

General Information

Instructions **General** Volume Rate Quality

Project Name: Application Type:

County: Municipality:

Project Type: New Project Minor / Major Amendment

Total Project Site Area: acres Total Earth Disturbance: acres
(In Watershed) *(In Watershed)*

No. of Post-Construction Discharge Points: Start DP Numbering at:

Discharge Point (DP) No.	Drainage Area (DA) (acres)	Earth Disturbance in DA (acres)	Existing Impervious in DA (acres)	Proposed Impervious in DA (acres)	Receiving Waters	Ch. 93 Class	Structural BMP(s)
002	1.54	0.44	0.60	0.37	Delineated Wetlands Tributary to Tookany Creek	WWF, MF	No
Undetained Areas							
Totals:	1.54	0.44	0.6	0.37			

PROJECT SITE MEETS SMALL SITE EXCEPTION - RATE WORKSHEET NOT REQUIRED

Volume Management

Project: 222 Church Road

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2-Year / 24-Hour Storm Event (NOAA Atlas 14): inches

Alternative 2-Year / 24-Hour Storm Event: inches

Alternative Source:

No. Rows:

Exempt from Meadow in Good Condition Automatically Calculate CN, Ia, Runoff and Volume

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
Pervious as Meadow	0.04	B	58	1.448	0.38	55
Pervious as Meadow	0.89	C	71	0.817	0.94	3,033
Impervious as Meadow	0.02	C	71	0.817	0.94	68
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	0.10	N/A	98	0.041	3.07	1,113
TOTAL (ACRES): 1.05						TOTAL (CF): 4,269

No. Rows:

TOTAL (CF): 4,269

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.02	B	61	1.279	0.49	35
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.33	C	74	0.703	1.10	1,322
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	0.09	N/A	98	0.041	3.07	1,002
TOTAL (ACRES): 0.44						TOTAL (CF): 2,360

NET CHANGE IN VOLUME TO MANAGE (CF):

Non-Structural BMP Volume Credits:

Tree Planting Credit

Other (attach calculations):

Structural BMP Volume Credits:

No. Structural BMPs:

Start BMP Numbering at:

DP No.	BMP No.	BMP Name	MRC?	Discharge	Incremental BMP DA (acres)	Volume Routed to BMP (CF)	Infiltration / Vegetated Area (SF)	Infiltration Rate (in/hr)	Infiltration Period (hrs)	Vegetated?	Media Depth (ft)	Storage Volume (CF)	Infiltration Credit (CF)	ET Credit (CF)

Totals:

INFILTRATION & ET CREDITS (CF):

NET CHANGE IN VOLUME TO MANAGE (CF):

TOTAL CREDITS (CF):

VOLUME REQUIREMENT SATISFIED

Rate Control

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SMALL SITE EXCEPTION SATISFIED: RATE CONTROL NOT REQUIRED

Precipitation Amounts:

NOAA 2-Year 24-Hour Storm Event (in):	3.3	Alternative 2-Year 24-Hour Storm Event (in):	
NOAA 10-Year 24-Hour Storm Event (in):	4.91	Alternative 10-Year 24-Hour Storm Event (in):	
NOAA 50-Year 24-Hour Storm Event (in):	6.9	Alternative 50-Year 24-Hour Storm Event (in):	
NOAA 100-Year 24-Hour Storm Event (in):	7.9	Alternative 100-Year 24-Hour Storm Event (in):	

Report Summary of Peak Rates Only

Attach model input and output data or other calculations to support the rates reported below.

	Peak Discharge Rates (cfs)		
	Pre-Construction	Post-Construction	Net Change
2-Year Storm:	5.06	3.14	-1.92
10-Year Storm:	6.53	4.05	-2.48
50-Year Storm:	7.73	4.80	-2.93
100-Year Storm:	8.19	5.08	-3.11

Rate Control Satisfied
Rate Control Satisfied
Rate Control Satisfied
Rate Control Satisfied

Water Quality

Project: 222 Church Road

PRINT

Instructions **General** Volume Rate **Quality**

Pre-Construction Pollutant Loads:

Land Cover (from Volume Worksheet)	Land Cover for Water Quality	Area (acres)	Soil Group	Runoff Volume (cf)	Pollutant Conc. (mg/L)			Pollutant Loads (lbs)		
					TSS	TP	TN	TSS	TP	TN
Pervious as Meadow	Grassland/Herbaceous	0.04	B	55	48.8	0.22	2.30	0.17	0.00	0.01
Pervious as Meadow	Grassland/Herbaceous	0.89	C	3,033	48.8	0.22	2.30	9.24	0.04	0.44
Impervious as Meadow	Grassland/Herbaceous	0.02	C	68	48.8	0.22	2.30	0.21	0.00	0.01
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	0.10	N/A	1,113	65.0	0.29	2.05	4.52	0.02	0.14
TOTAL (ACRES): 1.05							TOTALS:	14.14	0.06	0.60

Post-Construction Pollutant Loads (without BMPs):

Land Cover (from Volume Worksheet)	Land Cover for Water Quality	Area (acres)	Soil Group	Runoff Volume (cf)	Pollutant Conc. (mg/L)			Pollutant Loads (lbs)		
					TSS	TP	TN	TSS	TP	TN
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	0.02	B	35	78.0	0.25	1.25	0.17	0.00	0.00
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	0.33	C	1,322	78.0	0.25	1.25	6.44	0.02	0.10
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	0.09	N/A	1,002	65.0	0.29	2.05	4.07	0.02	0.13
TOTAL (ACRES): 0.44							TOTALS:	10.68	0.04	0.23

POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS):

0.00	0.00	0.00
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Land Cover	Area (acres)	Soil Group	CN	la (in)	Q Runoff (in)	Runoff Volume (cf)
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.02	B	61	1.279	0.49	35
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.33	C	74	0.703	1.10	1,322
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	0.09	N/A	98	0.041	3.07	1,002

Non-Structural BMP Water Quality Credits:

- Pervious Undetained Area Credit
- Other (attach calculations)

Structural BMP Water Quality Credits:

Use default BMP Outflows and Median BMP Outflow Concentrations

DP No.	BMP No.	BMP Name	BMP DA (acres)	Vol. Routed to BMP (CF)	Inf. & ET Credits (CF)	Capture & Buffer Credits (CF)	Outflow (CF)	Outflow Conc. (mg/L)			Pollutant Loads (lbs)			
								TSS	TP	TN	TSS	TP	TN	

POLLUTANT LOADS FROM STRUCTURAL BMP (TREATED) OUTFLOWS (LBS):
POLLUTANT LOADS FROM UNTREATED STORMWATER (LBS):
NON-STRUCTURAL BMP WATER QUALITY CREDITS (LBS):
NET POLLUTANT LOADS FROM SITE, POST-CONSTRUCTION (LBS):
POLLUTANT LOADS FROM SITE, PRE-CONSTRUCTION (LBS):

TSS	TP	TN
0.00	0.00	0.00
10.68	0.04	0.23
10.68	0.04	0.23
14.14	0.06	0.60

WATER QUALITY REQUIREMENT SATISFIED

CERTIFICATION

I certify under penalty of law and subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities) that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I further certify that the structure, function, and calculations contained in this spreadsheet have not been modified in comparison to the spreadsheet DEP has posted to its website or, if modifications were made, an explanation of the modifications made is attached to this spreadsheet.

Robert E. Blue, Jr., P.E.

Spreadsheet User Name

9/12/2023

Date