

General Information

Instructions
General
Volume
Rate
Quality

<p>Project Name: <input style="width: 90%;" type="text" value="Upper Dublin Township"/></p> <p>County: <input style="width: 90%;" type="text" value="Montgomery"/></p> <p>Project Type: <input style="width: 90%;" type="text" value="Redevelopment"/></p> <p>Area: <input style="width: 15%; text-align: center;" type="text" value="10.49"/> acres <i>(In Watershed)</i></p> <p>No. of Post-Construction Discharge Points: <input style="width: 10%; text-align: center;" type="text" value="2"/></p>	<p>Application Type: <input style="width: 90%;" type="text" value="PAG-02 NOI"/></p> <p>Municipality: <input style="width: 90%;" type="text" value="Upper Dublin Township"/></p> <p> <input checked="" type="radio"/> New Project <input type="radio"/> Minor / Major Amendment </p> <p>Total Earth Disturbance: <input style="width: 15%; text-align: center;" type="text" value="7.00"/> acres <i>(In Watershed)</i></p> <p>Start DP Numbering at: <input style="width: 10%; text-align: center;" type="text" value="001"/></p>
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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	5.21	3.07	2.19	1.66	Discharge to MS4	TSF, MF	Yes
002	5.28	3.39	2.11	2.49	Discharge to MS4	TSF, MF	Yes
Undetained Areas							
Totals:	10.49	6.46	4.299	4.15			

DISCHARGE POINT 001

Volume Management

Project: Upper Dublin Township

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2-Year / 24-Hour Storm Event (NOAA Atlas 14): 3.28 inches
 Alternative 2-Year / 24-Hour Storm Event inches
 Alternative Source:

Pre-Construction Conditions:
 No. Rows: 4
 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	0.00	B	58	1.448	0.37	3
Pervious as Meadow	1.16	C	71	0.817	0.93	3,888
Impervious as Meadow	0.44	C	71	0.817	0.93	1,473
Impervious Areas: Institutional	1.75	C	98	0.041	3.05	19,402
TOTAL (ACRES):		3.35		TOTAL (CF):		24,766

Post-Construction Conditions:
 No. Rows: 3

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%)	0.00	B	61	1.279	0.48	3
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	1.41	C	74	0.703	1.09	5,562
Impervious Areas: Institutional	1.66	C	98	0.041	3.05	18,384
TOTAL (ACRES):		3.07		TOTAL (CF):		23,949

NET CHANGE IN VOLUME TO MANAGE (CF): -816

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	Water Quality Filters & Hydrodynamic Devices	-	Off-Site	0.95	9,331								

Totals:

INFILTRATION & ET CREDITS (CF):

NET CHANGE IN VOLUME TO MANAGE (CF): -816

TOTAL CREDITS (CF):

VOLUME REQUIREMENT SATISFIED

DISCHARGE POINT 002

Volume Management

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2-Year / 24-Hour Storm Event (NOAA Atlas 14): 3.28 inches Alternative 2-Year / 24-Hour Storm Event inches

Alternative Source:

Pre-Construction Conditions: No. Rows: 3 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	1.00	C	71	0.817	0.93	3,377
Impervious as Meadow	0.42	C	71	0.817	0.93	1,416
Impervious Areas: Institutional	1.69	C	98	0.041	3.05	18,649
TOTAL (ACRES):		3.11		TOTAL (CF):		23,442

Post-Construction Conditions: No. Rows: 3

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%)	0.00	B	61	1.279	0.48	2
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.90	C	74	0.703	1.09	3,579
Impervious Areas: Institutional	2.49	C	98	0.041	3.05	27,510
TOTAL (ACRES):		3.39		TOTAL (CF):		31,090

NET CHANGE IN VOLUME TO MANAGE (CF): **7,648**

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)
002	2	Infiltration Basin	-	Off-Site	1.21	11,879	9,017	0.57	22	No	1.0	3,341	7,967	

Totals: 7,967

INFILTRATION & ET CREDITS (CF):

NET CHANGE IN VOLUME TO MANAGE (CF):

TOTAL CREDITS (CF):

VOLUME REQUIREMENT SATISFIED

DISCHARGE POINT 001

Water Quality

Project: Upper Dublin Township

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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	0.00	B	3	48.8	0.22	2.30	0.01	0.00	0.00
Pervious as Meadow	Grassland/Herbaceous	1.16	C	3,888	48.8	0.22	2.30	11.85	0.05	0.56
Impervious as Meadow	Grassland/Herbaceous	0.44	C	1,473	48.8	0.22	2.30	4.49	0.02	0.21
Impervious Areas: Institutional	Institutional	1.75	C	19,402	67.5	0.14	1.21	81.76	0.17	1.47
TOTAL (ACRES):		3.35			TOTALS:			98.11	0.24	2.24

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	0.00	B	3	78.0	0.25	1.25	0.02	0.00	0.00

Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	1.41	C	5,562	78.0	0.25	1.25	27.09	0.09	0.43
Impervious Areas: Institutional	Institutional	1.66	C	18,384	67.5	0.14	1.21	77.47	0.16	1.39

TOTAL (ACRES): 3.07

TOTALS: 104.58 0.25 1.82

POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS): 6.47 0.00 0.00

Characterize Undetained Areas (for Untreated Stormwater)

Land Cover	Area (acres)	Soil Group	CN	la (in)	Q Runoff (in)	Runoff Volume (cf)

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	Water Quality Filters & Hydrodynamic Devices	-	0.95	9,331			9,331	40.92	0.147	1.21	23.84	0.09	0.71

TSS	TP	TN
23.84	0.09	0.71
63.84	0.15	1.11

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):	87.68	0.24	1.82
POLLUTANT LOADS FROM SITE, PRE-CONSTRUCTION (LBS):	98.11	0.24	2.24

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.

Justin Massie

Spreadsheet User Name

5/15/2023

Date

DISCHARGE POINT 002

Water Quality

Project: Upper Dublin Township

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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	1.00	C	3,377	48.8	0.22	2.30	10.29	0.05	0.48
Impervious as Meadow	Grassland/Herbaceous	0.42	C	1,416	48.8	0.22	2.30	4.31	0.02	0.20
Impervious Areas: Institutional	Institutional	1.69	C	18,649	67.5	0.14	1.21	78.59	0.16	1.41
TOTAL (ACRES):		3.11			TOTALS:			93.20	0.23	2.10

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	0.00	B	2	78.0	0.25	1.25	0.01	0.00	0.00
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	0.90	C	3,579	78.0	0.25	1.25	17.43	0.06	0.28

Impervious Areas: Institutional	Institutional	2.49	C	27,510	67.5	0.14	1.21	115.93	0.24	2.08
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TOTAL (ACRES): 3.39

TOTALS: 133.37 0.30 2.36

POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS): 40.17 0.07 0.26

Characterize Undetained Areas (for Untreated Stormwater)

Land Cover	Area (acres)	Soil Group	CN	la (in)	Q Runoff (in)	Runoff Volume (cf)

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
002	2	Infiltration Basin	-	1.21	11,879	7,967		3,912	10	0.148	0.96	2.44	0.04	0.23

	TSS	TP	TN
POLLUTANT LOADS FROM STRUCTURAL BMP (TREATED) OUTFLOWS (LBS):	2.44	0.04	0.23
POLLUTANT LOADS FROM UNTREATED STORMWATER (LBS):	82.41	0.18	1.46
NON-STRUCTURAL BMP WATER QUALITY CREDITS (LBS):			
NET POLLUTANT LOADS FROM SITE, POST-CONSTRUCTION (LBS):	84.85	0.22	1.69
POLLUTANT LOADS FROM SITE, PRE-CONSTRUCTION (LBS):	93.20	0.23	2.10

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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.

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