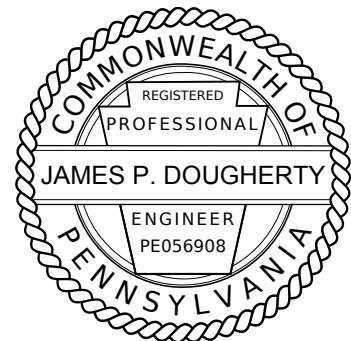


MS4 TMDL Strategy
For
Ambler Borough
Montgomery County, Pennsylvania

September 2012
Revised October 2015
Revised December 2015

Prepared For:

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MS4 TMDL Strategy
For
Ambler Borough
Montgomery County, Pennsylvania

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1.0. Introduction

Ambler Borough (Municipality), located within Montgomery County, is comprised of 0.8 square miles (512 acres) of land. The entire Municipality is within the Wissahickon Creek watershed (Appendix A). The Municipality owns and maintains a small municipal separate storm sewer system (MS4) requiring a National Pollutant Discharge Elimination System (NPDES) permit to allow discharge of stormwater runoff to waters of the Commonwealth of Pennsylvania. The Wissahickon Creek has a TMDL Plan, approved by EPA in 2003. This plan establishes sediment waste load allocations (WLA) for the Municipality limiting the amount of pollution permitted to be discharged to waters of the Commonwealth of Pennsylvania. At the time of this Strategy, the Wissahickon TMDL plan has a siltation (sediment) WLA attributed to the Municipality. Nutrient WLAs have not been established for the Municipality's MS4. Nutrient WLAs have been established for point sources within the watershed. These point sources are not tributary to the Municipal MS4 and are not subject to MS4 permit requirements. This MS4 TMDL Strategy is prepared to satisfy the permit condition requiring this document.

The intent of this MS4 TMDL Strategy is to establish the WLA of the Municipality and to present a plan to reduce waste loads discharged from the regulated small MS4 consistent with the WLAs in the approved TMDL Plan. Upon approval of this Strategy by the Pennsylvania Department of Environmental Protection (PADEP), the Municipality will provide MS4 TMDL Design Details for implementation of the Strategy. Together, these documents, the MS4 TMDL Strategy and the MS4 TMDL Design Details, comprise the MS4 TMDL Plan satisfying the requirement of the Municipality's NPDES MS4 Permit. Implementation of the TMDL Plan is an adaptive, iterative and dynamic process. The TMDL Plan will be evaluated and updated by the Municipality on an as-needed basis based on its effectiveness in reducing pollutant loads in discharges from the regulated small MS4, upon the reasonableness of achieving the WLAs and the cost/benefit of the BMP under consideration.

2.0. Watersheds

Ambler Borough is located within the Wissahickon Creek watershed. The current, approved TMDL plan associated with this watershed is listed below.

- US EPA, 2003. Nutrient and Siltation TMDL Development for Wissahickon Creek, Pennsylvania - Final Report. U.S. Environmental Protection Agency Region 3

At the time of this Strategy, the Wissahickon TMDL plan has a siltation (sediment) WLA attributed to the Municipality. Nutrient WLAs have not been established for the Municipality. Refer to Appendix A for information regarding the Wissahickon Creek Watershed and the applicable TMDL WLA.

3.0. Existing Pollutant Loads

Pollutants are transported by stormwater runoff and discharged to Waters of the Commonwealth of Pennsylvania through the Municipal storm sewer system. The TMDL plan for the watershed presents the waste load at the time the report was prepared. The TMDL plans are prepared based upon stream monitoring, historic rainfall data as well as hydrologic, hydraulic and pollutant modeling. The methodology and computational tools used to prepare each TMDL plan may vary but the result of each is the existing pollutant load at the time of the

plan, the waste load allocation for the watershed and reduction percentage. The Wissahickon TMDL plan presents the WLA for sediment as pounds per year (lbs/yr) for each municipality within the watershed. The tables below documents the WLA and reduction percentage attributed to Ambler Borough per the current approved TMDL plan for the watershed.

TABLE 3-1: SEDIMENT WLA ATTRIBUTED TO AMBLER BOROUGH

Source	Existing Sediemnt Load (lbs/year)	Sediment WLA (lbs/year)	Sediment Reduction (%)	Sediment Reduction (lbs/year)
Streambank Erosion	17,974.49	9,346.73	48%	8,628
Overland	75,008.50	32,843.24	56%	42,165
TOTAL	92,983	42,190	55%	50,793

3.1. MS4 Tributary Area

The existing pollutant loads presented above are attributed the entire area of the Municipality. The Municipality's permit obligation applies only to runoff collected by and discharged from the MS4. The following table summarizes areas that are not tributary to the Municipal MS4. The sediment loads generated from these non-tributary areas are parsed from the Municipality-wide load to determine that which is attributed to only the MS4. The Municipality reserves the right to modify parsed areas in the future. Any modification to parsed areas will be documented in future updates of the MS4 TMDL Plan.

TABLE 3-2: SUMMARY OF PARSED AREAS

Area Description	Acres
PADOT Roads	12.4
Not Tributary to MS4	124.5
Total	137

3.1.1. MS4 Pollutant Loads

The following table summarizes the sediment loads, WLAs and required sediment reductions for the overall area of the Municipality and that which is attributed to the MS4 after accounting for parsed areas.

TABLE 3-3: AMBLER BOROUGH MS4 POLLUTANT LOAD SUMMARY

Row	Description	Unit	Value	Source
A	Municipality Area	acres	512	Mapping
B	Municipality Sediment Load	lb/year	92,983	TMDL Plan
C	Municipality WLA	lb/year	42,190	TMDL Plan
D	Municipality Pollutant Reduction	lb/year	50,793	B-C
E	Municipality Pollutant Reduction	%	54.6%	D/B
F	Parsed Area - Total	acres	137	Table 3-2
G	Parsed Area - Total	%	26.8%	F/A
H	Parsed Area Sediment Load - Total	lb/year	-24,880	F*B
I	MS4 Sediment Load	lb/year	68,103	A+H
J	MS4 Required Pollutant Reduction	%	54.6%	E
K	MS4 Required Pollutant Reduction	lb/year	37,202	I*J

4.0. Pollutant Reduction Strategy

As presented in Table 3-3 above, the Municipality has a significant requirement to reduce sediment discharging from the MS4. The Municipality plans to achieve the sediment reduction using three basic approaches listed below and described in subsequent sections.

- Quantify existing best management practices (BMPs)
- Amend the Stormwater Management Ordinance to require pollutant reductions
- Implement new BMPs

The Municipality intends to implement this Strategy over 50 years. The Municipality intends that at or before the conclusion of 50 years the sediment reduction presented in Table 3-3 will be achieved and the assumptions made in the approved watershed TMDL Plan regarding attaining water quality will be satisfied.

The Municipality anticipates that setting realistic goals that can be quantified by “measurable” success, the reduction percentages outlined in the approved watershed TMDL Plan can be met and water quality in all waterways within the municipality will be positively impacted by implementation of this MS4 TMDL Strategy. Implementation of the MS4 TMDL Plan is an adaptive, iterative and dynamic process. The MS4 TMDL Plan will be evaluated and updated by the Municipality on an as-needed basis based on its effectiveness in reducing pollutant loads in discharges from the regulated small MS4, upon the reasonableness of achieving the WLAs and the cost/benefit of the BMP under consideration. Therefore, it is intended that this Strategy, in its entirety, including the implementation term, may be modified by the Municipality periodically to reflect actual results, achievable goals and obstacles encountered during the process of implementation of this Strategy.

4.1. Pollutant Load Concentration Calculation Method

In subsequent sections of this Strategy, pollutant load concentrations are required to quantify the amount of sediment generated from area tributary to proposed BMPs. The Water Quality Analysis of Pollutant Loading method (Worksheet 12, Pennsylvania Stormwater BMP Manual. 2006, PADEP) is utilized to approximate sediment generated on an annual basis. The method requires three input parameters:

- Pollutant event mean concentration (EMC) in mg/L (Table 8.3 of the PA BMP Manual)
- Tributary area in acres (measured from a map)
- Annual runoff depth in feet

For the purposes of the Strategy, runoff depth is calculated using 4 years (2012 – 2014) of daily rain gauge data from the Ambler Borough Waste Water Treatment Plant and the Runoff Curve Number method accounting for the initial abstraction and land cover classification.

TABLE 4-1: AVERAGE ANNUAL RUNOFF BASED ON LAND COVER CLASSIFICATION

LAND COVER CLASSIFICATION	CN	AVERAGE ANNUAL RUNOFF (in/year)
Forest	62	4.63
Meadow	60	4.10
Fertilized Planting Area	65	5.53
Native Planting Area	58	3.62
Lawn, Low Input	68	6.59
Lawn, High Input	65	5.53
Golf Course Fairway/Green	68	6.59
Grassed Athletic Field	70	7.39
Rooftop	98	43.51
High Traffic Street/Highway	97	39.80
Medium Traffic Street	90	23.96
Low Traffic/Residential Street	89	22.47
Res. Driveway, Play Courts, etc.	98	43.51
High Traffic Parking Lot	98	43.51
Low Traffic Parking Lot	98	43.51

4.2. Existing BMPs

The Wissahickon TMDL Plan was based on analysis completed in 2002. Several BMPs have been installed within the Municipality following the analysis included in the TMDL Plan. The majority of areas tributary to these BMPs are low intensity residential developments. The following parameters are used to determine the sediment load from these areas and the reduction provided by the improved basins.

- Tributary area – determined by inspection of the storm sewer map.
- Area cover conditions – percentage of impervious pervious areas was determined from approved land development plans or from aerial photography.
- Runoff depth – values for impervious and lawn areas from Table 4-1.
- EMC TSS – 35 mg/L and 53.5 mg/L were used for impervious areas to account for rooftops and roads, 108 mg/L was used for lawns, low input.

A detailed tabulation of the calculations can be found in Appendix D. A summary follows.

TABLE 4-2: SUMMARY OF EXISTING BMPS

EXISTING BMP SUMMARY		
Description		Sediment Load
		(lbs/yr)
PEAK RATE REDUCTION BMPS		
1	Ambler Boiler House	394
2	107 Locust Street	33
3	200 South Main Street	1,284
4	237 Trinity	26
5	Artman Home	606
6	234 Spring Garden	26
7	300 Highland	26
8	Borough Hall - 131 Rosemary	421
9	Center Street Twins	105
10	203 Locust	26
STREAMBANK EROSION REDUCTION		
11	Stream Bank Restoration - Rose Valley, 353 Valley Brook	865
12	Stream Bank Restoration - Rose Valley, East of N. Ridge	910
13	Stream Bank Restoration - Tannery Run, East of N. Maple Ave.	2,958
	TOTAL	7,681
		5,792

4.3. Ordinance Requirements

The current Municipal Ordinances require peak rate and volume reductions as well as water quality improvement. These requirements are typically met by the implementation of BMPs. However, the pollutant reduction associated with these BMPs is generally not quantified. The Municipality intends to include pollutant reduction requirements consistent with the approved watershed TMDL Plan WLAs in the Municipal Stormwater Management Ordinance. The purpose of this ordinance requirement is to ensure developments and other projects achieve the pollutant reductions required by the TMDL Plans and that those benefits are quantified under the TMDL Plan requirements. It is not possible to quantify the pollutant reductions achievable from these new ordinance requirements for inclusion in this Strategy. Any BMPs installed throughout the Municipality will be included in future reporting regarding implementation the MS4 TMDL Plan.

4.4. Potential New BMPs

The Municipality anticipates that sediment reduction from existing BMPs and from future projects subject to new ordinance requirements will not achieve the substantial pollutant reduction required by the TMDL Plan. The Municipality includes with this Strategy several potential BMPs that may be implementable in striving to meet the WLA requirements. These potential BMPs may be on private property and therefore, no guarantee is provided that these BMPs can or will be implemented. Implementation of any BMP expected to contribute to achieving the goal of this Strategy will require, planning, design, permitting approval, property owner consent, etc. Therefore, the potential BMPs presented in this MS4 TMDL Plan are to be considered conceptual in scope and in no way imply any obligation of the Municipality to implement these specific BMPs in the locations

identified. As stated previously, implementation of the TMDL Plan is an adaptive, iterative and dynamic process. The TMDL Plan will be evaluated and updated by the Municipality on an as-needed basis based on its effectiveness in reducing pollutant loads in discharges from the regulated small MS4, upon the reasonableness of achieving the WLAs and the cost/benefit of the BMP under consideration. Additional information regarding these potential BMPs is provided in Appendix E.

The Wissahickon watershed requires a 55% percent reduction in sediment.

TABLE 4-3: SUMMARY OF POTENTIAL BMPs

POTENTIAL BMP SUMMARY			
BMP	Appendix	Sediment Load (lbs/yr)	Sediment Reduction (lbs/yr)
Streetsweeping	C & E	34,776	12,172
Inlet Filter Inserts	E	22,604	13,562
Streambank Restoration	E	6,825	5,801
TOTAL		64,205	31,536

4.5. Pollutant Reduction Strategy Summary

The following table summarizes the sediment load, WLA and required sediment reduction for the overall Municipality and that which is attributed to the MS4 after accounting for parsed areas. It also includes a summary of the existing and potential BMPs contemplated to achieve the required sediment load reduction.

TABLE 4-4: MS4 TMDL STRATEGY SUMMARY

Row	Description	Unit	Value	Source
A	Municipality Area	acres	512	Mapping
B	Municipality Sediment Load	lb/year	92,983	TMDL Plan
C	Municipality WLA	lb/year	42,190	TMDL Plan
D	Municipality Pollutant Reduction	lb/year	50,793	B-C
E	Municipality Pollutant Reduction	%	54.6%	D/B
F	Parsed Area - Total	acres	137	Table 3-2
G	Parsed Area - Total	%	26.8%	F/A
H	Parsed Area Sediment Load - Total	lb/year	-24,880	F*B
I	MS4 Sediment Load	lb/year	68,103	A+H
J	MS4 Required Pollutant Reduction	%	54.6%	E
K	MS4 Required Pollutant Reduction	lb/year	37,202	I*J
L	Existing BMPs	lb/year	5,792	Table 4-2
M	Future Potential BMPs	lb/year	31,536	Table 4-3
N	Pollutant Reduction Potential	lb/year	37,328	L+M
O	Net Potential - Required	lb/year	126	N-K

The table above indicates that implementation of this Strategy will potentially exceed the required pollutant reduction by 126 Lbs/year.

5.0. Public Participation

As part of the preparation of this MS4 TMDL Strategy, PADEP requires solicitation of public involvement and participation. The following are required:

- A copy of the MS4 TMDL Strategy must be available for public review.
- Publish, in a newspaper of general circulation in the area, a public notice containing a statement describing the Strategy, where it may be reviewed by the public, and the length of time provided for the receipt of comments.
- Accept written comments for a minimum of 30 days from the date of public notice.
- Accept any verbal or written comments from any interested member of the public at a public meeting or hearing.
- Consider and make a record of the consideration of each timely comment received from the public during the public comment period concerning the Strategy, identifying any changes made to the Strategy in response to the comment.

Submission of the MS4 TMDL Strategy to PADEP must include a copy of the newspaper notice, a copy of all written comments received from the public and a copy of the record of consideration of all timely comments received in the public comment period. Documentation of public participation is included as Appendix F.

APPENDIX A

WATERSHED AND TMDL INFORMATION

Ambler Borough, Montgomery County, Pennsylvania

Title of TMDL(s)

U.S. Environmental Protection Agency Region 3, Nutrient and Siltation TMDL Development for Wissahickon Creek, Pennsylvania – Final Report, October 2003

List of watershed name(s) and eight-digit Hydrologic Unit Code (HUC) for the areas that discharge through the regulated MS4s to water bodies with TMDLS

Schuylkill River Watershed HUC 02040203

List of pollutant(s) and Waste Load Allocations (WLAs) assigned to each regulated small MS4 in each municipality covered by the NOI

Municipalities within the Wissahickon Creek watershed are assigned a siltation WLA. Refer to Table A-1 for WLA allocations.

For each applicable TMDL, a list of the municipalities subject to the TMDL within the area of the same eight-digit HUC

Refer to Table A-1.

For each applicable TMDL, a list of the counties subject to the TMDL within the area of the same eight-digit HUC

Montgomery County, Philadelphia County

Allocated pollutant loadings established in the each applicable TMDL

Refer to Table A-1

Reductions in pollutant loads (pounds or percent) necessary to meet each applicable TMDL or WLA

Refer to Table A-1

TABLE A-1: Summary of Sediment Wasteload Allocations for Streambank Erosion and Overland Load by Municipality

Municipality	Existing Load from Streambank Erosion (lbs/yr)	Streambank Erosion WLA (lbs/yr)	Required Streambank Erosion Reduction	Percent Reduction for Streambank Erosion %	Existing Overland Load (lbs/yr)	Overland Load WLA (lbs/yr)	Required Overland Load Reduction (lbs/yr)	Percent Reduction for Overland Load %	TOTAL EXISTING LOAD (lbs/yr)	TOTAL WLA (lbs/yr)	TOTAL LOAD REDUCTION (lbs/yr)	TOTAL PERCENT REDUCTION %
Abington	121,604.46	41,116.77	80,487.69	66%	362,538.56	87,796.68	274,741.88	76%	484,143.02	128,913.45	355,229.57	73%
Ambler	17,974.49	9,346.73	8,627.76	48%	75,008.50	32,843.24	42,165.26	56%	92,982.99	42,189.97	50,793.02	55%
Cheltenham	1,758.29	1,512.13	246.16	14%	20,549.46	4,449.00	16,100.46	78%	22,307.75	5,961.13	16,346.62	73%
Horsham	2,611.24	1,267.20	1,344.04	51%	5,764.44	2,288.51	3,475.93	60%	8,375.68	3,555.71	4,819.97	58%
Lansdale	10,032.37	5,216.83	4,815.54	48%	60,295.96	47,115.59	13,180.37	22%	70,328.33	52,332.42	17,995.91	26%
Lower	168,245.82	87,487.83	80,757.99	48%	575,510.64	349,872.50	225,638.14	39%	743,756.46	437,360.33	306,396.13	41%
Montgomery	25,443.78	13,230.77	12,213.01	48%	135,550.26	97,897.57	37,652.69	28%	160,994.04	111,128.34	49,865.70	31%
North Wales	8,414.77	4,375.68	4,039.09	48%	50,070.60	37,955.87	12,114.73	24%	58,485.37	42,331.55	16,153.82	28%
Philadelphia	133,827.01	115,091.23	18,735.78	14%	1,413,863.47	265,770.10	1,148,093.37	81%	1,547,690.48	380,861.33	1,166,829.15	75%
Springfield	51,241.03	38,361.29	12,879.74	25%	700,517.47	151,803.80	548,713.67	78%	751,758.50	190,165.09	561,593.41	75%
Upper Dublin	350,903.91	131,125.58	219,778.33	63%	906,098.66	333,482.10	572,616.56	63%	1,257,002.57	464,607.68	792,394.89	63%
Upper Gwynedd	73,016.96	37,968.82	35,048.14	48%	695,874.85	512,615.60	183,259.25	26%	768,891.81	550,584.42	218,307.39	28%
Upper Moreland	1,108.17	366.85	741.32	67%	1,303.29	494.72	808.57	62%	2,411.46	861.57	1,549.89	64%
Whitemarsh	79,221.96	51,034.76	28,187.20	36%	479,266.95	188,497.70	290,769.25	61%	558,488.91	239,532.46	318,956.45	57%
Whitpain	105,137.80	55,148.05	49,989.75	48%	357,776.46	236,125.20	121,651.26	34%	462,914.26	291,273.25	171,641.01	37%
Worcester	1,423.06	739.99	683.07	48%	10,644.84	9,610.08	1,034.76	10%	12,067.90	10,350.07	1,717.83	14%
TOTAL	1,151,965.12	593,390.51	558,574.61	48%	5,850,634.41	2,358,618.26	3,492,016.15	60%	7,002,599.53	2,952,008.77	4,050,590.76	58%

Note:

1. The Total Existing Load is the summation of the existing streambank and overland loads.
2. The Total WLA is the summation of the streambank and overland WLAs.
3. The Total Percent Reduction is based on the Total Existing Load and Total WLA.

Reference:

"Table 4-12. Summary of sediment wasteload allocations for streambank erosion and overland load by municipality (MS4)", U.S. Environmental Protection Agency - Region 3, Nutrient and Siltation TMDL Development for Wissahickon Creak, Pennsylvania - Final Report, October 2003.

APPENDIX B
WATERSHED MAP

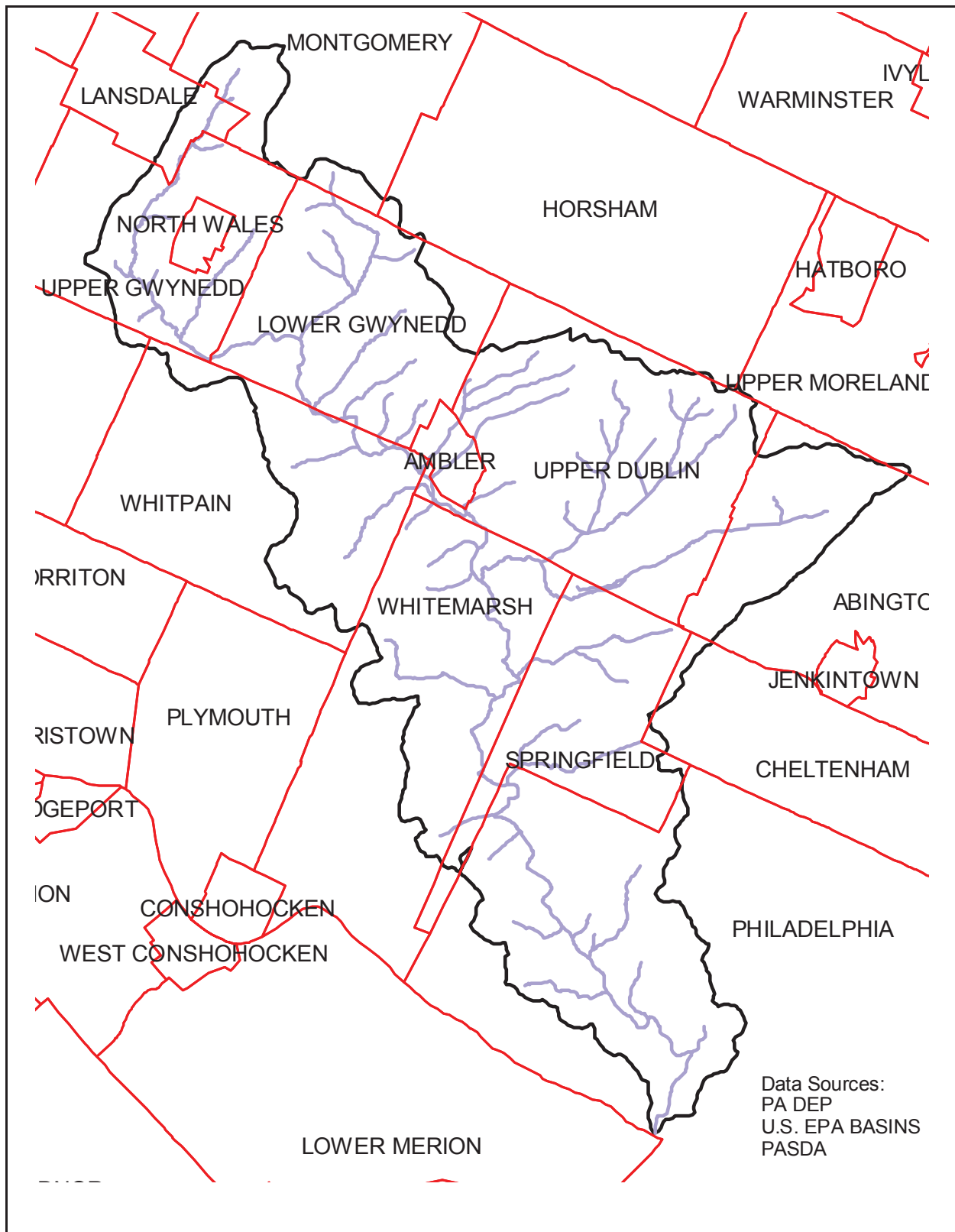


Figure 2-2. Municipal boundaries in the Wisahickon Creek watershed



PARSED AREA MAP APPENDIX B-2

AMBLER BOROUGH, MONTGOMERY COUNTY, PENNSYLVANIA



GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

CORPORATE HEADQUARTERS

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JOB NO.:
2003-0122-01

DATE:
12/15/15

SCALE:
N.T.S.

APPENDIX C

MUNICIPAL ROADWAY SEDIMENT LOADING CALCULATION

SEDIMENT LOAD WITHIN WISSAHICKON CREEK WATERSHED																
ROAD	START	END	LENGTH		AREA				TRAFFIC	IMPERVIOUS			PERVIOUS			TOTAL LOAD (lbs/yr)
			(mi)	(ft)	ROAD (sf)	CURB (sf)	WALK (sf)	GRASS (sf)		RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	
Ainsworth St	Forest Ave	Race St	0.12	633.6	12672	633.6	0	0	LOW	1.88	13306	86	0.55	0	180	133
Ambler Rd	Church St	Borough Line	0.02	105.6	1584	105.6	422.4	105.6	LOW	1.88	2112	86	0.55	105.6	180	22
Anderson Ln	End	Tennis Ave	0.08	422.4	16896	422.4	3379.2	844.8	LOW	1.88	20697.6	86	0.55	844.8	180	212
Artman Rd	Overlook Rd	Cherry Ln	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Bannockburn Ave	S Main St	S Spring Garden St	0.03	158.4	6336	158.4	1267.2	316.8	LOW	1.88	7761.6	86	0.55	316.8	180	80
Bannockburn Ave	S Spring Garden St	Church St	0.12	633.6	25344	633.6	5068.8	1267.2	LOW	1.88	31046.4	86	0.55	1267.2	180	318
Beechmont Rd	Candy Ln	Overlook Rd	0.14	739.2	29568	739.2	5913.6	1478.4	LOW	1.88	36220.8	86	0.55	1478.4	180	371
Belmont Ave	N Main St	N Spring Garden St	0.06	316.8	7286.4	316.8	2534.4	633.6	LOW	1.88	10137.6	86	0.55	633.6	180	105
Belmont Ave	N Spring Garden St	N Ridge Ave	0.07	369.6	8500.8	369.6	2956.8	739.2	LOW	1.88	11827.2	86	0.55	739.2	180	123
Belmont Ave	N Ridge Ave	Hendricks St	0.28	1478.4	38438.4	1478.4	11827.2	2956.8	LOW	1.88	51744	86	0.55	2956.8	180	535
Belmont Ave	Hendricks St	Glen Mawr Dr	0.1	528	15840	528	4224	1056	LOW	1.88	20592	86	0.55	1056	180	212
E Butler Ave	S Main St	S Spring Garden St	0.05	264	10560	264	2112	528	MEDIUM	1.88	12936	113	0.55	528	180	173
E Butler Ave	S Spring Garden St	Cavalier Dr	0.05	264	10560	264	2112	528	MEDIUM	1.88	12936	113	0.55	528	180	173
E Butler Ave	Cavalier Dr	S Ridge Ave	0.04	211.2	8448	211.2	1689.6	422.4	MEDIUM	1.88	10348.8	113	0.55	422.4	180	139
E Butler Ave	S Ridge Ave	York St	0.03	158.4	6336	158.4	1267.2	316.8	MEDIUM	1.88	7761.6	113	0.55	316.8	180	104
E Butler Ave	York St	Lindenwold Ave	0.1	528	21120	528	4224	1056	MEDIUM	1.88	25872	113	0.55	1056	180	346
E Butler Ave	Lindenwold Ave	Park Ave	0.12	633.6	25344	633.6	5068.8	1267.2	MEDIUM	1.88	31046.4	113	0.55	1267.2	180	416
E Butler Ave	Park Ave	Hendricks St	0.04	211.2	8448	211.2	1689.6	422.4	MEDIUM	1.88	10348.8	113	0.55	422.4	180	139
E Butler Ave	Hendricks St	Woodland Ave	0.03	158.4	6336	158.4	1267.2	316.8	MEDIUM	1.88	7761.6	113	0.55	316.8	180	104
E Butler Ave	Woodland Ave	Rosemont Ave	0.05	264	10560	264	2112	528	MEDIUM	1.88	12936	113	0.55	528	180	173
E Butler Ave	Rosemont Ave	Bethlehem Pk	0.09	475.2	19008	475.2	3801.6	950.4	MEDIUM	1.88	23284.8	113	0.55	950.4	180	312
W Butler Ave	Borough Line	S Locust St	0.02	105.6	4224	105.6	844.8	211.2	MEDIUM	1.88	5174.4	113	0.55	211.2	180	69
W Butler Ave	S Locust St	S Chestnut St	0.06	316.8	12672	316.8	2534.4	633.6	MEDIUM	1.88	15523.2	113	0.55	633.6	180	208
W Butler Ave	S Chestnut St	S Maple St	0.06	316.8	12672	316.8	2534.4	633.6	MEDIUM	1.88	15523.2	113	0.55	633.6	180	208
W Butler Ave	S Maple St	S Main St	0.09	475.2	19008	475.2	3801.6	950.4	MEDIUM	1.88	23284.8	113	0.55	950.4	180	312
Candy Ln	E Mount Pleasant Ave	Beechmont Rd	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Candy Ln	Beechmont Rd	Walker Rd	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Center St	S Chestnut St	S Maple St	0.06	316.8	7920	316.8	2534.4	633.6	LOW	1.88	10771.2	86	0.55	633.6	180	112
Cherry Ln	Artman Rd	Haywood Rd	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Cherry Ln	Haywood Rd	Tennis Ave	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
S Chestnut St	W Butler Ave	Wissahickon Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
S Chestnut St	Wissahickon Ave	Center St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
S Chestnut St	Center St	End	0.08	422.4	12672	422.4	3379.2	844.8	LOW	1.88	16473.6	86	0.55	844.8	180	170
Church St	Borough Line	S Main St	0.12	633.6	7286.4	633.6	2534.4	633.6	LOW	1.88	10454.4	86	0.55	633.6	180	108
Church St	S Main St	Bannockburn Ave	0.15	792	7920	792	6336	1584	LOW	1.88	15048	86	0.55	1584	180	160
Church St	Bannockburn Ave	Southern Ave	0.1	528	5280	528	4224	1056	LOW	1.88	10032	86	0.55	1056	180	107
Church St	Southern Ave	Highland Ave	0.1	528	5280	528	4224	1056	LOW	1.88	10032	86	0.55	1056	180	107
Church St	Highland Ave	Trinity Ave	0.8	4224	42240	4224	33792	8448	LOW	1.88	80256	86	0.55	8448	180	854
Church St	Trinity Ave	Rosemary Ave	0.05	264	2640	264	2112	528	LOW	1.88	5016	86	0.55	528	180	53
Church St	Rosemary Ave	Bethlehem Pk	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Cove Rd	Tennis Ave	Edgewood Dr	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
Edgewood Dr	End	Hendricks St	0.08	422.4	12672	422.4	3379.2	844.8	LOW	1.88	16473.6	86	0.55	844.8	180	170
Edgewood Dr	Hendricks St	Cove Rd	0.11	580.8	17424	580.8	4646.4	1161.6	LOW	1.88	22651.2	86	0.55	1161.6	180	234
Edgewood Dr	Cove Rd	Bethlehem Pk	0.21	1108.8	33264	1108.8	8870.4	2217.6	LOW	1.88	43243.2	86	0.55	2217.6	180	446
Euclid Ave	Park Ave	North St	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Euclid Ave	North St	Bethlehem Pk	0.12	633.6	25344	633.6	5068.8	1267.2	LOW	1.88	31046.4	86	0.55	1267.2	180	318
Fairview Ave	Hendricks St	Rosemont Ave	0.07	369.6	8500.8	369.6	2956.8	739.2	LOW	1.88	11827.2	86	0.55	739.2	180	123
Fairview Ave	Rosemont Ave	Bethlehem Pk	0.1	528	12144	528	4224	1056	LOW	1.88	16896	86	0.55	1056	180	175
Forest Ave	N Main St	N Spring Garden St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Forest Ave	N Spring Garden St	N Ridge Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
Forest Ave	N Ridge Ave	School St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Forest Ave	School St	Walnut Ln	0.16	844.8	25344	844.8	6758.4	1689.6	LOW	1.88	32947.2	86	0.55	1689.6	180	340
Forest Ave	Walnut Ln	Hendricks St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127

SEDIMENT LOAD WITHIN WISSAHICKON CREEK WATERSHED																
ROAD	START	END	LENGTH		AREA				TRAFFIC	IMPERVIOUS			PERVIOUS			TOTAL LOAD (lbs/yr)
			(mi)	(ft)	ROAD (sf)	CURB (sf)	WALK (sf)	GRASS (sf)		RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	
Forest Ave	Hendricks St	Glen Mawr Dr	0.1	528	15840	528	4224	1056	LOW	1.88	20592	86	0.55	1056	180	212
Forest Ave	Glen Mawr Dr	Bethlehem Pk	0.1	528	15840	528	4224	1056	LOW	1.88	20592	86	0.55	1056	180	212
Fulling Mill Ln	End	Tennis Ave	0.07	369.6	14784	369.6	2956.8	739.2	LOW	1.88	18110.4	86	0.55	739.2	180	186
Glen Mawr Dr	Valley Brook Rd	Belmont Ave	0.04	211.2	4857.6	211.2	1689.6	422.4	LOW	1.88	6758.4	86	0.55	422.4	180	70
Glen Mawr Dr	Belmont Ave	Forest Ave	0.06	316.8	7286.4	316.8	2534.4	633.6	LOW	1.88	10137.6	86	0.55	633.6	180	105
Greenwood Ave	Mattison Ave	Lindenwold Ave	0.16	844.8	25344	844.8	6758.4	1689.6	LOW	1.88	32947.2	86	0.55	1689.6	180	340
Grist Mill Ct	Hendricks St	End	0.08	422.4	12672	422.4	3379.2	844.8	LOW	1.88	16473.6	86	0.55	844.8	180	170
Haywood Rd	Tennis Ave	Walker Rd	0.11	580.8	23232	580.8	4646.4	1161.6	LOW	1.88	28459.2	86	0.55	1161.6	180	292
Haywood Rd	Walker Rd	Cherry Ln	0.13	686.4	27456	686.4	5491.2	1372.8	LOW	1.88	33633.6	86	0.55	1372.8	180	345
Heckler St	Hendricks St	Rosemont Ave	0.08	422.4	9715.2	422.4	3379.2	844.8	LOW	1.88	13516.8	86	0.55	844.8	180	140
Hendrick St	E Mount Pleasant Ave	Grist Mill Ct	0.06	316.8	14572.8	316.8	2534.4	633.6	LOW	1.88	17424	86	0.55	633.6	180	178
Hendrick St	Grist Mill Ct	Walker Rd	0.05	264	12144	264	2112	528	LOW	1.88	14520	86	0.55	528	180	148
Hendrick St	Walker Rd	Tennis Ave	0.1	528	24288	528	4224	1056	LOW	1.88	29040	86	0.55	1056	180	297
Hendrick St	Tennis Ave	Edgewood Dr	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Hendrick St	Edgewood Dr	Valley Brook Rd	0.07	369.6	14784	369.6	2956.8	739.2	LOW	1.88	18110.4	86	0.55	739.2	180	186
Hendrick St	Valley Brook Rd	Belmont Ave	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Hendrick St	Belmont Ave	Forest Ave	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Hendrick St	Forest Ave	Fairview Ave	0.06	316.8	7286.4	316.8	2534.4	633.6	LOW	1.88	10137.6	86	0.55	633.6	180	105
Hendrick St	Fairview Ave	Heckler St	0.06	316.8	7286.4	316.8	2534.4	633.6	LOW	1.88	10137.6	86	0.55	633.6	180	105
Hendrick St	Heckler St	E Butler Ave	0.05	264	6072	264	2112	528	LOW	1.88	8448	86	0.55	528	180	88
Highland Ave	S Spring Garden St	Park Ave	0.15	792	31680	792	6336	1584	LOW	1.88	38808	86	0.55	1584	180	398
Highland Ave	Park Ave	North St	0.08	422.4	16896	422.4	3379.2	844.8	LOW	1.88	20697.6	86	0.55	844.8	180	212
Highland Ave	North St	Church St	0.03	158.4	6336	158.4	1267.2	316.8	LOW	1.88	7761.6	86	0.55	316.8	180	80
Knight Rd	Borough Line	E Mount Pleasant Ave	0.1	528	8712	528	0	0	LOW	1.88	9240	86	0.55	0	180	92
Lemon St	Trinity Ave	Rosemary Ave	0.09	475.2	4752	475.2	3801.6	950.4	LOW	1.88	9028.8	86	0.55	950.4	180	96
Lindenwold Ave	E Race St	E Butler Ave	0.04	211.2	9715.2	211.2	1689.6	422.4	LOW	1.88	11616	86	0.55	422.4	180	119
Lindenwold Ave	E Butler Ave	Poplar St	0.03	158.4	7286.4	158.4	1267.2	316.8	LOW	1.88	8712	86	0.55	316.8	180	89
Lindenwold Ave	Poplar St	Greenwood Ave	0.05	264	12144	264	2112	528	LOW	1.88	14520	86	0.55	528	180	148
Lindenwold Ave	Greenwood Ave	Park Ave	0.04	211.2	9715.2	211.2	1689.6	422.4	LOW	1.88	11616	86	0.55	422.4	180	119
Lindenwold Ave	Park Ave	North St	0.09	475.2	21859.2	475.2	3801.6	950.4	LOW	1.88	26136	86	0.55	950.4	180	267
Lindenwold Ave	North St	Bethlehem Pk	0.08	422.4	19430.4	422.4	3379.2	844.8	LOW	1.88	23232	86	0.55	844.8	180	237
S Locust St	W Butler Ave	Wissahickon Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
S Locust St	Wissahickon Ave	Center St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
S Locust St	Center St	End	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
N Main St	E Mount Pleasant Ave	Tennis Ave	0.25	1320	30360	1320	10560	2640	LOW	1.88	42240	86	0.55	2640	180	438
N Main St	Tennis Ave	Reiffs Mill Rd	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
N Main St	Reiffs Mill Rd	Belmont Ave	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
N Main St	Belmont Ave	Forest Ave	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
N Main St	Forest Ave	Walnut St	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
N Main St	Walnut St	E Race St	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
N Main St	E Race St	W Butler Ave	0.03	158.4	4752	158.4	1267.2	316.8	LOW	1.88	6177.6	86	0.55	316.8	180	64
N Main St	W Butler Ave	Poplar St	0.09	475.2	14256	475.2	3801.6	950.4	LOW	1.88	18532.8	86	0.55	950.4	180	191
N Main St	Poplar St	Orange Ave	0.16	844.8	25344	844.8	6758.4	1689.6	LOW	1.88	32947.2	86	0.55	1689.6	180	340
N Main St	Orange Ave	Banockburn Ave	0.15	792	23760	792	6336	1584	LOW	1.88	30888	86	0.55	1584	180	318
N Main St	Banockburn Ave	Church St	0.14	739.2	22176	739.2	5913.6	1478.4	LOW	1.88	28828.8	86	0.55	1478.4	180	297
N Main St	Church St	Randolph Ave	0.04	211.2	3168	211.2	844.8	211.2	LOW	1.88	4224	86	0.55	211.2	180	44
N Maple St	Borough Line	W Butler Ave	0.2	1056	36960	1056	4224	1056	LOW	1.88	42240	86	0.55	1056	180	429
S Maple St	W Butler Ave	Wissahickon Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
Mattison Ave	Poplar St	Greenwood Ave	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Mattison Ave	Greenwood Ave	Water St	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Mattison Ave	Water St	Park Ave	0.08	422.4	16896	422.4	3379.2	844.8	LOW	1.88	20697.6	86	0.55	844.8	180	212
Mattison Ave	Park Ave	North St	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Mattison Ave	North St	Bethlehem Pk	0.11	580.8	23232	580.8	4646.4	1161.6	LOW	1.88	28459.2	86	0.55	1161.6	180	292

SEDIMENT LOAD WITHIN WISSAHICKON CREEK WATERSHED																
ROAD	START	END	LENGTH		AREA				TRAFFIC	IMPERVIOUS			PERVIOUS			TOTAL LOAD (lbs/yr)
			(mi)	(ft)	ROAD (sf)	CURB (sf)	WALK (sf)	GRASS (sf)		RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	
E Mount Pleasant Ave	Borough Line	N Main St	0.02	105.6	2428.8	105.6	844.8	211.2	LOW	1.88	3379.2	86	0.55	211.2	180	35
E Mount Pleasant Ave	N Main St	N Spring Garden St	0.05	264	6072	264	2112	528	LOW	1.88	8448	86	0.55	528	180	88
E Mount Pleasant Ave	N Spring Garden St	N Ridge Ave	0.06	316.8	7286.4	316.8	2534.4	633.6	LOW	1.88	10137.6	86	0.55	633.6	180	105
E Mount Pleasant Ave	N Ridge Ave	Reiffs Mill Rd	0.16	844.8	19430.4	844.8	6758.4	1689.6	LOW	1.88	27033.6	86	0.55	1689.6	180	281
E Mount Pleasant Ave	Reiffs Mill Rd	Hendricks St	0.06	316.8	7286.4	316.8	2534.4	633.6	LOW	1.88	10137.6	86	0.55	633.6	180	105
E Mount Pleasant Ave	Hendricks St	Candy Ln	0.06	316.8	4752	316.8	1267.2	316.8	LOW	1.88	6336	86	0.55	316.8	180	65
E Mount Pleasant Ave	Candy Ln	Overlook Rd	0.18	950.4	14256	950.4	3801.6	950.4	LOW	1.88	19008	86	0.55	950.4	180	196
E Mount Pleasant Ave	Overlook Rd	Bethlehem Pk	0.22	1161.6	17424	1161.6	4646.4	1161.6	LOW	1.88	23232	86	0.55	1161.6	180	239
North St	Highland Ave	Trinity Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
North St	Trinity Ave	Rosemary Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
North St	Rosemary Ave	Mattison Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
North St	Mattison Ave	Euclid Ave	0.07	369.6	7392	369.6	2956.8	739.2	LOW	1.88	10718.4	86	0.55	739.2	180	112
North St	Euclid Ave	Lindenwold Ave	0.07	369.6	7392	369.6	2956.8	739.2	LOW	1.88	10718.4	86	0.55	739.2	180	112
North St	Lindenwold Ave	Woodland Ave	0.13	686.4	20592	686.4	5491.2	1372.8	LOW	1.88	26769.6	86	0.55	1372.8	180	276
Orange Ave	S Main St	S Spring Garden St	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
Orange Ave	S Spring Garden St	Trinity Ave	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Orange Ave	Trinity Ave	Rosemary Ave	0.04	211.2	8448	211.2	1689.6	422.4	LOW	1.88	10348.8	86	0.55	422.4	180	106
Overlook Rd	E Mount Pleasant Ave	Artman Rd	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Overlook Rd	Artman Rd	Beechmont Rd	0.02	105.6	4224	105.6	844.8	211.2	LOW	1.88	5174.4	86	0.55	211.2	180	53
Overlook Rd	Beechmont Rd	Walker Rd	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
E Park Ave	S Spring Garden St	Southern Ave	0.15	792	23760	792	6336	1584	LOW	1.88	30888	86	0.55	1584	180	318
E Park Ave	Southern Ave	Highland Ave	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
E Park Ave	Highland Ave	Trinity Ave	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
E Park Ave	Trinity Ave	Rosemary Ave	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
E Park Ave	Rosemary Ave	Mattison Ave	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
E Park Ave	Mattison Ave	Euclid Ave	0.07	369.6	14784	369.6	2956.8	739.2	LOW	1.88	18110.4	86	0.55	739.2	180	186
E Park Ave	Euclid Ave	Lindenwold Ave	0.07	369.6	14784	369.6	2956.8	739.2	LOW	1.88	18110.4	86	0.55	739.2	180	186
E Park Ave	Lindenwold Ave	W Butler Ave	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Poplar St	S Main St	S Spring Garden St	0.04	211.2	8448	211.2	1689.6	422.4	LOW	1.88	10348.8	86	0.55	422.4	180	106
Poplar St	S Spring Garden St	Rosemary Ave	0.0001	0.528	15.84	0.528	4.224	1.056	LOW	1.88	20.592	86	0.55	1.056	180	0
Poplar St	Rosemary Ave	S Ridge Ave	0.08	422.4	12672	422.4	3379.2	844.8	LOW	1.88	16473.6	86	0.55	844.8	180	170
Poplar St	S Ridge Ave	York St	0.03	158.4	3168	158.4	1267.2	316.8	LOW	1.88	4593.6	86	0.55	316.8	180	48
Poplar St	York St	Lindenwold Ave	0.13	686.4	13728	686.4	5491.2	1372.8	LOW	1.88	19905.6	86	0.55	1372.8	180	207
E Race St	N Main St	N Spring Garden St	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
E Race St	N Spring Garden St	N Spring Garden St	0.01	52.8	1636.8	52.8	211.2	52.8	LOW	1.88	1900.8	86	0.55	52.8	180	19
E Race St	N Spring Garden St	N Ridge Ave	0.07	369.6	11457.6	369.6	1478.4	369.6	LOW	1.88	13305.6	86	0.55	369.6	180	135
E Race St	N Ridge Ave	School St	0.07	369.6	11457.6	369.6	1478.4	369.6	LOW	1.88	13305.6	86	0.55	369.6	180	135
E Race St	School St	Lindenwold Ave	0.07	369.6	14784	369.6	2956.8	739.2	LOW	1.88	18110.4	86	0.55	739.2	180	186
E Race St	Lindenwold Ave	E Butler Ave	0.14	739.2	29568	739.2	5913.6	1478.4	LOW	1.88	36220.8	86	0.55	1478.4	180	371
W Race St	End	N Main St	0.03	158.4	6336	158.4	1267.2	316.8	LOW	1.88	7761.6	86	0.55	316.8	180	80
Randolph Ave	N Main St	Borough Line	0.02	105.6	1584	105.6	422.4	105.6	LOW	1.88	2112	86	0.55	105.6	180	22
Reiffs Mill Rd	E Mount Pleasant Ave	N Ridge Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
Reiffs Mill Rd	N Ridge Ave	Tennis Ave	0.09	475.2	10929.6	475.2	3801.6	950.4	LOW	1.88	15206.4	86	0.55	950.4	180	158
Reiffs Mill Rd	Tennis Ave	N Main St	0.21	1108.8	33264	1108.8	8870.4	2217.6	LOW	1.88	43243.2	86	0.55	2217.6	180	446
N Ridge Ave	E Mount Pleasant Ave	Reiffs Mill Rd	0.16	844.8	25344	844.8	6758.4	1689.6	LOW	1.88	32947.2	86	0.55	1689.6	180	340
N Ridge Ave	Reiffs Mill Rd	Tennis Ave	0.0001	0.528	15.84	0.528	4.224	1.056	LOW	1.88	20.592	86	0.55	1.056	180	0
N Ridge Ave	Tennis Ave	Belmont Ave	0.11	580.8	17424	580.8	4646.4	1161.6	LOW	1.88	22651.2	86	0.55	1161.6	180	234
N Ridge Ave	Belmont Ave	Forest Ave	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
N Ridge Ave	Forest Ave	Walnut St	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
N Ridge Ave	Walnut St	E Race St	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
N Ridge Ave	E Race St	W Butler Ave	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
S Ridge Ave	W Butler Ave	Poplar St	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
Rosemary Ave	S Spring Garden St	Poplar St	0.02	105.6	4224	105.6	844.8	211.2	LOW	1.88	5174.4	86	0.55	211.2	180	53

SEDIMENT LOAD WITHIN WISSAHICKON CREEK WATERSHED																
ROAD	START	END	LENGTH		AREA				TRAFFIC	IMPERVIOUS			PERVIOUS			TOTAL LOAD (lbs/yr)
			(mi)	(ft)	ROAD (sf)	CURB (sf)	WALK (sf)	GRASS (sf)		RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	RUNOFF (ft/yr)	AREA (sf)	LOAD (mg/L)	
Rosemary Ave	Poplar St	Orange Ave	0.12	633.6	25344	633.6	5068.8	1267.2	LOW	1.88	31046.4	86	0.55	1267.2	180	318
Rosemary Ave	Orange Ave	Water St	0.02	105.6	4224	105.6	844.8	211.2	LOW	1.88	5174.4	86	0.55	211.2	180	53
Rosemary Ave	Water St	Lemon St	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
Rosemary Ave	Lemon St	Park Ave	0.02	105.6	4224	105.6	844.8	211.2	LOW	1.88	5174.4	86	0.55	211.2	180	53
Rosemary Ave	Park Ave	North St	0.08	422.4	16896	422.4	3379.2	844.8	LOW	1.88	20697.6	86	0.55	844.8	180	212
Rosemary Ave	North St	Church St	0.11	580.8	23232	580.8	4646.4	1161.6	LOW	1.88	28459.2	86	0.55	1161.6	180	292
Rosemont Ave	Fairview Ave	Heckler St	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
Rosemont Ave	Heckler St	E Butler Ave	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
School St	Forest Ave	Walnut Ln	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
School St	Walnut Ln	E Race St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Southern Ave	S Spring Garden St	Park Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
Southern Ave	Park Ave	Church St	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
N Spring Garden St	Belmont Ave	Forest Ave	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
N Spring Garden St	Forest Ave	Walnut St	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
N Spring Garden St	Walnut St	E Race St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
N Spring Garden St	E Race St	W Butler Ave	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
S Spring Garden St	E Butler Ave	Poplar St	0.09	475.2	14256	475.2	3801.6	950.4	LOW	1.88	18532.8	86	0.55	950.4	180	191
S Spring Garden St	Poplar St	Orange Ave	0.12	633.6	19008	633.6	5068.8	1267.2	LOW	1.88	24710.4	86	0.55	1267.2	180	255
S Spring Garden St	Orange Ave	Highland Ave	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
S Spring Garden St	Highland Ave	Southern Ave	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
S Spring Garden St	Southern Ave	E Park Ave	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
S Spring Garden St	E Park Ave	Bannockburn Ave	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
Tennis Ave	Borough Line	N Main St	0.02	105.6	3168	105.6	844.8	211.2	LOW	1.88	4118.4	86	0.55	211.2	180	42
Tennis Ave	N Main St	Reiffs Mill Rd	0.05	264	7920	264	2112	528	LOW	1.88	10296	86	0.55	528	180	106
Trinity Ave	Orange Ave	Lemon St	0.05	264	10560	264	2112	528	LOW	1.88	12936	86	0.55	528	180	133
Trinity Ave	Lemon St	Park Ave	0.09	475.2	19008	475.2	3801.6	950.4	LOW	1.88	23284.8	86	0.55	950.4	180	239
Trinity Ave	Park Ave	North St	0.08	422.4	16896	422.4	3379.2	844.8	LOW	1.88	20697.6	86	0.55	844.8	180	212
Trinity Ave	North St	Church St	0.07	369.6	14784	369.6	2956.8	739.2	LOW	1.88	18110.4	86	0.55	739.2	180	186
Valley Brook Rd	Hendricks St	Glen Mawr Dr	0.11	580.8	17424	580.8	4646.4	1161.6	LOW	1.88	22651.2	86	0.55	1161.6	180	234
Valley Brook Rd	Glen Mawr Dr	Bethlehem Pk	0.13	686.4	20592	686.4	5491.2	1372.8	LOW	1.88	26769.6	86	0.55	1372.8	180	276
Walker Rd	Hendrick St	Candy Ln	0.06	316.8	12672	316.8	2534.4	633.6	LOW	1.88	15523.2	86	0.55	633.6	180	159
Walker Rd	Candy Ln	Overlook Rd	0.08	422.4	16896	422.4	3379.2	844.8	LOW	1.88	20697.6	86	0.55	844.8	180	212
Walker Rd	Overlook Rd	Haywood Rd	0.03	158.4	6336	158.4	1267.2	316.8	LOW	1.88	7761.6	86	0.55	316.8	180	80
Walnut Ln	School St	Forest Ave	0.23	1214.4	36432	1214.4	9715.2	2428.8	LOW	1.88	47361.6	86	0.55	2428.8	180	488
Walnut St	N Main St	N Spring Garden St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Walnut St	N Spring Garden St	N Ridge Ave	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Water St	Rosemary Ave	Mattison Ave	0.06	316.8	6336	316.8	2534.4	633.6	LOW	1.88	9187.2	86	0.55	633.6	180	96
Wissahickon Ave	S Locust St	S Chestnut St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Wissahickon Ave	S Chestnut St	S Maple St	0.06	316.8	9504	316.8	2534.4	633.6	LOW	1.88	12355.2	86	0.55	633.6	180	127
Woodland Ave	E Butler Ave	Nicholas St	0.03	158.4	4752	158.4	1267.2	316.8	LOW	1.88	6177.6	86	0.55	316.8	180	64
Woodland Ave	Nicholas St	North St	0.04	211.2	6336	211.2	1689.6	422.4	LOW	1.88	8236.8	86	0.55	422.4	180	85
Woodland Ave	North St	Bethlehem Pk	0.07	369.6	11088	369.6	2956.8	739.2	LOW	1.88	14414.4	86	0.55	739.2	180	149
York St	E Butler Ave	Poplar St	0.05	264	5280	264	2112	528	LOW	1.88	7656	86	0.55	528	180	80
TOTAL																34,776

Assumptions:

- Annual runoff depth is calculated using 4 years (2012 – 2014) of daily rain gauge data from the Ambler Borough Waste Water Treatment Plant and the Runoff Curve Number method accounting for the initial abstraction and land cover classification.
- Sediment loading concentrations from Table 8.3, PADEP BMP Manual:
 - Low Traffic Street (86 mg/l)
 - Medium Traffic Street (113 mg/l)
 - Lawn Low Input (180 mg/l)

APPENDIX D
EXISTING BMPs

CLIENT:

AMBLER BOROUGH

PROJECT NAME:

NPDES MS4 PERMIT RENEWAL

PROJECT NUMBER:

03-0122-01



Gilmore & Associates, Inc.
Engineering and Consulting Services

PEAK RATE REDUCTION BMPs														60% SEDIMENT REDUCTION (Lb/year)
No.	LOCATION	TRIBUTARY AREA (ac)	IMPERVIOUS COVER (%)	IMPERVIOUS COVER (ac)	RUNOFF DEPTH (in)	EMC TSS (mg/L)	IMPERVIOUS SEDIMENT (Lb/year)	LAWN COVER (%)	LAWN COVER (ac)	RUNOFF DEPTH (in)	EMC TSS (mg/L)	LAWN SEDIMENT (Lb/year)	TOTAL SEDIMENT (Lb/year)	
1	Ambler Boiler House	1.1	70%	0.77	33	53.5	306	30%	0.33	6.59	180	88	394	236
2	107 Locust Street	0.1	50%	0.05	33	53.5	20	50%	0.05	6.59	180	13	33	20
3	200 South Main Street	4.9	70%	3.43	33	35	891	30%	1.47	6.59	180	392	1,284	770
4	237 Trinity	0.1	35%	0.04	33	35	9	65%	0.065	6.59	180	17	26	16
5	Artman Home	2.3	48%	1.10	33	35	287	52%	1.196	6.59	180	319	606	364
6	234 Spring Garden	0.1	35%	0.04	33	35	9	65%	0.065	6.59	180	17	26	16
7	300 Highland	0.1	35%	0.04	33	35	9	65%	0.065	6.59	180	17	26	16
8	Borough Hall - 131 Rosemary	1.6	50%	0.80	33	35	208	50%	0.8	6.59	180	214	421	253
9	Center Street Twins	0.4	50%	0.20	33	35	52	50%	0.2	6.59	180	53	105	63
10	203 Locust	0.1	50%	0.05	33	35	13	50%	0.05	6.59	180	13	26	16
TOTAL - PEAK RATE REDUCTION BMPs														1,770

STREAMBANK EROSION REDUCTION						
No.	BMP	LENGTH	EROSION RATE	SEDIMENT LOAD	TSS REMOVAL EFFICIENCY	SEDIMENT REDUCTION
		(ft)	(Lbs/ft/yr)	(Lbs/yr)	(%)	(Lbs/yr)
11	Stream Bank Restoration - Rose Valley, 353 Valley Brook	95	9.1	865	85%	735
12	Stream Bank Restoration - Rose Valley, East of N. Ridge	100	9.1	910	85%	774
13	Stream Bank Restoration - Tannery Run, East of N. Maple Ave.	325	9.1	2,958	85%	2,514
TOTAL - STREAMBANK EROSION REDUCTION						4,022

EROSION RATE CALCULATION	VALUE	UNIT	REFERENCE
Length of Stream in Watershed	24	miles	Wissahickon TMDL Plan
Length of Stream in Watershed	126,720	ft	miles/5280
Watershed Total Stream Bank Erosion	1,151,965	Lbs/yr	Table A-1 MS4 TMDL Strategy
Erosion Rate	9.1	Lbs/ft/yr	Total Stream Bank Erosion/Stream Length

APPENDIX E

POTENTIAL NEW BMPs

CLIENT:

AMBLER BOROUGH

PROJECT NAME:

NPDES MS4 PERMIT RENEWAL

PROJECT NUMBER:

03-0122-01



Gilmore & Associates, Inc.
Engineering and Consulting Services

ROADWAY SEDIMENT REMOVAL				
BMP	SEDIMENT LOAD	TSS REMOVAL EFFICIENCY	SEDIMENT REDUCTION	REMAINING SEDIMENT LOAD
	(Lbs/yr)	(%)	(Lbs/yr)	(Lbs/yr)
Streetsweeping	34,776	35%	12,172	22,604
Inlet Filter Inserts	22,604	60%	13,563	
TOTAL - ROADWAY			25,734	

STREAMBANK EROSION REDUCTION					
BMP	LENGTH	EROSION RATE	SEDIMENT LOAD	TSS REMOVAL EFFICIENCY	SEDIMENT REDUCTION
	(ft)	(Lbs/ft/yr)	(Lbs/yr)	(%)	(Lbs/yr)
Streambank Restoration	750	9.1	6,825	85%	5,801

POTENTIAL BMP SUMMARY		
BMP	SEDIMENT LOAD	SEDIMENT REDUCTION
	(lbs/yr)	(lbs/yr)
Streetsweeping	34,776	12,172
Inlet Filter Inserts	22,604	13,562
Streambank Restoration	6,825	5,801
TOTAL	64,205	31,536

EROSION RATE CALCULATION	VALUE	UNIT	REFERENCE
Length of Stream in Watershed	24	miles	Wissahickon TMDL Plan
Length of Stream in Watershed	126,720	ft	miles/5280
Watershed Total Stream Bank Erosion	1,151,965	Lbs/yr	Table A-1 MS4 TMDL Strategy
Erosion Rate	9.1	Lbs/ft/yr	Total Stream Bank Erosion/Stream Length

APPENDIX F

PUBLIC COMMENT AND RESPONSES

APPENDIX F-1

PUBLIC NOTICE

AFFIDAVIT OF PUBLICATION

307 Derstine Avenue • Lansdale, PA 19446

BOROUGH OF AMBLER

131 Rosemary Ave

AMBLER, PA 19002

Attention:

**STATE OF PENNSYLVANIA,
COUNTY OF MONTGOMERY**

The undersigned *Anna O'Hara*, being duly sworn the he/she is the principal clerk of The Times Herald, Times Herald Digital, published in the English language for the dissemination of local or transmitted news and intelligence of a general character, which are duly qualified newspapers, and the annexed hereto is a copy of certain order, notice, publication or advertisement of:

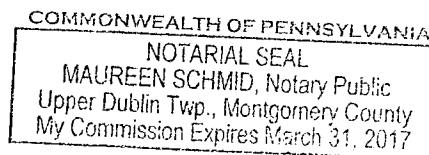
BOROUGH OF AMBLER**Published in the following edition(s):**

The Times Herald	10/28/15
Times Herald Digital	10/28/15

NOTICE OF PUBLIC COMMENT PERIOD AND PUBLIC MEETING for the Ambler Borough MS4 TMDL Strategy. The MS4 TMDL Strategy outlines the plan the Borough will use to reduce pollutants discharged from the Borough storm sewer system (MS4) consistent with the waste load allocations presented in the Wissahickon Creek TMDL plan. The Borough is soliciting written comments on the MS4 TMDL Strategy. Interested persons may submit written comments during the 30-day period of October 28 - November 27, 2015. The document may be reviewed during the comment period at Ambler Borough Hall, 131 Rosemary Ave., Ambler, PA 19002 weekdays from 8AM - 4:30PM or on the Borough website homepage www.boroughofambler.com. Written and verbal comments will be accepted at a public meeting on November 4, 2015 (7PM) at Ambler Borough Hall. Comments must be submitted in writing to address above (Attn: Borough Manager) or by email to manager@borough.ambler.pa.us and must include originator's name and address. Comments submitted by facsimile will not be accepted. TH-Oct 28-1a

Sworn to the subscribed before me this 11/3/2015.*Maureen Schmid*

Notary Public, State of Pennsylvania
Acting in County of Montgomery

**Advertisement Information**

Client Id: 882953

Ad Id: 801309

PO:

Sales Person: 093302

Proof of Publication of Notice

THE AMBLER GAZETTE

State of Pennsylvania,
County of Montgomery ss:

Elizabeth Douglas, Designated Agent of MONTGOMERY NEWSPAPERS LLC, a corporation of the County and State aforesaid, being duly sworn, deposes and says that THE AMBLER GAZETTE is a weekly newspaper published at Ambler, County and State aforesaid, which was established in the year 1879, since which date said newspaper has been regularly issued in said County, and that a copy of the printed notice of publication is attached hereto exactly as the same was printed and published in the regular editions and issues of the said weekly newspaper on the following dates, viz:

NOTICE OF PUBLIC COMMENT PERIOD AND PUBLIC MEETING for the Ambler Borough MS4 TMDL Strategy. The MS4 TMDL Strategy outlines the plan the Borough will use to reduce pollutants discharged from the Borough storm sewer system (MS4) consistent with the waste load allocations presented in the Wissahickon Creek TMDL plan. The Borough is soliciting written comments on the MS4 TMDL Strategy. Interested persons may submit written comments during the 30-day period of October 28 - November 27, 2015. The document may be reviewed during the comment period at Ambler Borough Hall, 131 Rosemary Ave., Ambler, PA 19002 weekdays from 8AM - 4:30PM or on the Borough website homepage www.boroughofambler.com. Written and verbal comments will be accepted at a public meeting on November 4, 2015 (7PM) at Ambler Borough Hall. Comments must be submitted in writing to address above (Attn: Borough Manager) or by email to manager@borough.ambler.pa.us and must include originator's name and address. Comments submitted by facsimile will not be accepted.
Gaz-Nov 1-1a

the 1st day of November, A.D 2015

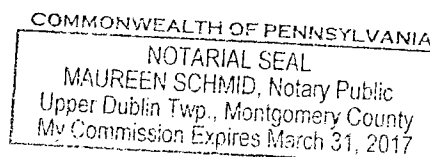
Affiant further deposes she is duly authorized by Montgomery Newspapers LLC, a corporation publisher of The Ambler Gazette, a weekly newspaper, to verify the foregoing statement under oath and also declares the affiant is not interested in the subject matter of the aforesaid notice or publication, and that all allegations in the foregoing statement as to time, place and character of publication are true.

Agent, Montgomery Newspapers LLC, a Corporation

Sworn to and subscribed by me this 10th day of November, 2015

Maureen Schmid
Notary Public

My Commission Expires: 3/31/2017



APPENDIX F-2

PUBLIC MEETING MINUTES

AMBLER BOROUGH COMMITTEE MINUTES

November 4, 2015

COMMITTEE REPORTS

The Committees of Ambler Borough Council met Wednesday, November 4, 2015 at 7:00 p.m. at Borough Council Chambers located at 131 Rosemary Avenue, Ambler, Pennsylvania, 19002. Present: Mr. Pasceri, Mr. Amento, Mr. Zacccone, Mr. Curtis, Mr. DeRuosi, Mrs. Deininger, Mrs. McCormick, Mr. Sheward and Mrs. Polesir. Mayor Sorg, Solicitor Bresnan, Chief Foley and Borough Manager Mary Aversa also were in attendance.

Special Public Meeting – MS4 TMDL Strategy

A Special Public Meeting was held this evening allowing for public comment on the Ambler Borough MS4 TMDL Strategy. Borough Engineer James Dougherty of Gilmore & Associates was present to provide an overview on the proposed Strategy. The MS4 TMDL Strategy outlines the plan the Borough will use to reduce pollutants discharged from the Borough storm sewer system (MS4) consistent with the waste load allocations presented in the Wissahickon Creek TMDL plan. The Borough is soliciting written comments from the public during the 30-day period of October 28 - November 27, 2015. It was stated a public copy of the document may be reviewed during the comment period at Ambler Borough Hall, 131 Rosemary Ave., Ambler, PA 19002 weekdays from 8AM - 4:30PM or may be accessed from the Borough website at www.boroughofambler.com. Written and verbal comments would be accepted at this evening's Public Meeting. Comments must be submitted in writing or may be delivered by email to the Borough Manager Mary Aversa at manager@borough.ambler.pa.us. Comments must include originator's name & address. Comments submitted by FAX will not be accepted.

No public comments were made at this evening's meeting. Council President Salvatore Pasceri closed the Special Meeting.

Respectfully submitted,

Elizabeth Russell
Assistant Secretary
Ambler Borough

APPENDIX F-3

RECORD OF PUBLIC COMMENT

AMBLER BOROUGH**MS4 TMSL Strategy****Record of Public Comment**

COMMENT NUMBER	COMMENT DATE	COMMENT TYPE	COMMENT AUTHOR	AUTHOR ADDRESS	COMMENT SUMMARY	COMMENT RESPONSE	CHANGES MADE TO STRATEGY
1	11/16/2016	Email	McCormick, Sharon	130 Tennis Ave, Ambler PA 19002	Existence and impact of industrial waste along Wissahickon Creek.	A TMDL is not established for the wastes identified in the comment and therefore not subject to the MS4 permit.	No changes required.
2	11/27/2015	Email	Marshall, J. Brooke	157 Edgewood Drive, Ambler PA 19002	Comments regarding zoning ordinance amendments (riparian buffer, steep slope) currently under consideration by the Borough.	Borough consideration and possible adoption of the subject ordinances is independent of this MS4 TMDL Strategy.	No changes required.

APPENDIX F-4

WRITTEN COMMENTS RECEIVED

COMMENT #1

From: Mary Aversa <maversa@borough.ambler.pa.us>
Sent: Monday, November 16, 2015 1:54 PM
To: Jim Dougherty
Subject: FW: TDML Strategy Plan public comment

Categories: Ambler, Ambler-2003-0122-01-NPDES MS4 Renewal

[For comments.](#)

From: sharon mccormick [REDACTED]
Sent: Monday, November 16, 2015 1:03 PM
To: maversa@borough.ambler.pa.us; fderuosi@borough.ambler.pa.us; [REDACTED]
jbresnan@dischellbartle.com
Cc: sharon mccormick
Subject: TDML Strategy Plan public comment

Please consider this for inclusion of the public comments.

Regarding the TMDL strategy plan: All municipalities along all the creeks in pa are encouraged to reduce their sedimentation and discharge into the creeks due to the poor water quality for the aquatic life in these creeks.

Here in Ambler, we have some of the largest piles of industrial waste in the country that pollutes the Rose Valley, Tannery run, Stuart farm, and Wissahickon creeks. The polycyclic aromatic hydrocarbons (pah) are consistently found in abundance in these waters and unfortunately are consistently ignored.

Chemicals called phthalates are also found in the creeks and in the dumps and these chemicals cause increase in phosphate levels.

Heavy metals and asbestos are also found.

Both the PaDep and epa are aware of it yet nothing about it shows up in any of the recent studies of the wissahickon especially. The recent Remedial Investigation by the USEPA for the BoRit Asbestos Site shows the groundwater to surface water discharge of these chemicals into the Wissahickon. These EPA studies also acknowledge that much of this discharge into the creeks is not known. Similar levels of similar toxins and surface to groundwater discharge in the creek has been documented by the USEPA near the Ambler Asbestos piles. Unfortunately, after the USEPA placed the 18 inch dirt cap on the Ambler Piles, monitoring of the ground water and surface water discharge to the Wissahickon from the dump sites had ceased. The data gaps that exist in both the RI studies from the BoRit and Ambler Asbestos Piles Superfund sites have never been satisfied to determine the elimination or continuance of groundwater to surface water discharge after the asbestos dirt cap remediation.

We hear so much about the Wissahickon in crisis, yet no mention of the toxins from the dumps exist in these discussions, which is the primary reason why the creek is in crisis. After reading all of this information over the years, I find it interesting that the PaDep will burden citizens and municipalities to decrease discharge yet do nothing about the enormous pollution coming from the enormous dumps that make up the banks of these creeks.

Logically what usefulness will a Riparian Buffer Ordinance or the TMDL strategy be in our small community when the most obvious assault to the water and aquatic life, and worst of all the assault on human life, is under the state and federal government jurisdiction. Neither agency is doing anything about it. Maintaining toxic waste in the flood plain of the Wissahickon means that the continuance of the discharge of these toxins is inevitable. Thus, the little bit of restriction we are planning for in this strategy plan will not make much difference in the health and safety of the aquatic life or water quality. Therefore it seems that the paDEP has burdened the borough with an impossible task.

<http://semspub.epa.gov/work/03/2215211.pdf> EPA Borit Phase 1 2009

<https://www.umweltbundesamt.de/sites/default/files/medien/publikation/long/4395.pdf> germ
an publication on Environmental hazards of PAH

http://boritcag.org/pdf/BoRit_Final_RI_Report.pdf Page ES 15 gives the health risks associated with the toxins in the creek. An interesting item to note - If you read the entire executive summary, the Wissahickon creek promotes the most health risk... even more than the contaminated soils ... Very sad.

According to much of the publications online regarding phosphorous discharge, the Boroughs decision regarding dogs allowed in the parks may not have been the best decision for the overall health of the Riparian buffer and the Rose Valley since animal waste is known to cause increase in phosphorous levels. Ricciardi Park would have been a better choice for the dogs.

Respectfully,

Sharon McCormick
130 Tennis Ave

COMMENT #2

From: Mary Aversa <maversa@borough.ambler.pa.us>
Sent: Monday, November 30, 2015 11:00 AM
To: Jim Dougherty
Subject: FW: Comments regarding MS4 TMDL Strategy

-----Original Message-----

From: Brooke Marshall [REDACTED]
Sent: Friday, November 27, 2015 5:40 PM
To: manager@borough.ambler.pa.us
Subject: Comments regarding MS4 TMDL Strategy

To: Borough of Ambler Council Members, Mary Aversa - Ambler Borough Manager, Joseph Bresnan, ESQ. - Borough Solicitor, Glenn Kutcher - Code Enforcement Officer

On November 5, 2015, the Ambler EAC held a very informative meeting regarding the overall issues the Borough of Ambler is facing to reduce pollutants discharged from our storm water sewer system into the Wissahickon Watershed and the need to comply with Pennsylvania Department of Environmental Protection (PA DEP) mandates. There were a couple of take-away messages I heard in the meeting that I hope the Borough of Ambler will consider when continuing to review and vote on the ordinances related to the MS4 TMDL strategy:

- (1) This is a borough-wide problem involving all storm-water inlets and waterways. This is not just a problem around Rose Valley Creek. The impact of the proposed ordinances on the overall issue of reducing pollutants seems negligible compared to what will actually need to be done to meet PA DEP mandates. Has any research been done to determine what impact these ordinances will have on pollutant reduction? If not, I would ask that the borough do their due diligence to assess the impact these ordinances would have on the reduction of pollutants before putting more restrictions on the property owners bordering Rose Valley Creek.
- (2) My understanding from the Ambler EAC is that the PA DEP has a list of best practices to deal with contaminants and pollutants getting into our waterways. Has the Borough of Ambler looked at this list of best practices to assess what practices would have the most impact on the reduction of pollutants? If not, I would ask that an assessment of these practices be done to determine the most effective overall strategy for reducing pollutants getting into the watershed. This assessment should be completed prior to passing these ordinances. There may be better and more effective means to control pollutants getting into our watershed that do not require passing ordinances that put more restrictions on property owners around Rose Valley Creek.

Thank you for the time and consideration you have given in reviewing these comments.

Sincerely,

J. Brooke Marshall
157 Edgewood Drive
Ambler, PA 19002
[REDACTED]