

## General Information

Instructions

**General**

Volume

Rate

Quality

Project Name: **River Pointe Logistics Center**

Application Type: **Individual NPDES Application**

County: **Northampton**

Municipality: **Upper Mount Bethel Township**

Project Type: **Commercial Building**

New Project  Minor / Major Amendment

Area: **283.00** acres  
*(In Watershed)*

Total Earth Disturbance: **256.93** acres  
*(In Watershed)*

No. of Post-Construction Discharge Points: **4**

Start DP Numbering at: **001**

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	234.24	215.07	1.09	83.21	UNT to Delaware River	CWF, MF	Yes
002					See Separate PADEP Spreadsheet		
003					See Separate PADEP Spreadsheet		
004	48.76	41.86	0.43	20.82	Discharge to MS4	CWF, MF	Yes

Undetained Areas							
<b>Totals:</b>	<b>283.00</b>	<b>256.93</b>	<b>1.52</b>	<b>104.03</b>			

# Volume Management

Project: River Pointe Logistics Center

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2-Year / 24-Hour Storm Event (NOAA Atlas 14):  inches    Alternative 2-Year / 24-Hour Storm Event  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)	101.57	A	30	4.667	0.00	0
Forested (Good Condition)	5.33	B	55	1.636	0.28	5,439
Forested (Good Condition)	14.24	C	70	0.857	0.89	45,845
Forested (Good Condition)	26.87	D	77	0.597	1.28	125,214
Pervious as Meadow	45.29	A	30	4.667	0.00	0
Pervious as Meadow	25.51	C	71	0.817	0.94	86,936
Pervious as Meadow	36.60	D	78	0.564	1.35	178,975
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	1.22	N/A	98	0.041	3.07	13,583
Impervious as Meadow	0.30	D	78	0.564	1.35	1,467

**TOTAL (ACRES): 256.93**

**TOTAL (CF): 457,459**

**Post-Construction Conditions:**

No. Rows: 8

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%)	74.55	A	39	3.128	0.00	505
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	5.32	B	61	1.279	0.49	9,377
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	32.55	C	74	0.703	1.10	130,437
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	31.29	D	80	0.500	1.48	168,017
Impervious Areas: Industrial	104.03	N/A	98	0.041	3.07	1,158,236
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	6.80	A	30	4.667	0.00	0
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	0.20	C	71	0.817	0.94	682
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	2.19	D	78	0.564	1.35	10,709

**TOTAL (ACRES): 256.93**

**TOTAL (CF): 1,477,963**

**NET CHANGE IN VOLUME TO MANAGE (CF): 1,020,503**

**Non-Structural BMP Volume Credits:**

Tree Planting Credit

Other (attach calculations):

**Structural BMP Volume Credits:**

No. Structural BMPs: 13

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)
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001	1	Capture and Reuse	-	Off-Site	45.15	334,275							
001	2	Capture and Reuse	-	Off-Site	16.52	111,438							
004	3	Capture and Reuse	-	Off-Site	17.81	143,672							
001	4	Capture and Reuse	-	Off-Site	27.76	283,935							
001	5	Capture and Reuse	-	Off-Site	37.42	82,694							
001	6	Water Quality Filters & Hydrodynamic Devices	-	to BMP No. 7	10.60	87,886							
001	7	Dry Extended Detention Basin	-	Off-Site									
001	8	Water Quality Filters & Hydrodynamic Devices	-	to BMP No. 9	10.11	18,742							
001	9	Dry Extended Detention Basin	-	Off-Site									
004	10	Water Quality Filters & Hydrodynamic Devices	-	to BMP No. 11	12.64	68,411							
004	11	Dry Extended Detention Basin	-	Off-Site									
001	12	Infiltration Bed	-	Off-Site	0.00	55,000	50,400	0.86	14	No		55,000	<b>45,511</b>
004	13	Infiltration Bed	-	Off-Site	0.00	33,000	27,460	1.56	12	No		33,000	<b>33,000</b>

**Totals: 78,511**

<b>INFILTRATION &amp; ET CREDITS (CF):</b>	<b>78,511</b>
<b>CAPTURE AND REUSE CREDIT (CF):</b>	<b>956,014</b>

<b>NET CHANGE IN VOLUME TO MANAGE (CF):</b>	<b>1,020,503</b>
<b>TOTAL CREDITS (CF):</b>	<b>1,034,525</b>

**VOLUME REQUIREMENT SATISFIED**

# Rate Control

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**Precipitation Amounts:**

NOAA 2-Year 24-Hour Storm Event (in):	<b>3.3</b>
NOAA 10-Year 24-Hour Storm Event (in):	<b>4.82</b>
NOAA 50-Year 24-Hour Storm Event (in):	<b>6.78</b>
NOAA 100-Year 24-Hour Storm Event (in):	<b>7.82</b>

Alternative 2-Year 24-Hour Storm Event (in):	
Alternative 10-Year 24-Hour Storm Event (in):	
Alternative 50-Year 24-Hour Storm Event (in):	
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:	246.79	240.60	-6.19	<i>Rate Control Satisfied</i>
10-Year Storm:	684.58	581.45	-103.13	<i>Rate Control Satisfied</i>
50-Year Storm:	1,379.25	1,149.18	-230.07	<i>Rate Control Satisfied</i>
100-Year Storm:	1,806.81	1,527.42	-279.39	<i>Rate Control Satisfied</i>

# Water Quality

Project: River Pointe Logistics Center

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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
Forested (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	101.57	A	0	45.0	0.13	1.05	0.00	0.00	0.00
Forested (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	5.33	B	5,439	45.0	0.13	1.05	15.28	0.04	0.36
Forested (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	14.24	C	45,845	45.0	0.13	1.05	128.82	0.37	3.01
Forested (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	26.87	D	125,214	45.0	0.13	1.05	351.84	1.02	8.21
Pervious as Meadow	Grassland/Herbaceous	45.29	A	0	48.8	0.22	2.30	0.00	0.00	0.00
Pervious as Meadow	Grassland/Herbaceous	25.51	C	86,936	48.8	0.22	2.30	264.91	1.19	12.49
Pervious as Meadow	Grassland/Herbaceous	36.60	D	178,975	48.8	0.22	2.30	545.37	2.46	25.70
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	1.22	N/A	13,583	65.0	0.29	2.05	55.13	0.25	1.74

Impervious as Meadow	Grassland/Herbaceous	0.30	D	1,467	48.8	0.22	2.30	4.47	0.02	0.21
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**TOTAL (ACRES): 256.93**

**TOTALS: 1365.83 5.35 51.71**

**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	74.55	A	505	78.0	0.25	1.25	2.46	0.01	0.04
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	5.32	B	9,377	78.0	0.25	1.25	45.67	0.15	0.73
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	32.55	C	130,437	78.0	0.25	1.25	635.30	2.04	10.18
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	31.29	D	168,017	78.0	0.25	1.25	818.33	2.62	13.11
Impervious Areas: Industrial	Industrial	104.03	N/A	1,158,236	81.0	0.24	2.01	5858.19	17.36	145.37
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	Grassland/Herbaceous	6.80	A	0	48.8	0.22	2.30	0.00	0.00	0.00
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	Grassland/Herbaceous	0.20	C	682	48.8	0.22	2.30	2.08	0.01	0.10
Meadow-Continuous Grass, Protected from Grazing and Generally Mowed for Hay	Grassland/Herbaceous	2.19	D	10,709	48.8	0.22	2.30	32.63	0.15	1.54

**TOTAL (ACRES): 256.93**

**TOTALS: 7394.65 22.33 171.07**



Characterize Undetained Areas (for Untreated Stormwater)

Land Cover	Area (acres)	Soil Group	CN	Ia (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	Capture and Reuse	-	45.15	334,275		334,275	0	0.00	0.00	0.00	0.00	0.00	0.00
001	2	Capture and Reuse	-	16.52	111,438		111,438	0	0.00	0.00	0.00	0.00	0.00	0.00
004	3	Capture and Reuse	-	17.81	143,672		143,672	0	0.00	0.00	0.00	0.00	0.00	0.00
001	4	Capture and Reuse	-	27.76	283,935		283,935	0	0.00	0.00	0.00	0.00	0.00	0.00
001	5	Capture and Reuse	-	37.42	82,694		82,694	0	0.00	0.00	0.00	0.00	0.00	0.00
001	6	Water Quality Filters & Hydrodynamic Devices	-	10.60	87,886			87,886	-	-	-	-	-	-

001	7	Dry Extended Detention Basin	-					22.00	0.19	1.22			
001	8	Water Quality Filters & Hydrodynamic Devices	-	10.11	18,742		18,742	-	-	-	-	-	-
001	9	Dry Extended Detention Basin	-					22.00	0.19	1.22			
004	10	Water Quality Filters & Hydrodynamic Devices	-	12.64	68,411		68,411	-	-	-	-	-	-
004	11	Dry Extended Detention Basin	-					22.00	0.19	1.22			
001	12	Infiltration Bed	-	0.00	55,000	45,511	9,489	22.00	0.10	2.38	13.04	0.06	1.41
004	13	Infiltration Bed	-	0.00	33,000	33,000	0	22.00	0.10	2.38	0.00	0.00	0.00

TSS	TP	TN
13.04	0.06	1.41
1295.40	3.91	29.97
1308.43	3.97	31.38
1365.83	5.35	51.71

**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
13.04	0.06	1.41
#####	3.91	29.97
#####	3.97	31.38
#####	5.35	51.71

**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.

**Steve Walsh**

4/1/2023

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Spreadsheet User Name

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Date