

Application Type Renewal
Facility Type MS4
Permit Type Individual

NPDES PERMIT FACT SHEET
MS4s


Application No. PAI130048
APS ID 950536
Authorization ID 1198470

Applicant and Facility Information

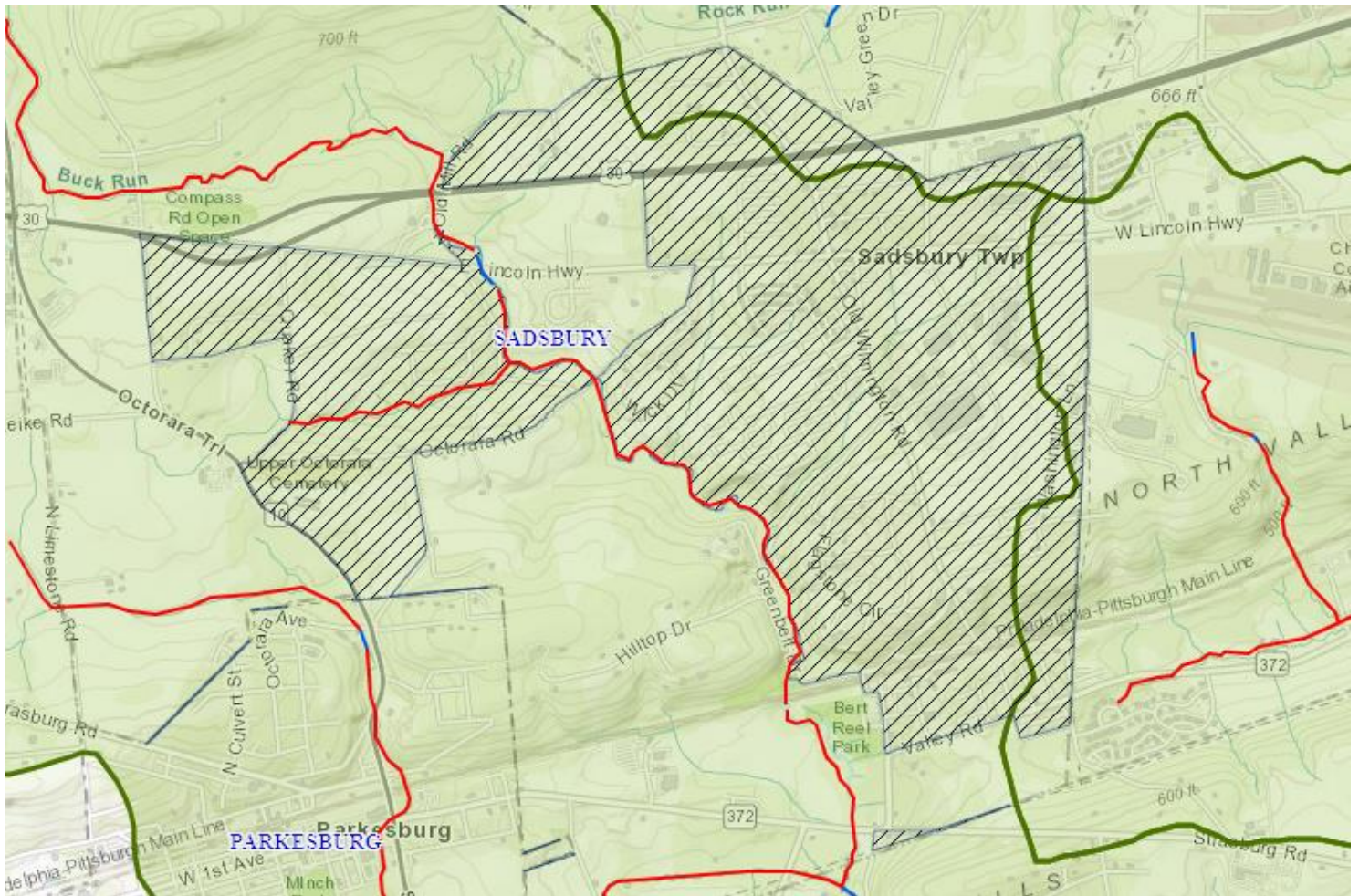
Applicant Name	<u>Sadsbury Township Chester County</u>	Facility Name	<u>Sadsbury Township Chester County MS4 UA</u>
Applicant Address	<u>PO Box 261</u> <u>Sadsburyville, PA 19369-0261</u>	Facility Address	<u>2920 Lincoln Highway</u> <u>Sadsburyville, PA 19369-0261</u>
Applicant Contact	<u>Linda Shank</u>	Facility Contact	<u>Linda Shank</u>
Applicant Phone	<u>(610) 857-9503</u>	Facility Phone	<u>(610) 857-9503</u>
Client ID	<u>87728</u>	Site ID	<u>614556</u>
SIC Code	<u>9199</u>	Municipality	<u>Sadsbury Township</u>
SIC Description	<u>Public Admin. - Genral Government, Nec</u>	County	<u>Chester</u>
Date Application Received	<u>September 15, 2017</u>		
Date Application Accepted	<u></u>		
Purpose of Application	<u></u>		

Internal Review and Recommendations

See Below

Approve	Deny	Signatures	Date
X		 Ian Quinlan / Environmental Engineering Specialist	September 22, 2022
X		<i>Elizabeth Mahoney</i> Elizabeth A Mahoney / Environmental Group Manager	9/22/2022

Internal Review and Recommendations



MS4 Urban Area Report
SADSBURY TWP, Chester County

INDIVIDUAL PERMIT REQUIRED: Yes	REASON: TMDL Plan	NPDES ID: PAG130101
IMPAIRED DOWNSTREAM WATERS	REQUIREMENTS	OTHER CAUSES OF IMPAIRMENT
West Branch Brandywine Creek	Appendix C-PCB (4a)	Water/Flow Variability (4c)
Christina River Basin Sediment	TMDL Plan-Siltation Suspended Solids (4a)	
Buck Run		Other Habitat Alterations (4c)
Sucker Run		Water/Flow Variability (4c)
Christina River Basin Nutrients	TMDL Plan-Nutrients Organic Enrichment/Low D.O. (4a)	

Loading Calcs:

Internal Review and Recommendations

1995 LOAD CALCULATIONS							
SOURCE	AREA	TOTAL SEDIMENT LOADING RATE	TOTAL SEDIMENT	TOTAL NITROGEN LOADING RATE	TOTAL NITROGEN	TOTAL PHOSPHORUS LOADING RATE	TOTAL PHOSPHORUS
Units	Acres	lbs./acre/yr.	lbs./yr.	lbs./acre/yr.	lbs./yr.	lbs./acre/yr.	lbs./yr.
Hay/Past		153.18	0.00	1.52	0.00	0.38	0.00
Cropland	301.92	1,727.47	521,557.32	6.98	2,107.40	1.81	546.47
Forest	75.66	136.22	10,306.85	0.15	11.35	0.03	2.27
Wetland		121.42	0.00	0.30	0.00	0.03	0.00
Disturbed		164.73	0.00	0.19	0.00	0.07	0.00
Turfgrass		0.00	0.00	0.00	0.00	0.00	0.00
Open_Land	16.81	296.97	4,990.66	1.15	19.33	0.16	2.69
Bare_Rock		0.00	0.00	0.00	0.00	0.00	0.00
Sandy_Areas		0.00	0.00	0.00	0.00	0.00	0.00
Unpaved_Road		0.00	0.00	0.00	0.00	0.00	0.00
Ld_Mixed		0.00	0.00	0.00	0.00	0.00	0.00
Md_Mixed	19.73	1,741.77	34,367.38	6.20	122.33	0.87	17.17
Hd_Mixed	0.82	2,492.67	2,034.81	6.81	5.56	1.02	0.83
Ld_Residential	254.11	730.55	185,638.08	1.69	429.44	0.27	68.61
Md_Residential	0.01	1,741.36	11.04	6.16	0.04	0.87	0.01
Hd_Residential	0.30	2,495.94	741.99	6.61	1.97	1.01	0.30
TOTAL	669.35		759,648.14		2,697.41		638.35

2012 LOAD CALCULATIONS							
SOURCE	AREA	TOTAL SEDIMENT LOADING RATE	TOTAL SEDIMENT	TOTAL NITROGEN LOADING RATE	TOTAL NITROGEN	TOTAL PHOSPHORUS LOADING RATE	TOTAL PHOSPHORUS
Units	Acres	lbs./acre/yr.	lbs./yr.	lbs./acre/yr.	lbs./yr.	lbs./acre/yr.	lbs./yr.
Hay/Past		185.06	0.00	1.70	0.00	0.42	0.00
Cropland	168.16	1,818.62	305,811.79	7.27	1,222.49	1.91	321.18
Forest	56.15	174.45	9,794.71	0.17	9.54	0.05	2.81
Wetland	0.04	158.47	6.59	0.32	0.01	0.04	0.00
Disturbed	14.34	228.93	3,283.43	0.26	3.73	0.10	1.43
Turfgrass	3.45	202.10	696.47	0.78	2.69	0.43	1.48
Open_Land		220.20	0.00	0.92	0.00	0.09	0.00
Bare_Rock		0.00	0.00	0.00	0.00	0.00	0.00
Sandy_Areas		0.00	0.00	0.00	0.00	0.00	0.00
Unpaved_Road		0.00	0.00	0.00	0.00	0.00	0.00
Ld_Mixed		680.65	0.00	1.62	0.00	0.25	0.00
Md_Mixed	28.80	1,548.50	44,599.19	7.42	213.71	0.95	27.36
Hd_Mixed	23.43	2,184.96	51,184.33	7.87	184.36	1.09	25.53
Ld_Residential	362.02	686.92	248,677.67	1.66	600.95	0.26	94.12
Md_Residential	12.97	1,547.69	20,074.50	7.40	95.98	0.95	12.32
Hd_Residential		2,182.85	0.00	7.69	0.00	1.07	0.00
TOTAL	669.35		684,128.69		2,333.47		486.24

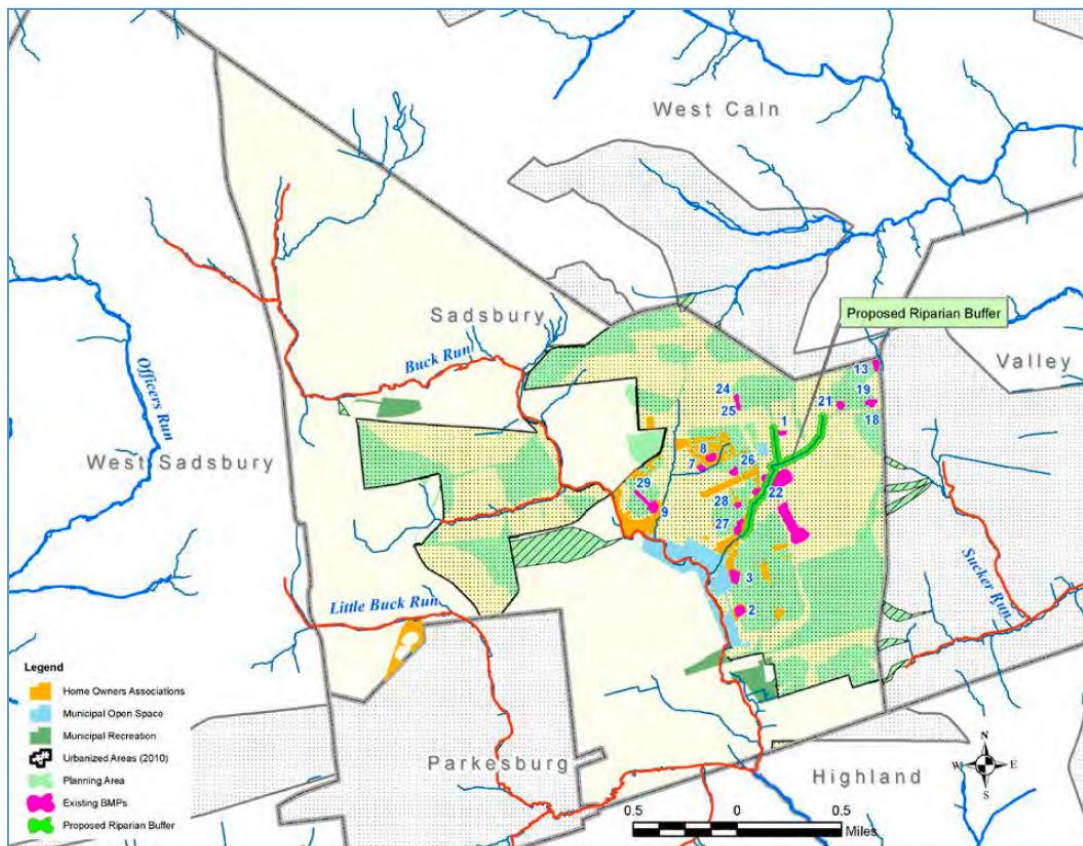
Revised Load Reduction Calculation					
1995 Baseline Load	Required Reduction	Revised Baseline Load	2012 Load	Land Conversion reduction	TMDL Reduction Required after Land Conversion
lbs./yr.	percent	lbs./yr.	lbs./yr.	lbs./yr.	lbs./yr.
759,648.14	40.59%	308,341.18	684,128.69	75,519.44	232,821.74

Internal Review and Recommendations

F. Analysis of TMDL Objectives.

1. Long-Term Reduction – According to the analysis above the long-term reduction requirement equals **232,822 lbs./yr.** That is not possible to achieve in the first 5-year permit cycle.
2. Short-Term Reduction – Sadsbury Township has determined that 232,822 lbs./yr. of sediment cannot be reduced during the next permit period, so it elects to pursue BMPs for the reduction of 68,413 lbs./yr. as its short term TMDL Objective. The required reduction, 10% of the Existing Load (648,129 lbs./yr.) or **68,413 lbs./yr.** of sediment, would need to be removed by proposed BMPs constructed over the five-year permit cycle.

BMP Clacs



PROPOSED BMP ESTIMATED LOAD AND REDUCTION											
Drainage area	TYPE	BMP Effectiveness	Crop	Water	Forest	HD Mixed Res.	MD Mixed Res.	LD Res.	Turf Golf	Sediment Load	Load Reduction
197.8	Riparian Buffer	50%	106.70	3.42	0.65	13.57	44.24	26.49	2.74	311,590.32	155,795.16

Internal Review and Recommendations

H. Funding Mechanisms

The cost for a riparian buffer project can be estimate based on the amount of land planted. The buffer is anticipated to be 35 feet on either side of the stream which equals an area of 8.10 acres. According to the BMP cost profiles for Pennsylvania included in the Chesapeake Assessment Scenario Tool (CAST), it is estimated the initial riparian buffer project would cost \$4,062 per acre or \$32,902 to construct. Operations and Maintenance (O&M) cost are estimated to be \$81.25 per acre per year or \$658/yr. The Short-Term Reduction initial cost for this permit cycle is **\$32,902**. O&M annual cost are estimated to be \$658 per year. That equals approximately \$6.50 per pound of sediment removed.

The cost for the stream restoration is based on CAST for PA is \$513.24 /foot of stream measured at the thalweg. O&M costs are \$64.16/foot of stream per year. Therefore, the estimated cost for the stream restoration of 1,550 feet of stream equals \$795,522 with O&M costs estimated to equal \$99,448 per year. That equals approximately \$11.50 per pound of sediment removed.

Funding would be through the Township's General Operating Budget, unless outside grant funding could be secured. Sources of outside grant funding for trees required for the Riparian Buffer BMPs will be sought through grant applications to the [TreeVitalize](#) and [Keystone 10 Million Trees](#) Partnership. Other sources will include grant applications to the Chester County [American Rescue Plan](#) (ARP) Funds, [Bipartisan Infrastructure Law](#) (BIL) funding, The National Municipal Stormwater Alliance (NMSA), [PennVest](#) and Commonwealth Financing Authority (CFA). CFA was established in 2004 as an independent agency of the Department of Community and Economic Development (DCED), and includes the [PA Small Water and Sewer Program](#).

Internal Review and Recommendations

I. Operations and Maintenance

Sadsbury Township would be responsible for the Operations and Maintenance (O&M) of the proposed BMPs.

The riparian buffer O&M includes to following minimum protocols:

Buffers must be inspected annually and immediately following severe storms for evidence of sediment deposit, and erosion, or concentrated flow channels. Prompt corrective action must be taken to stop erosion and restore sheet flow.

The following should be avoided within the buffer areas: excess use of fertilizers, pesticides, or other chemicals; vehicular traffic or excessive pedestrian traffic; and removal or disturbance of vegetation and litter inconsistent with erosion control and buffering objectives.

Zone 1 vegetation should remain undisturbed except for removal of individual trees of extremely high value or trees presenting unusual hazards such as potentially blocking culverts.

Zone 2 vegetation, undergrowth, forest floor, duff layer, and leaf litter shall remain undisturbed except for periodic cutting of trees to remove sequestered nutrients; to maintain an efficient filter by fostering vigorous growth; and for spot site preparation for regeneration purposes. Controlled burning for site preparation, consistent with good forest management practices, could also be used in Zone 2.

Zone 3 vegetation should be mowed, and the clippings removed as necessary to remove sequestered nutrients and promote dense growth for optimum soil stabilization. Hay or pasture uses can be made compatible with the objectives of Zone 3.

These are tasks could be performed by the Township's Public Works Department as part of their routine maintenance responsibilities. Therefore, these BMPs would not impose any significant operating and maintenance costs on the Township.

The Stream Restoration O&M would include the following minimum protocols:

Specific O&M activities / frequencies to be performed will be based upon design criteria established as part of the BMP development. Generally, inspections will occur quarterly and following significant rain events. General O&M activities for these stream restoration BMPs include:

Internal Review and Recommendations

- Maintenance of desirable vegetation and control of weeds and invasive plants.
- Repair of eroded/damaged areas and replanting the with appropriate plant material.
- Proper management of agricultural activities.
- Removal of debris hindering the function of the system.

STATE OF PENNSYLVANIA,

The undersigned Shelley G. Memon, being duly sworn the he/she is the principal clerk of Daily Local News, Daily Local News Digital, published in Chester County 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:

SADSBURY TWNSHP/CHESTER CO

Published in the following edition(s):

Daily Local News, Daily Local News Digital
06/09/22

PUBLIC NOTICE
Sadsbury Township,
Chester County, Pennsylvania

NOTICE IS HEREBY GIVEN that beginning June 10, 2022, the Board of Supervisors of Sadsbury Township, will accept written public comments for 30 days on the Total Maximum Daily Load (TMDL) Plan for Sadsbury Township. A copy of the TMDL Plan is available for public review at the Sadsbury Township Building, located at 2920 Lincoln Highway Sadsburyville, PA 19369. Interested persons will also be able to provide comments at the regular scheduled Board of Supervisors public meeting at the Township Building on August 2, 2022, at 7:00 P.M. (EDT) at the Sadsbury Township Building. The Plan provides the Township guidance on measures to be taken to address impaired surface waters within the Township.

Linda Shank,
Township Secretary
DLN June 9 a-1

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.