



**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES  
POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM) MODULE 2**

Applicant:

**PROLOGIS**

Project Site Name:

**7464 & 7600 LINGLESTOWN ROAD SITE**

Surface Water Name(s):

**U.N.T TO BEAVER CREEK (TRIB 09452)  
U.N.T TO BEAVER CREEK (TRIB 09452) VIA  
WETLAND  
U.N.T TO BEAVER CREEK (TRIB 09468)  
U.N.T TO WALNUT CREEK (TRIB 09596)  
U.N.T TO WALNUT CREEK (TRIB 09590) VIA  
WETLAND**

Surface Water Use(s):

**NONE  
NONE  
NONE  
NONE  
NONE**

**PCSM PLAN INFORMATION**

1. Identify all structural and non-structural PCSM BMPs that have been selected and provide the information requested.

<b>Discharge Point(s)</b>	<b>BMP ID</b>	<b>BMP Name</b>	<b>BMP Manual</b>	<b>Latitude</b>	<b>Longitude</b>	<b>DA Treated (ac)</b>
002	1	BMP #1	6.4.3	40.35807	-76.74388	11.65
002	2	BMP #2	6.4.2	40.35796	-76.74459	1.16
004	3	BMP #3	6.4.3	40.35657	-76.73939	21.81
005	4	BMP #4A	6.6.3	40.3588	-76.7367	18.11
005	5	BMP #4	6.4.3	40.3589	-76.7361	18.11
005	6	BMP #18	6.8.1	40.3581	-76.7353	0.27
005	7	BMP #5	6.6.3	40.3562	-76.7360	7.73
005	8	BMP #6	6.8.1	40.3591	-76.7372	0.88
005	9	BMP #7	6.8.1	40.3572	-76.7350	0.04
006	10	BMP #8	6.4.2	40.3547	-76.7355	2.12
006	11	BMP #9	6.6.3	40.3562	-76.7392	1.39
002	12	BMP #10	6.8.1	40.35780	-76.74496	12.81
004	13	BMP #11	6.8.1	40.3557	-76.7412	21.81
005	14	BMP #12	6.8.1	40.3586	-76.7355	18.11
004	15	BMP #13	6.8.1	40.3559	-76.7407	21.81
006	16	BMP #14	6.8.1	40.3549	-76.7363	2.12
006	17	BMP #15	6.8.1	40.3556	-76.7366	7.73

006	18	BMP #16	6.8.1	40.3550	-76.7358	2.12
006	19	BMP #17	6.8.1	40.3555	-76.7370	7.73
006	20	BMP #18	6.8.1	40.3552	-76.7370	1.07
006	21	BMP #19	6.8.1	40.3547	-76.7361	2.12
006	22	BMP #20	6.8.1	40.3575	-76.7351	18.11
005, 006	23	BMP #21	6.6.4	N/A	N/A	7.10

\* BMP #21 refers to the 7 Flexstorm Filters

**Undetained Areas:** 25.93 acre(s)

The Project Qualifies as a Site Restoration Project (25 Pa. Code §102.8(n))

2. Describe the sequence of PCSM BMP implementation in relation to earth disturbance activities and a schedule of inspections for the critical stages of PCSM BMP installation.

**REFERENCE "STAGING OF MAJOR CONSTRUCTION ACTIVITIES" SECTION ON SHEET SW 16.1 OF PCSM PLAN**

3.  Plan drawings have been developed for the project and will be available on-site.

4.  Plan drawings have been developed for the project and are attached to the NOI/application.

5.  Recycling and proper disposal of materials associated with PCSM BMPs are addressed as part of long-term operation and maintenance of the PCSM BMPs.

6. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and the applicant's plan to avoid or minimize potential pollution and its impacts.

**REFERENCE "GEOLOGIC SOIL FORMATIONS & POTENTIAL POLLUTION" SECTION ON SHEET SW 16.1 OF PCSM PLAN**

7. Identify whether the potential exists for thermal impacts to surface waters from post-construction stormwater. If such potential exists, identify BMPs that will be implemented to avoid, minimize, or mitigate potential thermal impacts.

**REFERENCE "THERMAL IMPACTS ANALYSIS" SECTION ON SHEET SW 16.1 OF PCSM PLAN**

8.  The PCSM Plan has been planned, designed, and will be implemented to be consistent with the E&S Plan.

9.  A pre-development site characterization has been performed.

**STORMWATER ANALYSIS – RUNOFF VOLUME**

**Surface Water Name:** U.N.T. TO BEAVER CREEK (TRIB 09452); U.N.T. TO BEAVER CREEK (TRIB 09452) VIA WETLAND  
**Discharge Point(s):** 001; 004

- 1.  The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.
- 2.  The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.
- 3.  An alternative design standard is being used.
- 4.  A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.

5. 2-Year/24-Hour Storm Event: \_\_\_\_\_ inches Source of precipitation data: \_\_\_\_\_

6. Stormwater Runoff Volume, Pre-Construction Conditions: \_\_\_\_\_ CF  Calculations attached

7. Stormwater Runoff Volume, Post-Construction Conditions: \_\_\_\_\_ CF  Calculations attached

8. Net Change (Post-Construction – Pre-Construction Volumes): \_\_\_\_\_ CF

9. Identify all selected structural PCSM BMPs and provide the information requested.  Calculations attached

DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
							<input type="checkbox"/>				

**Total Infiltration & ET Credits (CF):**

**Non-Structural BMP Volume Credits (CF) (Attach Calculations):**

**Managed Release Credits (CF) (Attach MRC Design Summary):**

**Volume Required to Reduce/Manage (CF):**

**Total Credits (CF):**

**STORMWATER ANALYSIS – RUNOFF VOLUME**

**Surface Water Name:** U.N.T. TO BEAVER CREEK  
(TRIB 09468)

**Discharge Point(s):** 002

10.  The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.

11.  The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.

12.  An alternative design standard is being used.

13.  A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.

14. 2-Year/24-Hour Storm Event: \_\_\_\_\_ inches Source of precipitation data: \_\_\_\_\_

15. Stormwater Runoff Volume, Pre-Construction Conditions: \_\_\_\_\_ CF  Calculations attached

16. Stormwater Runoff Volume, Post-Construction Conditions: \_\_\_\_\_ CF  Calculations attached

17. Net Change (Post-Construction – Pre-Construction Volumes): \_\_\_\_\_ CF

18. Identify all selected structural PCSM BMPs and provide the information requested.  Calculations attached

DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
							<input type="checkbox"/>				

**Total Infiltration & ET Credits (CF):**

**Non-Structural BMP Volume Credits (CF) (Attach Calculations):**

**Managed Release Credits (CF) (Attach MRC Design Summary):**

**Volume Required to Reduce/Manage (CF):**

**Total Credits (CF):**

**STORMWATER ANALYSIS – RUNOFF VOLUME**

**Surface Water Name:** U.N.T. TO WALNUT CREEK  
(TRIB 09596)

**Discharge Point(s):** 003

19.  The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.

20.  The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.

21.  An alternative design standard is being used.

22.  A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.

23. 2-Year/24-Hour Storm Event: inches Source of precipitation data:

24. Stormwater Runoff Volume, Pre-Construction Conditions: CF  Calculations attached

25. Stormwater Runoff Volume, Post-Construction Conditions: CF  Calculations attached

26. Net Change (Post-Construction – Pre-Construction Volumes): CF

27. Identify all selected structural PCSM BMPs and provide the information requested.  Calculations attached

DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
							<input type="checkbox"/>				

**Total Infiltration & ET Credits (CF):**

**Non-Structural BMP Volume Credits (CF) (Attach Calculations):**

**Managed Release Credits (CF) (Attach MRC Design Summary):**

**Volume Required to Reduce/Manage (CF):**

**Total Credits (CF):**

**STORMWATER ANALYSIS – RUNOFF VOLUME**

**Surface Water Name:** U.N.T. TO WALNUT CREEK  
(TRIB 09590) VIA WETLAND

**Discharge Point(s):** 005 & 006

28.  The design standard is based on volume management requirements in an Act 167 Plan approved by DEP within the past five years.

29.  The design standard is based on managing the net change for storms up to and including the 2-year/24-hour storm.

30.  An alternative design standard is being used.

31.  A printout of DEP's PCSM Spreadsheet – Volume Worksheet is attached.

32. 2-Year/24-Hour Storm Event: \_\_\_\_\_ inches Source of precipitation data: \_\_\_\_\_

33. Stormwater Runoff Volume, Pre-Construction Conditions: \_\_\_\_\_ CF  Calculations attached

34. Stormwater Runoff Volume, Post-Construction Conditions: \_\_\_\_\_ CF  Calculations attached

35. Net Change (Post-Construction – Pre-Construction Volumes): \_\_\_\_\_ CF

36. Identify all selected structural PCSM BMPs and provide the information requested.  Calculations attached

DP No.	BMP ID	Series	Vol. Routed to BMP (CF)	Inf. Area (SF)	Inf. Rate (in/hr)	Inf. Period (hrs)	Veg?	Media Depth (ft)	Storage Vol. (CF)	Inf. Credit (CF)	ET Credit (CF)
							<input type="checkbox"/>				

**Total Infiltration & ET Credits (CF):**

**Non-Structural BMP Volume Credits (CF) (Attach Calculations):**

**Managed Release Credits (CF) (Attach MRC Design Summary):**

**Volume Required to Reduce/Manage (CF):**

**Total Credits (CF):**

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #1</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	<b>3</b>
2. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
3. Test Pit Identifiers (from PCSM Plan Drawings):	<b>IT-2, IT-3, IT-4</b>
4. Avg Infiltration Rate: <b>4.57</b>	in/hr 5. FOS: <b>2</b> : 1
6. Infiltration rate used for design: <b>2.28</b>	in/hr
7. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
8. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
9. Comments:	<b>REFERENCE GEOTECHICAL ENGINEERING REPORT</b>

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #2</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
10. No. of infiltration tests completed:	<b>2</b>
11. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
12. Test Pit Identifiers (from PCSM Plan Drawings):	<b>IT-1, IT-22</b>
13. Avg Infiltration Rate: <b>10.00</b>	in/hr 14. FOS: <b>2</b> : 1
15. Infiltration rate used for design: <b>5.00</b>	in/hr
16. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
17. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
18. Comments:	<b>REFERENCE GEOTECHICAL ENGINEERING REPORT</b>

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #3</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
19. No. of infiltration tests completed:	<b>4</b>
20. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
21. Test Pit Identifiers (from PCSM Plan Drawings):	<b>IT-5, IT-6</b>
22. Avg Infiltration Rate: <b>12.0</b>	in/hr      23. FOS: <b>2</b> : 1
24. Infiltration rate used for design: <b>5.0</b>	in/hr
25. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
26. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
27. Comments:	<b>REFERENCE GEOTECHNICAL ENGINEERING REPORT</b>

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #4</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
28. No. of infiltration tests completed:	<b>2</b>
29. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
30. Test Pit Identifiers (from PCSM Plan Drawings):	<b>IT-101, IT-102</b>
31. Avg Infiltration Rate: <b>4.96</b>	in/hr      32. FOS: <b>2</b> : 1
33. Infiltration rate used for design: <b>2.48</b>	in/hr
34. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
35. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
36. Comments:	<b>REFERENCE INFILTRATION STUDY- SUPPLEMENTAL TESTING 11-28-2023</b>



<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #6</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
37. No. of infiltration tests completed:	<b>1</b>
38. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
39. Test Pit Identifiers (from PCSM Plan Drawings):	<b>I-17</b>
40. Avg Infiltration Rate: <b>33.0</b>	in/hr      41. FOS: <b>2</b> : 1
42. Infiltration rate used for design: <b>5.0</b>	in/hr
43. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
44. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
45. Comments:	<b>The bed area is small, and the infiltration tests IT 17 &amp; IT 18 both suggest infiltration in this zone is in excess of 10 in/hr. Soil ammendments are to be added to reduced the infiltration rate of this facility to 10 in/hr; REFERENCE SUPPLEMNTAL INFILTRATION TESTING 04-19-2024</b>

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #7</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
1. No. of infiltration tests completed:	<b>1</b>
2. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
3. Test Pit Identifiers (from PCSM Plan Drawings):	<b>I-18</b>
4. Avg Infiltration Rate: <b>21.0</b>	in/hr      5. FOS: <b>2</b> : 1
6. Infiltration rate used for design: <b>5.0</b>	in/hr
7. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
8. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
9. Comments:	<b>The bed area is small, and the infiltration tests IT 17 &amp; IT 18 both suggest infiltration in this zone is in excess of 10 in/hr. Soil ammendments are to be added to reduced the infiltration rate of this facility to 10 in/hr; REFERENCE SUPPLEMENTAL INFILTRATION TESTING 04-19-2024</b>

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #18</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
10. No. of infiltration tests completed:	<b>2</b>
11. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
12. Test Pit Identifiers (from PCSM Plan Drawings):	<b>I-12 &amp; I-14</b>
13. Avg Infiltration Rate: <b>17.1</b>	in/hr      14. FOS: <b>2</b> : 1
15. Infiltration rate used for design: <b>5.0</b>	in/hr
16. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
17. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
18. Comments: <b>REFERENCE SUPPLEMENTAL INFILTRATION TESTING 04-19-2024</b>	

<b>INFILTRATION INFORMATION</b>	
<b>BMP ID: BMP #8</b>	<input checked="" type="checkbox"/> Soil/geologic test results are attached.
19. No. of infiltration tests completed:	<b>2</b>
20. Method(s) used for infiltration testing:	<b>DOUBLE-RING INFILTROMETER</b>
21. Test Pit Identifiers (from PCSM Plan Drawings):	<b>IT-103, IT-104</b>
22. Avg Infiltration Rate: <b>8.40</b>	in/hr      23. FOS: <b>2</b> : 1
24. Infiltration rate used for design: <b>4.20</b>	in/hr
25. Separation distance between the BMP bottom and bedrock:	<b>&gt;2.0</b> feet
26. Separation distance between the BMP bottom and seasonal high-water table:	<b>&gt;2.0</b> feet
27. Comments: <b>REFERENCE INFILTRATION STUDY- SUPPLEMENTAL TESTING 11-28-2023</b>	

STORMWATER ANALYSIS – PEAK RATE								
<b>Surface Water Name:</b> U.N.T TO BEAVER CREEK (TRIB 09452)			<b>Discharge Point(s):</b> 001					
1. <input type="checkbox"/> The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.								
2. <input checked="" type="checkbox"/> The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.								
3. <input type="checkbox"/> An alternative design standard is being used.								
4. <input checked="" type="checkbox"/> A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.								
5. <input checked="" type="checkbox"/> Alternative rate calculations are attached.								
6. Identify precipitation amounts. Source of precipitation data: NOAA								
2-Year/24-Hour Storm:		2.90		10-Year/24-Hour Storm		4.36		
50-Year/24-Hour Storm:		6.38		100-Year/24-Hour Storm		7.48		
7. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.								
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (cfs)				Difference (cfs)		
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>							
10-Year/24-Hour								
50-Year/24-Hour								
100-Year/24-Hour								
8. Identify all BMPs used to mitigate peak rate differences and provide the requested information.								
BMP ID	Inflow to BMP (cfs)				Outflow from BMP (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>								
9. Report peak rates for pre-construction and post-construction with BMPs and identify the differences.								
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with BMPs) (cfs)				Difference (cfs)		
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>							
10-Year/24-Hour								
50-Year/24-Hour								
100-Year/24-Hour								

STORMWATER ANALYSIS – PEAK RATE								
<b>Surface Water Name:</b> U.N.T TO BEAVER CREEK (TRIB 09468)			<b>Discharge Point(s):</b> 002					
10. <input type="checkbox"/> The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.								
11. <input checked="" type="checkbox"/> The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.								
12. <input type="checkbox"/> An alternative design standard is being used.								
13. <input checked="" type="checkbox"/> A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.								
14. <input checked="" type="checkbox"/> Alternative rate calculations are attached.								
15. Identify precipitation amounts. Source of precipitation data: NOAA								
2-Year/24-Hour Storm:		2.90		10-Year/24-Hour Storm		4.36		
50-Year/24-Hour Storm:		6.38		100-Year/24-Hour Storm		7.48		
16. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.								
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (cfs)				Difference (cfs)		
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>							
10-Year/24-Hour								
50-Year/24-Hour								
100-Year/24-Hour								
17. Identify all BMPs used to mitigate peak rate differences and provide the requested information.								
BMP ID	Inflow to BMP (cfs)				Outflow from BMP (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>								
18. Report peak rates for pre-construction and post-construction with BMPs and identify the differences.								
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with BMPs) (cfs)				Difference (cfs)		
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>							
10-Year/24-Hour								
50-Year/24-Hour								
100-Year/24-Hour								



STORMWATER ANALYSIS – PEAK RATE								
<b>Surface Water Name:</b>		<b>U.N.T TO BEAVER CREEK (TRIB 09452) VIA WETLAND</b>				<b>Discharge Point(s): 004</b>		
28. <input type="checkbox"/> The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.								
29. <input checked="" type="checkbox"/> The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.								
30. <input type="checkbox"/> An alternative design standard is being used.								
31. <input checked="" type="checkbox"/> A printout of DEP’s PCSM Spreadsheet – Rate Worksheet is attached.								
32. <input checked="" type="checkbox"/> Alternative rate calculations are attached.								
33. Identify precipitation amounts. Source of precipitation data: NOAA								
2-Year/24-Hour Storm:		2.90		10-Year/24-Hour Storm		4.36		
50-Year/24-Hour Storm:		6.38		100-Year/24-Hour Storm		7.48		
34. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.								
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (cfs)				Difference (cfs)		
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>							
10-Year/24-Hour								
50-Year/24-Hour								
100-Year/24-Hour								
35. Identify all BMPs used to mitigate peak rate differences and provide the requested information.								
BMP ID	Inflow to BMP (cfs)				Outflow from BMP (cfs)			
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr
<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>								
36. Report peak rates for pre-construction and post-construction with BMPs and identify the differences.								
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with BMPs) (cfs)				Difference (cfs)		
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>							
10-Year/24-Hour								
50-Year/24-Hour								
100-Year/24-Hour								

STORMWATER ANALYSIS – PEAK RATE									
<b>Surface Water Name:</b>		<b>U.N.T TO WALNUT CREEK (TRIB 09590) VIA WETLAND</b>				<b>Discharge Point(s): 005 &amp; 006</b>			
37. <input type="checkbox"/> The design standard is based on rate requirements in an Act 167 Plan approved by DEP within the past five years.									
38. <input checked="" type="checkbox"/> The design standard is based on managing the net change for 2-, 10-, 50-, and 100-year/24-hour storms.									
39. <input type="checkbox"/> An alternative design standard is being used.									
40. <input checked="" type="checkbox"/> A printout of DEP's PCSM Spreadsheet – Rate Worksheet is attached.									
41. <input checked="" type="checkbox"/> Alternative rate calculations are attached.									
42. Identify precipitation amounts. Source of precipitation data: NOAA									
2-Year/24-Hour Storm:		2.90		10-Year/24-Hour Storm		4.36			
50-Year/24-Hour Storm:		6.38		100-Year/24-Hour Storm		7.48			
43. Report peak discharge rates, pre- and post-construction (without BMPs), based on a time of concentration analysis.									
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (cfs)				Difference (cfs)			
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>								
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									
44. Identify all BMPs used to mitigate peak rate differences and provide the requested information.									
BMP ID	Inflow to BMP (cfs)				Outflow from BMP (cfs)				
	2-Yr	10-Yr	50-Yr	100-Yr	2-Yr	10-Yr	50-Yr	100-Yr	
<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>									
45. Report peak rates for pre-construction and post-construction with BMPs and identify the differences.									
Design Storm	Pre-Construction Peak Rate (cfs)	Post-Construction Peak Rate (with BMPs) (cfs)				Difference (cfs)			
2-Year/24-Hour	<b>REFERENCE "PEAK DISCHARGE RATE DISCUSSION" SECTION OF PCSM REPORT - PAGE 4</b>								
10-Year/24-Hour									
50-Year/24-Hour									
100-Year/24-Hour									

**STORMWATER ANALYSIS – WATER QUALITY**

A printout of DEP's PCSM Spreadsheet – Quality Worksheet is attached for all surface waters receiving discharges.

**LONG-TERM O&M**

Describe the long-term operation and maintenance (O&M) requirements for each selected PCSM BMP.

**BMP ID**

**O&M Requirements**

**REFERENCE "OWNERSHIP AND MAINTENANCE OF STORMWATER / BMP FACILITIES" SECTION ON SHEET SW 16.2 OF THE PCSM PLAN SET**



# General Information

Instructions
General
Volume
Rate
Quality

Project Name:  Application Type:   
 County:  Municipality:   
 Project Type:   New Project  Minor / Major Amendment  
 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)
004	21.26	21.26	0.00	20.79		WWF, MF	Yes
Undetained Areas	2.43	2.43	0.00	0.00		WWF, MF	
<b>Totals:</b>	<b>23.69</b>	<b>23.69</b>		<b>20.78746556</b>			

# Volume Management

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

Instructions
General
Volume
Rate
Quality

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)	1.80	B	55	1.636	0.17	1,103
Forested (Good Condition)	20.59	D	77	0.597	1.00	74,906
Pervious as Meadow	5.17	B	58	1.448	0.24	4,551
Pervious as Meadow	4.92	D	78	0.564	1.06	18,909
<b>TOTAL (ACRES):</b> 32.48						<b>TOTAL (CF):</b> 99,469

**Post-Construction Conditions:**      No. Rows:

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	20.64	N/A	98	0.041	2.67	199,947
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.06	B	61	1.279	0.33	66
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	3.65	D	80	0.500	1.18	15,554
<b>TOTAL (ACRES):</b> 24.34						<b>TOTAL (CF):</b> 215,567

**NET CHANGE IN VOLUME TO MANAGE (CF): 116,098**

**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	Infiltration Rate (in/hr)	Infiltration Period (hrs)	Vegetated?	Media Depth (ft)	Storage Volume (CF)	Infiltration Credit (CF)	ET Credit (CF)
004	3	Infiltration Basin	-	Off-Site	2.1.81	204,931	38,365	5.00	24	No		0	172,643	

Totals: 172,643

INFILTRATION & ET CREDITS (CF):

NET CHANGE IN VOLUME TO MANAGE (CF):

TOTAL CREDITS (CF):

VOLUME REQUIREMENT SATISFIED

# Rate Control

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

Instructions
General
Volume
Rate
Quality

### Precipitation Amounts:

NOAA 2-Year 24-Hour Storm Event (in):	2.9
NOAA 10-Year 24-Hour Storm Event (in):	4.36
NOAA 50-Year 24-Hour Storm Event (in):	6.38
NOAA 100-Year 24-Hour Storm Event (in):	7.48

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.

	Peak Discharge Rates (cfs)		Net Change	
	Pre-Construction	Post-Construction		
2-Year Storm:	17.78	7.27	-10.51	Rate Control Satisfied
10-Year Storm:	42.79	18.23	-24.56	Rate Control Satisfied
50-Year Storm:	82.39	60.27	-22.12	Rate Control Satisfied
100-Year Storm:	105.11	93.20	-11.91	Rate Control Satisfied

# Water Quality

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

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
Forested (Good Condition)	Deciduous Forest/Evergreen	1.80	B	1,103	45.0	0.13	1.05	3.10	0.01	0.07
Forested (Good Condition)	Forest/Mixed Forest Deciduous	20.59	D	74,906	45.0	0.13	1.05	210.48	0.61	4.91
Pervious as Meadow	Forest/Mixed Forest	5.17	B	4,551	48.8	0.22	2.30	13.87	0.06	0.65
Pervious as Meadow	Grassland/Herbaceous	4.92	D	18,909	48.8	0.22	2.30	57.62	0.26	2.72
<b>TOTAL (ACRES): 32.48</b>					<b>TOTALS: 285.07 0.94 8.35</b>					

## 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: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	20.64	N/A	199,947	65.0	0.29	2.05	811.54	3.62	25.59
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	0.06	B	66	78.0	0.25	1.25	0.32	0.00	0.01

Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	3.65	D	15,554	78.0	0.25	1.25	75.75	0.24	1.21
--	------------	------	---	--------	------	------	------	-------	------	------

**TOTAL (ACRES): 24.34**

**TOTALS: 887.62 3.86 26.81**

**POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS): 602.55 2.93 18.46**

Characterize Undetained Areas (for Untreated Stormwater) No. Rows:

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%)	0.06	B	61	1.279	0.33	66
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	2.37	D	80	0.500	1.18	10,131

**Non-Structural BMP Water Quality Credits:**

- Pervious Undetained Area Credit
  - Other (attach calculations)
- |      |      |      |
|------|------|------|
| TSS  | TP   | TN   |
| 7.77 | 0.03 | 0.22 |

**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
004	3	Infiltration Basin	21.81	204,931	172,643		32,289	10.00	0.24	1.04	20.16	0.48	2.10

**POLLUTANT LOADS FROM STRUCTURAL BMP (TREATED) OUTFLOWS (LBS):**

TSS	TP	TN
20.16	0.48	2.10
49.67	0.16	0.80
7.77	0.03	0.22
62.06	0.62	2.67

**POLLUTANT LOADS FROM UNTREATED STORMWATER (LBS):**

**NON-STRUCTURAL BMP WATER QUALITY CREDITS (LBS):**

**NET POLLUTANT LOADS FROM SITE, POST-CONSTRUCTION (LBS):**

**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.

**CLAY CONDOL, P.E.**

Spreadsheet User Name

5/6/2024

Date

## General Information

Instructions
General
Volume
Rate
Quality

Project Name:  Application Type:

County:  Municipality:

Project Type: 
 New Project
  Minor / Major Amendment

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)
005	27.34	27.34	0.27	18.70		WWF, MF	Yes
Undetained Areas	5.05	5.05	0.00	0.00		WWF, MF	
<b>Totals:</b>	<b>32.39</b>	<b>32.39</b>	<b>0.267561983</b>	<b>18.69644169</b>			



# Volume Management

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

Instructions
General
Volume
Rate
Quality

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

**Pre-Construction Conditions:**
 Exempt from Meadow in Good Condition
  Automatically Calculate CN, Ia, Runoff and Volume  
 No. Rows:

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	0.21	N/A	98	0.041	2.67	2,074
Impervious as Meadow	0.02	B	58	1.448	0.24	13
Impervious as Meadow	0.04	D	78	0.564	1.06	148
Forested (Good Condition)	2.99	B	55	1.636	0.17	1,836
Forested (Good Condition)	11.39	D	77	0.597	1.00	41,429
Pervious as Meadow	2.74	B	58	1.448	0.24	2,407
Pervious as Meadow	7.73	D	78	0.564	1.06	29,692
<b>TOTAL (ACRES):</b> 25.11						<b>TOTAL (CF):</b> 77,598

**Post-Construction Conditions:**
 Exempt from Meadow in Good Condition
  Automatically Calculate CN, Ia, Runoff and Volume  
 No. Rows:

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
Impervious Areas: Commercial	18.70	N/A	98	0.041	2.67	181,119

Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	4.32	B	61	1.279	0.33	5,139
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	6.94	D	80	0.500	1.18	29,614
<b>TOTAL (ACRES):</b>	<b>29.95</b>				<b>TOTAL (CF):</b>	<b>215,872</b>

**NET CHANGE IN VOLUME TO MANAGE (CF):** 138,273

**Non-Structural BMP Volume Credits:**

- Tree Planting Credit
- Other (attach calculations):

**Structural BMP Volume Credits:** No. Structural BMPs: 6 Start BMP Numbering at: 4

DP No.	BMP No.	BMP Name	MRC	Discharge	Incremental BMP DA (acres)	Volume Routed to BMP (CF)	Infiltration / Vegetated	Infiltration Rate (in/hr)	Infiltration Period (hrs)	Vegetated?	Media Depth (ft)	Storage Volume (CF)	Infiltration Credit (CF)	ET Credit (CF)
005	4	Dry Extended Detention Basin	-	to BMP No. 5	17.99	140,837	0			No				
005	5	Infiltration Bed	-	to BMP No. 6	0.00	140,837	16,631	2.48	36	No		47,142	84,262	
005	6	Infiltration Basin	-	Off-Site	0.27	57,744	3,986	5.00	24	No		6,936	24,873	
005	7	Dry Extended Detention Basin	-	to BMP No. 8	7.73	58,528	0			No				
005	8	Infiltration Basin	-	to BMP No. 9	0.88	62,275	2,856	5.00	38	No		7,140	19,992	
005	9	Infiltration Basin	-	Off-Site	0.04	42,283	1,329	5.00	40	No		4,652	10,633	
<b>Totals:</b>												<b>139,760</b>		

**INFILTRATION & ET CREDITS (CF):** 139,760

**NET CHANGE IN VOLUME TO MANAGE (CF):** 138,273  
**TOTAL CREDITS (CF):** 139,760

**VOLUME REQUIREMENT SATISFIED**

# Rate Control

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

Instructions    General    Volume    **Rate**    Quality

**Precipitation Amounts:**

NOAA 2-Year 24-Hour Storm Event (in):	<b>2.9</b>
NOAA 10-Year 24-Hour Storm Event (in):	<b>4.36</b>
NOAA 50-Year 24-Hour Storm Event (in):	<b>6.38</b>
NOAA 100-Year 24-Hour Storm Event (in):	<b>7.48</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.

	Peak Discharge Rates (cfs)		Net Change	
	Pre-Construction	Post-Construction		
2-Year Storm:	31.83	13.01	-18.82	Rate Control Satisfied
10-Year Storm:	76.67	57.39	-19.28	Rate Control Satisfied
50-Year Storm:	147.80	141.80	-6.00	Rate Control Satisfied
100-Year Storm:	188.61	180.47	-8.14	Rate Control Satisfied

# Water Quality

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

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
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	0.21	N/A	2,074	65.0	0.29	2.05	8.42	0.04	0.27
Impervious as Meadow	Grassland/Herbaceous	0.02	B	13	48.8	0.22	2.30	0.04	0.00	0.00
Impervious as Meadow	Grassland/Herbaceous	0.04	D	148	48.8	0.22	2.30	0.45	0.00	0.02
Forested (Good Condition)	Deciduous Forest/Evergreen	2.99	B	1,836	45.0	0.13	1.05	5.16	0.01	0.12
Forested (Good Condition)	Forest/Mixed Forest Deciduous	11.39	D	41,429	45.0	0.13	1.05	116.41	0.34	2.72
Pervious as Meadow	Forest/Mixed Forest	2.74	B	2,407	48.8	0.22	2.30	7.33	0.03	0.35
Pervious as Meadow	Grassland/Herbaceous	7.73	D	29,692	48.8	0.22	2.30	90.48	0.41	4.26
<b>TOTAL (ACRES):</b>				<b>25.11</b>	<b>TOTALS:</b>			<b>228.29</b>	<b>0.83</b>	<b>7.74</b>

## 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: Commercial	Commercial	18.70	N/A	181,119	61.7	0.22	2.02	698.03	2.49	22.85
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	4.32	B	5,139	78.0	0.25	1.25	25.03	0.08	0.40
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	6.94	D	29,614	78.0	0.25	1.25	144.23	0.46	2.31

**TOTAL (ACRES): 29.95**

**TOTALS: 867.29 3.03 25.56**

**POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS): 639.00 2.20 17.82**

Characterize Undetained Areas (for Untreated Stormwater) No. Rows:

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%)	0.92	B	61	1.279	0.33	1,095
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	1.83	D	80	0.500	1.18	7,809

**Non-Structural BMP Water Quality Credits:**

Pervious Undetained Area Credit

TSS	TP	TN
6.78	0.02	0.19

Other (attach calculations)

Description:

TSS	TP	TN
105.21	0.31	1.07

**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	TSS	TP	TN			

005	4	Dry Extended Detention Basin	-	17.99	140,837			140,837	-	-	-	-	-	-
005	5	Infiltration Bed	-	0.00	140,837	84,262		56,575	-	-	-	-	-	-
005	6	Infiltration Basin	-	0.27	57,744	24,873		32,871	10.00	0.24	1.04	20.53	0.49	2.13
005	7	Dry Extended Detention Basin	-	7.73	58,528			58,528	-	-	-	-	-	-
005	8	Infiltration Basin	-	0.88	62,275	19,992		42,283	-	-	-	-	-	-
005	9	Infiltration Basin		0.04	42,283	10,633		31,651	10.00	0.24	1.04	19.76	0.47	2.06

TSS	TP	TN
40.29	0.97	4.19
43.37	0.14	0.69
111.99	0.33	1.26
0.00	0.77	3.62
228.29	0.83	7.74

**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):**

**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.

**CLAY CONDOL, P.E.**

Spreadsheet User Name

12/6/2022

Date

**WORKSHEET 13. POLLUTANT REDUCTION THROUGH BMP APPLICATIONS\***

Last Updated: 2024.04.22

\*FILL THIS WORKSHEET OUT FOR EACH BMP TYPE WITH DIFFERENT POLLUTANT REMOVAL EFFICIENCIES. SUM POLLUTANT REDUCTION ACHIEVED FOR ALL BMP TYPES ON FINAL SHEET.

BMP TYPE: Water Quality Filter  
IN 4-3

<b>DISTURBED AREA CONTROLLED BY THIS BMP TYPE (AC)</b>	1.27
--	------

**DISTURBED AREAS CONTROLLED BY THIS BMP TYPE:**

	LAND COVER CLASSIFICATION	POLLUTANT			Cover (Acres)	RUNOFF VOLUME (AF)	POLLUTANT LOAD**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS*** (LBS)	TP*** (LBS)	NO <sub>3</sub> (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.30					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low Input	180	0.40	0.44					
	Lawn, High Input	78	0.25	1.25	0.43	0.012	2.53	0.01	0.04
	Golf Course	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	62	0.22	2.02	0.84	0.187	31.15	0.11	1.02
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
<b>TOTAL UNTREATED POLLUTANT LOAD FROM UPSTREAM BMP'S</b>									
<b>TOTAL LOAD TO THIS BMP TYPE</b>							33.68	0.12	1.06
<b>POLLUTANT REMOVAL EFFICIENCIES FROM TABLE 9-3 (%)</b>							60	50	20
<b>POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)</b>							20.21	0.06	0.21

<b>POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)</b>			
<b>REQUIRED REDUCTION FROM WS12 (LBS)</b>			

\*\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7 Unit Conversion]

\*\*\*TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area

**WORKSHEET 13. POLLUTANT REDUCTION THROUGH BMP APPLICATIONS\***

Last Updated: 2024.04.22

\*FILL THIS WORKSHEET OUT FOR EACH BMP TYPE WITH DIFFERENT POLLUTANT REMOVAL EFFICIENCIES. SUM POLLUTANT REDUCTION ACHIEVED FOR ALL BMP TYPES ON FINAL SHEET.

BMP TYPE: Water Quality Filter  
IN 4-4

<b>DISTURBED AREA CONTROLLED BY THIS BMP TYPE (AC)</b>	1.37
--	------

**DISTURBED AREAS CONTROLLED BY THIS BMP TYPE:**

	LAND COVER CLASSIFICATION	POLLUTANT			Cover (Acres)	RUNOFF VOLUME (AF)	POLLUTANT LOAD**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS*** (LBS)	TP*** (LBS)	NO <sub>3</sub> (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.30					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low Input	180	0.40	0.44					
	Lawn, High Input	78	0.25	1.25	0.53	0.014	2.95	0.01	0.05
	Golf Course	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	62	0.22	2.02	0.84	0.187	31.15	0.11	1.02
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
<b>TOTAL UNTREATED POLLUTANT LOAD FROM UPSTREAM BMP'S</b>									
<b>TOTAL LOAD TO THIS BMP TYPE</b>							34.10	0.12	1.07
<b>POLLUTANT REMOVAL EFFICIENCIES FROM TABLE 9-3 (%)</b>							60	50	20
<b>POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)</b>							20.46	0.06	0.21

<b>POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)</b>			
<b>REQUIRED REDUCTION FROM WS12 (LBS)</b>			

\*\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7 Unit Conversion]

\*\*\*TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area



**WORKSHEET 13. POLLUTANT REDUCTION THROUGH BMP APPLICATIONS\***

Last Updated: 2024.04.22

\*FILL THIS WORKSHEET OUT FOR EACH BMP TYPE WITH DIFFERENT POLLUTANT REMOVAL EFFICIENCIES. SUM POLLUTANT REDUCTION ACHIEVED FOR ALL BMP TYPES ON FINAL SHEET.

BMP TYPE: Water Quality Filter  
IN 4-5

<b>DISTURBED AREA CONTROLLED BY THIS BMP TYPE (AC)</b>	1.41
--	------

**DISTURBED AREAS CONTROLLED BY THIS BMP TYPE:**

	LAND COVER CLASSIFICATION	POLLUTANT			Cover (Acres)	RUNOFF VOLUME (AF)	POLLUTANT LOAD**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS*** (LBS)	TP*** (LBS)	NO <sub>3</sub> (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.30					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low Input	180	0.40	0.44					
	Lawn, High Input	78	0.25	1.25	0.57	0.015	3.16	0.01	0.05
	Golf Course	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	62	0.22	2.02	0.84	0.187	31.15	0.11	1.02
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
<b>TOTAL UNTREATED POLLUTANT LOAD FROM UPSTREAM BMP'S</b>									
<b>TOTAL LOAD TO THIS BMP TYPE</b>							34.31	0.12	1.07
<b>POLLUTANT REMOVAL EFFICIENCIES FROM TABLE 9-3 (%)</b>							60	50	20
<b>POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)</b>							20.59	0.06	0.21

<b>POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)</b>			
<b>REQUIRED REDUCTION FROM WS12 (LBS)</b>			

\*\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7 Unit Conversion]

\*\*\*TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area

**WORKSHEET 13. POLLUTANT REDUCTION THROUGH BMP APPLICATIONS\***

Last Updated: 2024.04.22

\*FILL THIS WORKSHEET OUT FOR EACH BMP TYPE WITH DIFFERENT POLLUTANT REMOVAL EFFICIENCIES. SUM POLLUTANT REDUCTION ACHIEVED FOR ALL BMP TYPES ON FINAL SHEET.

BMP TYPE: Water Quality Filter  
IN 4-6

DISTURBED AREA CONTROLLED BY THIS BMP TYPE (AC)	1.39
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DISTURBED AREAS CONTROLLED BY THIS BMP TYPE:

	LAND COVER CLASSIFICATION	POLLUTANT			Cover (Acres)	RUNOFF VOLUME (AF)	POLLUTANT LOAD**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS*** (LBS)	TP*** (LBS)	NO <sub>3</sub> (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.30					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low Input	180	0.40	0.44					
	Lawn, High Input	78	0.25	1.25	0.55	0.015	3.16	0.01	0.05
	Golf Course	305	1.07	1.84					
Grassed Athletic Field	200	1.07	1.01						
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	62	0.22	2.02	0.84	0.187	31.15	0.11	1.02
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
<b>TOTAL UNTREATED POLLUTANT LOAD FROM UPSTREAM BMP'S</b>									
<b>TOTAL LOAD TO THIS BMP TYPE</b>							34.31	0.12	1.07
<b>POLLUTANT REMOVAL EFFICIENCIES FROM TABLE 9-3 (%)</b>							60	50	20
<b>POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)</b>							20.59	0.06	0.21

<b>POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)</b>			
<b>REQUIRED REDUCTION FROM WS12 (LBS)</b>			

\*\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7 Unit Conversion]

\*\*\*TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area

**WORKSHEET 13. POLLUTANT REDUCTION THROUGH BMP APPLICATIONS\***

Last Updated: 2024.04.22

\*FILL THIS WORKSHEET OUT FOR EACH BMP TYPE WITH DIFFERENT POLLUTANT REMOVAL EFFICIENCIES. SUM POLLUTANT REDUCTION ACHIEVED FOR ALL BMP TYPES ON FINAL SHEET.

BMP TYPE: Water Quality Filter  
IN 4-7

DISTURBED AREA CONTROLLED BY THIS BMP TYPE (AC)	1.36
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DISTURBED AREAS CONTROLLED BY THIS BMP TYPE:

	LAND COVER CLASSIFICATION	POLLUTANT			Cover (Acres)	RUNOFF VOLUME (AF)	POLLUTANT LOAD**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS*** (LBS)	TP*** (LBS)	NO <sub>3</sub> (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.30					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low Input	180	0.40	0.44					
	Lawn, High Input	78	0.25	1.25	0.52	0.037	7.79	0.02	0.12
	Golf Course	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	62	0.22	2.02	0.84	0.187	31.15	0.11	1.02
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
<b>TOTAL UNTREATED POLLUTANT LOAD FROM UPSTREAM BMP'S</b>									
<b>TOTAL LOAD TO THIS BMP TYPE</b>							38.94	0.13	1.14
<b>POLLUTANT REMOVAL EFFICIENCIES FROM TABLE 9-3 (%)</b>							60	50	20
<b>POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)</b>							23.36	0.07	0.23

**POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)**

105.21	0.31	1.07
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\*\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7 Unit Conversion]

\*\*\*TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area

## General Information

Instructions
General
Volume
Rate
Quality

Project Name:  Application Type:   
 County:  Municipality:   
 Project Type:   New Project  Minor / Major Amendment  
 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)
006	3.45	3.45	0.00	1.07		WWF, MF	Yes
Undetained Areas	12.83	12.83	1.27	0.74		WWF, MF	
<b>Totals:</b>	<b>16.28</b>	<b>16.28</b>	<b>1.27405877</b>	<b>1.810812672</b>			

# Volume Management

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

Instructions **General** Volume Rate Quality

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)
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	0.45	B	98	0.041	2.67	4,359
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	0.05	C	98	0.041	2.67	484
Impervious as Meadow	0.11	B	58	1.448	0.24	99
Impervious as Meadow	0.01	C	71	0.817	0.70	32
Forested (Good Condition)	0.50	D	77	0.597	1.00	1,819
Pervious as Meadow	5.22	B	58	1.448	0.24	4,594
Pervious as Meadow	1.48	C	71	0.817	0.70	3,780
Pervious as Meadow	2.97	D	78	0.564	1.06	11,408
<b>TOTAL (ACRES):</b> 10.80						<b>TOTAL (CF):</b> 26,577

**Post-Construction Conditions:** No. Rows:

Land Cover	Area (acres)	Soil Group	CN	Ia (in)	Q Runoff (in)	Runoff Volume (cf)
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Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	2.52	N/A	98	0.041	2.67	24,412
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	6.60	B	61	1.279	0.33	7,858
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	1.28	C	74	0.703	0.85	3,928
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	0.80	D	80	0.500	1.18	3,392
<b>TOTAL (ACRES):</b>	<b>11.20</b>				<b>TOTAL (CF):</b>	<b>39,590</b>

**NET CHANGE IN VOLUME TO MANAGE (CF):** 13,014

**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	CSM	Discharge	Incremental BMP DA (acres)	Volume Routed to BMP (CF)	Infiltration / Vegetated	Infiltration Rate (in/hr)	Infiltration Period (hrs)	Vegetated?	Media Depth (ft)	Storage Volume (CF)	Infiltration Credit (CF)	ET Credit (CF)
006	10	Infiltration Basin	-	Off-Site	2.69	24,008	7,324	4.20	24	No		0	24,008	
006	11	Dry Extended Detention Basin	-	Off-Site	1.39	5,011	0	0.00		No		0		

**Totals:** 24,008

**INFILTRATION & ET CREDITS (CF):**

**NET CHANGE IN VOLUME TO MANAGE (CF):**   
**TOTAL CREDITS (CF):**

**VOLUME REQUIREMENT SATISFIED**

# Rate Control

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

Instructions    General    Volume    **Rate**    Quality

**Precipitation Amounts:**

NOAA 2-Year 24-Hour Storm Event (in):	<b>2.9</b>
NOAA 10-Year 24-Hour Storm Event (in):	<b>4.36</b>
NOAA 50-Year 24-Hour Storm Event (in):	<b>6.38</b>
NOAA 100-Year 24-Hour Storm Event (in):	<b>7.48</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.

	Peak Discharge Rates (cfs)		Net Change	
	Pre-Construction	Post-Construction		
2-Year Storm:	25.23	23.27	-1.96	<i>Rate Control Satisfied</i>
10-Year Storm:	56.43	51.24	-5.19	<i>Rate Control Satisfied</i>
50-Year Storm:	104.59	93.42	-11.17	<i>Rate Control Satisfied</i>
100-Year Storm:	131.84	128.65	-3.19	<i>Rate Control Satisfied</i>

# Water Quality

Project: 7464 & 7600 LINGLESTOWN ROAD SITE

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
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	0.45	B	4,359	65.0	0.29	2.05	17.69	0.08	0.56
Impervious Areas: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	0.05	C	484	65.0	0.29	2.05	1.97	0.01	0.06
Impervious as Meadow	Grassland/Herbaceous	0.11	B	99	48.8	0.22	2.30	0.30	0.00	0.01
Impervious as Meadow	Grassland/Herbaceous	0.01	C	32	48.8	0.22	2.30	0.10	0.00	0.00
Forested (Good Condition)	Deciduous Forest/Evergreen Forest/Mixed Forest	0.50	D	1,819	45.0	0.13	1.05	5.11	0.01	0.12
Pervious as Meadow	Grassland/Herbaceous	5.22	B	4,594	48.8	0.22	2.30	14.00	0.06	0.66
Pervious as Meadow	Grassland/Herbaceous	1.48	C	3,780	48.8	0.22	2.30	11.52	0.05	0.54
Pervious as Meadow	Grassland/Herbaceous	2.97	D	11,408	48.8	0.22	2.30	34.76	0.16	1.64
<b>TOTAL (ACRES):</b>				<b>10.80</b>	<b>TOTALS:</b>			<b>85.45</b>	<b>0.38</b>	<b>3.60</b>

## 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: Paved Parking Lots, Roofs, Driveways, Etc. (Excluding ROW)	Residential	2.52	N/A	24,412	65.0	0.29	2.05	99.08	0.44	3.12
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	6.60	B	7,858	78.0	0.25	1.25	38.27	0.12	0.61
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	1.28	C	3,928	78.0	0.25	1.25	19.13	0.06	0.31
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	Open Space	0.80	D	3,392	78.0	0.25	1.25	16.52	0.05	0.26

**TOTAL (ACRES): 11.20**

**TOTALS: 173.01 0.68 4.31**

**POLLUTANT LOAD REDUCTION REQUIREMENTS (LBS): 87.56 0.30 0.71**

Characterize Undetained Areas (for Untreated Stormwater) 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%)	0.89	B	61	1.279	0.33	1,054
Open Space (Lawns, Parks, Golf Courses, Cemeteries, Etc.) - Good Condition (Grass Cover > 75%)	1.47	D	80	0.500	1.18	6,273
Impervious Areas: Streets and Roads - Paved; Curbs and Storm Sewers (Excluding ROW)	0.285	N/A	98	0.041	2.67	2,761

**Non-Structural BMP Water Quality Credits:**

- Pervious Undetained Area Credit
- Other (attach calculations)

TSS	TP	TN
5.58	0.02	0.16

**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 Conc. (mg/L)			Pollutant Loads (lbs)		
								TSS	TP	TN	TSS	TP	TN
006	10	Infiltration Basin	-	2.69	24,008	24,008	0	10.00	0.24	1.04	0.00	0.00	0.00
006	11	Dry Extended Detention Basin	-	1.39	5,011		5,011	24.30	0.19	1.19	7.60	0.06	0.37

TSS	TP	TN
7.60	0.06	0.37
60.16	0.17	1.09
5.58	0.02	0.16
62.19	0.21	1.30
85.45	0.38	3.60

**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):**

**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.

**CLAY CONDOL, P.E.**

Spreadsheet User Name

5/6/2024

Date