

Application Type

Renewal

Facility Type

MS4

Permit Type

Individual

Application No.

PAI130066

APS ID

952577

Authorization ID

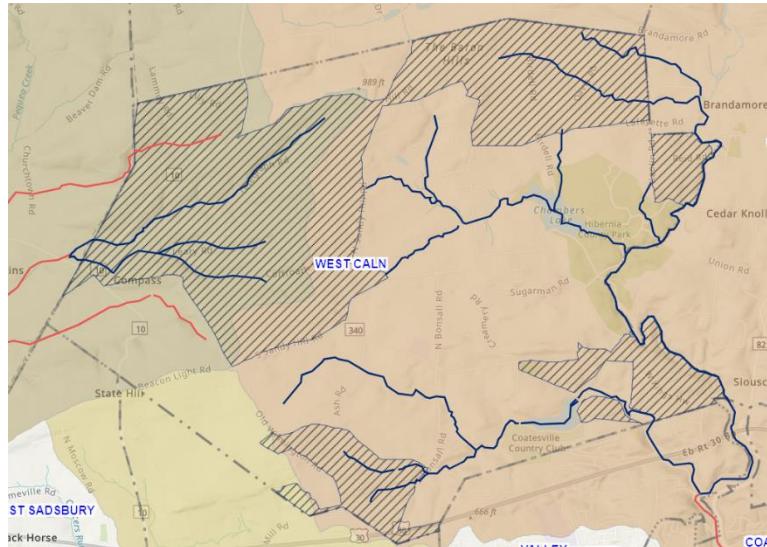
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NPDES PERMIT FACT SHEET MS4s

Applicant and Facility Information			
Applicant Name	<u>West Caln Township Chester County</u>		
Applicant Address	<u>721 West Kings Highway PO Box 175</u>		
Applicant Contact	<u>Wagontown, PA 19376-0175</u>		
Applicant Phone	<u>(610) 384-5643</u>		
Client ID	<u>75305</u>		
SIC Code	<u>9199</u>		
SIC Description	<u>Public Admin. - Genral Government, Nec</u>		
Date Application Received	<u>September 18, 2017</u>		
Date Application Accepted			
Purpose of Application	<u>Formerly PAG130145.</u>		
Facility Name	<u>West Caln Township MS4 UA</u>		
Facility Address	<u>721 West Kings Highway PO Box 175</u>		
Facility Contact	<u>Wagontown, PA 19376-0175</u>		
Facility Phone	<u>(610) 384-5643</u>		
Site ID	<u>617764</u>		
Municipality	<u>West Caln Township</u>		
County	<u>Chester</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
<input checked="" type="checkbox"/>		 Carrie M Konnovitch, P.E. / Environmental Engineer Trainee	September 5, 2024
<input checked="" type="checkbox"/>		 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)

TMDL Plan

Land Use	TMDL Subbasin - Land Use Analysis 1995					
	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

Land Use	TMDL Subbasin - Land Use Analysis 2012					
	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

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

Pollutant	Land Conversion Reduction					
	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

Pollutant	Remaining Required TMDL Load Reduction					
	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

Pollutant	Minimum Load Reduction Required within 5-yr Permit					
	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

Total Required TS Reduction	5-yr Permit Required TS Reduction	Candidate BMP	Candidate BMP Pollutant Reduction for Sediment (TS)		
			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 B32

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

Subbasin 33

Total Required TP Reduction	5-yr Permit Required TP Reduction	Candidate BMP	Candidate BMP Pollutant Reduction for Phosphorus (TP)		
			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

<u>West Caln Total PRP Area</u>	Sediment Loading Ratios¹	
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 Caln ²	
Urbanized Area	Urbanized Area
% Impervious (c)	% Pervious (d)
9%	91%

Total Sediment Load **Before** Parsing

Total Sediment Loading Planning					
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			n x 0.1	
	(acres)	(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	Impervious Area	Pervious Area	Sediment Load					
						Impervious Rate	Pervious Rate	Total	Removal Rate	Efficiency	Reduction
acres	%	%	lb/ac/yr	lb/ac/yr	lb/yr	lb/ft/yr	%	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 Lindsay's 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	Impervious Area	Pervious Area	Streambank Length	Sediment Load					
					Impervious Rate	Pervious Rate	Total	Removal Rate	Efficiency	Reduction
	acres	%	%	lf	lb/ac/yr	lb/ac/yr	lb/yr	lb/ft/yr	%	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