pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PAI130080**
Facility Type	**MS4**	APS ID	**953526**
Permit Type	**Individual**	Authorization ID	**1203926**

NPDES PERMIT FACT SHEET
MS4s

Applicant and Facility Information

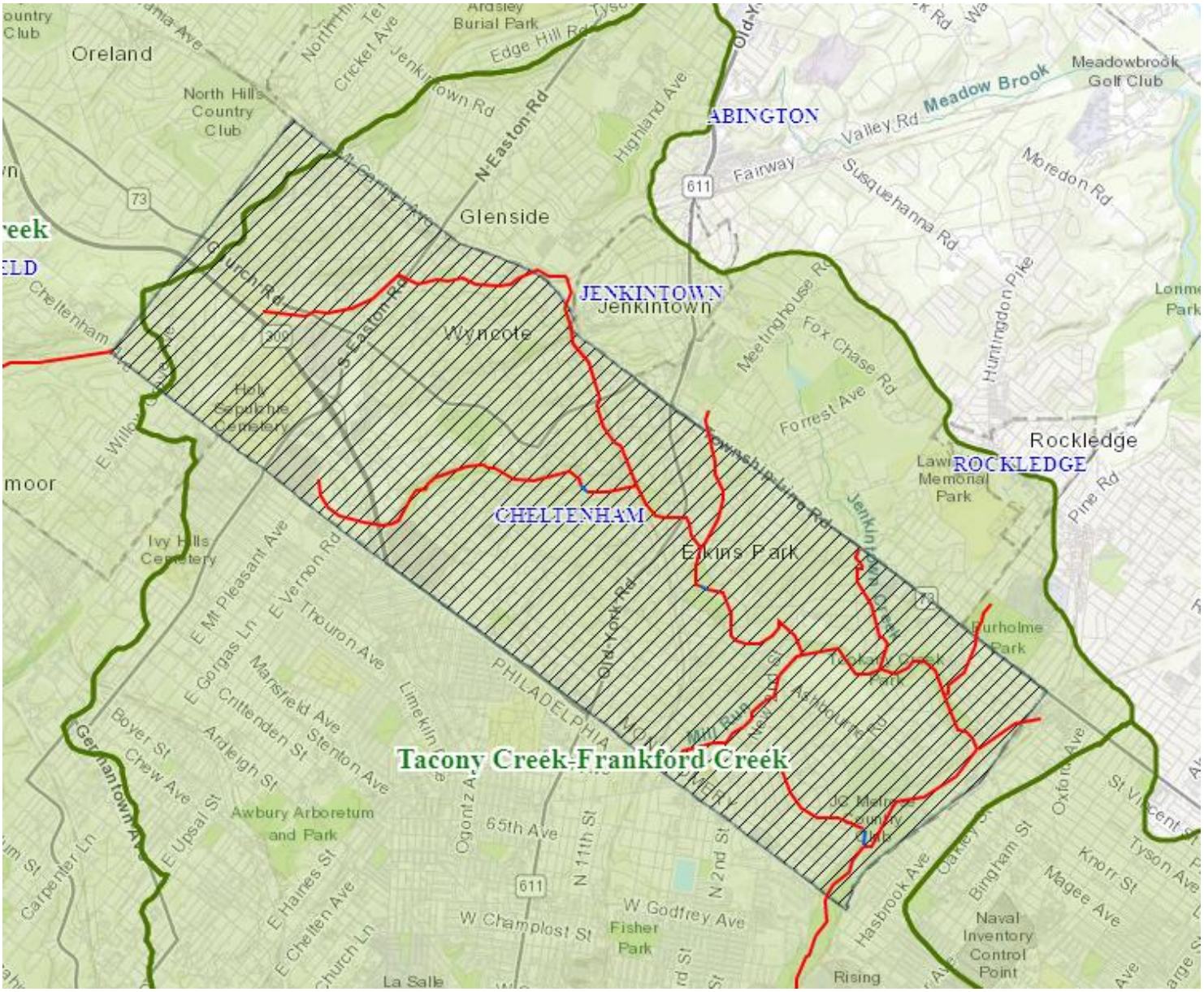
Applicant Name	**Cheltenham Township Montgomery County**	Facility Name	**Cheltenham Township MS4 UA**
Applicant Address	8230 Old York Road	Facility Address	8230 Old York Road
	Elkins Park, PA 19027-1514		Elkins Park, PA 19027
Applicant Contact	Robert Zienkowski	Facility Contact	Michael Fleming
Applicant Phone	(215) 887-1000	Facility Phone	(215) 887-6200
Client ID	52080	Site ID	613452
SIC Code	9199	Municipality	Cheltenham Township
SIC Description	Public Admin. - Genral Government, Nec	County	Montgomery
Date Application Received	September 15, 2017		
Date Application Accepted	October 26, 2017		
Purpose of Application	Formerly PAG130054.		

Internal Review and Recommendations

See Below

Approve	Deny	Signatures	Date
X		Ian Quinlan / Environmental Engineering Specialist	March 10, 2023
X		Elizabeth Mahoney Elizabeth A Mahoney / Environmental Group Manager	03/13/2023

Internal Review and Recommendations



Internal Review and Recommendations

MS4 Urban Area Report
CHELTENHAM TWP, Montgomery County

INDIVIDUAL PERMIT REQUIRED: Yes	**REASON:** TMDL Plan	**NPDES ID:** PAG130054

IMPAIRED DOWNSTREAM WATERS	REQUIREMENTS	OTHER CAUSES OF IMPAIRMENT
Wissahickon Creek	Appendix E-Nutrients (4a) Appendix B-Pathogens (5)	Water/Flow Variability (4c)
Delaware River	Appendix C-PCB (4a)	
Mill Run		Flow Alterations Other Habitat Alterations Water/Flow Variability (4c)
Frankford Creek	Appendix C-PCB (4a) Appendix E-Organic Enrichment/Low D.O. (5)	Flow Alterations Other Habitat Alterations Water/Flow Variability (4c)
Unnamed Tributaries to Wissahickon Creek		Other Habitat Alterations (4c)
Wissahickon TMDL	TMDL Plan-Siltation Suspended Solids (4a)	Cause Unknown (4a)
Jenkintown Creek		Flow Alterations Other Habitat Alterations Water/Flow Variability (4c)
Tacony Creek	Appendix E-Organic Enrichment/Low D.O. (5)	Flow Alterations Other Habitat Alterations Water/Flow Variability (4c)
Schuylkill River	Appendix C-PCB (4a)	

Tookany Watershed Calc's:

Internal Review and Recommendations

Table 4. Sediment Load calculation for the MS4-permitted area of the Tookany watershed in Cheltenham (NLCD land cover data)

Land Cover	**Area** (acres)	**Maximum % Impervious Area**[1]	**Impervious Area** (acres)	**Pervious Area** (acres)
Open Water	0.4	0	0	0.4
Developed, Open Space	1899.0	0.19	360.8	1538.2
Developed, Low Intensity	1243.6	0.49	609.4	634.3
Developed, Medium Intensity	326.5	0.79	257.9	68.6
Developed, High Intensity	89.4	1.00	89.4	0.0
Barren Land	0.7	0	0	0.7
Deciduous Forest	442.3	0	0	442.3
Mixed Forest	176.6	0	0	176.6
Shrub/Scrub	2.0	0	0	2.0
Herbaceous	0.4	0	0	0.4
Hay/Pasture	7.8	0	0	7.8
Cultivated Crops	0.2	0	0	0.2
Woody Wetlands	8.7	0	0	8.7
Total	**4,197.7**		**1,317.5**	**2,880.2**

[1] National Land Cover Database

Table 5. Sediment Load calculation using the Simplified Method for the MS4-permitted area of the Tookany watershed in Cheltenham (NLCD land cover data)

Land Cover	**Acres**	**Sediment Loading Rate**[1] (lb/ac/yr)	**Sediment Load** (lb/yr)	**Sediment Load** (tons/yr)
Impervious	1,317.5	1,839	2,422,883	1,211.4
Pervious	2,880.2	264.96	763,138	381.6
Total	4,197.7			1,593.0

[1] PADEP PRP Instructions, Attachment B, 3/2017

The result of this method is that the Township is responsible to reduce its annual sediment discharge to the Tookany Creek by 10%, or 159 tons/year.

Wissahickon Creek Calc's:

Internal Review and Recommendations

Figure 5. Table 4-12 from the Nutrient and Siltation TMDL Development for Wissahickon Creek (2003)

Table 4-12. Summary of sediment wasteload allocations for streambank erosion and overland load by municipality (MS4)

Municipality	Existing Load from Streambank Erosion (lbs/yr)	Streambank Erosion WLA (lbs/yr)	Percent Reduction for Streambank Erosion	Existing Overland Load (lbs/yr)	Overland Load WLA (lbs/yr)	Percent Reduction for Overland Load (lbs/yr)	TOTAL WLA (lbs/yr)
Abington	121,604.46	41,116.77	0.66	362,538.56	87,796.68	0.76	128,913.40
Ambler	17,974.49	9,346.73	0.48	75,008.50	32,843.24	0.56	42,189.97
Cheltenham	1,758.29	1,512.13	0.14	20,549.46	4,449.00	0.78	5,961.13
Horsham	2,611.24	1,267.20	0.51	5,764.44	2,288.51	0.60	3,555.71
Lansdale	10,032.37	5,216.83	0.48	60,295.96	47,115.59	0.22	52,332.43
Lower	168,245.82	87,487.83	0.48	575,510.64	349,872.50	0.39	437,360.30
Montgomery	25,443.78	13,230.77	0.48	135,550.26	97,897.57	0.28	111,128.30
North Wales	8,414.77	4,375.68	0.48	50,070.60	37,955.87	0.24	42,331.55
Philadelphia	133,827.01	115,091.23	0.14	1,413,863.47	265,770.10	0.81	380,861.30
Springfield	51,241.03	38,361.29	0.25	700,517.47	151,803.80	0.78	190,165.00
Upper Dublin	350,903.91	131,125.58	0.63	906,098.66	333,482.10	0.63	464,607.60
Upper	73,016.96	37,968.82	0.48	695,874.85	512,615.60	0.26	550,584.30
Upper	1,108.17	366.85	0.67	1,303.29	494.72	0.62	861.57
Whitemarsh	79,221.96	51,034.76	0.36	479,266.95	188,497.70	0.61	239,532.40
Whitpain	105,137.80	55,148.05	0.48	357,776.46	236,125.20	0.34	291,273.30
Worcester	1,423.06	739.99	0.48	10,644.84	9,610.08	0.10	10,350.07

Internal Review and Recommendations

Table 6. Land cover in the Wissahickon Watershed in Cheltenham Township

Land Cover	**Area** (acres)	**Maximum % Impervious Area**[1]	**Impervious Area** (acres)	**Pervious Area** (acres)
Open Water	0.0	0	0.0	0.0
Developed, Open Space	50.7	0.19	9.6	41.1
Developed, Low Intensity	22.7	0.49	11.1	11.6
Developed, Medium Intensity	6.2	0.79	4.9	1.3
Developed, High Intensity	1.3	1.00	1.3	0.0
Barren Land	0.0	0	0.0	0.0
Deciduous Forest	38.3	0	0.0	38.3
Mixed Forest	18.5	0	0.0	18.5
Shrub/Scrub	0.0	0	0.0	0.0
Herbaceous	0.0	0	0.0	0.0
Hay/Pasture	0.2	0	0.0	0.2
Cultivated Crops	0.0	0	0.0	0.0
Woody Wetlands	0.0	0	0.0	0.0
Total	**137.9**		**27.0**	**110.9**

[1] National Land Cover Database

Table 7 presents the computation of existing sediment loading, applying DEP's sediment loading rates. Using this method, the total suspended solid (TSS) loading rate for the entire Wissahickon Creek drainage area in the Township was found to be 79,038 lbs (39.5 tons) of sediment annually.

Table 7. Sediment Load calculation for the Wissahickon watershed in Cheltenham (2016 NLCD land cover data)

Land Cover	**Acres**	**Sediment Loading Rate**[1] (lb/ac/yr)	**Sediment Load** (lb/yr)	**Sediment Load** (tons/yr)
Impervious	27.0	1,839	49,659	24.8
Pervious	110.9	264.96	29,379	14.7
Total	137.9			39.5

[1] PADEP PRP Instructions, Attachment B, 3/2017

The result of this method would be that the Township would need to reduce its annual sediment discharge to the Wissahickon Creek by 10%, or 4.0 tons/year.

BMPs:

Table 7. Sediment discharge reduction in the Tookany watershed

Project ID *	Name	Drainage Area (acres)	DA Sediment Load (tons/year)	Treatment Area (acres) (Impervious/ Pervious)	BMP Effectiveness Value	Sediment Reduction (tons/yr)	BMP Description
05	Newbold Lane Storm Sewer	84	40.9	30 (14/16)	0.6	8.8	**Dry Extended Detention Basin.** Coordinate with landowner and PECO to construct an infiltration BMP receiving discharge from the storm sewer before flowing back to the Fawn Dr /Deer Run Rd storm sewer network.
11B	Renninger Park Wetland	76	37.0	30 (14/16)	0.8	11.7	**Construct wetland.** Reconfigure storm sewer outfall and swale from Hewett Rd to manage runoff in a new wetland feature constructed in the park's natural area.
13	Robinson Park Wetland Enhancement	95	46.2	30 (14/16)	0.8	11.7	**Dry Extended Detention Basin.** Manage invasive phragmites, daylight existing concrete conveyance structure, and align flows for treatment in a newly constructed infiltration basin. Consult flood study for downstream neighborhoods.
14	Evergreen Ave Bioswale and Infiltration Basin	7	3.4	7 (3/4)	0.8	2.7	**Bioswale.** Stabilize existing swale to prevent accumulation of debris that could clog downstream conveyance features. Direct discharge to a new infiltration structure to a location below the tennis courts in collaboration with Cedar Brook Middle School *(other stream restoration and green infrastructure opportunities may be available at the MS).*
15A	Anselm Rd Basin Retrofit	10	4.9	10 (4/6)	0.7	3.4	**Bioswale.** Convert the existing Dry Detention Basin to an infiltration feature.

Project ID *	Name	Drainage Area (acres)	DA Sediment Load (tons/year)	Treatment Area (acres) (Impervious/ Pervious)	BMP Effectiveness Value	Sediment Reduction (tons/yr)	BMP Description
20	Chelten Hills Drive Step Pool	9	4.4	9 (4/5)	0.8	3.5	**Bioswale.** Install a step pool conveyance network to infiltrate runoff and convey flows downhill from Washington Ln and Serpentine Dr to Chelten Hills Dr and the Tookany Creek.
24	Brookside Rd and Ogontz Park Infiltration	4	1.9	4 (2/2)	0.8	1.6	**Bioswale.** Add inlets along Church Road and reconfigure storm sewer to discharge to an infiltration structure in Ogontz Park.
25	Church Rd and Ogontz Park Infiltration	10	4.9	10 (4/6)	0.8	3.9	**Bioswale.** Create bioswales and infiltration areas within Ogontz Park to receive and infiltrate stormwater from Church Rd and High School Rd to reduce volume flowing to High School Rd from multiple directions.
30A	Boncouer at Meadow	41	20.0	30 (14/16)	0.8	11.7	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration BMP prior to stream discharge.
30B	Brookfield at Boncouer	25	12.2	30 (14/16)	0.8	11.7	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.
30C	Boncouer at Meadow	5	2.4	5 (2/3)	0.8	1.9	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.
30D	Parkview between Brookfield and Front	9	4.4	9 (4/5)	0.8	3.5	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.
30E	Parkview at Front	37	18.0	25 (11/14)	0.8	9.7	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.

Internal Review and Recommendations

Project ID *	Name	Drainage Area (acres)	DA Sediment Load (tons/year)	Treatment Area (acres) (Impervious/ Pervious)	BMP Effectiveness Value	Sediment Reduction (tons/yr)	BMP Description
30F	Parkview at Ivinetta	12	5.8	12 (5/7)	0.8	4.7	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.
30G	Parkview at Hilldale	4	1.9	4 (2/2)	0.8	1.6	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.
30H	Parkview at Rowland	9	4.4	9 (4/5)	0.8	3.5	**Bioswale.** Cut off existing storm sewer discharge to the Tookany Creek and install an infiltration feature prior to stream discharge.
32A	Conklin Pool Bioswale **	42	20.4	42 (19/23)	0.8	17.7	**Bioswale.** **Project complete** in partnership with Abington Township and TTF Partnership.
32B	Conklin Pool Parking Lot Infiltration	4	1.9	4 (2/2)	0.8	1.6	**Bioswale.** Direct stormwater from the facility parking lot and the Church Rd right of way to an infiltration feature. Naturalize the existing concrete channel.
33A	Curtis Arboretum Meadow Conversion	13	6.3	13 (6/7)	0.6	3.8	**Bioswale.** Intercept and treat flows from Church Rd.
33B	Curtis Arboretum and Rock Creek Stream Restoration	NA		1,500 LF	44.88 lb/LF	33.7	**Stream Restoration.** Stabilize select portions of the channel that are actively eroding from the meadow to the confluence with Rock Creek. Additional stream restoration opportunities are available on Township property upstream on Rock Creek parallel to Rock Creek Drive.
33C	Curtis Arboretum Porous Pavement **	0.7	0.4	0.7 (0.3/0.4)	0.8	0.3	**Porous Pavement.** **Project complete**. Replaced existing 30,950 sq. ft. of compacted soil with porous pavement.

Internal Review and Recommendations

Project ID *	Name	Drainage Area (acres)	DA Sediment Load (tons/year)	Treatment Area (acres) (Impervious/ Pervious)	BMP Effectiveness Value	Sediment Reduction (tons/yr)	BMP Description
33D	Curtis Arboretum Bioswale **	20	9.7	20 (9/11)	0.8	7.8	**Bioswale. Project complete**. Infiltration BMP intercepts an area which previously discharged directly to the creek. The feature manages both the piped conveyance and surface flows from the fields. Downstream sections of the pipe were removed and the drainage conveyed though a naturalized bioswale.
					TOTAL (target 159 tons/yr)	160.3	

Notes:

* Project ID numbers consistent with Cheltenham Township stormwater capital project fact sheets

** Documentation of completed projects included in **Appendix 2**.

Table 8. Sediment discharge reduction in the Wissahickon watershed

Project ID *	Name	Drainage Area (acres)	DA Sediment Load (tons/year)	Treatment Area (Imperviou s/Pervious) (acres)	BMP Effectivenes s Value	Sediment Reduction (tons/yr)	BMP Description
W1	Hillbrook Condominiu ms	5	2.4	5 (2/3)	0.8	1.9	**Bioswale.** Redirect off existing storm sewer discharge to the storm sewer Creek and install an infiltration feature in privately-owned open space.
W2	Carroll Park	6	2.9	6 (3/3)	0.8	2.3	**Bioswale.** Convert existing swale into an infiltration and water quality BMP to receive discharge from park and adjacent industrial use.
					TOTAL (target 4 tons/yr)	4.3	

F. Funding Mechanism

The Township intends to pursue a variety of grant opportunities to fund the additional projects that may include:

- Growing Greener Watershed Protection Grants
- Coastal Zone Management Grant Program
- Nonpoint Source Implementation Program Grants (Section 319)
- Pennsylvania Infrastructure Investment Authority Clean Water State Revolving Fund
- Community Development Block Grants
- Watershed Restoration and Protection Program

The Township currently finances stormwater projects and grant matches through its general fund and in partnership with the Tookany/Tacony-Frankford Watershed Partnership. The Township's stormwater user fee and general fund are other sources of funding for these projects.

Internal Review and Recommendations

G. Responsible Parties for Operations and Maintenance

Cheltenham Township will assume responsibility for the projects proposed. The Township Public Works Department will be the lead agency responsible for the operation and maintenance of all proposed BMPs following implementation. The Public Works Department will enter into partnerships with community conservation organizations (Friends of Curtis Arboretum, Tookany/Tacony-Frankford Watershed Partnership, etc) and the Township Parks Department on individual projects where appropriate. If BMPs are installed on property not owned by the Township, the Township may enter into agreements with the property owner that identify BMP operations and maintenance responsibilities. If there is structural failure of a project feature, the Township will evaluate the cause of the failure and modify the design or construction methods if necessary. Typical operation and maintenance activities for the proposed projects include:

- Post construction inspection to verify that stormwater facilities are installed as designed;
- Inspection of stormwater conveyance network serving stormwater facilities;
- Monitoring of dewatering time of stormwater facilities to ensure they function as designed;
- Evaluation of continuing ability for runoff to infiltrate into stormwater facilities as designed;
- Removal of trash and debris that accumulates in stormwater facilities;
- Removal of trash and debris that accumulates in stormwater conveyance network;
- Inspection of vegetation and deposition of sediment and debris after significant storm events;
- Monitoring of success of riparian and wetland plantings;
- Management of invasive species; and
- Replanting of vegetation, soil stabilization, and debris removal, as necessary.

The Township will inspect each BMP associated with this Plan on an annual basis and maintain records of inspection findings and resulting action items. Inspections may be more frequent to ensure that maintenance and repair activities are effective and BMPs function as designed.

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.