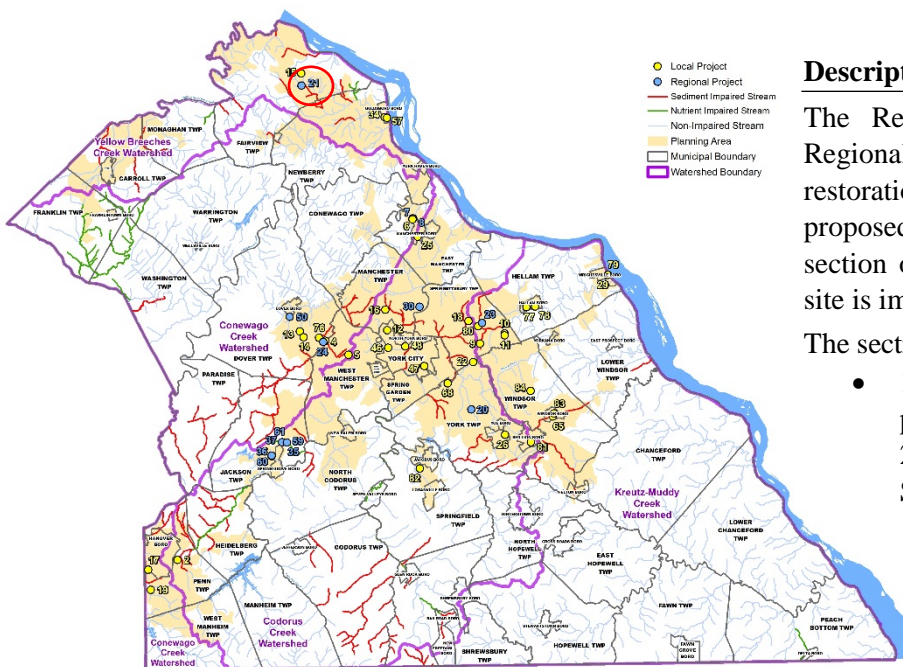
Stream Restoration Length (ft):	
Red Lands High School	1,700
PA American Water	<u>1,200</u>
<b>Total</b>	<b>2,900 ft</b>

Cost (\$) 870,000

## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	
Red Lands High School	76,296
PA American Water	<u>53,856</u>
<b>Total</b>	<b>130,152</b>

Cost (\$) / lb 6.68



## Description

The Red Land High School Stream Restoration Regional Project includes two (2) sections of stream restoration. The sections of the UNT to Fishing Creek proposed for restoration are not impaired, however the section of the tributary downstream from the project site is impaired for siltation.

The sections of stream proposed for restoration are:

- 1,700 ft of stream at Red Land High School, property parcel number 27000QF0145A000000 owned by the West Shore School District; and
- 1,200 ft of stream east of Red Land High School within a PA American Water easement near I-83.

## Notes

# York Twp. Pond Retrofit

Basin Retrofit  
 York Township



## General

Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	Unnamed Trib to Mill Creek (TSS)

## Basin Retrofit

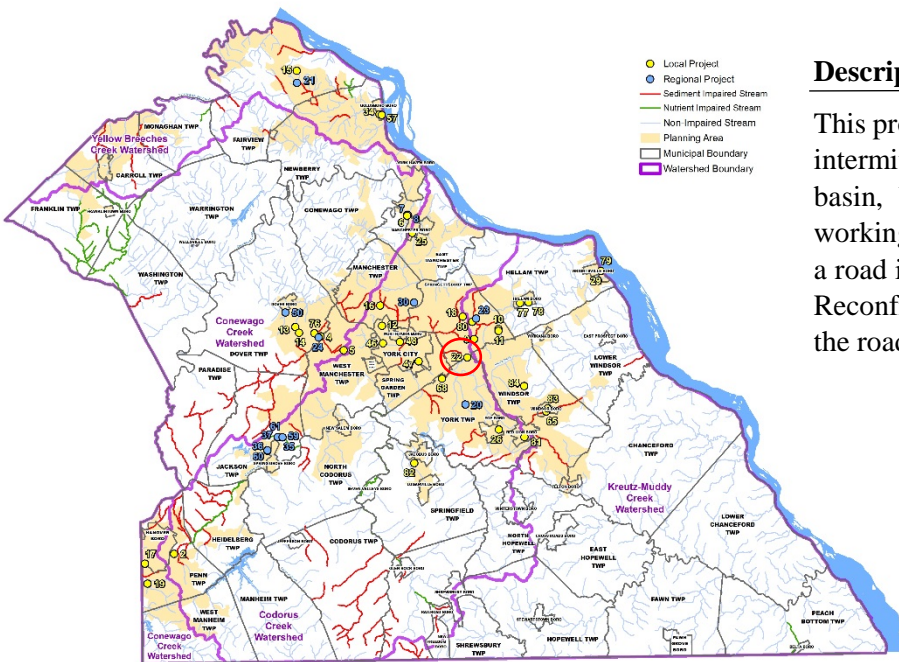
Basin footprint (acres)	0.3
Basin drainage area (acres)	5

Cost (\$)	9,000
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	1,498
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Cost (\$) / lb	6.01
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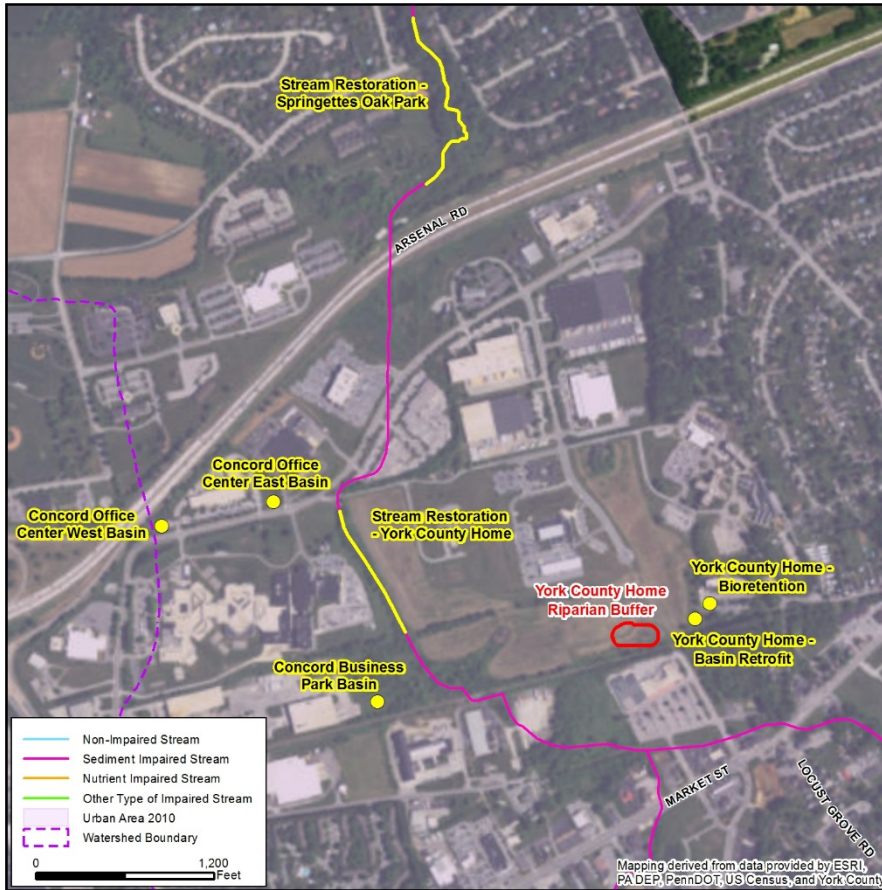
## Description

This project is a PennDOT stormwater basin with an intermittent stream running through it. It is a new basin, but there has been concern that it is not working as designed. The Township is looking to do a road improvement project in the area of the basin. Reconfiguring the basin will be required as part of the road improvement project.

## Notes

### East York P3

Stream Restoration/Basin Retrofits/Biorettention/Forest Buffer  
 Springettsbury Twp.



#### General

Ownership: Public/Private  
 Secured Funding: No  
 Designs: No  
 Watershed: Kreutz-Muddy Creek  
 NPDES Permit req: Yes  
 Impaired Stream: Unnamed Trib Kreutz Creek (TSS)

Stream Restoration Length (ft):	
Springettes Oak Park	1,900 ft
York County Home	<u>700 ft</u>
<b>Total</b>	<b>2,600 ft</b>

Riparian Buffer Area (acres):  
 York County Home 1.53 ac

Bioretention  
 Basin footprint (acres): 0.04 ac  
 Drainage area (acres): 0.63 ac

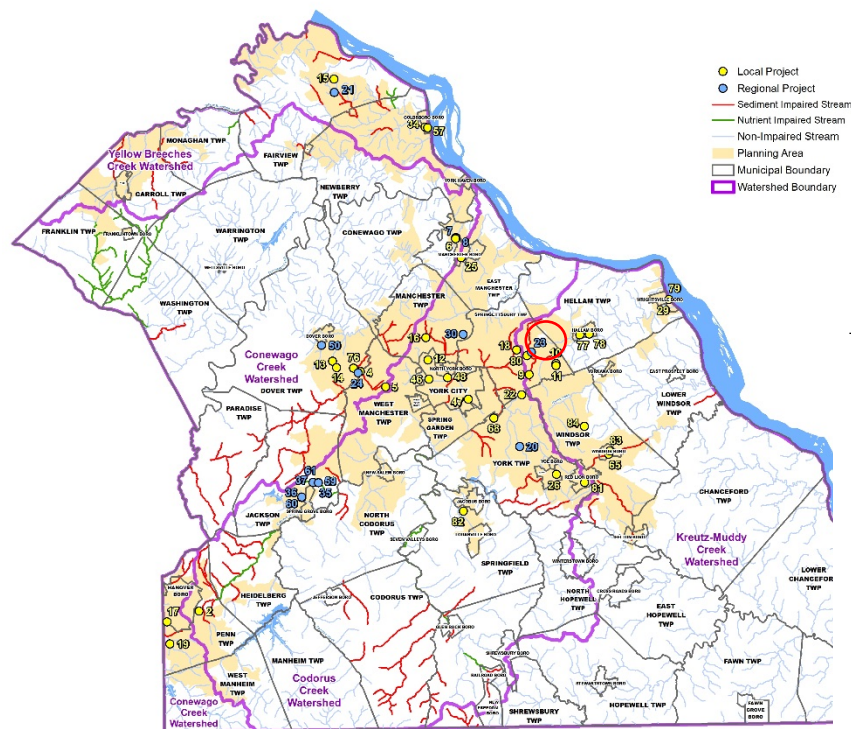
Basin Retrofits:  
 Concord Business Park  
 Basin footprint (acres): 0.21 ac  
 Drainage area (acres): 13 ac

Concord Office Center – East Basin  
 Basin footprint (acres): 0.14 ac  
 Drainage area (acres): 1.02 ac

Concord Office Center – West Basin  
 Basin footprint (acres): 0.18 ac  
 Drainage area (acres): 1.13 ac

York County Home  
 Basin footprint (acres): 0.05 ac  
 Drainage area (acres): 0.5 ac

Cost (\$) 851,142



#### Pollutant Load Reduction

Stream Restoration:	TSS (lbs/yr)
Springettes Oak Park	85,272
York County Home	31,416
Forest Buffer	543
Bioretention	185
Basin Retrofits:	
Concord Business Park	3,911
Concord Office Center – East Basin	304
Concord Office Center – West Basin	340
York County Home	<u>144</u>
<b>Total</b>	<b>122,115</b>

Cost (\$) / lb 6.97

## **Description**

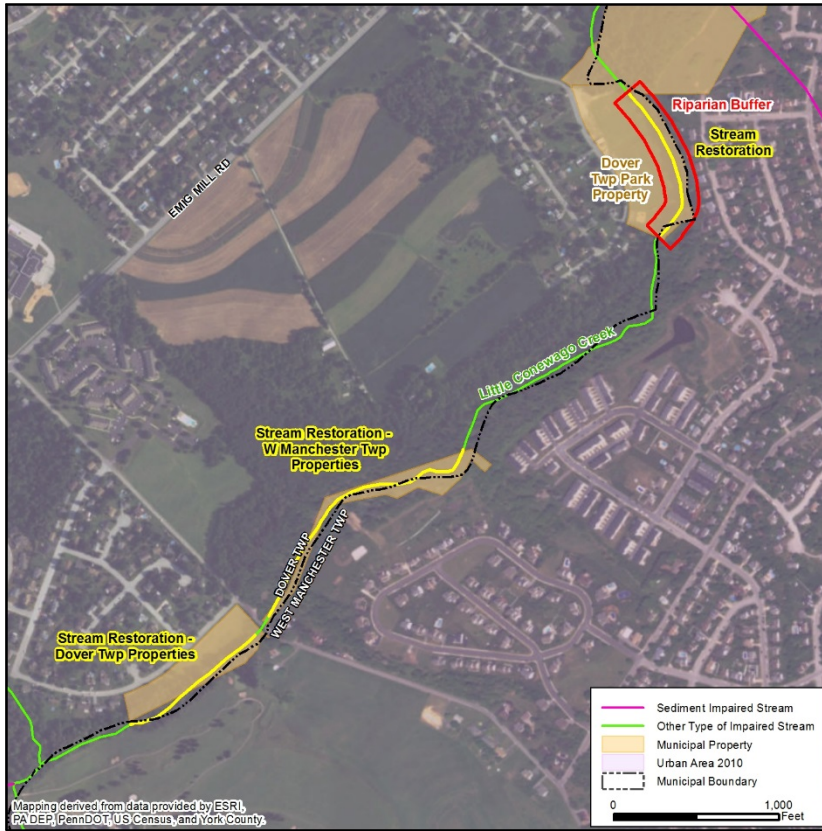
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The East York P3 Regional Project includes the following BMPs:

- Two sections of stream restoration of an unnamed tributary the Kreutz Creek (impaired siltation)
  - ✓ 1,900 ft (approx.) in Springettes Oak Park.
  - ✓ 700 ft (approx.) along the western border of the York County Home property.
- Four detention basin retrofits
  - ✓ The Kinsley Concord Business Park basin treats a 13-acre drainage area.
  - ✓ The Kinsley Concord Office Center (east basin) basin treats a 1.02-acre drainage area.
  - ✓ The Kinsley Concord Office Center (west basin) basin treats a 1.13-acre drainage area.
  - ✓ The York County Home basin treats a 0.5-acre drainage area.
- One bioretention basin
  - ✓ The proposed bioretention basin at the York County Home will treat a 0.63-acre drainage area.
- One riparian buffer area
  - ✓ The riparian buffer area will be approximately 50-feet wide and stretch for approximately 1,300 around the perimeter of the existing York County Home pond.

## Dover Twp./West Manchester Twp. Stream Restoration

Stream Restoration/Forest Buffer  
 Dover Twp. & West Manchester Twp.



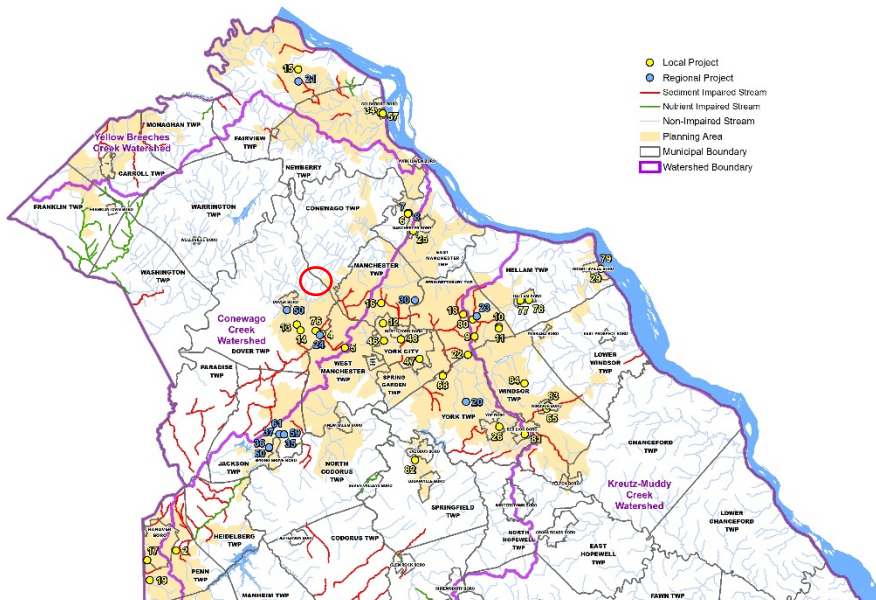
### General

Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Impaired Stream:	Little Conewago Creek (TSS) UNT Little Conewago Creek (TSS)

Stream Restoration Length (ft):	
Dover Twp. Park	1,000
Little Conewago Conserv. Area	
UNT Little Conewago Creek	1,230
Little Conewago Creek	1,800
Dover Twp. Properties	1,000
West Manchester Properties	<u>1,800</u>
<b>Total</b>	<b>7,310 ft</b>

Forest Buffer Area (acres):	
Dover Twp. Park	0.8

Cost (\$)	2,193,000
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### Pollutant Load Reduction TSS (lbs/yr)

Stream Restoration	
Dover Twp. Park	44,880
Little Conewago Conserv. Area	102,326
Dover Twp. Properties	44,880
West Manchester Properties	<u>80,784</u>
<b>Total</b>	<b>328,073</b>

Forest Buffer	
Dover Twp Park	284

Cost (\$ / lb)	6.68
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### Description

This regional project includes areas of stream restoration along Little Conewago Creek (impaired TSS) and an unnamed tributary to the Little Conewago Creek (impaired TSS). These sections of stream stabilization are anticipated to include in-stream stabilization measures and outfall stabilization along the streambank.



# Dauberton HOA Basin Retrofit

Basin Retrofit  
 Manchester Boro



## General

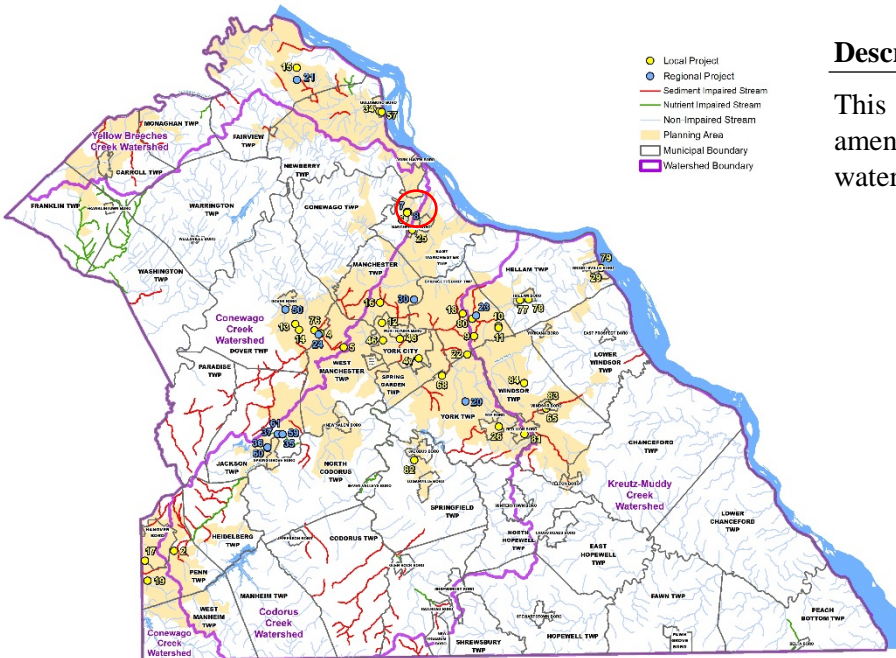
Ownership:	Private
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	No
Closest downstream waterway:	Hartman Run (not impaired)

## Basin Retrofit

Basin footprint (acres)	0.6
Basin drainage area (acres)	5.5
Cost (\$)	18,000

## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	1,647
Cost (\$)/lb	10.93



## Description

This project will retrofit the existing basin with amended soils and plantings to provide additional water quality benefits.

## Notes

# Dallastown Basin Retrofit

Basin Retrofit  
 Dallastown Boro



## General

Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	Barshinger Creek (impaired TSS)

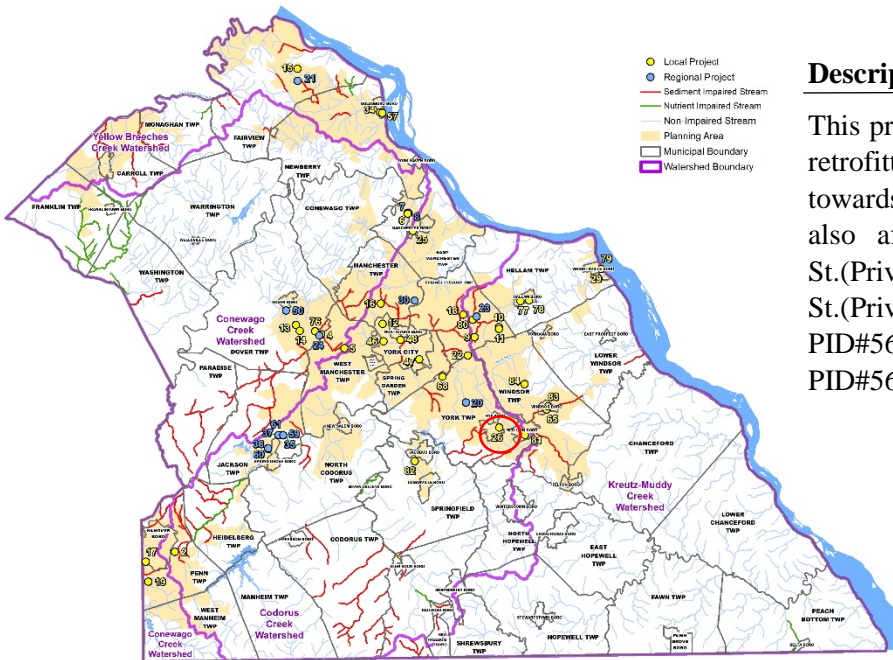
## Basin Retrofit

Basin footprint (acres)	1
Basin drainage area (acres)	5.5

Cost (\$)	30,000
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	1,647
Cost (\$) / lb	18.21



## Description

This project will improve stormwater runoff quality by retrofitting an existing basin. The basin is located towards the bottom of Hobbs Avenue. The retrofit will also affect the following parcels: 400 E. Locust St.(Private), PID#560000301960; 125 N. Park St.(Private), PID#5600003019400; ROW (Public) PID#5600030108A0; and 451 E. Maple St.(Private), PID#5600003018000.

## Notes

# Riverfront Park GI Plan (Susq River)

Bioretention Basin #1  
 Wrightsville Borough



## General

Ownership:	Public
Secured Funding:	Partial
Designs:	Yes
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Waterway:	Susquehanna River

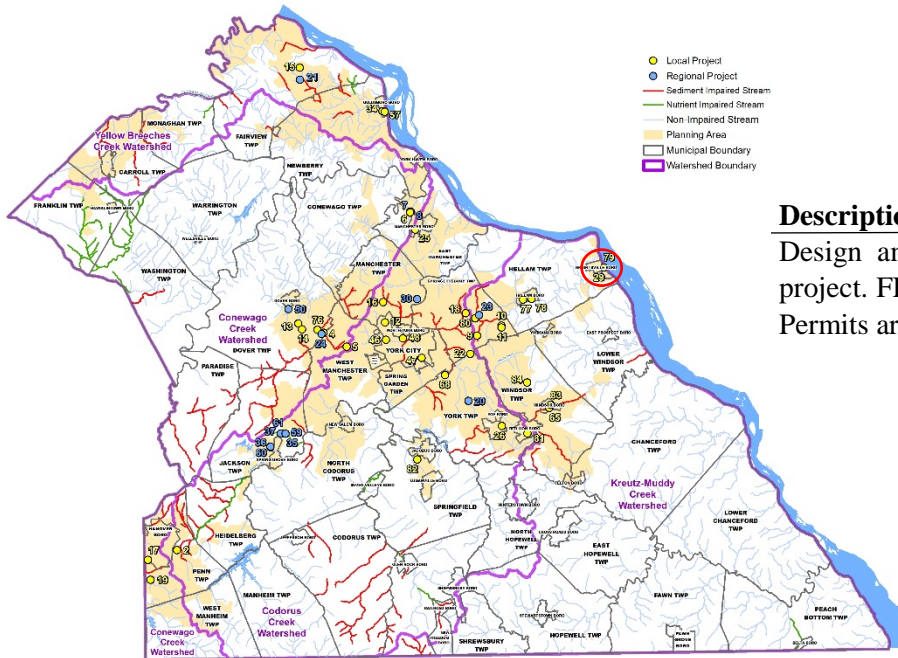
## Bioretention Basin #1

Basin footprint (acres):	0.2
Basin drainage area (acres):	22.6

Cost (\$)	376,350
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## Pollutant Load Reduction

Bioretention TSS (lbs/yr):	9,415
Cost (\$) / lb	39.97



## Description

Design and DEP permitting is complete for this project. FEMA and PennDOT Highway Occupancy Permits are also required.

## Notes

Project designed in 2014 by LandStudies using NFWF grant funds. The Borough has applied for a Growing Greener Grant for construction funding. Project is located in Riverfront Park. Secondary benefits are park improvement, reduced flooding, and education opportunities.

# York County Solid Waste and Refuse Center

Water Re-use  
 Manchester Twp.



## General

Ownership:	Public
Secured Funding:	Yes
Designs:	Yes
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	Codorus Creek (TSS)

## Water Reuse

Total water volume to be re-used (cf)	111,977
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Cost (\$)	0
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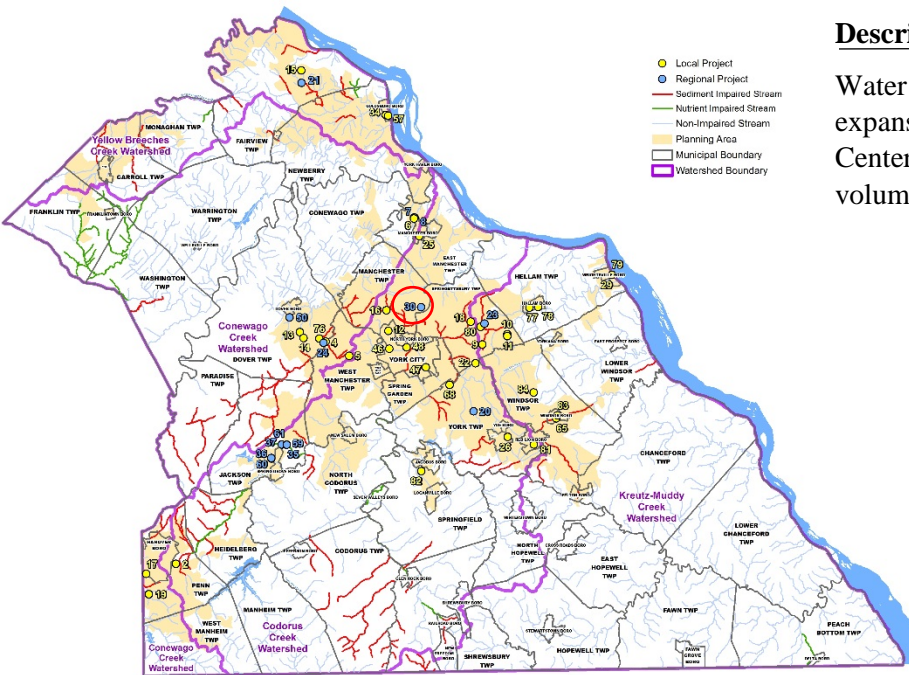
## Pollutant Load Reduction

Water Re-use (lbs/yr):	30,440
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Cost (\$) / lb	0
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## Description

Water re-use operations installed during the planned expansion of the York County Solid Waste and Refuse Center will result in reduced stormwater runoff volume and a reduction in TSS load.

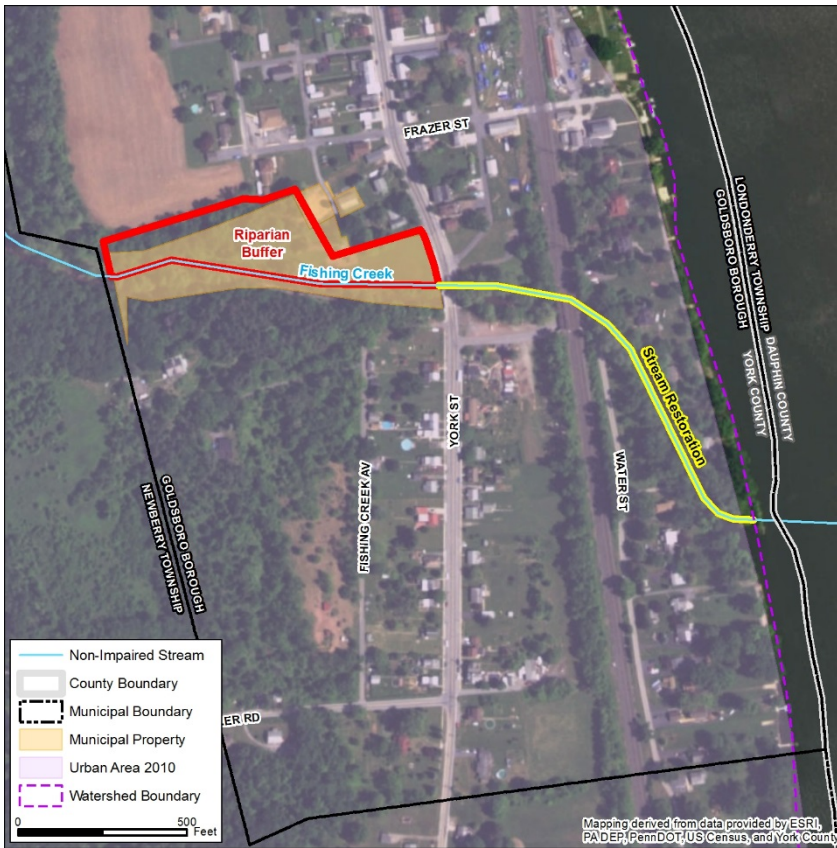


## Notes

This project is a planned improvement to the York County Solid Waste and Refuse Center. Project will not require YCSWC funding.

# 138 South York Street (Fishing Creek)

Riparian Buffer  
Goldsboro Borough



## General

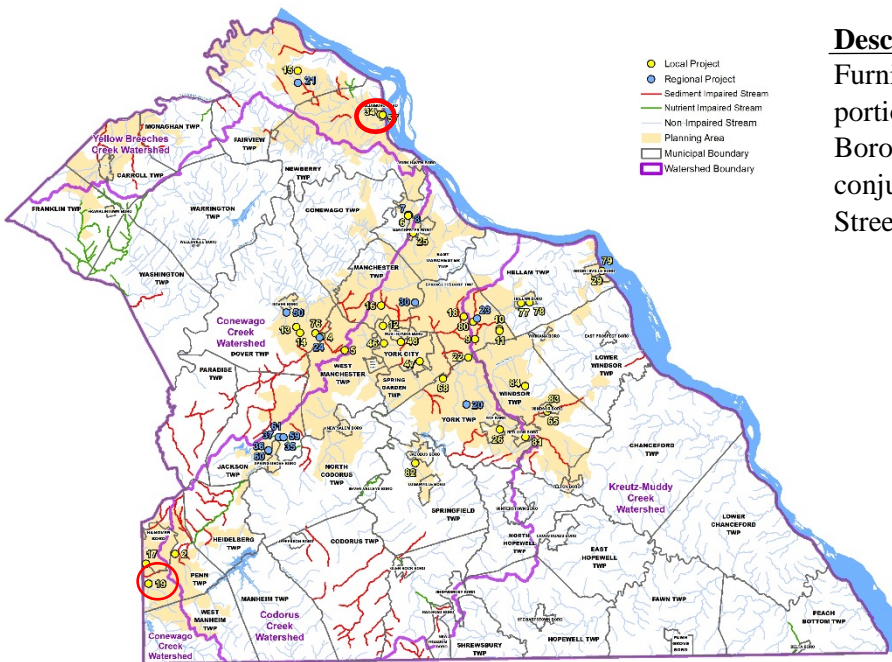
Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Yellow Breeches Creek
NPDES Permit req.:	Yes
Waterway:	Fishing Creek
Riparian Buffer Area (ac):	4.83
Cost (\$)	3,767

## Pollutant Load Reduction

Riparian Buffer TSS (lbs/yr):	1,717
Cost (\$) / lb	2.19

## Description

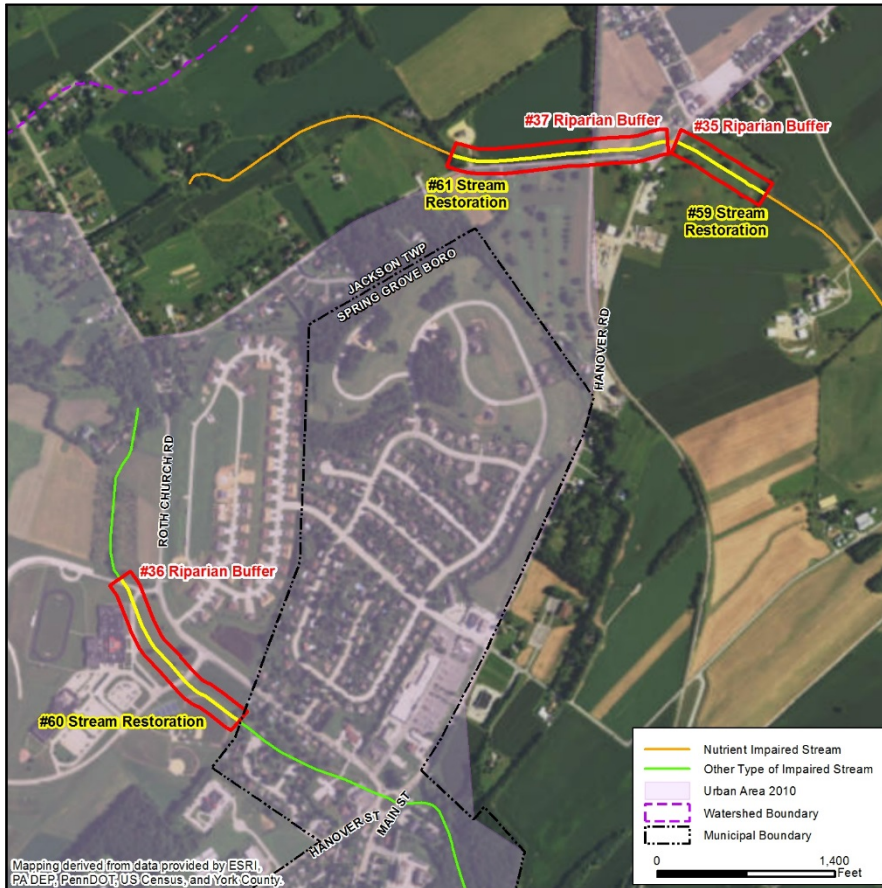
Furnish and install riparian buffer along the portion of Fishing Creek through the Goldsboro Borough Park. Project to be completed in conjunction with Project #57 – 138 South York Street (Fishing Creek) Stream Restoration.



## Notes

Secondary benefits include – Project located within a public park, accessible to the public and adjacent to a stocked trout stream.

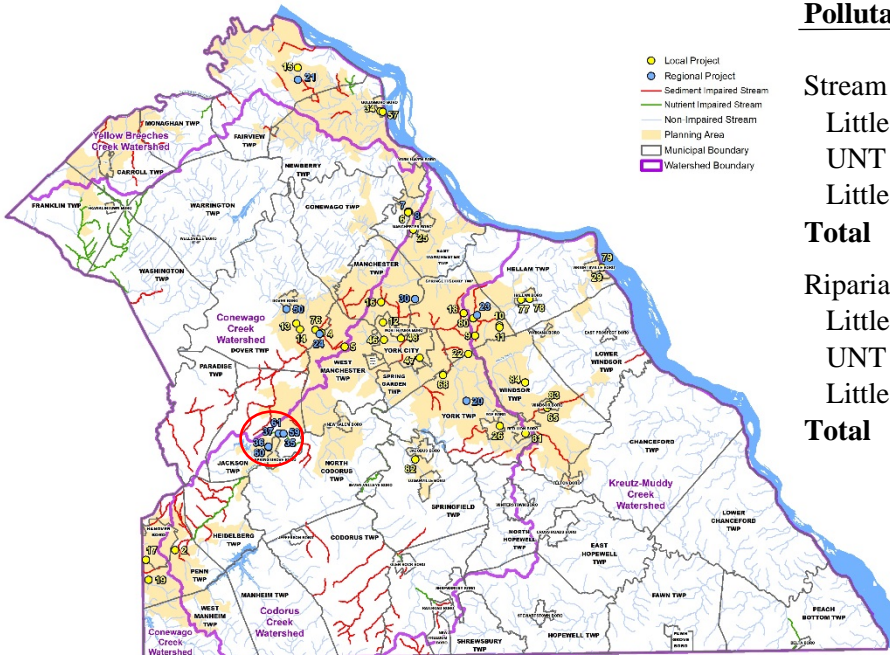
**BMPs #1, BMP #2, BMP #3**  
 Stream Restoration/Riparian Forest Buffer  
 Jackson Twp.



**General**

Ownership:	Public/Private
Secured Funding:	Partial
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	Little Creek (Nutrients) UNT W Br Codorus Creek (Pathogens)
Stream Restoration Length (ft):	
Little Creek (Proj 59)	800
UNT W Br Codorus (Proj 60)	1,325
Little Creek (Proj 61)	<u>1,850</u>
<b>Total</b>	<b>3,975 ft</b>
Riparian Forest Buffer (acres):	
Little Creek (Proj 35)	1.65
UNT W Br Codorus (Proj 36)	4.48
Little Creek (Proj 37)	<u>2.65</u>
<b>Total</b>	<b>8.78 acres</b>
Cost (\$)	1,192,500

**Pollutant Load Reduction**



	TSS (lbs/yr)
<b>Stream Restoration:</b>	
Little Creek (Proj 59)	35,904
UNT W Br Codorus (Proj 60)	59,466
Little Creek (Proj 61)	<u>83,028</u>
<b>Total</b>	<b>178,398</b>
<b>Riparian Buffer:</b>	
Little Creek (Proj 35)	584
UNT W Br Codorus (Proj 36)	1,593
Little Creek (Proj 37)	<u>939</u>
<b>Total</b>	<b>3,116</b>
Cost (\$) / lb	6.57

**Notes**

BMP #1 (Projects 35 & 59) are designed/permitted. Partial funding is secured for construction.

**Lincoln Park**  
 Stream Restoration  
 York City



**General**

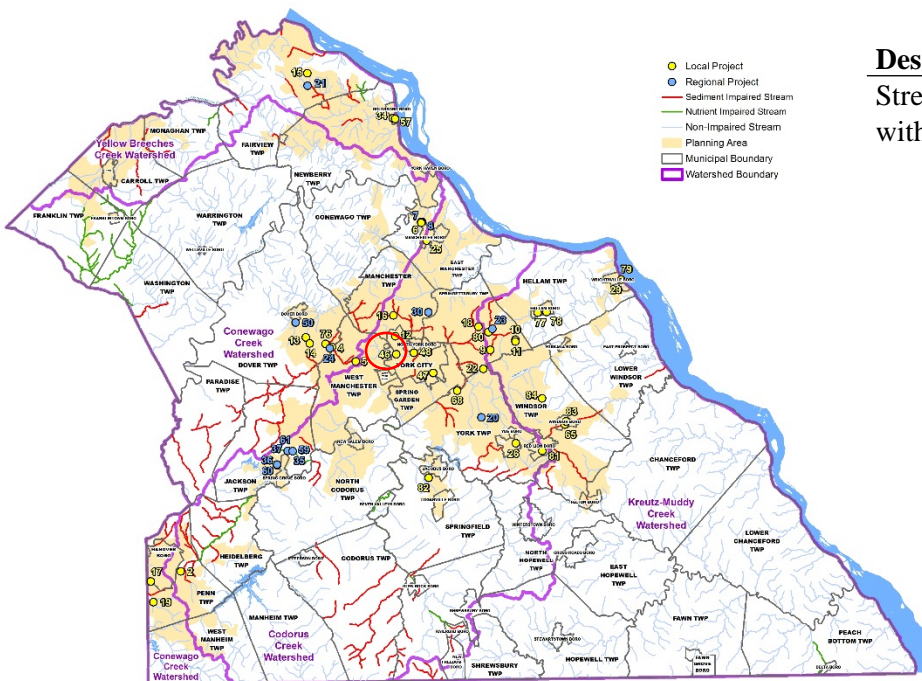
Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	Willis Run (TSS)
<b>Stream Restoration Length (ft):</b>	
York Twp.	515
<b>Cost (\$)</b>	154,500

**Pollutant Load Reduction**

Stream Restoration TSS (lbs/yr):	23,113
<b>Cost (\$) / lb</b>	6.68

**Description**

Stream restoration and floodplain restoration within Lincoln Park.



**Notes**

Currently, the stream is eroded and not attractive or integrated into the park infrastructure. This project will improve the park and water quality.

**Memorial Park**  
 Stream Restoration  
 York City



**General**

Ownership:	Public
Secured Funding:	Partial
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Tributary to Codorus Creek (TSS)

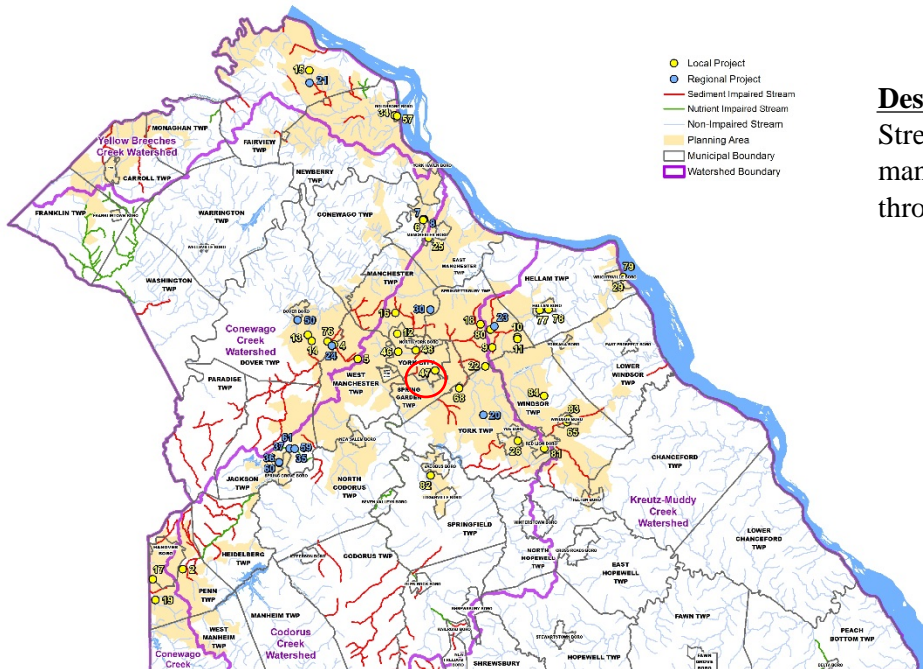
Stream Restoration Length (ft): 2,150

Cost (\$) 645,000

**Pollutant Load Reduction**

Stream Restoration TSS (lbs/yr): 96,492

Cost (\$) / lb 6.68



**Description**

Stream restoration and floodplain management of the stream running through Memorial Park in the city.

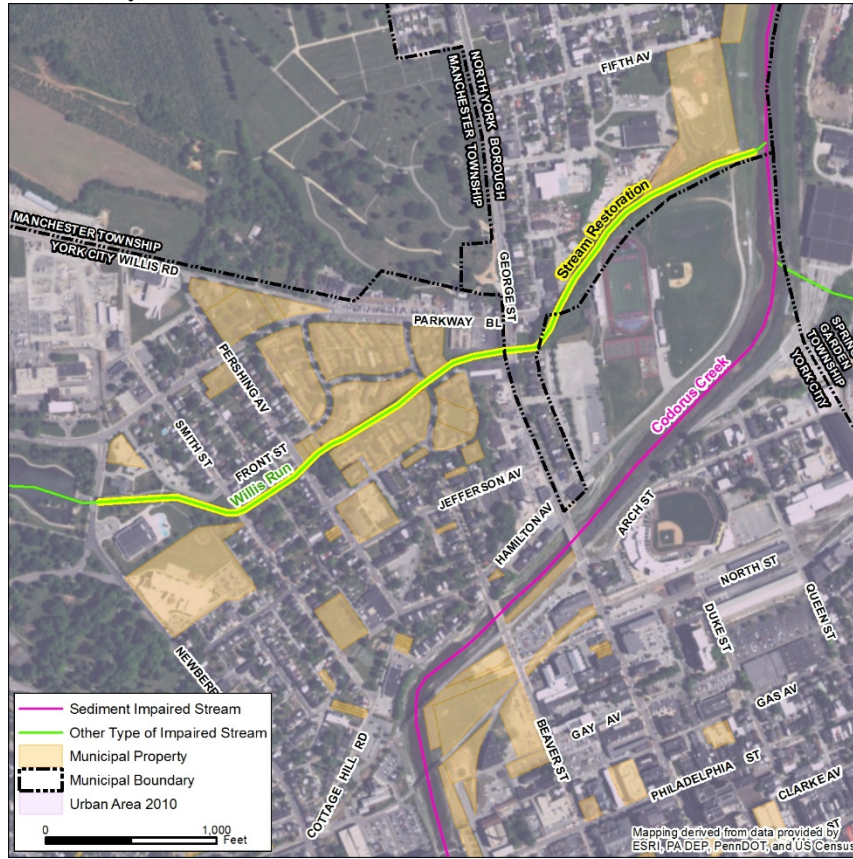
**Notes**

Project would incorporate the completion of the Broad Street Greenway; School District is a potential partner. City received a PA DEP Local Stormwater BMP Implementation Grant for this project



# Farquar Park/Kiwanis Lake

Stream Restoration  
 York City

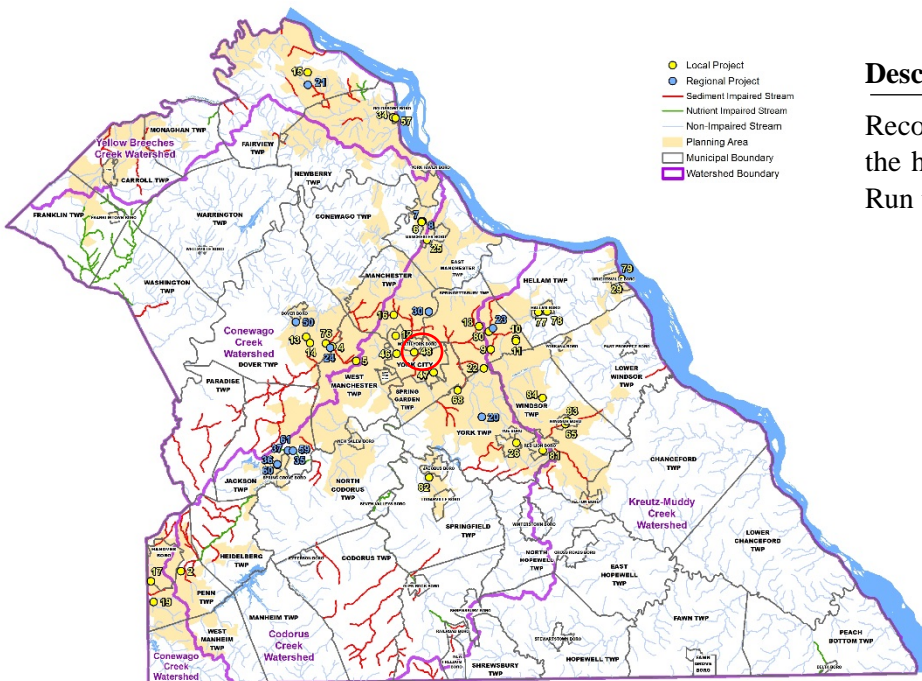


## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Tributary to Willis Run (TSS)
Stream Restoration Length (ft):	3,900
Cost (\$)	1,170,000

## Pollutant Load Reduction

Stream Restoration	
TSS (lbs/yr):	175,032
Cost (\$) / lb	6.68



## Description

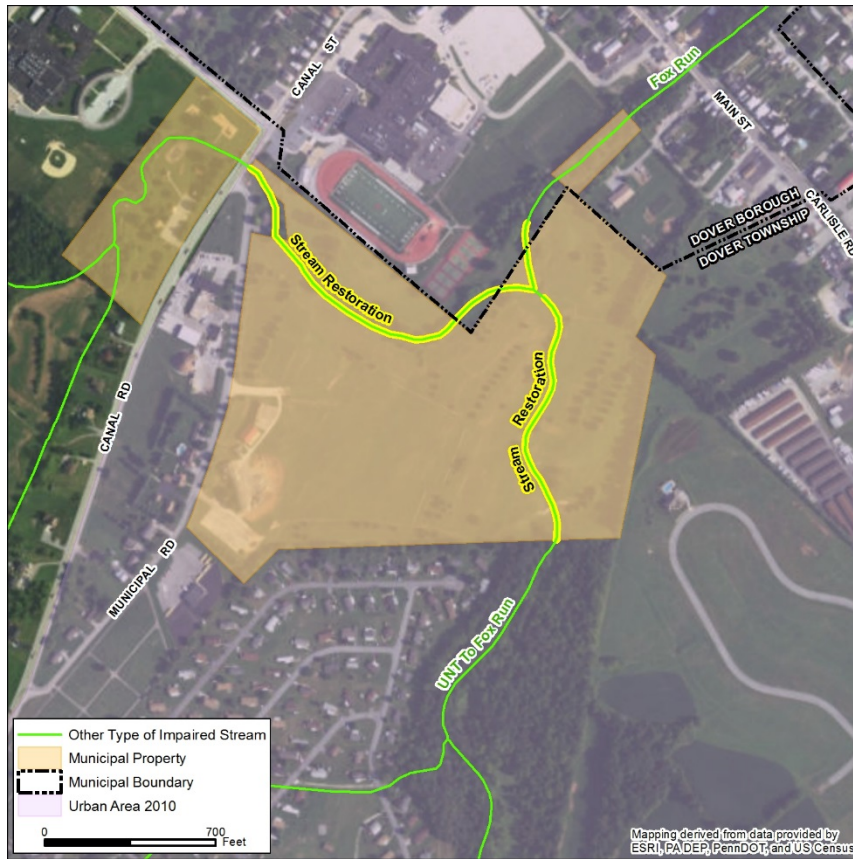
Reconnection of the groundwater table with the highly urbanized channel carrying Willis Run towards the Codorus Creek.

## Notes

This project should include a walking path to connect the highly urbanized residential areas of the City with the Heritage rail trail system with the stream restoration efforts.

# Dover Township Park (Old Golf Course)

Stream Restoration  
Dover Township



## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Stream:	Fox Run (non-impaired) UNT to Fox Run (non-impaired)

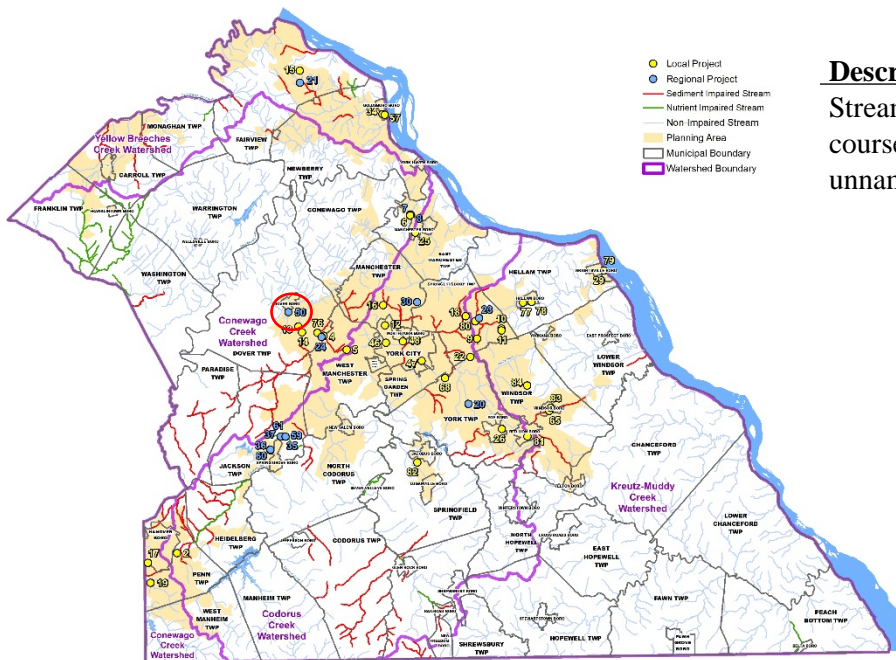
Stream Restoration Length (ft):	
Fox Run	1,880
UNT to Fox Run	<u>1,080</u>
Total	2,960

Cost (\$)	888,000
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## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	
Fox Run	84,374
UNT to Fox Run	<u>48,470</u>
Total	132,844

Cost (\$) / lb	6.68
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## Description

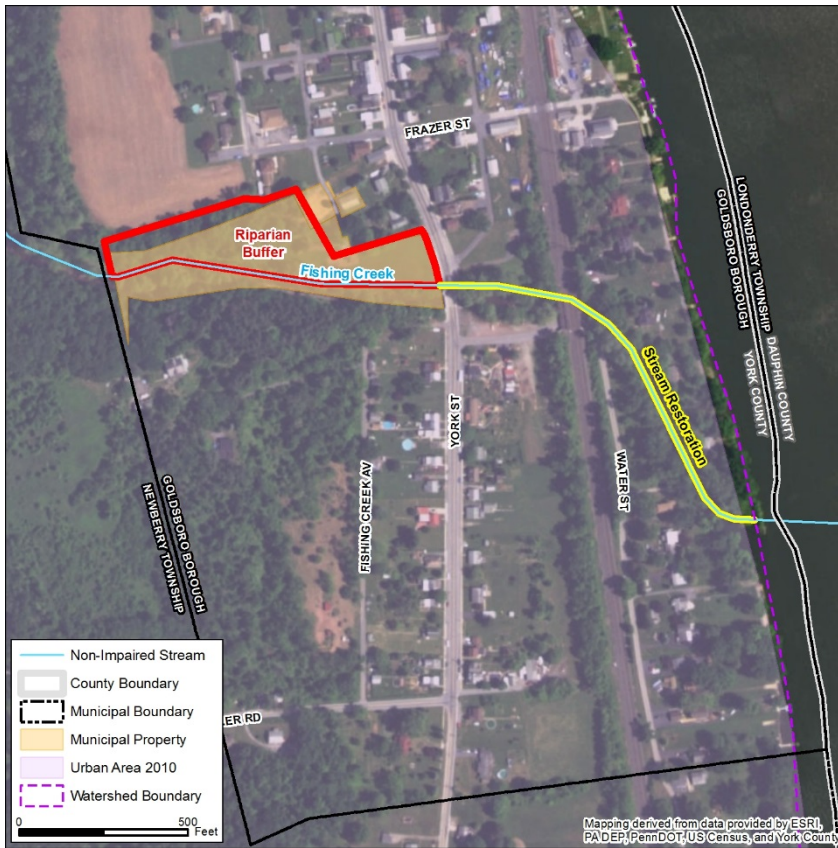
Stream and floodplain restoration on old golf course property along Fox Run and an unnamed tributary to Fox Run

## Notes

Preliminary conceptual design and project feasibility report have been completed by LandStudies. Seeking funding from the Transportation Alternatives Set-Aside Program (TASP).

# 138 South York Street (Fishing Creek)

Stream Restoration  
 Goldsboro Borough



### General

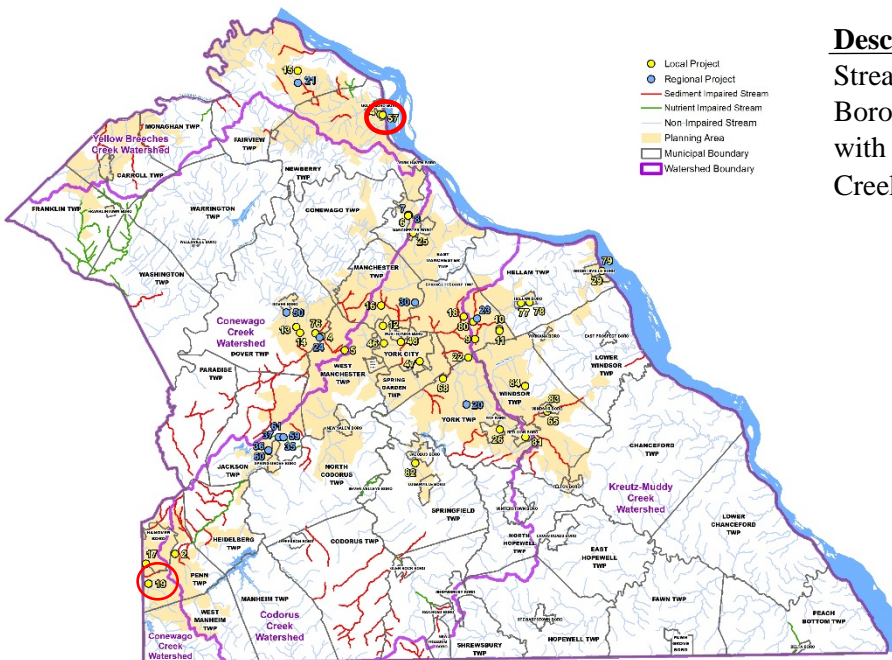
Ownership:	Public/Private
Secured Funding:	Partial
Designs:	No
Watershed:	Yellow Breeches Creek
NPDES Permit req.:	Yes
Stream:	Fishing Creek
Stream Restoration Length (ft):	1,700
Cost (\$)	510,000

### Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	76,296
Cost (\$) / lb	6.68

### Description

Stream Restoration of Fishing Creek in Goldsboro Borough. Project to be completed in conjunction with Project #34 – 138 South York Street (Fishing Creek) Riparian Buffer.



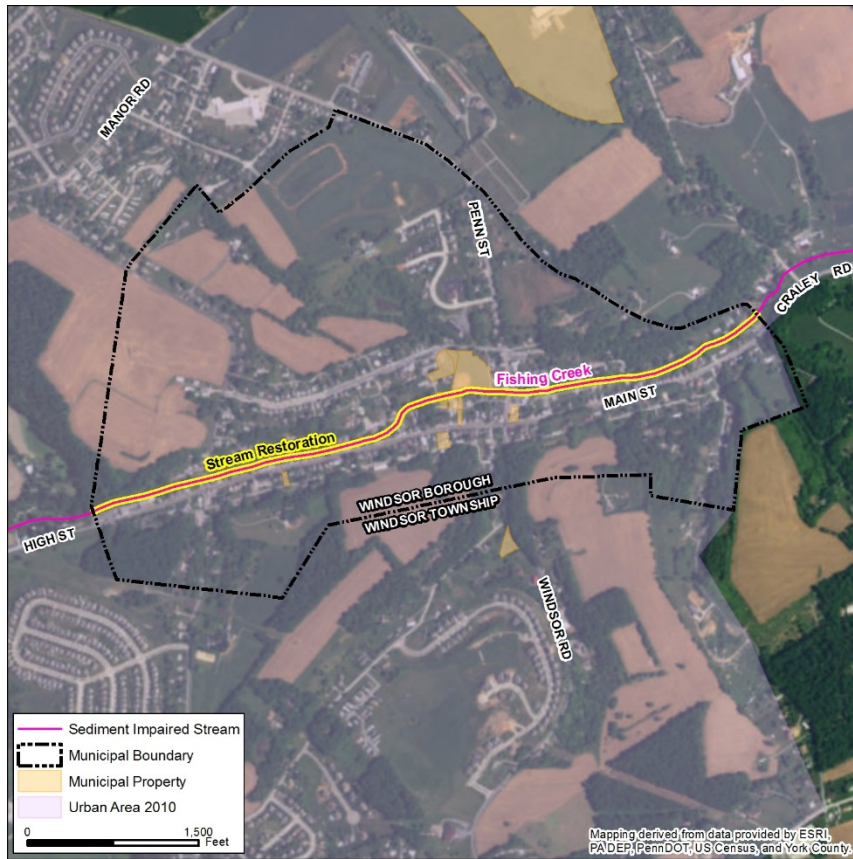
### Notes

Borough received a Local BMP Implementation Grant from PA DEP.

# Fishing Creek Study – Stream Restoration

Stream Restoration / Riparian Buffer

Windsor Borough



## General

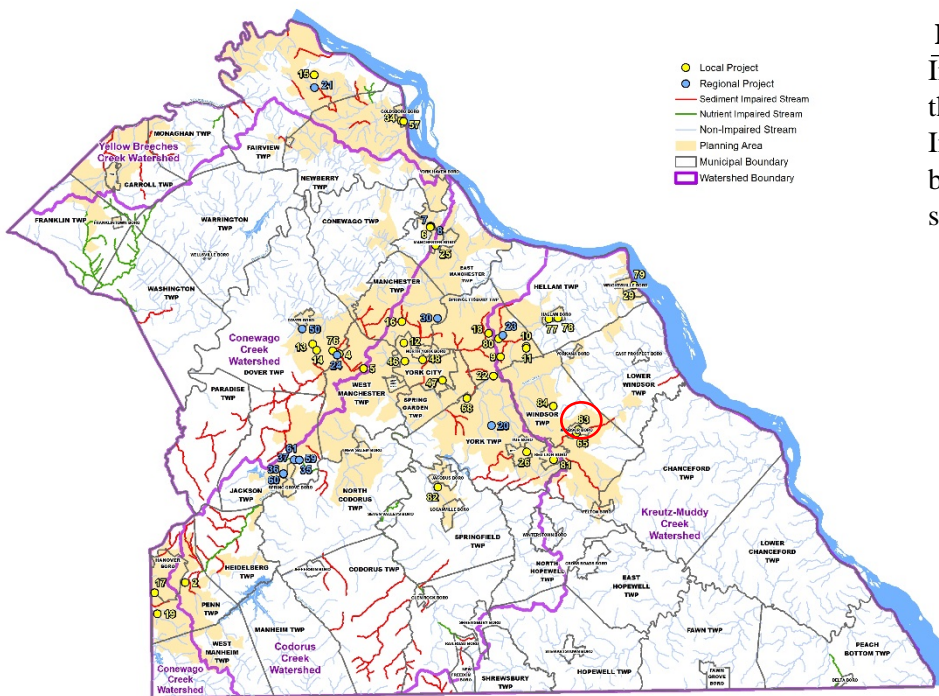
Ownership:	Private
Secured Funding:	No
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Impaired Stream:	Fishing Creek (TSS)
Stream Restoration Length (ft):	6,700
Cost (\$)	2,010,000

## Pollutant Load Reduction

Stream Restoration	
TSS (lbs/yr):	300,696
Cost (\$) / lb	6.68

## Description

Improvements to Fishing Creek through the entire Borough (approx. 6,700 LF). Improvements will include planting buffers, filtering practices, and stream stabilization measures.



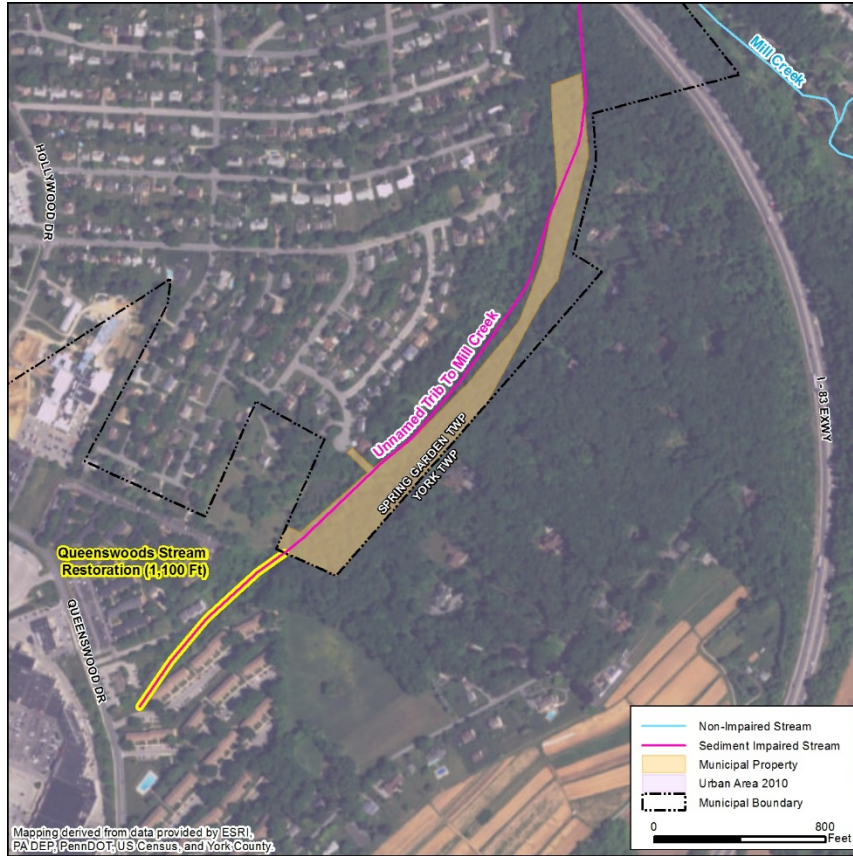
## Notes

This project will involve PADEP General permits and possibly a NDPES permit. The ACOE is currently conducting a preliminary study of the entire creek corridor through the Borough to determine whether it is a worthy project additional funding for detailed design.

# Queenswood Improvements

## Stream Restoration

### York Township



### General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Tributary to Mill Creek (TSS)

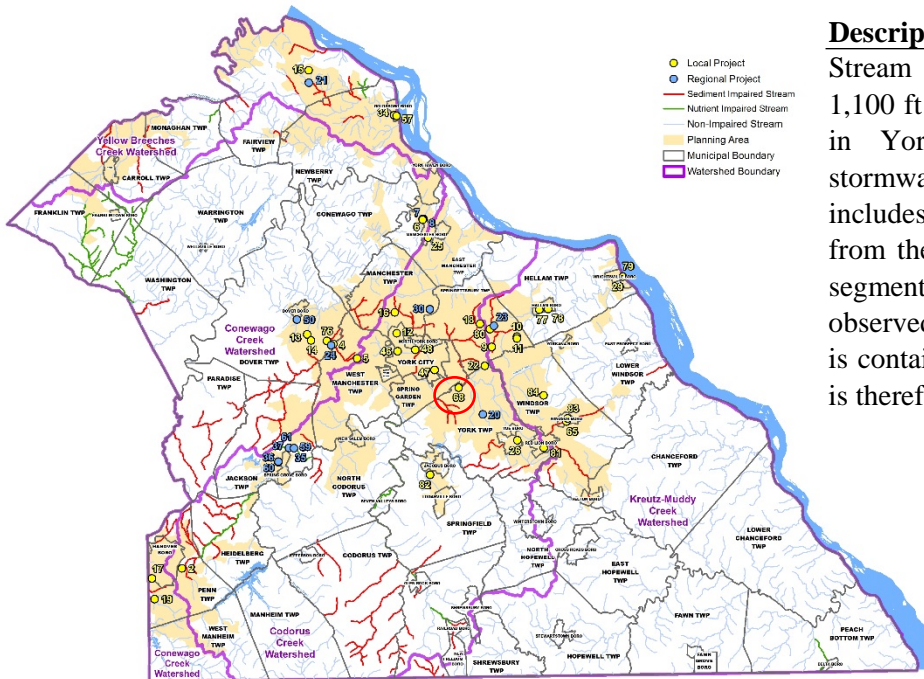
Stream Restoration Length (ft):  
 York Twp. 1,100

Cost (\$) 330,000

### Pollutant Load Reduction

Stream Restoration TSS (lbs/yr): 49,368

Cost (\$) / lb 6.68



### Description

Stream restoration is planned for approximately 1,100 ft along an impaired tributary to Mill Creek in York Township. This tributary receives stormwater runoff from a large drainage area that includes a significant amount of impervious area from the Queenswoods Shopping Plaza. Multiple segments of highly-eroded streambank were observed during a field visit to the site. The stream is contained within a sanitary sewer easement and is therefore relatively easily accessible.

### Notes

# Danielle & Willpa Drives

Stream Restoration

Dover Township



## General

Ownership:	Private
Secured Funding:	Yes
Designs:	No
Watershed:	Conewago Creek
NPDES Permit req.:	Yes
Impaired Stream:	Unnamed Tributary to Little Conewago Creek (pathogens)

Stream Restoration Length (ft):	
York Twp.	800

Cost (\$)	240,000
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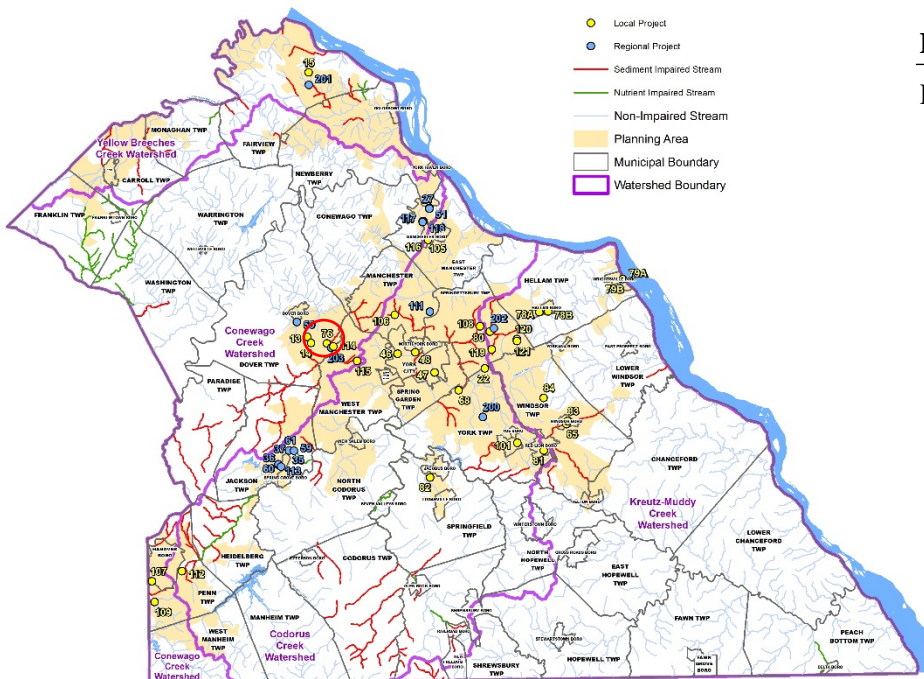
## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	35,904
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Cost (\$) / lb	6.68
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## Description

Restoration of 800 feet of stream.

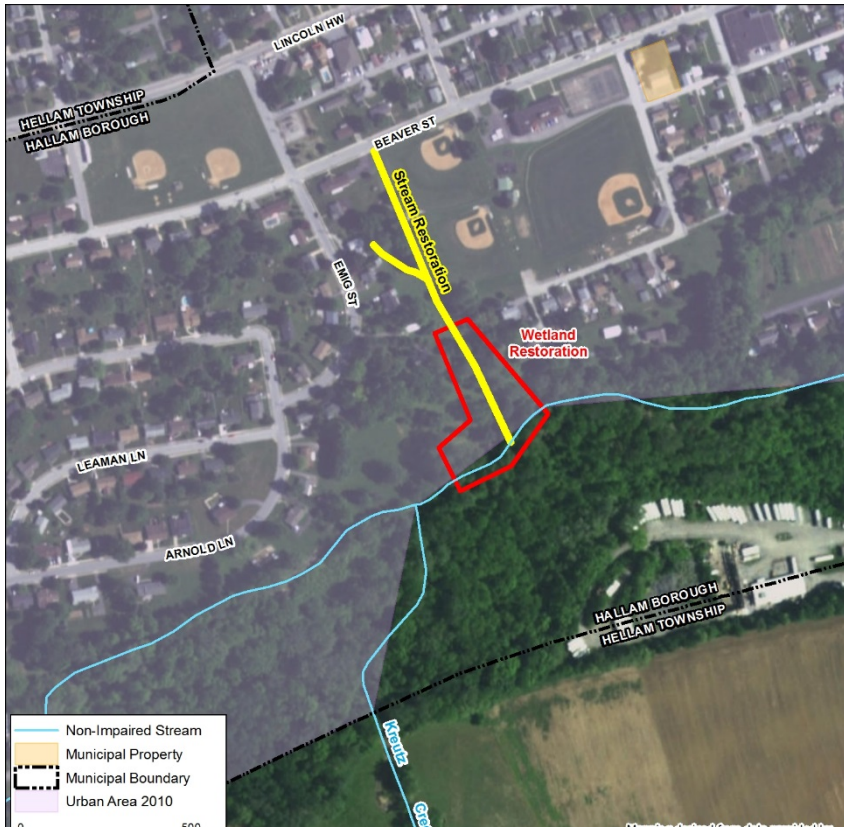


## Notes

Partial funding secured from the YCSWC (\$42,000). Balance of project cost to be paid by the Township.

# Beaver Street Swale Restoration

Swalw Restoration / Wetland Restoration  
Hallam Borough



## General

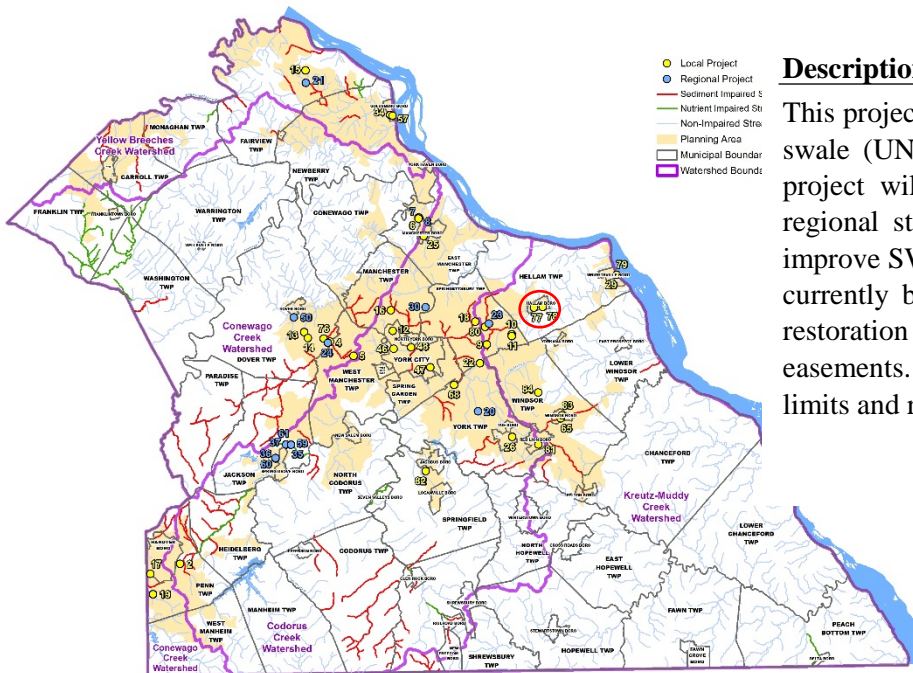
Ownership:	Public/Private
Secured Funding:	No
Designs:	No
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Stream:	Unnamed Trib to Kreutz Creek
Stream Restoration Length (ft):	795
Wetland Restoration Area (acres):	2.0

Cost (\$) 739,676

## Pollutant Load Reduction

Stream Restoration TSS (lbs/yr):	35,680
Wetland Restoration TSS (lbs/yr):	1,908
Total	37,588

Cost (\$) / lb 19.68



## Description

This project includes restoration of 795 feet of drainage swale (UNT of Kreutz Creek) in two segments. The project will stabilize the immediate system, provide regional stabilization and water quality benefits, and improve SWM conditions. This portion of the project is currently being designed and permitted. The wetland restoration is still a possibility, but will require easements. This portion of the project will depend on the limits and route of the restored swale/stream.

## Notes

The YCSWC has awarded \$82,000 for this project; of which up to \$20,000 can be used for design.

# Restoration of Kreutz Creek

Stream Restoration  
 Hallam Borough



## General

Ownership:	Public
Secured Funding:	No
Designs:	No
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Stream:	Kreutz Creek

Stream Restoration Length (ft)	
Kreutz Creek:	6,000

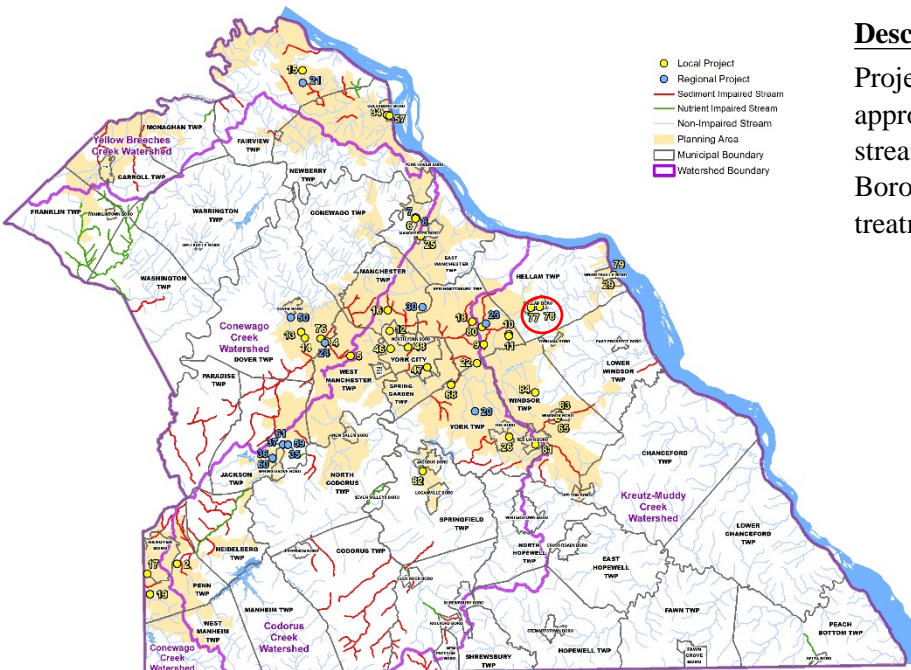
Cost (\$)	1,800,000
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## Pollutant Load Reduction

Stream Restoration	
TSS (lbs/yr):	269,280
Cost (\$)/lb	6.68

## Description

Project includes stream restoration of approximately 6,000 feet of Kreutz Creek. The stream restoration will extend from the western Borough boundary to just past the wastewater treatment plant.



## Notes



**Riverfront Park GI Plan**  
 Bioretention Basin #2, Bioswale #2  
 Wrightsville Borough



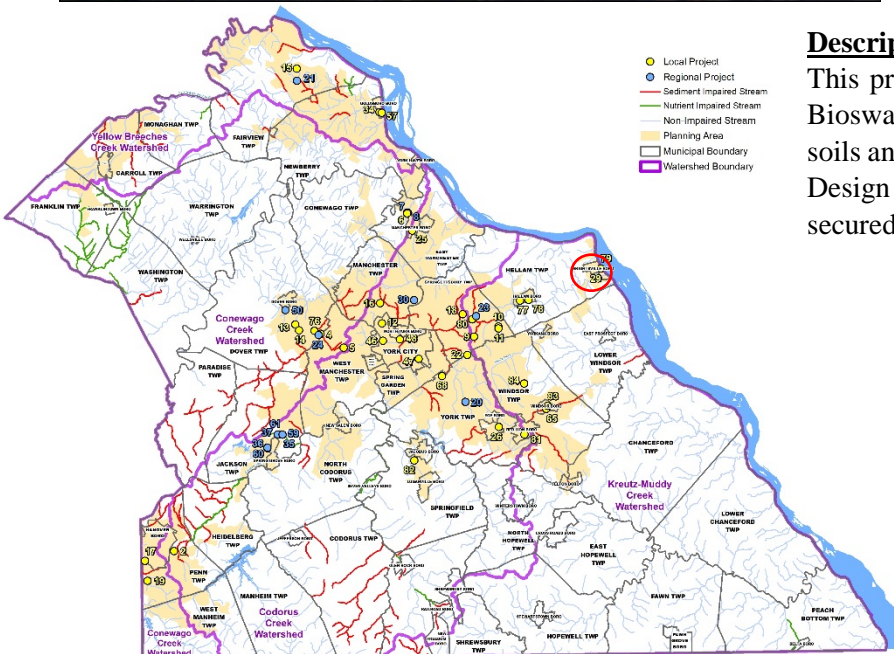
**General**

Ownership:	Public
Secured Funding:	Yes
Designs:	Yes
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Waterway:	Susquehanna River

Bioretention Basin #2 and Bioswale #2	
Basin footprint (acres):	0.1
Basin drainage area (acres):	11.9
Cost (\$)	250,000

**Pollutant Load Reduction**

Bioretention TSS (lbs/yr):	4,875
Cost (\$)/lb	51.28



**Description**

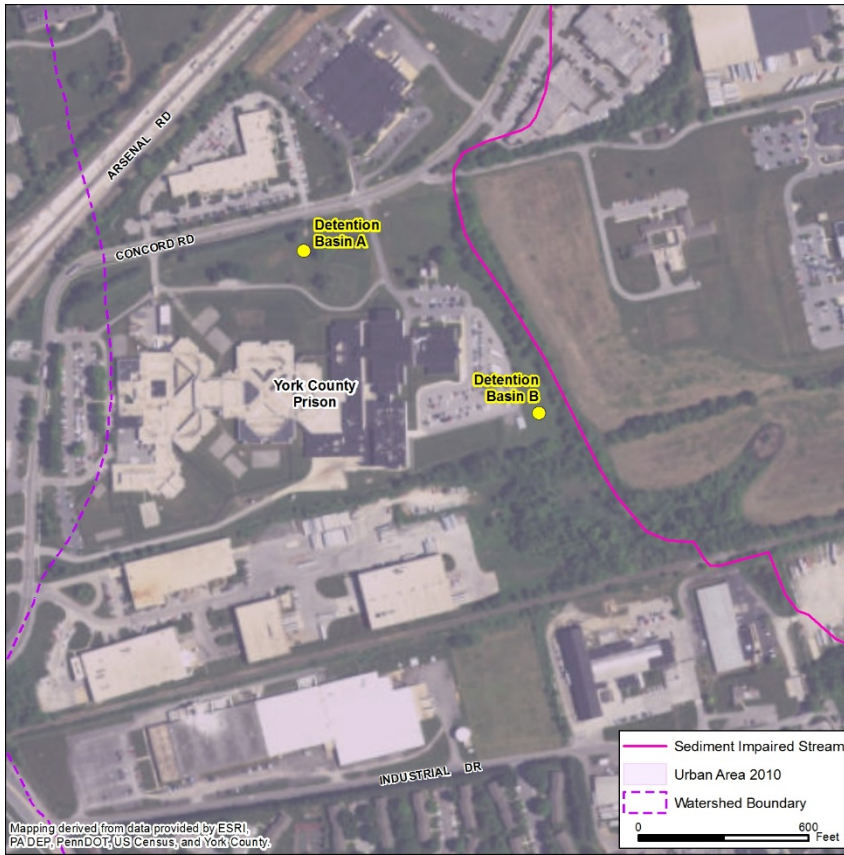
This project includes construction of Basin #2 and Bioswale #2. Design of the basin includes amended soils and planting of native trees, shrubs and seeding. Design and permitting is completed and funding is secured.

**Notes**

Project designed in 2014 by LandStudies using NFWF grant funds. All permits are in hand. Project is located in Riverfront Park. Secondary benefits are park improvement, reduced flooding, and educational opportunities.

# Prison Property SW Fac Upgrade

Basin Retrofits (2)  
 Springettsbury Township



## General

Ownership:	Public
Secured Funding:	Yes
Designs:	No
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Closest downstream impaired waterway:	Unnamed Trib to Kreutz Creek (TSS)

## Basin Retrofits

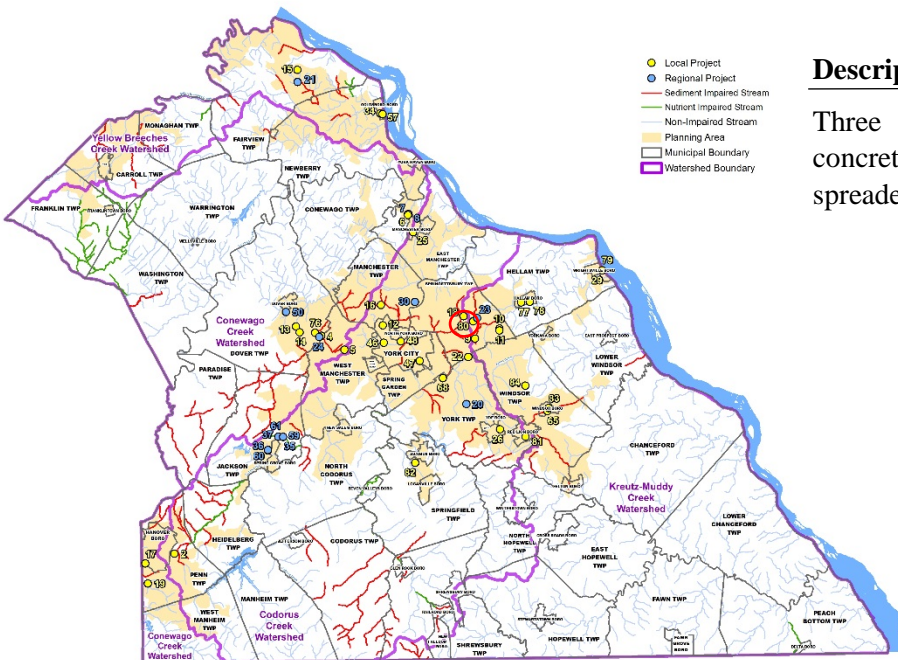
Basin footprints (acres)	1.1
Basin drainage areas (acres)	35

Cost (\$)	33,747
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## Pollutant Load Reduction

Basin Retrofits TSS (lbs/yr):	10,533
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Cost (\$) / lb	3.20
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## Description

Three (3) stormwater basin retrofits, removal of concrete low flow channels, installation of level spreader, and modification of existing eroded swale.

## Notes

This is a York County project. The County received a \$200,000 Local Stormwater BMP Implementation Grant from PA DEP to design and construct the project.

# Horace Mann Ave BMP #1

Bioretention  
 Red Lion Borough



## General

Ownership:	Public
Secured Funding:	Yes
Designs:	No
Watershed:	Codorus Creek
NPDES Permit req.:	No
Closest downstream impaired waterway:	Unnamed Trib to Barshinger Creek (TSS)

## Bioretention Basin

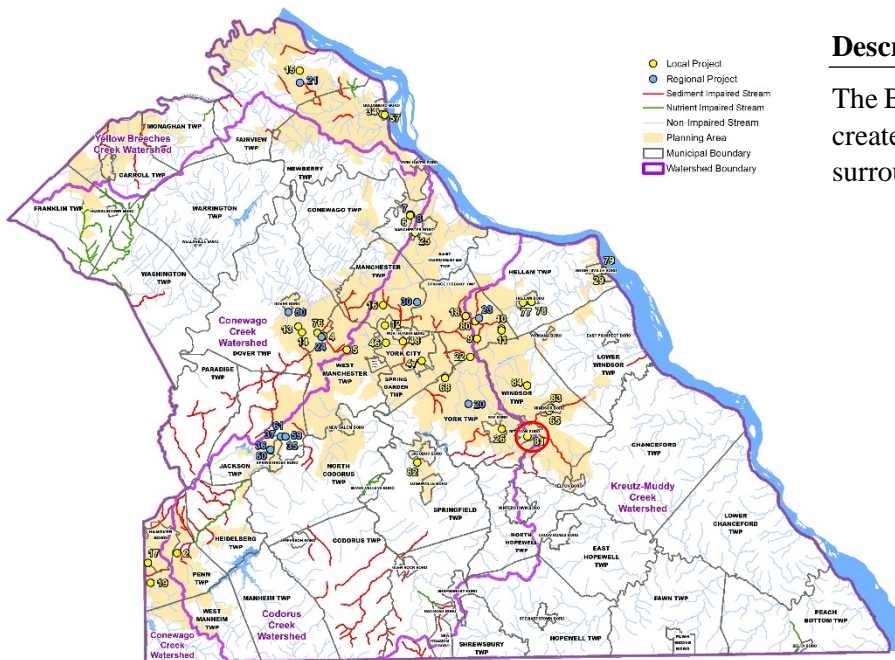
Basin footprint (acres)	0.13
Basin drainage area (acres)	1.9

Cost (\$)	13,892
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	779
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Cost (\$) / lb	17.83
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## Description

The Borough is working with the School District to create bioretention beds to take runoff from the surrounding properties and streets.

## Notes

This work is intended to be made part of the street resurfacing and storm sewer upgrades for Horace Mann Avenue. The partnership with the School District will allow the construction of a highly visible project that can be used for educational purposes.

# Ensminger Drive Swale Rehabilitation

Swale Retrofit  
 Springfield Township



## General

Ownership: Public/Private  
 Secured Funding: Yes  
 Designs: Yes  
 Watershed: Codorus Creek  
 NPDES Permit req.: Yes  
 Closest downstream impaired waterway: Unnamed Trib to Barshinger Creek (TSS)

Vegetated Swale  
 Stabilization Length (ft) 200

Cost (\$) 200,000

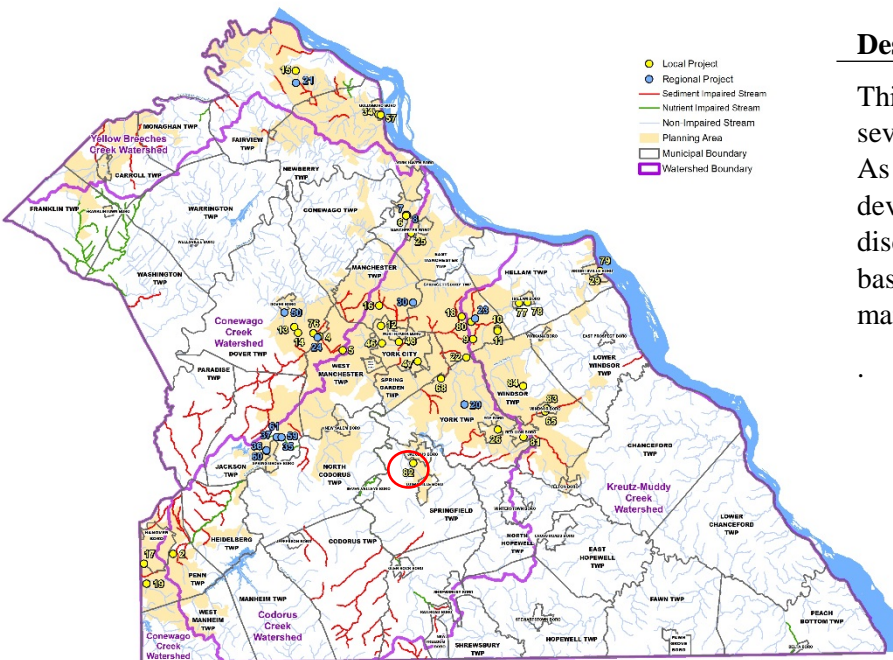
## Pollutant Load Reduction

Swale Stabilization (lbs/yr): 20,110

Cost (\$) / lb 9.79

## Description

This project will include the stabilization of a severely eroded swale in Springfield Township. As was common in the 1960s and 70s, the entire development drains to a few inlets which discharge directly to this swale. No stormwater basin or other control facility was installed to manage this flow.

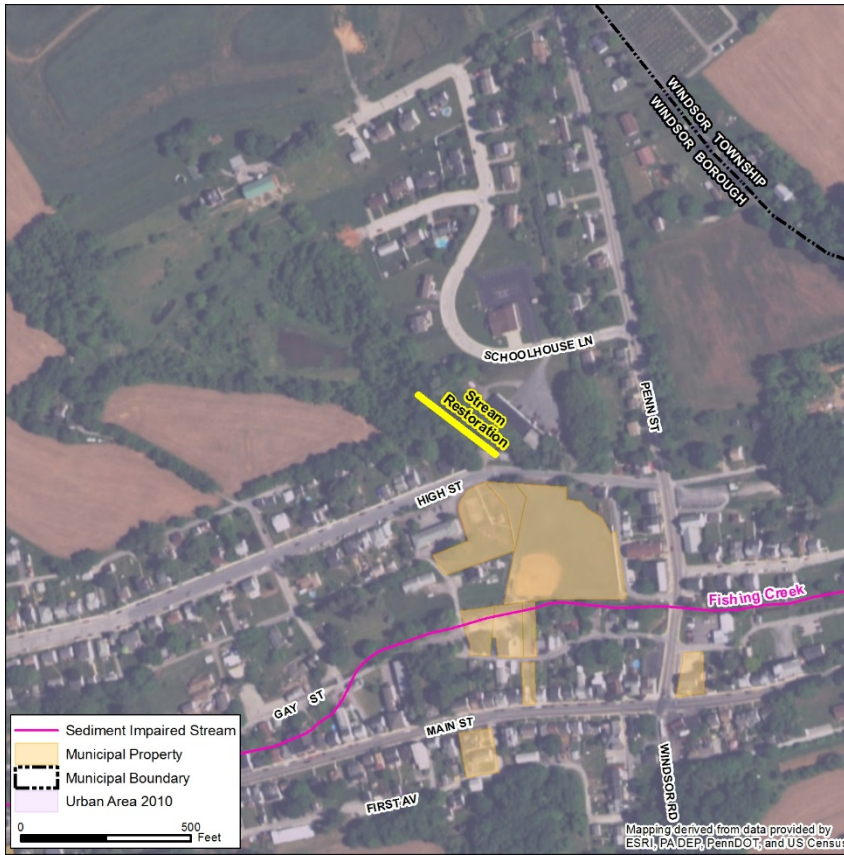


## Notes

All required permits are in hand. Township paid for design and contributed construction funds. The YCSWC also awarded \$82,299 of funding for construction.

# Stream/Drainage Improvement – Lions Club Property

Stream Restoration  
 Windsor Borough



## General

Ownership:	Private
Secured Funding:	No
Designs:	No
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	Yes
Impaired Stream:	Fishing Creek (TSS)
Stream Restoration Length (ft):	285

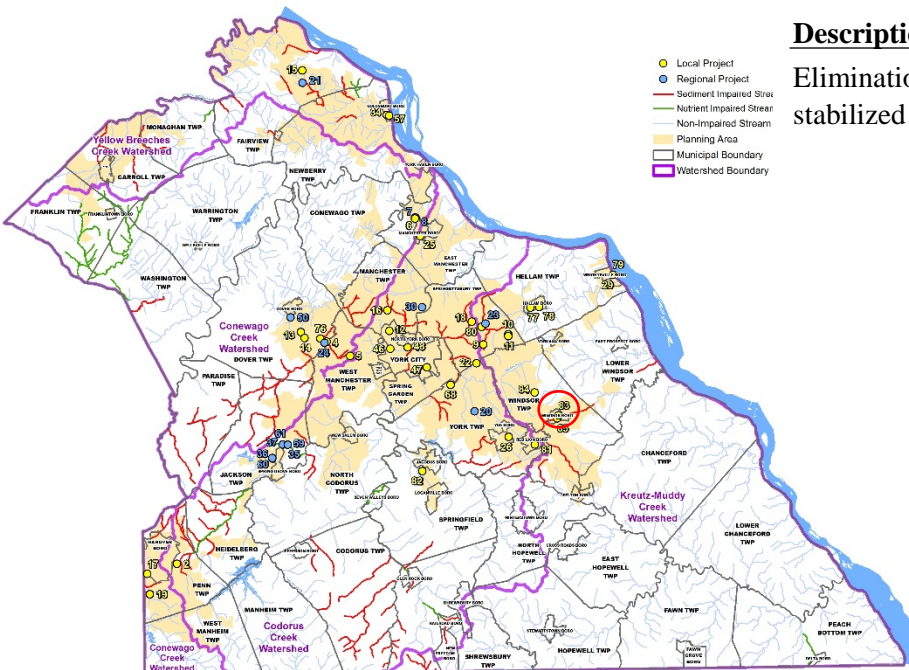
Cost (\$)	85,500
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## Pollutant Load Reduction

Stream Restoration	
TSS (lbs/yr):	12,791
Cost (\$) / lb	6.68

## Description

Elimination of a deteriorated CMP and creation of a stabilized stream channel.



## Notes

This project would improve the ground of the local Lions Club. At present the area around the deteriorated CMP is very wet most of the time. The creation of a stabilized drainage channel through this area would capture additional stormwater and potentially dry up some of the unusable areas.

# Milner Heights Basin Retrofit

Basin Retrofit  
 Windsor Township



## General

Ownership:	Private
Secured Funding:	Yes
Designs:	Yes
Watershed:	Kreutz-Muddy Creek
NPDES Permit req.:	No
Closest downstream waterway:	Unnamed Trib to Cabin Creek

## Basin Retrofit

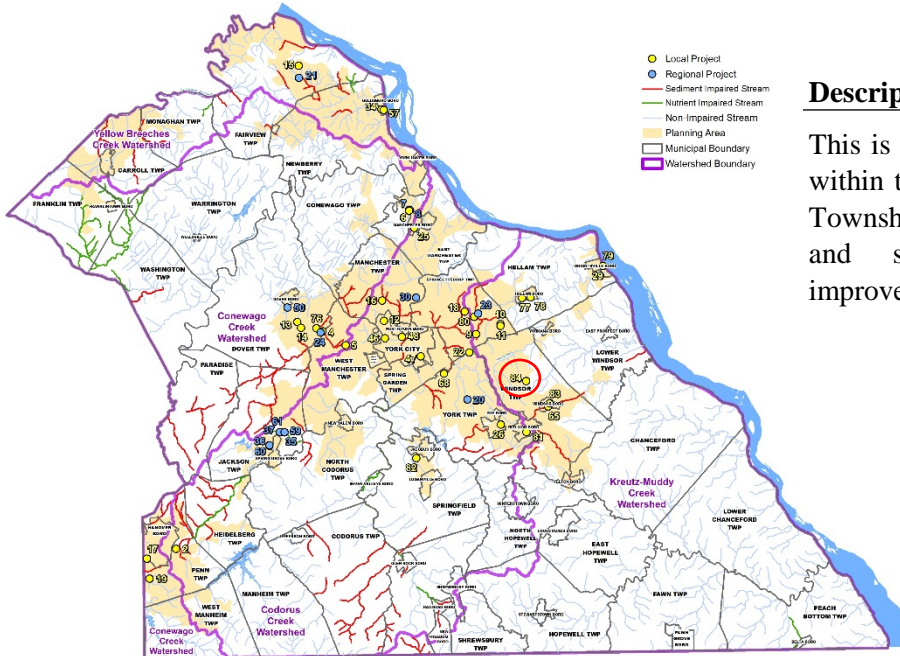
Basin footprint (acres)	1.0
Basin drainage area (acres)	42

Cost (\$)	30,000
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## Pollutant Load Reduction

Basin Retrofit TSS (lbs/yr):	12,469
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Cost (\$) / lb	2.37
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## Description

This is a retrofit of an old stormwater basin located within the Milner Heights Development in Windsor Township. The project would add native plantings and sediment forebay for water quality improvements.

## Notes

Basin is privately owned and the Township has entered into an operation and maintenance agreement with the property owner. All design work is complete and no permits will be required. Windsor Township and Red Lion Municipal Authority split the cost of design equally to get the project moving.

APPENDIX VIII

BMP Short List





Project Name	Location	Project Type	Length (ft)	Drainage Area (acres)	Area (acres)	Pollutant Reduction TSS (lbs/yr)	
Conewago Creek Watershed							
27	Creek Bottom Rd Forest Buffer	East Manchester Twp.	Forest Buffer	n/a	n/a	7.38	2,620
28	Dover Township Public Works Facility	Dover Twp.	Basin Retrofit	n/a	9.0	n/a	2,704
51	55-95 Creek Bottom Rd (Musser Run)	East Manchester Twp.	Stream Restoration	650	n/a	3	30,743
Codorus Creek Watershed							
1	Broad Street Greenway	York City	Bioretention	n/a	6.34	0.03	2,641
3	Campus Ave Stream Restoration Extension of Proj. 61 (UNT W Br Codorus Creek)	Spring Grove Boro	Stream Restoration	1,250	n/a	n/a	56,100
31	Bridgewater Stream Restoration	York Twp.	Stream Restoration	3,968	n/a	n/a	178,084
42	Barshinger Run Stream Restoration (IWLA/ARRC Project)	York Twp.	Stream Restoration	2,000	n/a	n/a	89,760
85	York City Industrial Park	York City	Stream Restoration	2200	n/a	n/a	98,736
Kreutz-Muddy Creek Watershed							
45	Pine Run Stream Restoration	Windsor Twp.	Stream Restoration	1,350	n/a	n/a	60,588
<b>Total</b>						<b>521,976</b>	



**APPENDIX IX**

**Intergovernmental Cooperation Agreement**



**AMENDED AND RESTATED INTERGOVERNMENTAL  
COOPERATION AGREEMENT  
FOR THE IMPLEMENTATION OF THE  
YORK COUNTY REGIONAL CHESAPEAKE BAY  
POLLUTANT REDUCTION PLAN**

THIS AGREEMENT is made this 16<sup>th</sup> day of September, 2017, by and among the York County Planning Commission (“YCPC”) and the municipalities executing this Amended and Restated Intergovernmental Cooperation Agreement for the Implementation of the York County Regional Chesapeake Bay Pollutant Reduction Plan (“Agreement”)(collectively, the “Participants” or the “York County Stormwater Consortium” or the “Consortium”)(the YCPC and each Participant shall individually be referred to as a “Party” and shall collectively be referred to as the “Parties”). The list of Participants is included as Attachment “B” hereto, and shall be updated by Addendum as necessary.

This Intergovernmental Cooperation Agreement (the “Agreement”) is authorized and required pursuant to applicable law, including, but not limited to, 53 Pa.C.S. §2303.

**BACKGROUND**

A. Municipalities that are designated to hold a Pennsylvania Department of Environmental Protection (“DEP”) MS4 Permit (regarding stormwater discharges) are required to prepare and implement pollutant reduction plans (each a “PRP” or collectively the “PRPs”) including a Chesapeake Bay Pollutant Reduction Plan (the “CBPRP”) (except those Municipalities that have received an advanced waiver and if they later receive a full waiver); and

B. YCPC has led a group of interested municipalities through the process of developing a Regional CBPRP (the “Regional Plan”), as an alternative to each of the local government units developing their own PRPs; and

C. Certain Best Management Practices (“BMPs”) are designed to control stormwater and improve water quality, and are required to be implemented as part of a PRP; and

D. BMPs or BMP projects require capital expenditures, in some cases, significant capital expenditures; and

E. Participants desire to cooperate to effectuate the cost effective installation of BMPs in order to accomplish annual reduction(s) of nitrogen, phosphorous and sediment discharges into the Waters of the Commonwealth, as that term is defined in the Pennsylvania Clean Streams Law, 35 P.S. §691.1, in York County; and

F. As set forth in this Agreement, all Participants shall share in the cost to implement stormwater and water quality Best Management Practices Projects (individually referred to as a “BMP Project” or collectively “BMP Projects”) that are selected by the Participants in accordance with the terms of this Agreement; and

G. The amount of annual financial contribution expected of each Participant is calculated based upon an agreed-upon formula set forth herein; and

H. Participants that hold a MS4 Permit shall be able to be credited for the pollutant reductions achieved by construction of the BMP Projects in the Regional Plan. Such pollutant reductions shall be reported to DEP in the MS4 Status Report (the “Annual Report”); and

I. The content of the Regional Plan, including BMP Project selection and the level of funding for each BMP Project, shall be determined by the Participants as set forth herein; and

J. The Regional Plan approved by DEP, including any subsequent revisions/amendments thereto, is incorporated by reference herein; and

K. The purpose of this Agreement is to set forth the Parties’ agreement as to how the Parties will cooperate to implement and revise the Regional Plan, how the Parties will interact with the regulatory agencies regarding MS4 permit requirements, and how the Consortium will be governed, the process to withdraw, and the obligations of each Participant and the YCPC; and

L. The Parties agree and acknowledge that nothing in this Agreement, nor the resultant actions here from, shall limit, prevent, or interfere with any Participant's responsibility to comply with applicable Pennsylvania law and regulation, Federal law and regulation, applicable regulatory agency rules and policies, permit requirements, DEP directives, or United States Environmental Protection Agency directives, and local ordinance; and

M. Many of the Participants were a party to the prior Agreement, entitled Intergovernmental Cooperation Agreement for the Implementation of the York County Regional Chesapeake Bay Pollutant Reduction Plan dated September 21, 2014 (the "Original Agreement") which is being amended and restated by this document.

N. All Participants shall adopt an Ordinance and take all necessary action to approve this Agreement and to effectuate their participation.

INTENDING TO BE LEGALLY BOUND, THE PARTIES AGREE AS FOLLOWS:

1. **Background.** All of the Background paragraphs hereto are incorporated herein by reference as if fully set forth at length.

2. **Guiding Principles.**

a. The Parties have a mutual interest in protecting the Waters of the Commonwealth, and restoring the impaired waters of the County. The Parties commit to cooperate to implement a Regional Plan that identifies and funds cost effective BMP Projects to meet the required reductions of nitrogen, phosphorous and sediment entering the Waters of the Commonwealth in York County, Pennsylvania as efficiently as possible.

b. The Parties agree that priority will be given to BMP Projects located on or upstream of an impaired stream in the Planning Area identified in the Regional Plan. Only the Regional Committee, as defined herein, may revise the Regional Plan to modify the BMP Summary List, funding plan or other plan components. Any changes to the Regional Plan shall assure that MS4

Permit PRP requirements, including, but not limited to sediment reduction and BMP project funding continue to be satisfied.

3. **Organization.**

a. **Participant Representation.** Each Participant shall designate a primary voting representative and an alternate to serve as the contact person(s) on all matters related to the Regional Plan. The name of and contact information for the representative and alternate shall be provided to the YCPC in writing, as well as any subsequent changes.

b. **Regional Committee.** The Regional Committee shall consist of the representatives designated by the Participants pursuant to Paragraph 3(a) above. The alternate shall be entitled to fully participate in all Committee meetings, but may vote only when the designated representative is unavailable.

c. **Management Committee.**

(i) Members. The Management Committee shall consist of seven (7) voting representatives (primary voting representatives only) from the Regional Committee and the designated representative of the YCPC to serve as Administrator for the Consortium (the “Administrator”). No less than five (5) members of the Management Committee shall be representatives of Participants that have MS4 Permits. The Administrator shall be a participating but non-voting member of the Management Committee.

(ii) Election of Management Committee Members. The members of the Management Committee shall be elected at the Annual Meeting where a Quorum (as defined below) is present. The Administrator shall solicit for volunteers interested in serving on the Management Committee from all primary voting representatives at least forty-five (45) days prior to the Annual Meeting. The Administrator shall issue a slate of eligible (i.e. voting primary representative from



Participant jurisdiction) and willing volunteer Management Committee candidates to all designated Participant representatives no less than fifteen (15) days prior to the Annual Meeting. Each Participant present at the Annual Meeting shall be entitled to one (1) vote for each vacancy on the Management Committee. Those nominated to serve on the Management Committee and receiving the highest number of votes shall be elected to the Management Committee. Voting cards, or another means acceptable to a majority of the Participants present at the Annual Meeting, shall be utilized and continue until all ties are broken.

(iii) Management Committee Term. The Management Committee members shall serve a term of one (1) year, to begin on January 1 after election at the Annual Meeting, and which term shall expire on the following December 31 of that same calendar year. There is no limit to the number of terms that members may serve.

(iv) Management Committee Vacancy. Where a Management Committee member vacates his or her position prior to the end of the term, the Management Committee is authorized to unilaterally appoint an eligible Participant representative to fill the vacancy for the remainder of the term (i.e., December 31 of that year).

d. **Officers** - Members of the Management Committee shall elect officers, to include a Chair, Vice-Chair, Secretary and Treasurer. Those Officers shall perform the duties necessary to implement this Agreement and as generally envisioned by *Robert's Rules of Order*, latest edition. Generally, the Officers shall be responsible as follows:

(i) Chairperson – shall run the Management and Regional Committee meetings with the Administrator;

(ii) Vice-Chairperson – shall fill in for Chairperson, when requested, and serves at the discretion of the Chairperson;

(iii) Secretary – shall ensure that meeting minutes of the Management and Regional Committees are accurate and retained as a record; and

(iv) Treasurer – shall ensure that Consortium funds are disbursed in a timely fashion for legitimate expenses related to implementation and administration of the Regional Plan, and as approved by the Management and/or the Regional Committees.

The Officers shall serve a term of one (1) year, to begin on January 1, and which term shall expire on the following December 31 of that same calendar year. There is no limit to the number of terms that a representative may serve as an Officer on the Management Committee.

e. **Administration.** Staff of the YCPC will administer the activities of the Regional Committee and Management Committee at the direction of the Management and Regional Committees. The following are tasks that shall be undertaken and the responsibility of the YCPC, for which reimbursement shall be provided from the Consortium funds:

(i) Preparation and circulation to all Participants of minutes from all Regional Committee, Management Committee, and Subcommittee meetings.

(ii) Arrange, plan, and coordinate all Regional Committee, Management Committee, and Subcommittee meetings and/or conference calls.

(iii) Ensure that all applicable notice requirements are satisfied and advertisements are drafted and published as required by applicable laws, including, but not limited to, the Pennsylvania Sunshine Act.

(iv) Oversee, and administer BMP Projects funded by the Consortium to ensure funds are being spent as approved, on approved projects or project elements.

(v) Pay appropriate invoices submitted for BMP Projects approved for funding by the Regional Committee, following approval of the invoice by the Management Committee.

(vi) Draft any revisions to the Regional Plan for circulation and review by the Regional and Management Committees. Administer any such revisions.

(vii) Prepare all draft Regional Plan documents, revisions, updates, and any content requirements, as determined and directed by the Management Committee for approval thereafter by the Regional Committee for submission to DEP.

(viii) Prepare the MS4 CBPRP Annual Report related to and/or for the York County Regional CBPRP that is required in draft for review and approval by the Regional Committee. Finalize and aid in the submission of the MS4 CBPRP Annual Report as directed by the Regional and Management Committees prior to the designated due date, as determined by DEP.

(ix) Calculate the Annual Contribution for each new Participant (in accordance with the Contribution Formula in Section 7.a.(ii) and as reflected in Attachment "A" (and any subsequent addenda to this Attachment) and issue an annual invoice to every Participant no later than January 31 for the current calendar year of the Term.

(x) Collect all Annual Contributions from Participants and deposit all Annual Contribution funds into the Consortium Account, as described herein.

(xi) Manage and administer Consortium funds paid and deposited in the Consortium Account.

(xii) Retain all records, as that term is defined by the Pennsylvania Right-to-Know Law, for the time period required by applicable law or funding source but

not less than six (6) years. Such records related to the Regional Plan and the activities undertaken pursuant to this Agreement shall be available for review and copying by any Participant at the YCPC offices, upon submission of written request no less than five (5) business days prior to the desired date of review. Such written notice by a Participant is not required to comply with the then current Pennsylvania Right- to- Know Law.

(xiii) Prepare or cause to be prepared an annual:

- (1) Financial Report of the Consortium funds and all expenditures;
- (2) Progress Report related to all approved BMP Projects.

(xiv) Notify all Participants in writing of each Participant that has not paid the assigned annual financial contribution no later than September 30 of each calendar year.

(xv) Assist in identifying grant funding that can be used to fund implementation of the Regional Plan and/or the actions and activities (excluding Administration) undertaken pursuant to this Agreement.

(xvi) Solicit project status reports, Final Reports for each completed Project, and suggested revisions to the BMP Summary List from all Regional Committee members and Participant jurisdictions at least 90 days prior to the Annual Report deadline.

(xvii) Provide summaries of interactions with DEP or other regulatory agencies regarding the implementation of this Agreement.

(xviii) Undertake other actions that may be necessary or convenient to implement the provisions of this Agreement.

4. **Meetings.**

a. Annual Meeting - There shall be an annual meeting of the Regional Committee (the “Annual Meeting”). The Annual Meeting shall occur following advance written notice to the Municipal representative and alternate of no less than thirty (30) days. Such Annual Meeting notice shall be provided by the Administrator to all Participants in accordance with this Agreement, and such notice may be provided by regular mail, facsimile or email using the contact information provided by each Participant. The Annual Notice will specify the time, place and agenda for the Annual Meeting.

b. The following business shall be conducted at the Annual Meeting:

(i) Vote on BMP Projects to fund for the following calendar year, provided the Regional Committee shall not de-fund a multi-year project where construction has begun. If a funding matter arises during the course of the year, it can be considered by the Regional Committee at a Regular Meeting.

(ii) Presentation of the Annual Financial Report provided by YCPC.

(iii) Presentation of the Status of Funded Projects Report provided by YCPC.

(iv) Participant Update shall be presented by the Management Committee or the Administrator.

(v) Review and approval of proposed budget prepared by the Administrator and Management Committee for the following calendar year.

(vi) Presentation of annual update by Subcommittees.

(vii) Establish dates for the quarterly Regular Regional Committee Meetings (referenced in Section 5.b. below), one of which shall serve as the Annual Meeting, for the following calendar year (currently during the months of February, May, August and November).

(viii) Elect the members to the Management Committee, which election shall occur as set forth in Section 3.c. above.

(ix) Authorize that an audit be conducted in the upcoming year upon close out of the current year.

(x) Other business, as determined by the Management Committee, the Administrator, and/or the Participants.

c. Except as otherwise provided herein, all voting shall be completed by voting cards or another means acceptable to a majority of the Participants at the Annual Meetings and decisions shall be based on a simple majority vote of Regional Committee Participants in attendance.

Each Participant in attendance shall be entitled to one (1) vote on all matters addressed at the Annual Meeting and for which a vote is taken.

d. Regular Regional Committee Meetings –

(i) The Regional Committee shall meet quarterly to conduct business related to the Regional Plan and Annual Report (the “Regular Meetings”), unless such meeting is cancelled or the date or location is moved by the Management Committee (by simple majority vote of four (4) Management Committee members, which vote can be cast via electronic communication). Business at the Regular Meetings shall be approved by a simple majority vote of those in attendance at the meeting.

(ii) In addition to Regular Meetings, as set forth in (i) above, the Management Committee, or a majority of the members of the Regional Committee, may call for a Regional Committee meeting for any purpose arising from or related to this Agreement. Such meetings shall occur following advance written notice of

no less than fifteen (15) calendar days, which notice shall be provided to all Participants by the Administrator.

e. Quorum. A quorum (50% of all Participants as represented by a voting representative) is necessary for the Regional Committee to take official action.

f. Participant Request. The Parties and the Administrator recognize that some Participants may request technical support and/or regulatory representation under certain circumstances and will consider those requests.

g. YCPC Staff. YCPC staff shall be authorized to attend and participate in all meetings referenced herein.

5. **Authority of Management Committee.** Except as otherwise provided herein, the implementation of the Regional Plan pursuant to this Agreement shall be managed and governed by the Management Committee. In addition to the duties and authority referenced elsewhere in this Agreement, the Participants hereby delegate such functions, powers and responsibilities set forth below to the Management Committee:

a. Authorize payment of submitted invoices. All procurement rules applicable to the participating Municipality shall be applicable to the BMP Projects undertaken pursuant to this Agreement. The Chairperson or Vice-Chairperson shall sign documents on behalf of the Management Committee. The Secretary or Treasurer shall attest those signatures.

b. Ensure funded BMP Projects are constructed as approved, payments for the work are within the approved scope of each Project, and that payments are issued timely to the Participants.

c. Review the Regional Plan as might be necessary or appropriate.

d. Review and vote on new Participant requests, including specified amount(s) for each new Participant, as prescribed by YCPC and/or Administrator.

- e. Administer this Agreement, as necessary, throughout Agreement term.
- f. Convene and appoint persons to serve on any Subcommittee deemed necessary by the Management Committee to fulfill the obligations, actions and activities required in this Agreement.

The Management Committee shall comply with laws applicable to the Participants, including, but not limited to, the Sunshine Act, the Right-to-Know Law and the Public Official and Employees Ethics Act, and any and all other applicable laws. All actions of the Management Committee shall be approved by a majority of its seven (7) voting members. Regional Committee members shall be entitled to attend meetings of the Management Committee, which shall occur no less than four (4) times per year or more frequently as needed, following advance written notice to all members of the Management Committee and Regional Committee by regular mail, facsimile or email.

6. **Implementation of Agreement.**

a. **Participants' Obligations.**

(i) The Participant jurisdiction in which any local level BMP Project on the BMP Summary List is located shall be responsible for the implementation of the BMP Project (including, but not limited to, design, permitting, construction, operation, monitoring, and long-term maintenance and monitoring). If a BMP Project is designated as regional on the BMP Summary List, a Participant or qualified third party (the "Project Sponsor") shall be designated by the Management Committee as responsible for its implementation. Participants may contractually transfer such obligations for design, construction, operation and long-term maintenance, and monitoring to qualified third parties, but the Participant jurisdiction where the BMP Project is located shall remain responsible to ensure that the contracted third parties are performing the required tasks satisfactorily. The



Participants' obligations and accepted liability to the other Parties to this Agreement shall remain with the Participant. Such long-term future obligations of operation, maintenance and monitoring of BMP Projects funded by the Consortium set forth in this provision shall survive opt out (Section 7.a.(ix)) and/or termination.

(ii) The Participant or Project Sponsor shall compile and timely submit any and all invoices related to funded BMP Projects to the YCPC, which will forward them to the Management Committee for review and approval for payment.

(iii) The Participant or Project Sponsor shall maintain the BMP Project documentation and submit copies of all records relative to the BMP Project, including the approved Stormwater Management BMP Operations and Maintenance Plan, annually, unless requested more frequently by the Administrator, to the Administrator, who will then update the Management Committee and all Participants on the status of the BMP Project. The Participant or Project Sponsor shall retain BMP Project documentation that qualify as "public records" under the then current Right-to-Know Law, for the time period required by applicable law or funding source but not less than six (6) years. Such records related to the Regional Plan shall be available for public review and copying at Participant or Project Sponsor office, upon submission of written request no less than five (5) business days prior to the desired date of review. The Participant or Project Sponsor shall also provide to YCPC the Final Report for completed Projects.

(iv) If a BMP Project, sponsored by a Project Sponsor, is to be implemented, such Project shall be subject to terms and conditions approved by the Management Committee and Administrator. The Management Committee and

Administrator will seek to develop a form of agreement to be used in such instances. Where a Participant does not have a Regional Plan BMP Project in its jurisdiction, that Participant shall not have any obligations as to that BMP Project pursuant to this Agreement and pursuant to its MS4 permit.

b. Enforcement Actions. The Regional Committee shall meet to consider any final compliance or enforcement action (including the pursuit of a civil penalty, Order, or any other compliance notice or action) if taken by either the Commonwealth or the Federal Government in any way related to the Regional Plan, or implementation actions and activities undertaken pursuant to this Agreement and the relevant Participant permit requirements. The Regional Committee shall consider, among other things, whether any one (1) or more Parties are responsible for the alleged violation(s), and determine what the Consortium's response action(s) shall be. Where the Administrator, YCPC, or the Management Committee become aware of a potential compliance issue or question, the Administrator shall send written notice to all Participants within three (3) business days, which notice shall include any and all correspondence (including hard, electronic, or telephone call notes/summary) from or with a regulatory entity (including, but not limited to, the York County Conservation District, DEP, the United States Environmental Protection Agency, and United States Fish and Wildlife Service). The Management Committee shall convene a special meeting of the Regional Committee in accordance with applicable law, and within ten (10) calendar days of issuance of the notice referenced herein. Under this provision and after an enforcement action becomes final, the Regional Committee may unilaterally terminate the Agreement as to any Participant, during a meeting where a Quorum is present and upon approval by a majority vote. Where this occurs, the terminated Participant(s)'

contribution(s) to date shall be retained by the Parties in the Consortium Account and is thereby forfeited by the terminated Participant(s).

7. **Financing.**

a. **Contributions by Participants**

(i). Annual Contribution. Unless a Participant opts out pursuant to Section 7.a.(ix), below, each Participant shall provide annual funding to the Consortium pursuant to this Agreement in the amounts set forth in the Cost Sharing Summary (“Annual Contribution”), which is attached hereto as Attachment “A” and incorporated by reference herein. So long as a Participant does not opt out, Annual Contributions shall be made by each Participant jurisdiction on an annual basis, as set forth herein, through the Term (as defined below) of this Agreement.

(ii) Contribution Formula. The Parties have agreed that Annual Contributions from each Participant jurisdiction that holds an MS4 Permit shall be calculated as follows:

A. = Lineal Miles of Impaired Streams in Participant Jurisdiction x \$13,261.2350 per mile\*

B. = 2010 Population per U.S. Census in Participant Jurisdiction x \$12.103711 per person\*

C. = Acres of Impervious Coverage in Participant Jurisdiction x \$ 221.61367 per acre\*

\* round result to a whole number; no decimals

Total Contribution Over Five Years = A + B + C

Annual Contribution = (A + B + C) / 5<sup>1</sup>

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<sup>1</sup> Lineal Miles of Impaired Stream in Participant Jurisdiction = 20% of contribution  
[\$2,547,057 / total miles of Impaired streams (192.0678) = cost/ mile]

Population in Participant Jurisdiction = 30% of contribution  
[\$3,820,585 / total population (315,654) = cost/ person]

Impervious Coverage (by acre) in Participant Jurisdiction = 50% of contribution  
\$6,367,642 / total impervious cover (28,733) = cost/acre]

(Cost/ mile x miles of impaired streams in PJ) + (Cost/ person x population in PJ) + (Cost/acre x acres of impervious cover in PJ) = Participant Jurisdiction Total Contribution over five (5) years

The Parties have also agreed that each Participant Jurisdiction that receives a full MS4 Permit Waiver or is a non-MS4 shall pay an equal share of the administrative cost. The Annual Contribution for each shall be \$1,591.00.

The formula for each Participant's Annual Contribution shall not be changed or revised through the Term (as defined below) of this Agreement, except as specifically set forth herein. However, the Annual Contribution may be adjusted using the formula, if there is a default by a Participant under the Agreement that would affect funding at large, if there is a reasonably anticipated funding or nutrient reduction gap, provided that such additional funding is believed by the Management Committee to be necessary to avoid a violation under the CBPRP, or if BMP projects in the Regional Plan are accomplished ahead of schedule and the Consortium is on track to meet the MS4 Permit pollutant reduction requirements.

(iii) Invoicing and Payment. Participants shall be invoiced by YCPC no later than January 31 of each calendar year, and the Participants' respective contributions shall be due either: (a) in full on or before April 30 of each year, or (b) half by April 30 and the remaining half by August 31 of each year.

(iv) Non-Appropriation. Failure to budget and timely pay the contribution invoice issued by YCPC shall result in:

(a) retention of Annual Contribution funds paid to date by the violating Participant jurisdiction by YCPC and the Consortium;

(b) unilateral termination of this Agreement as to the violating Participant jurisdiction, following final notice and reasonable opportunity to cure of no less than five (5) business days, which shall be provided in writing by YCPC to the violating Participant jurisdiction;

(c) submission of notice of termination as to the violating Participant jurisdiction to the PA DEP; and

(d) if any BMP Project located in the violating Participant jurisdiction was approved for funding by the Consortium and Regional Committee, those funds may be reallocated to other BMP Projects by the Regional Committee at the next Annual Meeting.

(v) Subsequent Participants (i.e. “opt in”). A local government jurisdiction may opt in, subject to approval of the Regional Committee, provided that it shall:

(a) contribute an Annual Contribution as calculated by the Administrator and approved by the Management Committee, which amount shall be the total of: application of the Contribution Formula to the jurisdiction for the full five-year term, divided by the number of years left on the Term of this Agreement. (For example, if a municipality would have owed \$500 over the Term of the Agreement (\$100/yr) based upon application of the Contribution Formula, and it opts in for the last 2 years of the Term, the municipality shall owe \$250/year as its Annual Contribution in years 4 and 5 of the Term.) The Participants reserve the right to charge a “Plan Revision Fee” to Participants that opt in, equal to and based upon administrative costs and expenses arising from the requested action;

(b) make its Annual Contribution payment in accordance with this Agreement within thirty (30) calendar days of being approved to participate by the Management Committee, unless participation begins at start of a calendar year, then invoicing and payment shall be in accordance with Section 7.a.(iii); and

(c) such Annual Contribution of such subsequent and additional Participant(s) shall not reduce the other Participants' Annual Contribution.

(vi) Consortium Account. A separate Regional CBPRP bank account (the "Consortium Account") shall be established by the YCPC for the deposit of the Participants' Annual Contributions and the funds therein shall be used solely for the Annual Audit, reimbursement for eligible YCPC administrative costs and expenses, as set forth herein, and the implementation of BMP Projects identified in the Regional Plan. Administration of these funds to pay for proper expenses under this Agreement shall be the responsibility of the Administrator and YCPC, with oversight and at the direction of the Management Committee. Such use of funds shall be for aspects of BMP Project implementation, as approved by the Regional Committee at the Annual Meeting. YCPC will be compensated for its administrative role in an amount not to exceed \$35,000 in any one calendar year. YCPC shall also be entitled to reimbursement for direct expenses arising from or related to its administration under this Agreement including, but not limited to, advertising, supplies, solicitor fees, fiscal software changes, and bank fees. YCPC may, if it believes that compensation for its Administrative role is inadequate, seek approval for a reasonable increase, which must be approved by the Regional Committee.

(vii) Segregated Funds. All Parties agree that the Annual Contribution funds in the Consortium Account shall be kept separate and apart from any and all other funds that may be acquired or utilized by YCPC and/or the Consortium, including, but not limited to, grant, loan, or donated funds. Grant, loan or donated funds shall be placed in separate Consortium accounts (each an "Additional

Account”). It is the obligation of YCPC and the Administrator to maintain these funds and Additional Accounts separately, and to account for and report use of these funds to the Regional Committee.

(viii) YCPC Reimbursement. The YCPC shall be reimbursed for invoiced costs and expenses reasonably related to those duties and obligations set forth in Section 3.e., and upon approval of invoices for payment by the Management Committee. The YCPC shall not be reimbursed for attorney or legal fees, unless incurred (1) with pre-authorization of such engagement and expense by the Management Committee (such pre-authorization may consist of formal action at a meeting or electronic approval by a majority of Management Committee members to be followed by ratification at a meeting); (2) on behalf of the Consortium’s implementation of the Plan and this Agreement; and (3) at the direction of the Management Committee. YCPC shall not seek nor obtain reimbursement for actions, activities or costs that are otherwise paid for by grant, loan or other sources of money.

(ix) Opt Out. During the Term of this Agreement, where a Participant, that does not have an MS4 permit or has a MS4 permit waiver, is not satisfied with the Regional Plan or the implementation of this Agreement, a Participant may opt out of the Regional Plan and unilaterally terminate its participation in this Agreement in year 3 of the Agreement Term (i.e., 2020). Such opt out action shall only be effective where accomplished as follows:

(a) Submit written notice of intent to opt out and terminate to the Administrator and the Management Committee no less than sixty (60) days prior to the Annual Meeting for termination to begin January 1, 2021.

(b) Such written notice of opt out shall terminate this Agreement as to the opting out Participant on January 1, 2021.

(c) All Annual Contributions made to date by the Participant shall be automatically forfeited and shall become the property of the remaining Parties hereto.

(d) The Participant choosing to opt out at this stage shall pay a “Plan Revision Charge” of \$500 to the Consortium Account.

b. Grants.

(i). Any grants or donations received by the YCPC or the Consortium Participants to implement stormwater BMP Projects included in the Regional Plan shall not reduce the Participants’ Annual Contributions, except as provided for in Section 7.a.(ii).

(ii). Each Participant agrees that it may apply for grants as directed by its governing body and undertake any and all actions necessary to obtain them.

(iii). Upon receipt of such a grant, the Participant shall administer the grant. Assistance with grant administration may be sought from the Management Committee or YCPC.

c. Donations.

1. To the extent that donations to the Consortium can be obtained from any source, they shall be deposited into an Additional Account.

2. Such donations to the Consortium shall be utilized to fund BMP Projects identified in the Regional Plan.

d. Payment Procedures for Funded BMP Projects.

Each BMP Project that the Regional Committee agrees to fund shall be assigned a Project Number and a Request for Payment form shall be prepared by



YCPC. Invoices will be processed in accordance with the Standard Operating Procedure established for Processing Payments for Funded Regional CBPRP BMP Projects. This Procedure, including any subsequent revisions thereto, is incorporated by reference herein. A similar procedure will be utilized for processing YCPC administration invoices. Where the Participants are funding a portion (partial funding) of a BMP Project, Consortium funds shall be the last funds used or paid out by YCPC.

8. **Effective Date.**

a. The Effective Date of this Agreement shall be September 16, 2017. It is recognized that all Participants shall have executed this Agreement and passed an ordinance authorizing the Agreement pursuant to 53 Pa. C.S. § 2303 (an “Authorizing Ordinance”) before that date. It is the intent of the Parties that their cooperative efforts, including the conduct of meetings authorized or required by this Agreement, shall commence as of September 16, 2017, regardless of when each Participant executes the Agreement or passes an Authorizing Ordinance.

b. This Agreement shall become effective *as to each Party* upon execution and, where applicable, adoption of an Authorizing Ordinance.

c. For any Participant that received an advanced waiver and is seeking a full waiver, upon notification from DEP of issuance of an MS4 Permit or full waiver, that Participant may withdraw at the end of the calendar year of the Term, and upon no less than sixty (60) days advance written notice to the Administrator prior to the end of the calendar year. The annual Participant contribution shall be \$1,591 until time of withdrawal. However, if an MS4 Permit is issued by DEP and the municipality remains a Participant, it shall be obligated to pay the Annual Contribution if Full Waiver Not Received as set forth in the last column of Attachment “A”, (if the Annual Contribution in

the second column of Attachment “A” has already been paid, then that amount shall be applied to the Annual Contribution if Full Waiver Not Received and the Participant shall pay the balance) by the end of the current calendar year.

9. **Term.**

a. The term of this Agreement shall begin on the Effective Date and end on December 31, 2023 (the “Term”). All Participants approving this Agreement may participate for such time period, unless the Participant opts out or is terminated prior to the end of this Agreement Term as provided for herein.

b. This Agreement may be extended by those Participant jurisdictions desiring to participate for an additional term or terms, by resolution.

10. **Termination and Wind-Up.** In the event of termination of the Consortium established by this Agreement, either at the conclusion of the initial Term, or at the end of any additional extended term agreed to by the Parties, any funds remaining in the Consortium Account shall be returned to those Participants who are part of the Consortium at the time of termination. For Participants who hold an MS4 Permit, any remaining BMP Project contributions shall be returned based upon their percentage (rounded to three decimal digits) of the total Participant BMP contributions as reflected at the time of termination. For Participants who have an MS4 Permit Waiver or are non-MS4s, any remaining administration contributions shall be returned based upon their percentage of the total Participant administration contributions as reflected at the time of termination. Such funds shall be disbursed to the Participants remaining on the date of Termination no more than thirty (30) days after the date of Termination.

11. **Applicable Law.** The Parties agree and affirm that Pennsylvania law applies to this Agreement and all matters covered by and addressed by this Agreement. It is acknowledged and agreed that the sole and exclusive jurisdiction and venue for any dispute relating to any matter covered by this Agreement, and/or regarding any dispute over the enforcement or interpretation of

this Agreement, shall rest with the York County Court of Common Pleas. The Parties hereby submit to the exclusive jurisdiction of that Court.

12. **Integration.** This Agreement contains the entire agreement between the Parties. There are no understandings or agreements, verbal or otherwise, in relation hereto, except those expressly and specifically set forth herein. The Parties have not relied upon any statement, projection, disclosure, report, information or any other representation or warranty except for those as may be specifically and expressly set forth in this Agreement.

13. **No Oral Modification.** This Agreement may not be modified except in writing executed by all Parties. This Agreement shall be amended only in writing, by duly authorized representatives of all Parties, and such revision(s) must be approved by official action of each Participant jurisdiction, and as required by any applicable law of the Commonwealth.

14. **Severability.** No determination by any court, governmental body, arbitration, or other judicial body, that any provision of this Agreement or any amendment that may be created hereto, is invalid or unenforceable in any instance shall affect the validity or enforceability of any other provision of the Agreement or applicable amendment. Each provision shall be valid and enforceable to the fullest extent permitted by applicable law, and shall be construed where and whenever possible as being consistent with applicable law.

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

16. **Counterparts.** This Agreement may be executed in counterparts, each of which will be an original, and all of which taken together shall constitute one and the same instrument.

17. **Execution by Facsimile or Electronic Scanning.** Delivery of an executed counterpart of this Agreement by facsimile, or by electronically scanning and e-mailing an executed counterpart signature page, while not specifically required, will be acknowledged by the Parties as being equally as effective as delivery of a manually executed counterpart of this Agreement. The use of a signature page received by facsimile, or through an electronic scan and e-mail, shall not affect the validity, enforceability, or binding effect of this Agreement.

18. **Fees and costs.** The Parties agree to bear their own fees and costs in connection with or incurred related to the matters between them, and relating to this Agreement.

19. **Signatures.** The Parties hereto, and the undersigned individuals and/or representatives, represent and warrant that they have the authority to enter into this Agreement and be legally bound hereby.

20. **Prior Participants.** Participants in the prior Intergovernmental Cooperation Agreement for the Implementation of the York County Regional Chesapeake Bay Pollution Reduction Plan that are not a party to this Agreement shall be relieved of any obligations thereunder by the signatures of the Parties hereto.

**SIGNATURE PAGES FOLLOW**

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY CARROLL TOWNSHIP

Faye L Romberger

By: [Signature]

Faye L. Romberger  
Print name and title Secretary

Bruce R. Trostle  
Print name and title Chairman

Signature date: September 11, 2017

Participation authorized by Ordinance No 2017-240 passed at a meeting of the governing body on Sept. 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

CHANCEFORD TOWNSHIP

Tonya L Jackson

By: Kent E. Heffner

Tonya L Jackson / Secretary /  
Print name and title Treasurer

Kent E. Heffner / twp supervisor  
Print name and title

Signature date: September 14, 2017

Participation authorized by Ordinance No 2017-01, passed at a meeting of the governing body on September 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY CONEWAGO TOWNSHIP

*Lou Anne Bostic*

By: *Barbara R. Wilhite*

Lou Anne Bostic, manager  
Print name and title

Barbara R. Wilhite - Supervisor  
Print name and title Chairperson

Signature date: 9/5/2017

Participation authorized by Ordinance No 2017-35b, passed at a meeting of the governing body on ~~Aug.~~ 5 Sept., 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY

DALLASTOWN BOROUGH

By: DALLASTOWN BOROUGH

Conne R. Stokes  
Print name and title Manager

[Signature]  
Print name and title President

Signature date: August 14, 2017

Participation authorized by Ordinance No 2017-4, passed at a meeting of the governing body on 8/14/17, 2017.



IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY DILLSBURG BOROUGH



Karen Deibler, Manager  
Print name and title

By: 

John J. Richardson, Jr  
Print name and title Council President

Signature date: Sept. 12, 2017

Participation authorized by Ordinance No 2017- 3, passed at a meeting of the governing body on Sept 12, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY

DOVER BOROUGH

Brenda J. Plowman

By: Joseph M. Sabold

Brenda Plowman, Secretary/Treasurer  
Print name and title

Joseph Sabold, Council President  
Print name and title

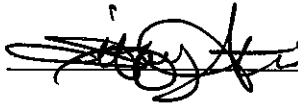
Signature date: August 7, 2017

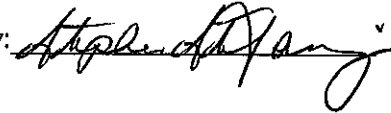
Participation authorized by Ordinance No 2017- 01 , passed at a meeting of the governing body on August 7, , 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY Dover Township

  
\_\_\_\_\_

By: 

Tiffany Stone, Dover Township  
Secretary  
Print name and title

Stephen Stefanowicz  
Print name and title Dover Township  
Chairman

Signature date: August 28<sup>th</sup>, 2017

Participation authorized by Ordinance No 2017- 07, passed at a meeting of the governing body on August 28<sup>th</sup>, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY *FAIRVIEW TOWNSHIP*

*Donald F. Martin III*

By: *[Signature]*

Donald F. Martin III  
Print name and title *Manager Sec*

DR. Larry Cox Chairman  
Print name and title

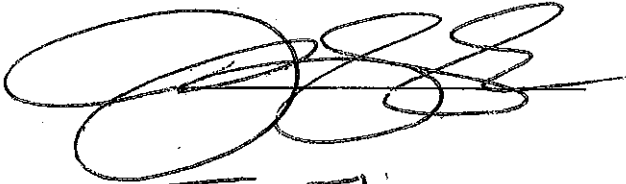
Signature date: *8-29-17*

Participation authorized by Ordinance No 2017-2, passed at a meeting of the governing body on August 28th, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY Felton Borough



Joy Flinchbaugh  
Print name and title  
Borough Secretary

Signature date: 8/7/17

By: Gardland Martin

Gardland Martin  
Print name and title  
Borough President

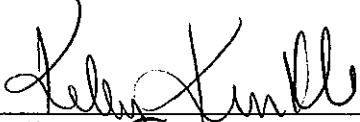
Participation authorized by Ordinance No 2017-01, passed at a meeting of the governing body on August 7, 2017.


IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

**WITNESS/ATTEST:**

**Franklintown Borough**

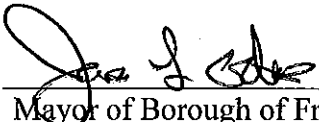
**York County, Pennsylvania**

  
\_\_\_\_\_  
Kelly Kunkle, Secretary

  
\_\_\_\_\_  
Richard Blouch, Council President

Signature date: September 6, 2017

Examined and approved this 6th day of September, 2017.

BY:   
\_\_\_\_\_  
Mayor of Borough of Franklintown James L. Adams

Participation authorized by Ordinance No 285-2017, passed at a meeting of the governing body on September 6, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY GLEN ROCK BOROUGH

Anne E. Merrick

By: [Signature]

ANNE E. MERRICK, Sec/Treas.  
Print name and title

Douglas E. Young, President  
Print name and title

Signature date: 8/9/17

Participation authorized by Ordinance No 2017-<sup>488</sup>03, passed at a meeting of the governing body on August 9, 2017.

## **GOLDSBORO BOROUGH**

The Borough of Goldsboro has not yet had the opportunity to adopt the ordinance approving the York County Regional Chesapeake Bay Pollutant Reduction Plan (CBPRP) Intergovernmental Cooperation Agreement. At the September 11, 2017, Borough Council meeting, Council approved advertisement of the Legal Notice indicating the Borough's intent to adopt an Ordinance authorizing the Agreement.

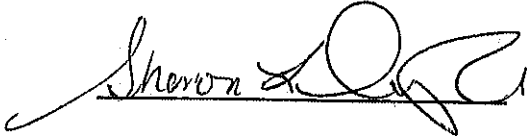
The Borough of Goldsboro is planning to participate in the Regional CBPRP and the Intergovernmental Cooperation Agreement is on the agenda for approval at the October 9, 2017, Council Meeting. Upon approval, a copy of the approved Ordinance/Agreement will be submitted to DEP and the County of York for their records.




IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY *HALLAM BOROUGH*

  
\_\_\_\_\_

By   
\_\_\_\_\_

*SHARON L. DUPLER, SECRETARY*  
Print name and title

*William F. Patrick Pres.*  
Print name and title *Borough Council*

Signature date: 9/11/17

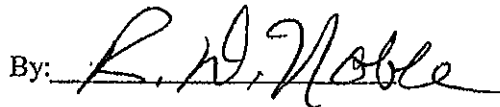
Participation authorized by Ordinance No 2017- 5, passed at a meeting of the governing body on September 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY HANOVER BOROUGHS



By: 

Dorothy C. Neiderer, Secretary  
Print name and title

R. Daniel Noble, President  
Print name and title

Signature date: August 23, 2017

Participation authorized by Ordinance No 2259, passed at a meeting of the governing body on August 23, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY HELLAM TOWNSHIP

Corina L. Mann

By: Galen S. Weibley

Corina L. Mann

Print name and title

Galen Weibley Chairman

Print name and title

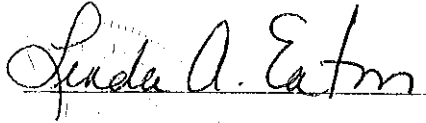
Signature date: September 7, 2017

Participation authorized by Ordinance No 2017-06, passed at a meeting of the governing body on September 7<sup>th</sup>, 2017.

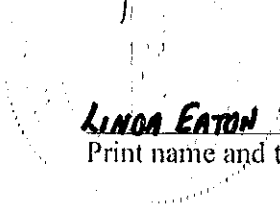
IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY JACKSON TOWNSHIP



By: 



LINDA EATON TOWNSHIP SECRETARY  
Print name and title

WILLIAM J. CONN TOWNSHIP MANAGER  
Print name and title

Signature date: 9/5/17

Participation authorized by Ordinance No ~~212-17~~ <sup>212-17</sup>, passed at a meeting of the governing body on SEPTEMBER 5, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY JACOBUS BOROUGH

Cynthia M. Ferree

By: Roger W. Coleman

Cynthia M. Ferree, Office Manager  
Print name and title

ROGER W. COLEMAN  
COUNCIL PRESIDENT  
Print name and title

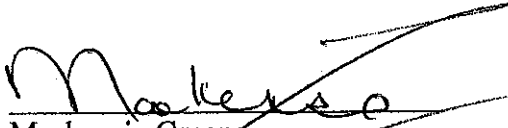
Signature date: September 15, 2017


Participation authorized by Ordinance No 2017-1, passed at a meeting of the governing body on September 6, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

**WITNESS/ATTEST:**

**LEWISBERRY BOROUGH**

  
Mackensie Greene  
Lewisberry Borough Manager

By:   
Mark Keener,  
Lewisberry Borough Council President

Signature date: September 5, 2017

Participation authorized by Ordinance No 2017-01 passed at a meeting of the governing body on September 5, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY LOGANVILLE BOROUGH



DAVID H. DAVIDSON JR. ESQ.  
Print name and title

By: Ronald Tombesi

RONALD Tombesi President  
Print name and title

Signature date: 9/15/17

Participation authorized by Ordinance No 2017- 1, passed at a meeting of the governing body on SEPT 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY

LOWER WINDSOR TOWNSHIP



By: Barry Miller

Linda Zimmerman, Secretary  
Print name and title

Barry Miller, Chairman  
Print name and title

Signature date: August 10, 2017

Participation authorized by Ordinance No 2017- 03, passed at a meeting of the governing body on August 10, 2017.



IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

Judith R. Hilliard

Judith R. Hilliard, Secretary  
Print name and title

MUNICIPALITY

MANCHESTER BOROUGH

By: 

Adam Bowman, President  
Print name and title

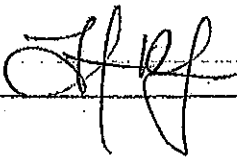
Signature date: September 11, 2017

Participation authorized by Ordinance No 2017- 3, passed at a meeting of the governing body on September 11, 2017.

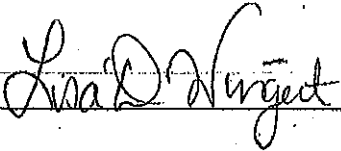
IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY MANCHESTER TOWNSHIP

  
\_\_\_\_\_

Timothy R. James  
Print name and title

By:   
\_\_\_\_\_

Lisa D. Wingert  
Print name and title

Signature date: 8/8/17

Participation authorized by Ordinance No 2017-04, passed at a meeting of the governing body on August 8, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY MONAGHAN TOWNSHIP

*Linda Altland*

By: *Chris A. Hoover*

LINDA ALTLAND  
Print name and title

CHRIS A. HOOPER, CHAIRMAN  
Print name and title

Signature date: 9-11-17

Participation authorized by Ordinance No 2017- 96, passed at a meeting of the governing body on 9-11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

**WITNESS/ATTEST:**

**BOROUGH OF MOUNT WOLF**

Steven C. Kehler

By: William N. M. Arzig

Steven C. Kehler, Secretary/Treas.  
Print name and title

William N. M. Arzig, President  
Print name and title

Signature date: 8/8/2017

Participation authorized by Ordinance No 2017- 1, passed at a meeting of the governing body on August 8, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY NEW SALEM BOROUGH



By: 

Andrew N. Shafer - Sec.  
Print name and title

VICKI M ROHRBAUGH  
Print name and title PRES. - COUNCIL  
New Salem Borough

Signature date: 9/5/17

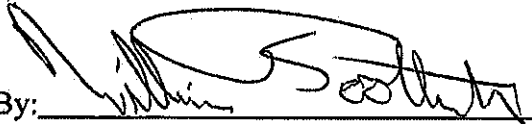
Participation authorized by Ordinance No 2017- 1, passed at a meeting of the governing body on September 5, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

**WITNESS/ATTEST:**

**NEWBERRY TOWNSHIP, YORK COUNTY**

  
Donald L. Keener, Secretary

By:   
William Toothaker, Chairman

Signature date: August 22, 2017

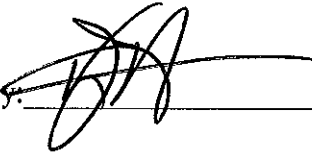
Participation authorized by Ordinance No. 401, passed at a meeting of the governing body on August 22, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

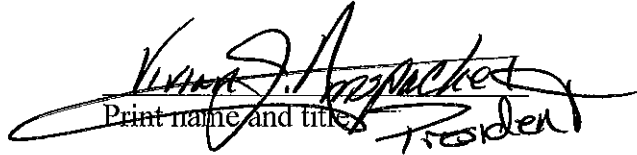
MUNICIPALITY *NORTH YORK BOROUGH*

  
\_\_\_\_\_

By:   
\_\_\_\_\_

*John Elliott - Solicitor*  
\_\_\_\_\_

Print name and title

  
\_\_\_\_\_

Print name and title

*President*

Signature date: *9/12/17*

Participation authorized by Ordinance No 2017- *1*, passed at a meeting of the governing body on *September 12*, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY PENN TOWNSHIP

Angela M. Hallett

By: Phillip W. Heilman

Angela M. Hallett, Secretary  
Print name and title

Phillip W. Heilman, President  
Print name and title

Signature date: August 21, 2017

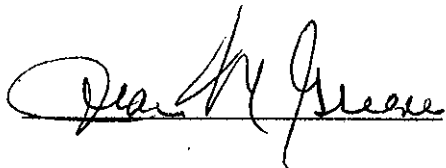
Participation authorized by Ordinance No 2017- 799, passed at a meeting of the governing body on August 21, 2017.



IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY RAILROAD BOROUGH



By: 

JEAN M. GREENE  
Print name and title  
BORO SECY/TREAS

Vice President RANDALL KAHL  
Print name and title

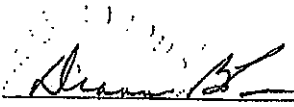
Signature date: 8-15-2017

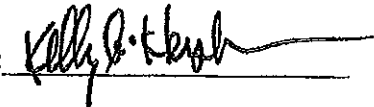
Participation authorized by Ordinance No 2017- 02, passed at a meeting of the governing body on AUG 15, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY RED LION BOROUGH

  
\_\_\_\_\_

By:   
\_\_\_\_\_

DIANNA PRICE, Secy.  
Print name and title

Kelly A. Hershaw President  
Print name and title

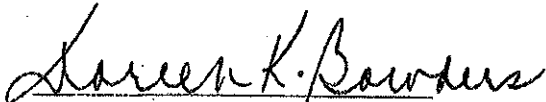
Signature date: September 11<sup>th</sup> 2017

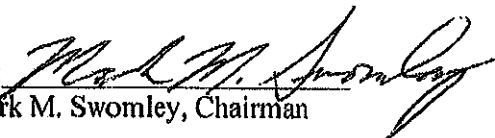
Participation authorized by Ordinance No 2017- 5, passed at a meeting of the governing body on September 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

SPRINGETTSBURY TOWNSHIP

  
Doreen K. Bowders, Secretary

By:   
Mark M. Swomley, Chairman

Signature date: 8/24/17

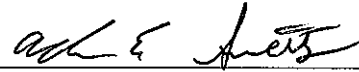
Participation authorized by Ordinance No 2017-07, passed at a meeting of the governing body on August 24, 2017.

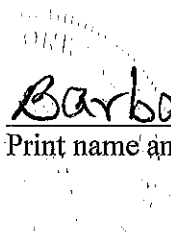
IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY SPRINGFIELD  
TOWNSHIP



By: 

  
Barbara E. Sweitzer  
Print name and title Sec. Treas

Aden E Sweitzer Vice Chairman  
Print name and title

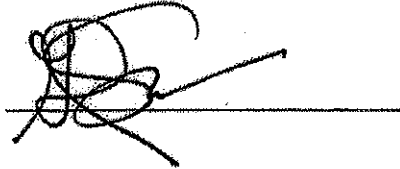
Signature date: Sept 11, 2017

Participation authorized by Ordinance No 2017-03, passed at a meeting of the governing body on September 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

SPRING GARDEN TOWNSHIP



By: 

George J. Swartz  
Print name and title  
ASSISTANT SECRETARY  
BOARD OF COMMISSIONERS

Thomas I. Werman  
Print name and title  
Vice President, Board of Commissioners

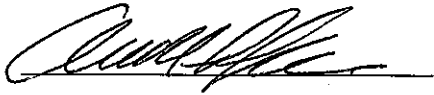
Signature date: September 13, 2017

Participation authorized by Ordinance No 2017-~~67~~, passed at a meeting of the governing body on Sept. 13, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY *SPRING GROVE BOROUGH*



BY: *Richard P. Hegore*

*Andrew N. Staffer, Manager*  
Print name and title

*Richard P. Hegore, President.*  
Print name and title

Signature date: *8/7/17*

Participation authorized by Ordinance No 2017- *5*, passed at a meeting of the governing body on *August 7*, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY  
WEST MANCHESTER TOWNSHIP

  
Secretary: Kelly K. Kelch

By:   
Chairman: Steve Harlacher

  
Vice-Chairman: Dave Markel

  
Supervisor: Rosa Hickey

Signature date: July 31, 2017

Participation authorized by Ordinance No 2017- 07 , passed at a meeting of the governing body on July 31<sup>st</sup> , 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY WEST MANHEIM TOWNSHIP

Miriam Clapper

By: Harold L. Hartlaub

MIRIAM CLAPPER  
Print name and title

HAROLD L. HARTLAUB, CHAIRMAN  
Print name and title

Signature date: September 7, 2017

Participation authorized by Ordinance No 2017- 01, passed at a meeting of the governing body on 9/7, 2017.



IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY WEST YORK BOROUGH

Linda Diaz

By: Mary Wagner

Linda Diaz - Borough Secretary

Mary Wagner Council President

Print name and title

Print name and title

Signature date:

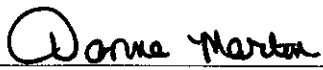
9/5/2017

Participation authorized by Ordinance No 2017-543, passed at a meeting of the governing body on Sept 5, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

**WITNESS/ATTEST:**

**WINDSOR BOROUGH COUNCIL,  
YORK COUNTY**

  
\_\_\_\_\_  
Donna J. Martin, Secretary

By:   
\_\_\_\_\_  
Matthew L. Dietz, President

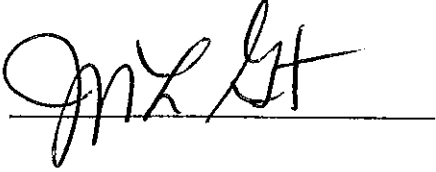
Signature date: September 11, 2017


Participation authorized by Ordinance No. 2-2017, passed at a meeting of the governing body on September 11, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY: Windsor Township



By: 

Jennifer L. Gunnet, Secretary  
Print name and title

Dean L. Heffner, Chairman  
Print name and title

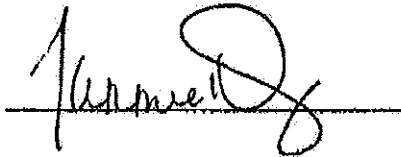
Signature date: August 21, 2017

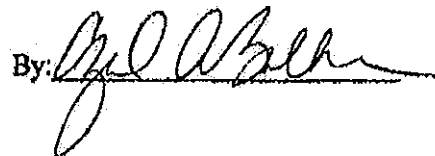
Participation authorized by Ordinance No 2017<sup>08-01</sup>, passed at a meeting of the governing body on August 21, , 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY WRIGHTSVILLE BOROUGH



By: 

Tammie Hoff, Borough Secretary  
Print name and title

Crystal A. Bolton, Council President  
Print name and title

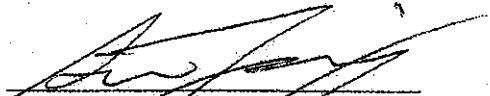
Signature date: 9-13-17

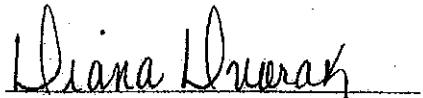
Participation authorized by Ordinance No 2017-2, passed at a meeting of the governing body on Sept. 11, 2017.

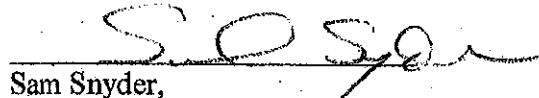
IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

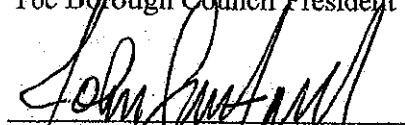
**WITNESS/ATTEST:**

**MUNICIPALITY: Yoe Borough**

  
\_\_\_\_\_  
Seth Eric Springer, Esq.,  
Yoe Borough Solicitor

  
\_\_\_\_\_  
Diana Dvorak,  
Yoe Borough Secretary/Treasurer

  
\_\_\_\_\_  
Sam Snyder,  
Yoe Borough Council President

  
\_\_\_\_\_  
John Sanford,  
Yoe Borough Mayor

Signature date: September 5, 2017

Participation authorized by Ordinance No. 2017-03, passed at a meeting of the governing body on September 5, 2017.



# The City of York Pennsylvania

101 South George Street ❖ PO Box 509 ❖ York PA 17405

www.yorkcity.org

*Honorable C. Kim Bracey, Mayor*

*Chaz A. Green  
Deputy Director  
Department of Public Works*

**Date: September 19, 2017**

**Resolution No. 93 - 2017**

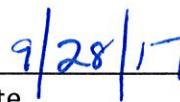
CONTRACT to Amend and Restated Intergovernmental Cooperation Agreement for the Implementation of the York County Regional Chesapeake Bay Pollutant Reduction Plan.

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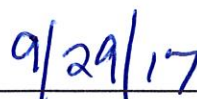
IN WITNESS WHEREOF, the parties have executed this agreement the day and year first above written.

## **CITY OF YORK**

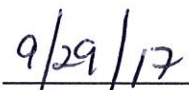
  
\_\_\_\_\_  
Mayor C. Kim Bracey  
City of York

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
Dianna L. Thompson-Mitchell, City Clerk  
City of York

  
\_\_\_\_\_  
Date

  
\_\_\_\_\_  
AliceAnne D. Frost, Controller  
City of York

  
\_\_\_\_\_  
Date

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY YORK COUNTY

Sherry Baer

By: Susan Burnes

SHERRY BAER, CHIEF CLERK  
Print name and title

SUSAN BURNES, PRES. COMMISSIONER  
Print name and title

Signature date: 8/16/2017

Participation authorized by Ordinance No 2017-04, passed at a meeting of the governing body on August 16, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

**WITNESS/ATTEST:**

**YORK COUNTY PLANNING COMMISSION**

Felicia S. Dell

By: Mary E. Coble

Felicia S. Dell, Director  
Print name and title

Mary E. Coble, Vice-Chairman  
Print name and title

Signature date: September 8, 2017

Participation authorized by Ordinance No 2017-04, passed at a meeting of the governing body on August 16, 2017.



IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY YORK TOWNSHIP

*[Signature]*

By: *Robert D. Steele*

Gary Milbrand  
Print name and title  
*York Township Secretary*

Robert D. Steele  
Print name and title  
*PRESIDENT BOC*

Signature date: August 8, 2017

Participation authorized by Ordinance No 2017-4, passed at a meeting of the governing body on August 8, 2017.

IN WITNESS WHEREOF, the Parties hereto have caused this Intergovernmental Cooperation Agreement for the Implementation of the York County Chesapeake Bay Pollutant Reduction Plan to be executed and effective on September 16, 2017.

WITNESS/ATTEST:

MUNICIPALITY YORK HAVEN BOROUGH

Pamela Bilot

By: Margaret E Malehorn

Pamela Bilot, Secretary  
Print name and title Treasurer

MARGARET E MALEHORN  
Print name and title Council President

Signature date: September 5, 2017

Participation authorized by Ordinance No 2017-01, passed at a meeting of the governing body on September 5, 2017.

# ATTACHMENT “A”

## COST SHARING SCHEDULE

Municipality Participating in Regional CBPRP	Five (5) Year Contribution	Annual Contribution	Five (5) Year Contribution if Full Waiver Not Received	Annual Contribution if Full Waiver Not Received
Carroll Township	\$352,534	\$70,507		
Chanceford Township	\$7,955	\$1,591	\$263,971	\$52,794
Conewago Township	\$7,955	\$1,591	\$393,125	\$78,625
Dallastown Borough	\$94,009	\$18,802		
Dillsburg Borough	\$69,505	\$13,901		
Dover Borough	\$7,955	\$1,591	\$50,353	\$10,071
Dover Township	\$1,012,712	\$202,542		
Fairview Township	\$972,505	\$194,501		
Felton Borough	\$7,955	\$1,591	\$21,708	\$4,342
Franklintown Borough	\$7,955	\$1,591	\$12,124	\$2,425
Goldsboro Borough	\$7,955	\$1,591	\$25,162	\$5,032
Hallam Borough	\$7,955	\$1,591	\$58,060	\$11,612
Hanover Borough	\$512,451	\$102,490		
Heidelberg Township	\$7,955	\$1,591	\$353,843	\$70,769
Hellam Township	\$7,955	\$1,591	\$290,410	\$58,082
Jackson Township	\$582,369	\$116,474		
Jacobus Borough	\$7,955	\$1,591	\$46,217	\$9,243
Lewisberry Borough	\$7,955	\$1,591	\$14,740	\$2,948
Loganville Borough	\$7,955	\$1,591	\$36,784	\$7,357
Lower Windsor Township	\$7,955	\$1,591	\$288,612	\$57,722
Manchester Borough	\$72,534	\$14,507		
Manchester Township	\$849,083	\$169,817		
Monaghan Township	\$140,586	\$28,117		
Mount Wolf Borough	\$35,808	\$7,162		
New Salem Borough	\$7,955	\$1,591	\$20,418	\$4,084
Newberry Township	\$542,555	\$108,511		
North York Borough	\$59,139	\$11,828		
Penn Township	\$679,527	\$135,905		
Red Lion Borough	\$161,686	\$32,337		
Spring Garden Township	\$514,101	\$102,820		
Spring Grove Borough *	\$7,955	\$1,591	\$68,589	\$13,718

Municipality Participating in Regional CBPRP	Five (5) Year Contribution	Annual Contribution	Five (5) Year Contribution if Full Waiver Not Received	Annual Contribution if Full Waiver Not Received
Springettsbury Township	\$1,120,690	\$224,138		
Springfield Township	\$358,000	\$71,600		
West Manchester Township	\$888,661	\$177,732		
West Manheim Township	\$262,725	\$55,545		
West York Borough	\$104,066	\$20,813		
Windsor Borough	\$44,033	\$8,807		
Windsor Township	\$591,874	\$118,375		
Wrightsville Borough	\$7,955	\$1,591	\$60,537	\$12,107
Yoe Borough	\$21,482	\$4,296		
York City	\$1,058,578	\$211,716		
York Haven Borough	\$7,955	\$1,591	\$18,111	\$3,622
York Township	\$1,089,927	\$217,985		
Yorkana Borough	\$7,955	\$1,591	\$6,489	\$1,298
Glen Rock Borough	\$7,955	\$1,591		
North Hopewell Township	\$7,955	\$1,591		
Railroad Borough	\$7,955	\$1,591		
<b>TOTALS</b>	\$12,844,030	2,568,804		

Waiver Requested
Non-MS4

\*Spring Grove Borough elected to submit its own Chesapeake Bay Pollutant Reduction Plan. Accordingly, Spring Grove Borough does not need to participate in the Consortium to meet its permit requirements. However, Spring Grove Borough desires to enter into this Intergovernmental Cooperation Agreement under the same parameters as the Waiver and Non-MS4 municipalities, including the payment of related five year and annual Contributions. If Spring Grove Borough should need to participate in the Consortium to meet its permit requirements during the term hereof, it would be required to pay the appropriate portion of the Contribution in the third column.

## ATTACHMENT B

Carroll Township	(MS4 Permit)
Chanceford Township	(MS4 Permit) Waiver requested
Conewago Township	(MS4 Permit) Waiver requested
Dallastown Borough	(MS4 Permit)
Dillsburg Borough	(MS4 Permit)
Dover Borough	(MS4 Permit) Waiver requested
Dover Township	(MS4 Permit)
Fairview Township	(MS4 Permit)
Felton Borough	(MS4 Permit) Waiver requested
Franklintown Borough	(MS4 Permit) Waiver requested
Glen Rock Borough	(Non-MS4)
Goldsboro Borough	(MS4 Permit) Waiver requested
Hallam Borough	(MS4 Permit) Waiver requested
Hanover Borough	(MS4 Permit)
Heidelberg Township	(MS4 Permit) Waiver requested
Hellam Township	(MS4 Permit) Waiver requested
Jackson Township	(MS4 Permit)
Jacobus Borough	(MS4 Permit) Waiver requested
Lewisberry Borough	(MS4 Permit) Waiver requested
Loganville Borough	(MS4 Permit) Waiver requested
Lower Windsor Township	(MS4 Permit) Waiver requested
Manchester Borough	(MS4 Permit)
Manchester Township	(MS4 Permit)
Monaghan Township	(MS4 Permit)
Mount Wolf Borough	(MS4 Permit)
New Salem Borough	(MS4 Permit) Waiver requested
Newberry Township	(MS4 Permit)
North Hopewell Township	(Non-MS4)
North York Borough	(MS4 Permit)
Penn Township	(MS4 Permit)
Railroad Borough	(Non-MS4)
Red Lion Borough	(MS4 Permit)
Spring Garden Township	(MS4 Permit)
Spring Grove Borough	(MS4 Permit) *
Springettsbury Township	(MS4 Permit)
Springfield Township	(MS4 Permit)

West Manchester Township	(MS4 Permit)
West Manheim Township	(MS4 Permit)
West York Borough	(MS4 Permit)
Windsor Borough	(MS4 Permit)
Windsor Township	(MS4 Permit)
Wrightsville Borough	(MS4 Permit) Waiver requested
Yoe Borough	(MS4 Permit)
York City	(MS4 Permit)
York County	(MS4 Permit) Waiver requested
York Haven Borough	(MS4 Permit) Waiver requested
York Township	(MS4 Permit)
Yorkana Borough	(MS4 Permit) Waiver requested