

General Information

Instructions **General** Volume Rate Quality

Project Name: Application Type:

County: Municipality:

Project Type: New Project Minor / Major Amendment

Area: acres (In Watershed) Total Earth Disturbance: acres (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)
001	12.57	10.44	8.18	7.17	UNT to Jordan Creek	HQ-CWF, MF	Yes
Undetained Areas							
Totals:	12.57	10.44	8.18	7.17			

Volume Management

Project: 2951 BETZ COURT SITE

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

Alternative 2-Year / 24-Hour Storm Even inches

Alternative Source:

Pre-Construction Conditions:

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)
Forested (Good Condition)	0.87	B	55	1.636	0.26	820
Impervious Areas: Streets and Roads - Gravel (Including ROW)	5.85	B	85	0.353	1.78	37,868
Impervious Areas: Commercial	0.68	B	98	0.041	3.00	7,399
Impervious as Meadow	1.63	B	58	1.448	0.35	2,082
Pervious as Meadow	3.52	B	58	1.448	0.35	4,495

TOTAL (ACRES): 12.55

TOTAL (CF): 52,665

Post-Construction Conditions:

No. Rows:

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
Impervious Areas: Industrial	7.17	B	98	0.041	3.00	78,013
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	0.71	B	58	1.448	0.35	907
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	2.33	B	61	1.279	0.46	3,859
Woods (Good Condition)	0.23	B	55	1.636	0.26	217

TOTAL (ACRES): 10.44

TOTAL (CF): 82,996

ET CHANGE IN VOLUME TO MANAGE (CF): 30,331

Non-Structural BMP Volume Credits:

Tree Planting Credit

Other (attach calculations):

Structural BMP Volume Credits:

No. Structural BMPs: 1

Start BMP Numbering at: 1

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)
001	1	Infiltration Basin	-	Off-Site	8.34	76,412	20,791	2.00	28	Yes	2.0	35,549	72,973	3,439

Totals: 72,973 3,439

INFILTRATION & ET CREDITS (CF): 76,412

NET CHANGE IN VOLUME TO MANAGE (CF): 30,331

TOTAL CREDITS (CF): 76,412

VOLUME REQUIREMENT SATISFIED

Rate Control

Project: 2951 BETZ COURT SITE

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Precipitation Amounts:

NOAA 2-Year 24-Hour Storm Event (in):	3.23	Alternative 2-Year 24-Hour Storm Event (in):	
NOAA 10-Year 24-Hour Storm Event (in):	4.71	Alternative 10-Year 24-Hour Storm Event (in):	
NOAA 50-Year 24-Hour Storm Event (in):	6.62	Alternative 50-Year 24-Hour Storm Event (in):	
NOAA 100-Year 24-Hour Storm Event (in):	7.61	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.

<i>Peak Discharge Rates (cfs)</i>				
	Pre-Construction	Post-Construction	Net Change	
2-Year Storm:	30.05	13.35	-16.70	<i>Rate Control Satisfied</i>
10-Year Storm:	43.56	22.63	-20.93	<i>Rate Control Satisfied</i>
50-Year Storm:	52.45	36.49	-15.96	<i>Rate Control Satisfied</i>
100-Year Storm:	56.20	43.83	-12.37	<i>Rate Control Satisfied</i>

Water Quality

Project: 2951 BETZ COURT SITE

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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
Forested (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	0.87	B	820	45.0	0.13	1.05	2.31	0.01	0.05
Impervious Areas: Streets and Roads - Gravel (Including ROW)	Highway (general)	5.85	B	37,868	141.0	0.43	2.65	333.41	1.02	6.27
Impervious Areas: Commercial	Commercial	0.68	B	7,399	61.7	0.22	2.02	28.51	0.10	0.93
Impervious as Meadow	Grassland/Herbaceous	1.63	B	2,082	48.8	0.22	2.30	6.34	0.03	0.30
Pervious as Meadow	Grassland/Herbaceous	3.52	B	4,495	48.8	0.22	2.30	13.70	0.06	0.65
TOTAL (ACRES):		12.55			TOTALS:			384.27	1.22	8.20

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
Impervious Areas: Industrial	Industrial	7.17	B	78,013	81.0	0.24	2.01	394.58	1.17	9.79

Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	Grassland/Herbaceous	0.71	B	907	48.8	0.22	2.30	2.76	0.01	0.13
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	2.33	B	3,859	78.0	0.25	1.25	18.80	0.06	0.30
Woods (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	0.23	B	217	45.0	0.13	1.05	0.61	0.00	0.01

TOTAL (ACRES): 10.44

TOTALS: 416.75 1.24 10.24

POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS): **32.48** **0.03** **2.04**

Characterize Undetained Areas (for Untreated Stormwater)

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	MRC?	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
001	1	Infiltration Basin	-	8.34	76,412	76,412		0	10.00	0.24	0.96	0.00	0.00	0.00

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
33.06	0.10	0.81
33.06	0.10	0.81
384.27	1.22	8.20

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.

Joshua D. Hoffman, P.E.

Spreadsheet User Name

12/5/2022

Date