

Application Type Renewal
Facility Type MS4
Permit Type Individual

NPDES PERMIT FACT SHEET MS4s

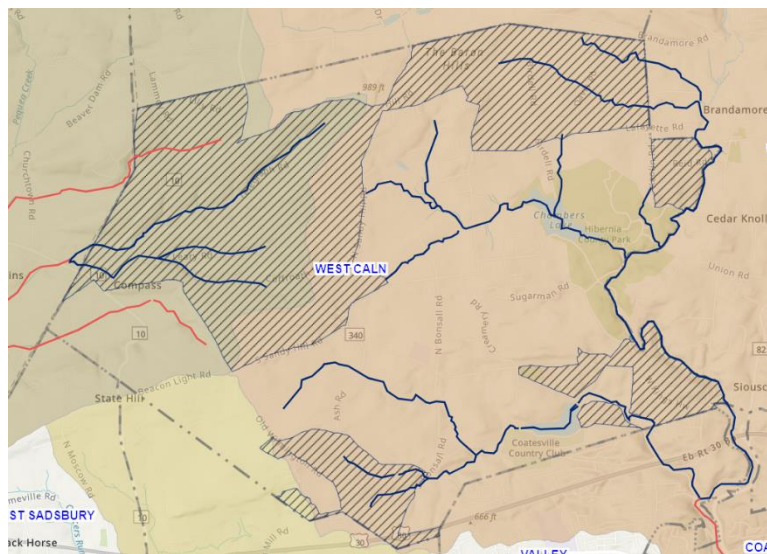
Application No. PAI130066
APS ID 952577
Authorization ID 1202353

Applicant and Facility Information

Applicant Name	<u>West Caln Township Chester County</u>	Facility Name	<u>West Caln Township MS4 UA</u>
Applicant Address	<u>721 West Kings Highway PO Box 175</u> <u>Wagontown, PA 19376-0175</u>	Facility Address	<u>721 West Kings Highway PO Box 175</u> <u>Wagontown, PA 19376-0175</u>
Applicant Contact	<u>Kim Milane-Sauro</u>	Facility Contact	<u>Kim Milane-Sauro</u>
Applicant Phone	<u>(610) 384-5643</u>	Facility Phone	<u>(610) 384-5643</u>
Client ID	<u>75305</u>	Site ID	<u>617764</u>
SIC Code	<u>9199</u>	Municipality	<u>West Caln Township</u>
SIC Description	<u>Public Admin. - Genral Government, Nec</u>	County	<u>Chester</u>
Date Application Received	<u>September 18, 2017</u>		
Date Application Accepted	<u></u>		
Purpose of Application	<u>Formerly PAG130145.</u>		

Internal Review and Recommendations

In the interest of issuing this permit in a timely manner, DEP has made the decision to issue this permit with a compliance schedule.



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		<i>Carrie Konnovitch</i> Carrie M Konnovitch, P.E. / Environmental Engineer Trainee	September 5, 2024
x		<i>Elizabeth Mahoney</i> Elizabeth A Mahoney / Environmental Group Manager	10/09/2024

Internal Review and Recommendations

WEST CALN TWP	PAG130145	Upper West Branch Brandywine Creek		Christina River Basin Nutrients, Christina River Basin Sediment, West Branch Brandywine Creek		Appendix C-PCB, TMDL Plan-Nutrients, Organic Enrichment/Low D.O., Siltation, Suspended Solids
		Headwaters Pequea Creek		Chesapeake Bay Nutrients/Sediment, Indian Spring Run, Pequea Creek		Appendix D-Siltation/Nutrients, Appendix E-Nutrients, Organic Enrichment/Low D.O., Siltation
WEST CALN TWP	PAG130145	Yes	TMDL Plan, SP	Christina River Basin Sediment	TMDL Plan-Siltation, Suspended Solids (4a)	
				Christina River Basin Nutrients	TMDL Plan-Nutrients, Organic Enrichment/Low D.O. (4a)	
				Chesapeake Bay Nutrients/Sediment	Appendix D-Nutrients, Siltation (4a)	
				Pequea Creek	Appendix E-Nutrients, Organic Enrichment/Low D.O., Siltation (4a)	
				West Branch Brandywine Creek	Appendix C-PCB (4a)	
				Indian Spring Run	Appendix E-Nutrients, Organic Enrichment/Low D.O., Siltation (4a)	
					Water/Flow Variability (4c)	

TMDL Plan

TMDL Subbasin - Land Use Analysis 1995						
Land Use	Subbasin Storm Sewershed Planning Areas (acres)					
	B01	B02	B03	B20	B32	B33
Cropland	0	120.44	21.03	0	166.03	100.38
Forest	30.57	146.69	11.50	57.97	212.03	125.97
Disturbed	0	0	0	0	0.41	0
Turfgrass	0	0	0	0	0	0
Open Land	0	37.18	20.15	0.52	4.46	5.19
MD Mixed Urban	0	0	2.19	0	0	6.81
HD Mixed	0	0.01	0	0.43	0	4.63
LD Residential	27.65	262.97	52.12	41.35	179.38	397.73
MD Residential	0	0.46	0.9	0	0	1.54
HD Residential	0	0	0	0	0	1.19
Water	0	0.10	0.01	0	0	0.04
Total	58.22	567.85	107.90	100.27	562.31	643.50

TMDL Subbasin - Land Use Analysis 2012						
Land Use	Subbasin Storm Sewershed Planning Areas (acres)					
	B01	B02	B03	B20	B32	B33
Cropland	0	74.43	1.08	0	117	108.17
Forest	30.57	102.58	8.59	49.59	115.08	89.14
Disturbed	0	6.48	15.15	0	20.7	1.51
Turfgrass	0	0	0	0	0	19.88
Open Land	0	0	0	0	0	18.09
MD Mixed Urban	0	0	6.18	0	0	8.09
HD Mixed	0	2.01	7.99	12.14	9.21	14.35
LD Residential	27.65	382.2	68.81	31.6	300.32	384.28
MD Residential	0	0	0	0	0	0
HD Residential	0	0.11	0.1	6.94	0	0
Water	0	0.04	0.01	0	0	0
Total	58.22	567.85	107.90	100.27	562.31	643.50

Revised TMDL Baseline Loads							
Year	Pollutant	Subbasin					
		B01	B02	B03	B20	B32	B33
1995	Sediment (ton/yr)	12.18	n/a	n/a	19.67	n/a	n/a
	Nitrogen (kg/day)	0.064	1.681	0.347	n/a	1.863	1.850
	Phosphorus (kg/day)	0.010	0.373	0.073	n/a	0.442	0.381
2012	Sediment (ton/yr)	13.30	n/a	n/a	36.02	n/a	n/a
	Nitrogen (kg/day)	0.072	1.505	0.294	n/a	1.798	2.044
	Phosphorus (kg/day)	0.012	0.310	0.045	n/a	0.397	0.428

Internal Review and Recommendations

Land Conversion Reduction						
Pollutant	Subbasin					
	B01	B02	B03	B20	B32	B33
Sediment (ton/yr)	0	n/a	n/a	0	n/a	n/a
Nitrogen (kg/day)	0	0.176	0.052	n/a	0.065	0
Phosphorus (kg/day)	0	0.062	0.027	n/a	0.046	0

Remaining Required TMDL Load Reduction						
Pollutant	Subbasin					
	B01	B02	B03	B20	B32	B33
Sediment (ton/yr)	4.50	n/a	n/a	7.26	n/a	n/a
Nitrogen (kg/day)	0.025	0.497	0	n/a	0.121	0.185
Phosphorus (kg/day)	0.004	0.086	0	n/a	0	0.038

Minimum Load Reduction Required within 5-yr Permit						
Pollutant	Subbasin					
	B01	B02	B03	B20	B32	B33
Sediment (ton/yr)	1.33	n/a	n/a	3.60	n/a	n/a
Phosphorus (kg/day)	n/a	0.016	0	n/a	0	0.021

Subbasin 01

Candidate BMP Pollutant Reduction for Sediment (TS)					
Total Required TS Reduction	5-yr Permit Required TS Reduction	Candidate BMP	Total TS Reduction	Installation During 1 st 5-yr Permit	5-yr Permit TS Reduction
4.50 (ton/yr)	1.33	Roadside Bioswale North Sandy Hill Rd	4.57	100% of bio-swale	4.57

Subbasin 20

Candidate BMP Pollutant Reduction for Sediment (TS)					
Total Required TS Reduction	5-yr Permit Required TS Reduction	Candidate BMP	Total TP Reduction	Installation During 1 st 5-yr Permit	5-yr Permit TP Reduction
7.26 (ton/yr)	3.6	Basin #1 Retrofit	5.09	100% of basin retrofit.	5.09
		Infiltration Basin #1	3.14	No installation during 1 st 5-yr permit.	0

Subbasin 02

Candidate BMP Pollutant Reduction for Phosphorus (TP)					
Total Required TP Reduction	5-yr Permit Required TP Reduction	Candidate BMP	Total TP Reduction	Installation During 1 st 5-yr Permit	5-yr Permit TP Reduction
0.086 (kg/day)	0.016	400 LF Streambank Stabilization #1 Telegraph Rd	0.086	75 LF Streambank Stabilization	0.016

Subbasin B32

There are no remaining required reductions for sediment and nutrients within Subbasin B32.

Subbasin 33

Candidate BMP Pollutant Reduction for Phosphorus (TP)					
Total Required TP Reduction	5-yr Permit Required TP Reduction	Candidate BMP	Total TP Reduction	Installation During 1 st 5-yr Permit	5-yr Permit TP Reduction
0.038 (kg/day)	0.021	175 LF Streambank Stabilization #2 Waterworks Rd	0.038	95 LF Streambank Stabilization	0.021

Subbasin B03

There are no remaining required reductions for sediment and nutrients within Subbasin B03.

Internal Review and Recommendations

PRP

West Caln Township PRP Required Sediment Loading Reduction

West Caln Total PRP Area	Sediment Loading Ratios ¹	
2,459.2 acres	Impervious (a)	1,504.78 lb/ac/yr
3.84 sq. mi.	Pervious (b)	185.12 lb/ac/yr

MS4 Land Cover Estimates- West Caln²

Urbanized Area % Impervious (c)	Urbanized Area % Pervious (d)
9%	91%

Total Sediment Load **Before** Parsing

PRP Area (e)	Impervious Loading (f)	Pervious Loading (g)	Total Sediment Loading (h)	10% Required Reduction	
	e x a x c	e x b x d	f + g	h x 0.1	
(acres)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(tons/yr)
2,459.2	333,047.2	414,271.5	747,318.7	74,731.9	37.37

Total Sediment Load **After** Parsing

PRP Planning Area (i)	Impervious Loading (j)	Pervious Loading (k)	Total Sediment Loading (l)	Existing BMP Reduction (m)	Revised Baseload (n)	10% Required Reduction	
	i x a x c	i x b x d	j + k		l - m	n x 0.1	
(acres)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(lb/yr)	(ton/yr)
1,037.3	140,481.7	174,742.7	315,224.5	8,432.8	306,791.7	30,679.2	15.34

West Caln Township PRP Existing BMP Sediment Load Reduction

Existing BMP	Latitude	Longitude	Watershed Area acres	Impervious Area %	Pervious Area %	Sediment Load					
						Impervious Rate lb/ac/yr	Pervious Rate lb/ac/yr	Total lb/yr	Removal Rate lb/ft/yr	Efficiency %	Reduction lb/yr
Infiltration Basin Toby Road	40.033305°	-75.904820°	20.54	9%	91%	1,504.8	185.1	6,241.9	n/a	95%	5,929.8
Infiltration Basin Lindsays Way	40.047816°	-75.920747°	8.67	9%	91%	1,504.8	185.1	2,634.7	n/a	95%	2,503.0
										Total	8,432.8

Internal Review and Recommendations

Candidate BMP Pollutant Reduction for Sediment

Candidate BMP	Drainage Area acres	Impervious Area %	Pervious Area %	Streambank Length lf	Sediment Load					
					Impervious Rate lb/ac/yr	Pervious Rate lb/ac/yr	Total lb/yr	Removal Rate lb/ft/yr	Efficiency %	Reduction ton/yr
Streambank Stabilization #1	n/a	n/a	n/a	360	n/a	n/a	n/a	44.88	n/a	8.08
Retrofit Infiltration Basin - Woodland Drive	11.09	9%	91%	n/a	1504.8	185.1	3370.0	n/a	85%	1.43
Streambank Stabilization #2	n/a	n/a	n/a	210	n/a	n/a	n/a	44.88	n/a	4.71
Roadside Bioswale Cains Road	9.33	9%	91%	n/a	1504.8	185.1	2835.1	n/a	78.8%	1.12
								Total Proposed:		15.34
								Required:		15.34

Basin Retrofit Impervious Loading Ratios

Basin Retrofit ID	Infiltration Area	Impervious Area	Impervious Loading Ratio
	(sf)	(sf)	
Woodland Drive	13,865	60,098	4.3:1