

NOTICE OF INTENT FORM



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF WATERSHED MANAGEMENT

OFFICIAL USE ONLY
ID # _____
Date Received _____

**PERMIT APPLICATION
 NOTICE OF INTENT FOR COVERAGE
 UNDER THE GENERAL (PAG-02) NPDES PERMIT
 OR
 APPLICATION FOR AN INDIVIDUAL NPDES
 PERMIT FOR STORMWATER DISCHARGES
 ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

PLEASE READ THE PERMIT SUMMARY SHEET AND INSTRUCTIONS PROVIDED IN THIS PERMIT APPLICATION PACKAGE BEFORE COMPLETING THIS FORM. COMPLETE THE ATTACHED CHECKLIST AND WORKSHEETS 1 THROUGH 5 REFERENCED AFTER APPENDIX B OF THIS PERMIT APPLICATION. COMPLETE ALL OTHER APPLICABLE WORKSHEETS REFERENCED IN THE APPLICATION CHECKLIST.

1 acre to less than 5 acres of disturbance with a point source discharge 5 acres or larger disturbance

PLEASE PRINT OR TYPE INFORMATION IN BLACK OR BLUE INK.

CHECK APPROPRIATE BOX	GENERAL <input type="checkbox"/>	INDIVIDUAL <input checked="" type="checkbox"/>		
APPLICATION TYPE	NEW <input checked="" type="checkbox"/>	RENEWAL <input type="checkbox"/>	MAJOR MODIFICATION <input type="checkbox"/>	PHASED <input type="checkbox"/>

SECTION A. APPLICANT INFORMATION

Applicant's Last Name	First Name	MI	Phone	FAX
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Email Address _____

Organization Name or Registered Fictitious Name	Phone	570-802-8111
PPL Bell Bend, LLC	FAX	570-802-8119

Mailing Address	City	State	ZIP + 4
38 Bomboy Lane	Berwick	PA	18603
Suite 2			

Co-Applicant's Last Name (if applicable)	First Name	MI	Phone	FAX
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Email Address _____

Organization Name or Registered Fictitious Name	Phone	FAX
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Mailing Address	City	State	ZIP + 4
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SECTION B. PROJECT INFORMATION AND SITE ANALYSIS

1. Project Name: PPL Bell Bend Nuclear Power Plant

2. Project Description
 PPL Bell Bend, LLC is proposing to construct a new Nuclear Power plant. The proposed construction will disturb a total of approximately 687 Ac. The earth moving activities will consist of constructing a main access road off of US11, other access and security roads, a railroad spur, parking lots, utilities, buildings and two cooling towers that will support the proposed power plant.

- | | | |
|--|--|---|
| <input type="checkbox"/> Residential Subdivision | <input type="checkbox"/> Sewerage/Water System | <input type="checkbox"/> Private Road/Residence |
| <input type="checkbox"/> Commercial/Industrial | <input type="checkbox"/> Public Road | <input type="checkbox"/> Government Facility |

Utility Facility/Transmission

Recreational

Remediation/Restoration

3. Total Project Area (Acres): 1218

4. Project Location or Physical Address (if available):

I-81 North, exit onto US93 West turn right onto US11 North in Berwick. Turn left onto Market St. Bear right and continue on Market St. The project site is on your right-hand side.

5. County	Municipality	City	Boro	Twp
Luzerne	Salem	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Latitude: 41 ° / 05 ' / 21.19 " Longitude: 76 ° / 09 ' / 57.34 "

Collection Method: EMAP HGIS GISDR ITPMP GPS WAAS LORAN

Check the horizontal reference datum (or projection datum) employed in the collection method. EMAP and HGIS (PNDI) have known datum and do not require checking here. NAD27 NAD83 WGS84 (GEO84)

Enter the date of collection if the lat and long coordinates were derived from GPS, WAAS or LORAN. 09 mm 09 dd 2010 yyyy

7. U.S.G.S. Quad Map Name Berwick

8. Existing and Previous Uses of the Land Proposed for Construction (use separate sheet if necessary):

Existing Land Uses: Agriculture Forest/Woodland Barren Urban Brownfield Other

Description: The land is primarily used as farmland and made of open fields, wetlands, forest, and passive recreation.

Previous Land Uses: Agriculture Forest/Woodland Barren Urban Brownfield Other

Description: The land has been primarily used as farmland and made of open fields, wetlands, forest, and passive recreation.

9. Site Analysis

a. Describe how Natural Resources features on the site (Worksheets 2 and 3 referenced in the Pa. Stormwater BMP Manual) were considered in: Location and Design of the project, E & S Plan Design, PCSM Plan Design. (attach additional sheet if necessary)

The site contains Walker Run and its tributaries along with connected wetlands. The site also contains unconnected wetlands. The site also contains woodland and steep slopes. Avoidance of disturbance to wetlands and streams, along with minimization of unavoidable impacts to those features, was a key factor in the current siting of BBNPP.

b. Identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities and include BMPs to avoid or minimize potential pollution and its impacts from the formation.

The site's geology and soil conditions vary throughout the site and will all have the potential to cause pollution during construction. The implementation of numerous E&S BMP's such as sediment basins, sediment traps, silt fence, immediate stabilization practice, etc. will minimize the potential for pollution.

10. Potential Toxic or Hazardous Pollutants: (Submit the following data if soil contaminant, geology or past or present land use provides a potential for contaminated runoff from the project site) N/A Use additional sheets if necessary.

Pollutant	Concentration w/Units	Source	Sample Type	Date(s) / Number of Samples

11. Fill Material

Based on a cut/fill analysis of the project site, will the site need to import fill, export fill or will the site balance? Be sure to read the instructions before completing this section. Clean Fill can not be placed in or on waters of the Commonwealth.

Check the appropriate box

Import fill – the Operator will, in most situations, be responsible to perform environmental due diligence and determine that all fill imported to the site meets the department's definition of clean fill. The plan designer must include a note on the drawings to identify the operator(s) responsibility and provide the definition of Clean Fill and Environmental Due Diligence.

- Export fill – the Applicant is responsible for performing environmental due diligence at the time this application was submitted to determine that any fill exported from the site will be certified as clean fill.
- Balance all cuts and fills with the amount of rock and soil available on the site.

12. Total Disturbed Area (Acres) to be permitted: 687

13. Estimated Timeframe for completion of project: Project Start Date April 2013 Project End Date Dec 2019

14. Estimated Timetable for Phased Projects Build Out (Complete for phased projects only)

Phase No. or Name	Proposed Type of Activity	Total Area	Disturbed Area	Start Date	End Date
N/A					

15. Stormwater Discharges to (during construction): Impaired Waters According to Chapter 303(d) List
 Waters of the Commonwealth Municipal Separate Storm Sewer Private Storm Sewer Non Surface Waters

Receiving Water/Watershed Name: Walker Run and Susquehanna River/Susquehanna River Basin	Chapter 93 Receiving Water Classification: (Designated use) CWF-MF/WWF-MF	Existing Use (if different from the Designated use) N/A
Name of Municipal Storm Sewer Operator: Salem Township	Name of Private Storm Sewer Operator: N/A	Other: (including off-site discharges) N/A

SECTION C. E & S AND POST CONSTRUCTION STORMWATER MANAGEMENT (PCSM) PLAN

Note: For projects involving multiple watershed boundaries, please submit a complete, separate Section C for each additional watershed.

Note: The following information applies to both the Walker Run & Susquehanna River Watersheds.

1. Provide a brief summary of proposed BMPs and their performance to manage E & S for the project. If E & S BMPs and their application do not follow the guidelines referenced in the Pa. Erosion and Sediment Pollution Control Program Manual, provide documentation to demonstrate performance equivalent to, or better than, the BMPs in the Manual.

E & S BMPs

The sedimentation controls proposed consist of Silt Barrier Fence, Super Silt Fence, Sediment Traps, Sediment Basins, Slope Protection, Rock Filter Berms, and Rock Construction Entrances. The Silt Barrier Fence will be used along the toe of the soil stockpiles and the toe of the fill slopes at locations shown on the E&S plans to prohibit sediment from leaving the construction area. The Super Silt Fabric Fence will be placed around the designated wetlands on site. The installation of the Super Silt Fabric Fence will protect these wetland areas during construction activities.

PCSM Plan Information - The PCSM Plan should be designed to maximize volume reduction technologies, eliminate (where possible) or minimize point source discharges to surface waters, preserve the integrity of stream channels, and protect the physical, biological and chemical qualities of the receiving surface water. **The DEP recommends the use of Control Guideline 1 (CG1) referenced in the Pa. Stormwater BMP Manual to achieve this goal.**

Design standards applied to develop the PCSM Plan. Check those that apply.

- Act 167 Plan - The attached PCSM plan is consistent with an applicable approved Act 167 Plan. **A letter of consistency from the Municipal or County Engineer should be provided with the application.** Complete and submit all applicable worksheets referenced in the application checklist as part of the permit application for each approved Act 167 Plan.

Complete the following table for all applicable approved Act 167 Stormwater Management Plans. (use additional sheets if necessary)

ACT 167 Plan Name	Date Adopted	Consistency Letter Included
		<input type="checkbox"/>

- The attached PCSM plan is consistent with all applicable local stormwater management ordinances, including MS4 (NPDES Permit to Discharge Stormwater Through a Municipal Separate Storm Sewer System) ordinances. **A letter of consistency from the Municipal or County Engineer must be provided with the application.** Complete and submit all applicable worksheets referenced in the application checklist as part of the permit application.

Complete the following table for all applicable Municipalities. (use additional sheets if necessary)

Municipality Name	Ordinance Number	Consistency Letter Included
Salem Township	SALDO93-1, Amnd.01-1, Strm. Mang. Ord. # 2011-04	<input type="checkbox"/>

The PCSM Plan must satisfy either subparagraph a or b below. Check those that apply.

- A. Act 167 Plan approved on or after January 2005 – The attached PCSM Plan, in its entirety, is consistent with all requirements pertaining to rate, volume, and water quality from an Act 167 Stormwater Management Plan approved by DEP on or after January 2005.

OR

B. The PCSM Plan must satisfy one or both of the following requirements:

- PA Stormwater BMP Manual - The attached PCSM plan is consistent with water quality design features and BMPs as presented in the Pennsylvania Stormwater BMP Manual. CG 1 has been met.
- Other Design Standard – The attached PCSM plan was developed using partial compliance with the above standards or other standard. Demonstrate/explain in the space provided how this standard meets the criteria described in the PA Comprehensive Stormwater Management Policy Document 392-0300-002.

POI 1

2. SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 24.62	2 104.24	3 +79.62
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 1996896.61	5 2632741.27	6 +635844.66
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 1598393.28	8 (-428468.27)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 200.07	10 183.80	11 (-16.27)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	3.382Ac.-ft.	17.13
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Subsurface Infiltration bed	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	19.675Ac.-ft.	178.589
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	7.29 Ac.-ft.	74.10
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Other <u>Snouts</u>	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	23.057Ac.-ft.	195.719
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 2

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 15.63	2 33.94	3 +18.31
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 757459.45	5 1025288.58	6 +267829.13
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 834900.85	8 +77441.40
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 39.83	10 33.76	11 (-6.07)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	1.712 Ac.-ft.	14.73
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Subsurface Infiltration bed	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	5.215 Ac.-ft.	52.02
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	2.68 Ac.-ft.	19.41
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Other Snouts	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	6.927 Ac.-ft.	66.75
<input type="checkbox"/> Other	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 3A

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 0.94	2 7.44	3 +6.50
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 120761.37	5 368755.43	6 +247994.06
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 229.84	8 (-123464.07)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 16.66	10 0.01	11 (-16.65)

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Key: RC = Rate Control VC = Volume Control WQ = Water Quality

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BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Infiltration basin	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	4.774Ac.-ft.	111.19
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	5.68 Ac.-ft.	57.28
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 3B

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 0.77	2 0.00	3 (-0.77)
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 18994.69	5 0.00	6 (-18994.69)
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 0.00	8 (-18994.69)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 0.00	10 0.00	11 0.00

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 3C

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 1.09	2 0.58	3 (-0.51)
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 11488.79	5 7345.47	6 (-4143.32)
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 7345.47	8 (-4143.32)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 0.00	10 0.00	11 0.00

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 4**SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA**

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2</u> years _____ Rainfall amount <u>3.0</u> _____ inches			
Impervious area (acres)	1 1.78	2 2.43	3 +0.65
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 151872.51	5 177645.06	6 +25772.56
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 177645.06	8 +25772.56
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 0.52	10 0.12	11 (-0.40)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	2.024Ac.-ft.	22.799
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 5**SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA**

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 1.45	2 8.71	3 +7.26
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 114921.99	5 241435.38	6 +126513.39
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 342.70	8 (-114579.29)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 2.59	10 0.02	11 (-2.57)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Subsurface Infiltration bed	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	4.221Ac.-ft.	44.310
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	4.09 Ac.-ft.	35.93
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Other <u>Snout</u>	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	4.221Ac.-ft.	44.310
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 6

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 77.29	2 99.78	3 +22.49
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 912029.94	5 1112330.71	6 +200300.77
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 1069110.56	8 +157080.62
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 98.29	10 96.55	11 (-1.74)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Infiltration basin	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	0.588Ac.ft.	12.72
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	1.07 Ac.-ft.	9.45
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Other <u>Snout</u>	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	0.588Ac.ft.	12.72
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 7**SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA**

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches						
Impervious area (acres)	1	1.04	2	1.10	3	+0.06
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4	24991.43	5	24718.37	6	(-273.06)
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)			7	24718.37	8	(-273.06)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9	0.00	10	0.00	11	0.00

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 8

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 1.29	2 1.61	3 +0.32
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 185426.19	5 181540.67	6 (-3885.52)
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 181540.67	8 (-3885.52)
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 65.78	10 64.49	11 (-1.29)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No
 If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 9

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 0.84	2 2.00	3 +1.16
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 153503.90	5 187750.16	6 +34246.25
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 161232.87	8 +4308.57
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 53.10	10 44.57	11 (-8.53)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control

VC = Volume Control

WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Subsurface Infiltration bed	<input checked="" type="checkbox"/> VC <input checked="" type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	1.268Ac.-ft.	8.66
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input checked="" type="checkbox"/> Other <u>Snout</u>	<input type="checkbox"/> VC <input type="checkbox"/> RC <input checked="" type="checkbox"/> WQ	1.268Ac.-ft.	8.66
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI 10

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 5.82	2 7.63	3 +1.81
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 733297.48	5 742156.85	6 +8859.37
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 742156.85	8 +8859.37
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 127.45	10 126.82	11 (-0.63)

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI I-1

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2 years</u> Rainfall amount <u>3.0</u> inches						
Impervious area (acres)	1	0*	2	0.16	3	0.16
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4	0*	5	2276	6	2276
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)			7	NA	8	NA
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9	0*	10	0.7	11	0.7

*INCLUDED IN PRE POI I-5

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI I-2

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches						
Impervious area (acres)	1	0*	2	0.57	3	0.57
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4	0*	5	6949	6	6949
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)			7	NA	8	NA
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9	0*	10	2.2	11	2.2

*INCLUDED IN PRE POI I-5

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI I-3

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches						
Impervious area (acres)	1	0.00	2	0.00	3	0.00
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4	2748	5	8515	6	5767
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)			7	NA	8	NA
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9	0.5	10	3.3	11	2.8

- Box 1.** **Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2.** **Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3.** **Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4.** **Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5.** **Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6.** **Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7.** **Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8.** **Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9.** **Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10.** **Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11.** **Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI I-4

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches			
Impervious area (acres)	1 0	2 0	3 0
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4 362	5 362	6 0
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)		7 NA	8 NA
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9 0.04	10 0.04	11 0.0

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI I-5

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches						
Impervious area (acres)	1	0.15	2	0.06	3	-0.9
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4	12850	5	11314	6	-1537
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)			7	NA	8	NA
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9	2.2	10	2.6	11	0.4

- Box 1.** **Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2.** **Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3.** **Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4.** **Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5.** **Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6.** **Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7.** **Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8.** **Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9.** **Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10.** **Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11.** **Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

POI I-6

SUMMARY TABLE FOR SUPPORTING CALCULATION AND MEASUREMENT DATA

Please reference the Stormwater Methodology used (i.e. SCS Method) SCS Method

	Pre-construction		Post Construction		Net Change	
Design storm frequency <u>2</u> years Rainfall amount <u>3.0</u> inches						
Impervious area (acres)	1	0	2	0	3	0
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet without planned stormwater BMPs (check appropriate box)	4	7400	5	9267	6	1867
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input checked="" type="checkbox"/> cubic feet with planned stormwater BMPs (check appropriate box)			7	NA	8	NA
Stormwater peak discharge rate for the design frequency storm (cubic feet per second)	9	1.1	10	1.8	11	0.7

- Box 1. Pre-construction impervious area:** The total acres of impervious area on the project site before construction activities begin, based on land use for five years preceding the planned project.
- Box 2. Post construction impervious area:** The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. Net change of impervious area:** The difference between the acres of impervious area listed in Box 1 and Box 2. Zero or negative values are acceptable.
- Box 4. Pre-construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin, based on land use for five years preceding the project.
- Box 5. Post construction stormwater runoff volume without planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished assuming that no stormwater infiltration or retention BMPs have been installed.
- Box 6. Net change in stormwater volume without planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. Post construction stormwater runoff volume with planned BMPs:** The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. Net change in stormwater runoff volume with planned BMPs:** The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

3. SUMMARY DESCRIPTION OF POST CONSTRUCTION STORMWATER BMPs (consistent with Worksheets 3 and 5 referenced in the Pa. Stormwater BMP Manual)

Key: RC = Rate Control VC = Volume Control WQ = Water Quality

In the lists below, check the BMPs identified in the PCSM Plan, and their function(s) using the above Key. More than one function may be checked for a BMP. List the stormwater volume and area of runoff to be treated by each BMP type. If any BMP in the PCSM Plan is not listed below, describe it in the space provided after "Other".

BMP	Function(s)	Volume of stormwater treated	Acres treated
<input type="checkbox"/> Wet ponds	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed wetlands	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Retention basins	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Underground detention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry Extended detention basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Sediment fore bay	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration trench	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration Berm/Retentive Grading	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Subsurface Infiltration bed	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Infiltration basin	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Pervious pavement	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Dry well/Seepage pit	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Bio-infiltration areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rain gardens/Bio-retention	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated swales	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Constructed filters	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect Sensitive & Special Value Features	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Protect/Conserve/Enhance Riparian areas	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Restoration: Buffers/ Landscape/Floodplain	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Disconnection from storm sewers	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Rooftop disconnection	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Vegetated roofs	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Runoff capture/Reuse	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Oil/grit separators	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Water quality inserts/inlets	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Street sweeping	<input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA
<input type="checkbox"/> Other _____	<input type="checkbox"/> VC <input type="checkbox"/> RC <input type="checkbox"/> WQ	NA	NA

4. OFF SITE DISCHARGE ANALYSIS

Does the project propose any off-site discharges to areas other than surface waters? Yes No

If yes, describe the type of easement that provides the legal authority for this discharge and a demonstration that the discharge will not cause erosion, damage, or a nuisance to off-site properties.

5. THERMAL IMPACTS ANALYSIS

Please explain how thermal impacts associated with this project were avoided.

Thermal impacts to the EV Wetlands were avoided to the greatest extent possible through the redirection of post construction runoff. Mitigation for the Post Construction runoff that does occur is explained below.

If thermal impacts cannot be avoided, describe how impacts were minimized and the BMPs that will mitigate such impacts in a manner that will protect and maintain water quality in receiving surface waters in accordance with 25 Pa. Code Chapter 93.

The potential sources of thermal impact for this development include runoff from the proposed access drives, parking lots and buildings. Runoff from the warm impervious areas will be mitigated by routing the stormwater through a series of grass-lined swale, and deep, low sloping pipes before draining into a series of subsurface infiltration/detention basins. The infiltration/detention basins areas will provide for permanent storage of the first flush storms, thus limiting the discharge of the warmer waters. Many of the basins will discharge via level spreaders to existing wetlands and other vegetated areas before entering the adjacent watercourses. These features will combine to mitigate any thermal impacts and allow the runoff to return to ambient temperature. This is reiterated in section X. of the PCSM Narrative pg24.

SECTION D. ANTIDegradation ANALYSIS MODULE

This Section is to be completed for Special Protection Watershed Only. (HQ/EV and EV Wetlands)

PART 1 NON-DISCHARGE ALTERNATIVES EVALUATION

The applicant must consider and describe any and all non-discharge alternatives for the entire project area which are environmentally sound and will:

- Minimize accelerated erosion and sedimentation during the earth disturbance activity
- Achieve no net change from pre-development to post-development volume, rate and concentration of pollutants in water quality

E & S Plan	Official Use Only	PCSM Plan	Official Use Only
<p>Check off the environmentally sound non-discharge Best Management Practices (BMPs) listed below to be used prior to, during, and after earth disturbance activities that have been incorporated into your E & S Plan based on your site analysis. For BMPs not checked, provide an explanation of why they were not utilized. (attach additional sheets if necessary) See page 20 of the PCSM Narrative</p>		<p>Check off the environmentally sound non-discharge Best Management Practices (BMPs) listed below to be used after construction that have been incorporated into your PCSM Plan based on your site analysis. For BMPs not checked, provide an explanation of why they were not utilized. (attach additional sheets if necessary) See page 20 of the PCSM Narrative</p>	
<p>Non-discharge BMPs</p> <p><input checked="" type="checkbox"/> Alternative Siting</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Alternative location</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Alternative configuration</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Alternative location of discharge</p> <p><input checked="" type="checkbox"/> Limited Disturbed Area</p> <p><input checked="" type="checkbox"/> Limiting Extent & Duration of Disturbance (Phasing, Sequencing)</p> <p><input type="checkbox"/> Vegetated Riparian Buffers (100 ft min)</p> <p><input type="checkbox"/> Other _____</p>		<p>Non-discharge BMPs</p> <p><input checked="" type="checkbox"/> Alternative Siting</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Alternative location</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Alternative configuration</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> Alternative location of discharge</p> <p><input checked="" type="checkbox"/> Low Impact Development (LID / BSD)</p> <p><input type="checkbox"/> Vegetated Riparian Buffers (100 ft min)</p> <p><input checked="" type="checkbox"/> Infiltration</p> <p><input type="checkbox"/> Water Reuse</p> <p><input type="checkbox"/> Other _____</p>	

Part 2 Antidegradation Best Available Combination of Technologies (ABACT)

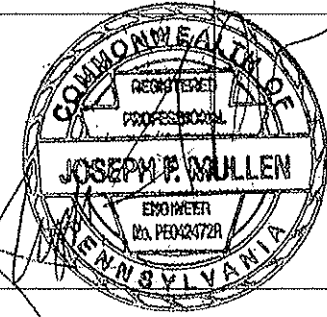
If the net change in stormwater discharge from or after construction is not fully managed by non-discharge BMPs, the applicant must utilize ABACT BMPs to manage the difference. The Applicant must specify whether the discharge will occur during construction, post-construction or both, and identify the technologies that will be used to ensure that the discharge will be a non-degrading discharge. ABACT BMPs include but are not limited to:

E & S Plan	Official Use Only	PCSM Plan	Official Use Only
<p><input checked="" type="checkbox"/> Treatment BMPs:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Sediment basin with skimmer <input checked="" type="checkbox"/> Sediment basin ratio of 4:1 or greater (flow length to basin width) <input checked="" type="checkbox"/> Sediment basin with 4-7 day detention <input type="checkbox"/> Flocculants <p><input checked="" type="checkbox"/> Land disposal:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Vegetated filters <input type="checkbox"/> Vegetated Riparian buffers <100ft. <input checked="" type="checkbox"/> Immediate stabilization <p><input checked="" type="checkbox"/> Pollution prevention:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> PPC Plans <input checked="" type="checkbox"/> Street sweeping <input checked="" type="checkbox"/> Channels, collectors and diversions lined with permanent vegetation, rock, geotextile or other non-erosive materials <p><input type="checkbox"/> Stormwater reuse technologies:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Sediment basin water for dust control <input type="checkbox"/> Sediment basin water for irrigation <p><input type="checkbox"/> Other _____</p>		<p><input checked="" type="checkbox"/> Treatment BMPs:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Infiltration Practices <input type="checkbox"/> Wet ponds <input type="checkbox"/> Created wetland treatment systems <input checked="" type="checkbox"/> Vegetated swales <input checked="" type="checkbox"/> Manufactured devices <input type="checkbox"/> Bio-retention/infiltration <input type="checkbox"/> Green Roofs <p><input checked="" type="checkbox"/> Land disposal:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Vegetated filters <input type="checkbox"/> Vegetated Riparian Buffers <100ft. <input type="checkbox"/> Disconnection of roof drainage <input type="checkbox"/> Bio-retention/bio-infiltration <p><input checked="" type="checkbox"/> Pollution prevention:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Street sweeping <input type="checkbox"/> Nutrient, pesticide, herbicide or other chemical application plan alternatives <input checked="" type="checkbox"/> PPC Plans <input checked="" type="checkbox"/> Non-structural Practices <input type="checkbox"/> Land Preservation <input type="checkbox"/> Restoration BMPs <p><input type="checkbox"/> Stormwater reuse technologies:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Cisterns <input type="checkbox"/> Rain barrels <input type="checkbox"/> Dry hydrant with underground storage <input type="checkbox"/> Spray/Drip Irrigation <p><input type="checkbox"/> Other _____</p>	
<p>Are the ABACT BMPs selected sufficient to minimize E & S discharges to the extent that existing or designated surface water uses are protected?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. If no, and the project is located in a HQ water, proceed to Part 3.</p>		<p>Are the ABACT BMPs selected sufficient to achieve no net change to the extent that existing or designated surface water uses are protected?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No. If no, and the project is located in a HQ water, proceed to Part 3.</p>	

Part 3 Social or Economic Justification (SEJ) (for projects in high quality waters only)

If the applicant cannot demonstrate that the net change in discharge will protect the existing quality of the receiving surface waters, for projects in HQ waters, the applicant may pursue the SEJ process for demonstrating that lowering water quality is necessary to accommodate important economic or social development in the area in which the waters are located, in accordance with Chapter 10 of the Water Quality Antidegradation Implementation Guidance Manual, DEP Document ID No. 391-0300-002.

SECTION E. CONSULTANT FOR THIS PROJECT

Last Name		First Name		MI
Mullen		Joseph		
Title		Consulting Firm		
Office Principal/Division Manager		Pennoni Associates, Inc		
Mailing Address				
100 North Wilkes-Barre Boulevard				
City	State	ZIP+4		
Wilkes-Barre	PA	18702		
Email	Phone	5708242200	Ext	
jmulen@pennoni.com	FAX	5708240800		

SECTION F. COMPLIANCE HISTORY REVIEW

Is/was the applicant(s) in violation of any permits issued by DEP or any regulated activities within the past five years?
 Yes No

If yes, list each permit or project that is/was in violation and provide compliance status of the activity (use additional sheets to provide information on all permits).

Permit Program or Activity:	Permit Number (if applicable):
Brief description of non-compliance:	

Steps taken to achieve compliance	Date(s) Compliance Achieved

Current Compliance Status: In-Compliance In Non-Compliance

If the applicant is not in compliance with any permit requirement of DEP Regulations or regulated activity, provide a narrative description of how the applicant will achieve compliance with the permit requirement or activity, including the schedule for achieving compliance with appropriate milestones.

SECTION G. PERMIT COORDINATION

Does the applicant (owner and/or operator) have, have pending, or require any other environmental permits for this project and all additional planning requirements?

Yes No If yes, list each permit or approval, permit number, and description.

- Combined License Application to construct and operate a nuclear power plant - Nuclear Regulatory Commission
- Licenses for Consumptive Use, Surface Water Withdrawal, and Groundwater Withdrawal - SRBC
- CWA Section 404 Permit - US ACE
- NPDES Discharge Permit - PADEP
- Air Quality Plan Approval - PADEP
- CWA Section 401 Water Quality Certification - PADEP
- Chapter 105 Water Obstruction and Encroachment Permit - PADEP

Coordination Questions

1. Does the project involve any of the following: Placement of fill, excavation within or a placement of a structure located in, along, across, or projecting into a water course, floodway or body of water (including wetlands)?

Yes No If yes, identify which authorization under Chapter 105 is applicable.

Joint Permit General Permit Waiver

2. What is your 537 Plan status? Please note that 537 Plan approval is required prior to permit issuance.

The project site is a part of Salem Township's approved Act 537 plan. A Sewage Facilities Planning Module will be submitted for this project.

3. Is your project associated with a Brownfield's Remediation? Yes No If yes, please indicate any coordination to date with the Environmental Cleanup Program (Act 2 or Superfund).

4. Are there any additional permits or approvals that may be required for this project? Yes No If yes, please list them.

- Land Development Plan – Salem Township
- Submerged Land License Agreement - PADEP
- Highway Occupancy Permit - PennDOT

SECTION H. CERTIFICATION

Applicant Certification

I certify under penalty of law that this application and all related attachments were prepared by me or under my direction or supervision by qualified personnel to properly gather and evaluate the information submitted. Based on my own knowledge and on inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. The responsible official's signature also verifies that the activity is eligible to participate in the NPDES permit, and that BMP's, E&S Plan, PPC Plan, PCSM Plan, and other controls are being or will be, implemented to ensure that water quality standards and effluent limits are attained. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment or both for knowing violations pursuant to Section 309(c)(4) of the Clean Water Act and, 18 Pa. C.S. §§4903-4904.

Applicant

Co-Applicant (if applicable)

Terry L. Harpster, VP-Bell Bend Project Development
Print Name and Title of Person Signing

Print Name and Title of Person Signing

(570) 802-8111
Telephone Number of Person Signing

()
Telephone Number of Person Signing

[Handwritten Signature]
Signature of Applicant

Signature of Co-Applicant

9/16/2011
Date Signed

Date Signed

Please note below the name, address and telephone number of the individual that should be contacted in the event additional information is required.

Name: Chad M. Lello, P.E., Pennoni Associates Inc.

Address: 100 North Wilkes-Barre Boulevard, Wilkes-Barre, PA 18702

Telephone: (570) 824-2200 FAX: (570) 824-0800

Notarization: Commonwealth of Pennsylvania
County of

Sworn to and Subscribed to Before Me This
Day of , 20

NOTARY

SEAL

My Commission Expires:

Notary Public

