pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PAI130045**
Facility Type	**MS4**	APS ID	**950500**
Permit Type	**Individual**	Authorization ID	**1198381**

NPDES PERMIT FACT SHEET
MS4s

Applicant and Facility Information

Applicant Name	**Horsham Township**	Facility Name	**Horsham Township MS4**
Applicant Address	1025 Horsham Road	Facility Address	1025 Horsham Road
	Horsham, PA 19044-1326		Horsham, PA 19044-1326
Applicant Contact	William T. Gildea-Walker	Facility Contact	William T. Gildea-Walker
Applicant Phone	(215) 643-3131	Facility Phone	(215) 643-3131
Client ID	78801	Site ID	617835
SIC Code	9199	Municipality	Horsham Township
SIC Description	Public Admin. - General Government	County	Montgomery
Date Application Received	September 14, 2017		
Date Application Accepted	October 6, 2017		

Purpose of Application: Renewal of MS4 NPDES Individual Permit

Internal Review and Recommendations

This applicant has submitted a MS4 Individual Permit Application Package containing TMDL/PRP for the coverage under the permit cycle 2018-2023. The previous permit was issued on 4/28/2004 as general NPDES Permit PAG130157.

The township enacted a SWM Ordinance on January 8, 2014.

The applicant has indicated in the application that it will rely on Pennsylvania's Chapter 102 program for E & S controls and post-construction SWM requirements.

The review of TMDL Plan/PRP is detailed in TMDL Plan/PRP Review Check List.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		Harris Mahmud / Environmental Engineering Specialist	12/21/2020
X		Elizabeth Mahoney/Environmental Group Manager	1/4/2021

TMDL Plan/ PRP Review excerpts:

The Horsham Township has submitted its TMDL Plan and PRP in compliance with its requirement as shown in MS4 Requirements Table below:

MS4 Urban Area Report
HORSHAM TWP, Montgomery County

INDIVIDUAL PERMIT REQUIRED: Yes	**REASON:** TMDL Plan	**NPDES ID:** PAG130157

IMPAIRED DOWNSTREAM WATERS	REQUIREMENTS	OTHER CAUSES OF IMPAIRMENT
Wissahickon Creek	Appendix E-Nutrients (4a) Appendix B-Pathogens (5)	Water/Flow Variability (4c)
Little Neshaminy Creek	Appendix B-Pathogens (5) Appendix C-PCB (5) Appendix E-Nutrients Organic Enrichment/Low D.O. (5)	Water/Flow Variability (4c)
Wissahickon TMDL	TMDL Plan-Siltation Suspended Solids (4a)	Cause Unknown (4a)
Neshaminy Creek TMDL	TMDL Plan-Siltation Suspended Solids (4a)	
Pennypack Creek	Appendix E-Siltation (5)	Cause Unknown (5) Flow Alterations Other Habitat Alterations Water/Flow Variability (4c)
Warrington Lake	Appendix E-Nutrients (5)	Exotic Species (5)
Trewellyn Creek	Appendix E-Nutrients (4a)	Water/Flow Variability (4c)
Park Creek	Appendix B-Pathogens (5) Appendix C-PCB (5) Appendix E-Nutrients (5)	Water/Flow Variability (4c)

Warrington Lake and Park Creek are included in Neshaminy Creek TMDL Watershed. The TMDL Plan will be adequate for Appendix E requirements on these streams.

Trewellyn Creek is included in Wissahickon TMDL Plan.

The township has requirements to achieve its TMDL required load reductions in two TMDLs: Wissahickon TMDL and Neshaminy Creek TMDL, all of these being in two distinct HUC – 12s.

HORSHAM TWP	PAG130157	Little Neshaminy Creek	Little Neshaminy Creek, Park Creek, Little Neshaminy Creek, Park Creek, Warrington Lake, Neshaminy Creek TMDL	Appendix B-Pathogens, Appendix C-PCB, Appendix E-Nutrients, Organic Enrichment/Low D.O., TMDL Plan-Siltation, Suspended Solids
		Lower Pennypack Creek, Upper Pennypack Creek	Pennypack Creek	Appendix E-Siltation
		Lower Wissahickon Creek, Upper Wissahickon Creek	Trewellyn Creek, Wissahickon Creek, Wissahickon Creek, Wissahickon TMDL	Appendix B-Pathogens, Appendix E-Nutrients, TMDL Plan-Siltation, Suspended Solids

Pennypack Creek has Appendix E requirement for sediment and total phosphorous.

The township also has Appendix B – pathogens and Appendix C for PCB requirements on various streams, which must be complied with during this permit terms.

The township has parsed areas that are not served by the municipality MS4, typically areas which included Drainage to PennDOT, Turnpike and/or railroad right - of - ways, drainage to private roads that do not enter MS4, and drainage directly flowing to the stream. The parsed areas are shown in the planning area map.

TMDL Plan

Little Neshaminy Creek

According to EPA- approved Neshaminy Creek TMDL, the total existing loads, WLAs and Required Reductions:

Internal Review and Recommendations

Table C2.5. Sediment Load Allocation by Each Land Use/Source

Land Use Category	*Area (acres)*	*1992 Load (lbs/year)*	*2000 Load (lbs/year)*	*WLA (lbs/year)*	*Reduction (%)*
Hay/Pasture	2,726	47,108	43,465	36,032	17
Cropland	7,989	1,286,115	1,053,201	873,004	17
Coniferous Forest	296	240	243	201	17
Mixed Forest	1,911	2,250	2,252	1,867	17
Deciduous Forest	6,918	10,504	10,110	8,381	17
Unpaved Road	7	3,285	3,289	2,727	17
Transitional land	17	3,991	826,324	685,023	17
Low Intensity Devel	5,640	127,814	136,071	112,603	17
High Intensity Devel	1,758	29,731	30,949	25,657	17
Stream Bank Erosion		6,197,130	6,263,576	5,192,105	17
Groundwater					
Point Source					
Septic Systems					
Total	27,262	7,708,168	8,369,480	6,937,351	17

The total allowable sediment load in the Little Neshaminy Creek and its tributaries when all land use/cover sources are considered (as well as the 10% MOS) is 6,937,351 pounds per year. In order for all stream segments to attain their specific uses, the total sediment load should be reduced from 8,369,480 pounds per year by a factor of 17%.

Existing Load

The Neshaminy Creek TMDL Plan includes the PRP approach of achieving a 10% reduction of sediment existing load, and this reduction is sufficient to achieve 5% reduction of nutrient existing loads as a presumptive approach.

Horsham Township has 7,363 acres in Little Neshaminy Creek Watershed. The township rightfully parsed 4,457 acres. As such, it has MS4 served urbanized area is 2,906 acres, which was used to run MapShed Model.

The township decided to calculate its existing load to Little Neshaminy Creek TMDL Watershed utilizing MapShed Modeling for its discharges from Various MS4 sewersheds. According to its own MapShed Model calculations:

Existing Sediment Load = 2,087,556 lbs./year
Planning Area = 2,906 acres

TMDL Required Reduction = 2,087,556 X 0.17 = 354,885 lbs./year (TMDL Required 17% Reduction)

The township decided to take 10% reduction of the load in this permit term.

Permit Term Required Reduction = 2,087,556 X 0.10 = 208,756 lbs./year.

Internal Review and Recommendations

Horsham Township's Planning Area - Neshaminy Creek	
Horsham Twp. Area in Watershed (ac)	7,363
Area Parsed (ac)	4,457
Area Parsed (%)	61%
Horsham Twp. Planning Area in Watershed (ac)	2,906

Table E- 4: Planning Area Breakdown – Neshaminy Creek

Horsham Township's Planning Area - Neshaminy Creek		
Parcel	Load (lbs.)	Area (ac)
0	26,658	37
1	469,154	656
2	9,609	21
3	286,823	410
4	66,065	122
5	12,090	28
6	365,612	502
7	716,173	968
8	70,528	87
9	33,288	39
10	31,556	36
Total Baseline Load for Planning Area	**2,087,556**	**2,906**
Required Sediment Reduction (10%)	**208,755.6**	***Areas from MapShed**

Proposed BMPS

The township has proposed potential BMPs 13 Basin Retrofits, 1 Bioswale and 3 stream restorations of 1650 linear feet to achieve the required sediment reduction. The reduction loads were calculated utilizing MapShed Models.

Internal Review and Recommendations

Table F- 1: Summary of BMPs – Neshaminy Creek

Potential BMPs - Neshaminy Creek				
BMP #	**Type**	**Location**	**Area Treated (ac.)**	**TSS Reduction (lbs./yr.)**
1	Basin Retrofit	Jasper Drive	25	16,572
2	Basin Retrofit	Running Water Court	32	14,385
3	Basin Retrofit	Stoney River Drive	9	5,280
4	Basin Retrofit	Sun Valley Drive	71	28,173
5	Basin Retrofit	Shetland Court	15	9,191
6	Basin Retrofit	Hunt Drive & Herman Road	16	10,397
7	Basin Retrofit	Burgdorf Drive	13	7,870
8	Basin Retrofit	Gregory Drive	19	10,529
9	Basin Retrofit	Glenview Drive	13	8,510
10	Basin Retrofit	Gilman Road	15	9,059
11	Basin Retrofit	Sterling Dr. near Herman Road	13	8,510
12	Basin Retrofit	Herman Rd & Downey Dr.	33	12,654
13	Basin Retrofit	Brantford Circle	45	27,868
14	Bioswale	County Line & Keith Valley	36	21,052
15	Stream Restoration	Behind HVE	Up to 650 feet	74,750
16	Stream Restoration	Kohler Park near Twp. Bldg.	Up to 500 feet (1 side)	28,750
17	Stream Restoration	Governor Road	Up to 500 feet	57,500
			Required PRP TSS Reduction	208,756
			Required TMDL TSS Reduction	67,957
			Total Potential TSS Reduction	351,050

Total Sediment Reduction Loads from Proposed BMPs = 351,050 lbs./year which will exceed (if all implemented) the permit term as well as TMDL required reduction of 208,756.0 lbs./year.

Wissahickon Creek TMDL Plan

Similar to Little Neshaminy Creek TMDL Plan, the Horsham Township has calculated its existing sediment load utilizing MapShed Model. The loads are given below:

Horsham Township's Planning Area - Wissahickon Creek	
Horsham Twp. Area in Watershed (ac)	63
Area Parsed (ac)	61
Area Parsed (%)	97%
Horsham Twp. Planning Area in Watershed (ac)	2

Table E- 8: Planning Area Breakdown – Wissahickon Creek

Horsham Township's Planning Area - Wissahickon Creek		
Parcel	Load (lbs.)	Area (ac)
0	1,085	2
Total Baseline Load for Planning Area	**1,085.0**	2
Required Sediment Reduction (10%)	**108.5**	***Areas from MapShed**

Proposed BMP

Internal Review and Recommendations

As the existing load and required reductions are very small in amount, the township can achieve them by implementing one BMP as stated in the table below. The reductions are shown below.

Potential BMPs - Wissahickon Creek				
BMP #	Type	Location	Area Treated (ac.)	TSS Reduction (lbs./yr.)
26	Water Quality Inlets (Snouts)	Lower State Road	2	651
			Required PRP TSS Reduction	109
			Required TMDL TSS Reduction	299
			Total Potential TSS Reduction	651

Pollutants Reduction Plan (PRP)

The township submitted its PRP for reduction of sediment and nutrients (total Phosphorous or phosphorous) in Pennypack Creek Watershed. It calculated its existing load utilizing MapShed Model on a planning area of 2,087 acres. The township has overall 3,632 acres in this watershed, but the planning area served by MS4 is 1,903 acres. So, it parsed 1,729 acres of UA, which included Drainage to PennDOT, Turnpike and/or railroad right – of – ways, drainage to private roads that do not enter MS4, and drainage directly flowing to the stream.

Horsham Township's Planning Area - Pennypack Creek	
Horsham Twp. Area in Watershed (ac)	3,632
Area Parsed (ac)	1,729
Area Parsed (%)	48%
Horsham Twp. Planning Area in Watershed (ac)	1,903

Table E- 6: Planning Area Breakdown – Pennypack Creek

Horsham Township's Planning Area - Pennypack Creek		
Parcel	Load (lbs.)	Area (ac)
0	509,231	830
1	22,750	43
2	4,035	5
3	3,966	4
4	179,728	276
5	784	2
6	400,058	627
7	12,268	30
8	6,838	11
9	6,779	12
10	784	2
11	45,105	61
Total Baseline Load for Planning Area	**1,192,326**	**1,903**
Required Sediment Reduction (10%)	**119,232.6**	***Areas from MapShed**

Existing Sediment Load = 1,192,326 lbs./year

10% Sediment Reduction = 119,233 lbs./year

Proposed BMPs

Internal Review and Recommendations

The township selected the following BMPs to achieve the required sediment load reduction: 6 Basin Retrofits, 1 infiltration trench, and one stream restoration of 595 linear feet of one side. For one sided stream restoration BMP reduction load calculation, the rate of reduction was half of the full reduction rate of115 lb/feet/year.

Table F- 2: Summary of BMPs – Pennypack Creek

Potential BMPs - Pennypack Creek				
BMP #	**Type**	**Location**	**Area Treated (ac.)**	**TSS Reduction (lbs./yr.)**
18	Basin Retrofit	Witmer Road	65	42,723
19	Basin Retrofit	Whetstone Road	33	17,348
20	Basin Retrofit	Log Pond Drive	36	13,794
21	Basin Retrofit	Loggers Mill Road	15	9,835
22	Infiltration Trench	Lukens Park	10	4,367
23	Stream Restoration	Dresher Road	Up to 595 feet (1-side)	34,213
24	Basin Retrofit	Forrester Road	17	9,945
25	Basin Retrofit	Firewood Drive	11	8,062
			Required PRP TSS Reduction	119,233
			Total Potential TSS Reduction	**140,287**

Total Sediment Reduction of 135,389 lbs./year exceeds the required reduction. A 10% reduction of sediment existing load is sufficient to achieve 5% reduction of nutrient existing load as a presumptive approach.

Funding

The municipality has stated in the plan its intention to apply for grants, such as Growing Greener, Watershed Restoration Protection, DCNR Grants to implement the proposed BMPs. However, the township is willing to utilize its General Fund to cover the cost for design and construction of the proposed BMPs if no grant money awarded to the township.

Operation & Maintenance (O & M)

The township has stated in the plan that the Horsham Township will be responsible for the O & M of the implemented BMPs for this plan. The BMPs will be inspected per PA BMP Manual.

Public Participation for the Plans

The TMDL/ PRP public notice was published in local newspaper on August 3, 2017. The plan was made available for public review on August 3, 2017. A comment period was provided ending on September 7, 2017. A public meeting held on August 28, 2017, included this TMDL/PRP in the agenda. The township did not receive any comments from the public on this PRP/TMDL Plan.