



OFFICIAL USE ONLY	
NPDES Permit ID #	_____
Date Received	_____
NOI Complete Date	_____
Issue Date	_____
Effective Date	_____
Expiration Date	_____

**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 APPROPRIATE WORKSHEETS.

PLEASE PRINT OR TYPE INFORMATION IN BLACK OR BLUE INK.

PERMIT TYPE	GENERAL <input checked="" type="checkbox"/>	INDIVIDUAL <input type="checkbox"/>		
APPLICATION TYPE	NEW <input type="checkbox"/>	RENEWAL <input type="checkbox"/>	MAJOR MODIFICATION <input checked="" type="checkbox"/>	PHASED <input type="checkbox"/>
SECTION A. APPLICANT INFORMATION				
Corporations for profit, corporations not-for-profit, limited liability companies, partnerships or sole proprietorships, limited partnerships, professional associations and business or statutory trusts that were not created or formed under the laws of Pennsylvania desiring to do business in this Commonwealth must register with the Pennsylvania Department of State.				
Applicant/Organization Name		Phone		
Birdsboro Power LLC		FAX		
Mailing Address	City	State	ZIP + 4	
PO Box 314	Birdsboro	PA	19508	
Supplemental Mailing Address (if needed)				
Employer ID (EIN)	37-1779677			
Email Address	jryan@ppmsllc.com			
Contact Name	James Ryan	Contact Title	Projects General Manager	
Contact Phone	518-428-5929	Contact Email Address	jryan@ppmsllc.com	
Co-Applicant/Organization Name		Phone		
		FAX		
Mailing Address	City	State	ZIP + 4	
Supplemental Mailing Address (if needed)				
Employer ID (EIN)				
Email Address				
Contact Name	Contact Title			
Contact Phone	Contact Email Address			

SECTION B. PROJECT INFORMATION

1. Project Name: Birdsboro Power PA,
 2. Total Project Site (Acres): 103 3. Total Disturbed Area (Acres): 2.0
 4. Project Description: Major Modification to existing permit to include the installation of approximately 13,000 LF of 16" Ductile Iron Water Main & appurtenances to provide water service to the permitted project.

5. Project Location or Physical Address:
 Address City State ZIP + 4
 One Armorcast Drive Birdsboro PA 19508
 Supplemental Address (If needed)

6. Project County Project Municipality City Boro Twp
Berks Birdsboro Boro. & Robeson Twp.

7. Type of Ownership:
 County Government Municipality (local) School District
 Federal Facility (U.S. Government) Non-Government State Government
 Mixed Ownership (e.g. Public/Private)

8. Project Latitude: 40 °/ 16 ' / 6.33 " Project Longitude: -75 °/ 47 ' / 59.726 "
 8a. Collection Method: EMAP HGIS GISDR ITPMP GPS WAAS LORAN
 8b. Horizontal reference datum (or projection datum) employed in the collection method. (EMAP has a known datum of WGS84 and HGIS (PNDI) has a known datum of NAD83) NAD27 NAD83 WGS84 (GEO84)
 Enter the date of collection if the latitude and longitude coordinates were derived from GPS, WAAS or LORAN.
3 mm 11 dd 2015 yyyy

9. U.S.G.S. Quad Map Name(s) Birdsboro

10. Primary NAICS Code (check one):
 236115 New Single-Family Housing Construction (except For-Sale Builders)
 236116 New Multifamily Housing Construction (except For-Sale Builders)
 236117 New Housing For-Sale Builders
 236210 Industrial Building Construction
 236220 Commercial and Institutional Building Construction
 237110 Water and Sewer Line and Related Construction
 237120 Oil and Gas Pipeline and Related Structures Construction
 237130 Power and Communication Line and Related Structures Construction
 237310 Highway, Street, and Bridge Construction
 237990 Other Heavy and Civil Engineering Construction
 Other Primary NAICS Code (specify)

11. Additional NAICS Code(s) (list all additional codes that apply from the list above): 221112, 237120, 237130

SECTION C. SITE ANALYSIS

1. Existing and Previous Uses of the Project Site:
 1a. Existing Land Uses: Agriculture _____ % Forest/Woodland _____ % Barren _____ %
 Urban 100 % Brownfield _____ % Other _____ %

1b. Historical Land Uses: Agriculture ____ % Forest/Woodland ____ % Barren ____ %
 Urban 100 % Brownfield ____ % Other _____ %

2. Potential Toxic or Hazardous Pollutants: N/A

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

3. Fill Material

Will the applicant need to import or export fill for the project site? Clean fill can not be placed in or on waters of the Commonwealth. If fill will be imported or exported, Form FP-001 (Document # 258-2182-773) must be used to certify origin of the fill material.

Check the appropriate box
 Import fill – the applicant 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.

4. Estimated Timetable for Phased Projects (Complete for phased projects only)

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

5 Waters to Which Project Discharges (Check all that apply)

5.a. Waters of the Commonwealth to which the project discharges or has the potential to discharge to (including EV wetlands) other than MS4s, CSOs, private storm sewers:

Name of Waters	Designated Use of Water	Existing Use of Water
<u>Schuykill River</u>	<u>WWF, MF</u>	<u>N/A</u>

<input type="checkbox"/> Combined Sewer Overflow System to which the project discharges:	<input type="checkbox"/> Municipal Separate Storm Sewer (MS4) to which the project discharges:	<input type="checkbox"/> Private Storm Sewer to which the project discharges:	<input type="checkbox"/> Non Surface Water: (including off-site discharges):
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5b. Does the site discharge to waters classified as impaired according to Category 4 of PA Integrated Water Quality Monitoring and Assessment Report? Yes No
 If yes, list source and cause of impairment: Siltation

5c. Does the site discharge to waters with a TMDL according to Category 5 of the PA Integrated Water Quality Monitoring & Assessment Report? Yes No
 If yes, list source and cause of impairment TMDL addresses: _____

**SECTION D. EROSION & SEDIMENTATION (E & S) AND POST CONSTRUCTION
STORMWATER MANAGEMENT (PCSM)**

Note: For projects involving multiple points of discharge, please submit a complete, separate Section D for each additional point of discharge.

1. E & S Plan The E & S Plan must satisfy at least one of subparagraph A or B below.
- A. E & S plan is designed using BMPs in the Pennsylvania Erosion & Sedimentation Pollution Control Manual (ESPC) (Technical Guidance #363-2134-008/March 2012)
- OR**
- B. E & S plan is designed using an alternative BMP or design standard

2. PCSM Plan
- The PCSM Plan must satisfy either subparagraph A, or B or C below.
- 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 approved Act 167 Stormwater Management 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"/> |
| | | Consistency Letter Pending <input type="checkbox"/> |
- If the PCSM Plan is consistent with a DEP approved Act 167 plan from 2005 or later and the Act 167 plan is without variance consistent with the standard design criteria from the 25 Pa. Code Chapter 102.8(g)(2) and (3) then utilizing worksheets 1-5 and the *Summary table for Supporting Calculation and Measurement Data* are recommended, otherwise check the applicable box(es) in Section D.3
- OR**
- B. The PCSM Plan meets the standard design criteria from the 25 Pa. Code Chapter 102.8(g)(2) and (3).
- OR**
- C. Alternative Design Standard – The attached PCSM plan was developed using approaches other than those in 25 Pa. Code Chapter 102.8(g)(2) and (3). Demonstrate how this standard will be either more protective than what is required in 25 Pa. Code Chapter 102.8(g)(2) and (3). and will maintain and protect existing water quality and existing and designated uses as allowed in 102.8(g)(2)(iv) and 102.8(g)(3)(iii).

3. Summary Table for Supporting Calculation and Measurement Data

Not Applicable in accordance with 102.8(g)(2)(iv)- provide supporting calculations and documentation in the Narrative. **If checked, proceed to Peak Rate Analysis** (provide supporting details to include a summary, calculations, and a statement and demonstration of attainment in the Narrative- Reference the *Instructions for a General (PAG-02) OR Individual NPDES Permit for stormwater discharges associated with construction activities* Section D)

Not Applicable PCSM Plan satisfies an Act 167 Plan approved on or after January 2005, in its entirety- provide supporting calculations and documentation in the Narrative. **If checked proceed to Section D.4** (provide supporting details to include a summary, calculations and a statement and demonstration of attainment in the Narrative- Reference the *Instructions for a General (PAG-02) OR Individual NPDES Permit for stormwater discharges associated with construction activities* Section D)

Please reference the stormwater methodology used (Numbers generated in the table below should be consistent with Worksheets 3,4, and 5 and be accompanied by supporting calculations in the Narrative)

	Pre-construction	Post Construction	Net Change
Design storm frequency _____ Rainfall amount _____ inches			
Impervious area (acres)	1	2	3
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input type="checkbox"/> cubic feet (check appropriate box)	4	5	6
Volume of stormwater runoff <input type="checkbox"/> acre-feet or <input type="checkbox"/> cubic feet (check appropriate box)		7	8

Peak Rate Analysis: Complete Boxes 9-20 (Numbers generated in table should be accompanied by supporting calculations in the narrative)

Exempt in accordance 102.8(g)(3)(ii), Complete Boxes 9-20

Not Applicable in accordance with 102.8(g)(3)(iii)

{If any of the above is checked, provide supporting calculations and documentation in the Narrative}

Stormwater peak discharge rate for the 2-year/24-hour storm (cubic feet per second (cfs))	9	10	11
Stormwater peak discharge rate for 10-year/24-hour storm (cfs)	12	13	14
Stormwater peak discharge rate for 50-year/24-hour storm (cfs)	15	16	17
Stormwater peak discharge rate for the 100-year/24-hour storm	18	19	20

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 change in the impervious area (acres) listed in Box 1 and Box 2. Zero or negative values are acceptable. (Box 2- Box 1)

Box 4. Pre-construction stormwater runoff volume: 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: 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 non-structural/structural BMP(s) have been installed.

Box 6. Net change in stormwater volume: The change in stormwater runoff volumes listed in Box 4 and Box 5. (Box 5 - Box 4)

Box 7. Post construction stormwater runoff volume reduction: The amount of stormwater runoff volume reduction that would result from the planned non-structural/structural BMP(s) installation. (Total non-structural volume credit (*from worksheet 3*) + Total Structural volume (*from worksheet 5*))

Box 8. Net change in stormwater runoff volume with planned BMPs: The change in stormwater runoff volume and volume reduction listed in Box 6 and Box 7. (Box 6 – Box 7)
 Figures contained in the "Summary table for supporting calculation and measurement data" should be consistent with those on Worksheets 3, 4, and 5, when applicants have utilized the Stormwater Best Management Practices (BMP) Manual to meet design standards. Below is a depiction of which worksheet(s) corresponds (i.e. WKST 4) to each Box and where on the worksheet to find the information (i.e. 2-Year Volume Increase).

Numbers generated in the summary table should be consistent with Worksheets (WKST) 3, 4 and 5			
	Pre-construction	Post Construction	Net Change
Design storm frequency <u>2-year/24-hour storm</u> Rainfall amount <u>WKST 4 "2-Year Rainfall"</u> inches			
Impervious area (acres)	1 WKST 4 Existing Condition: Impervious cover type	2 WKST 4 Developed Condition: Impervious cover type	3 Box 2 - Box 1
Volume of stormwater runoff <input checked="" type="checkbox"/> acre-feet or <input type="checkbox"/> cubic feet (check appropriate box)	4 WKST 4 Existing Condition: Total Runoff Volume	5 WKST 4 Developed Condition: Total Runoff Volume	6 WKST 4 2-Year Volume Increase
Volume of stormwater runoff <input checked="" type="checkbox"/> acre-feet or <input type="checkbox"/> cubic feet (check appropriate box)		7 WKST 3 Total non-structural volume credit + WKST 5 Total structural volume	8 WKST 5 Difference

- Box 9. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 2-year/24-hour 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 2-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 11. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 9 and Box 10. (Box 10 – Box 9)
- Box 12. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 10-year/24-hour storm as determined by the land use for the past five years.
- Box 13. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 10-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 14. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 12 and Box 13. (Box 13 – Box 12)
- Box 15. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 50-year/24-hour storm as determined by the land use for the past five years.
- Box 16. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 50-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 17. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 15 and Box 16. (Box 16 – Box 15)
- Box 18. Pre-construction stormwater discharge rate:** The stormwater runoff discharge rate for the 100-year/24-hour storm as determined by the land use for the past five years.
- Box 19. Post construction stormwater discharge rate:** The stormwater runoff discharge rate for the 100-year/24-hour storm after all planned stormwater BMPs are installed.
- Box 20. Net change stormwater discharge rate:** The change in stormwater runoff discharge rates listed in Box 18 and Box 19. (Box 19 – Box 18)

4. Summary Description of Post Construction Stormwater BMPs (consistent with the design or applicable worksheets)
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. A BMP may have more than one function (rate, volume, water quality), therefore, there may be more than one volume/acres listed. For example, a Rain garden/Bio-retention BMP may have a volume treated and acres treated for volume control and water quality, that differs from the volume treated and acres treated for rate control. If any BMP in the PCSM Plan is not listed below, it must be described in the space provided after "Other". Attach additional sheet(s) as needed

For Rate Control provide the volume of stormwater treated and acres treated for the 100-year/24-hour storm event

For Volume Control and Water Quality provide the volume of stormwater treated and acres treated for the 2-year/24-hour storm event

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

5. Off Site Discharge Analysis

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

If yes, the applicant must have appropriate easement that provides the legal authority for this off-site discharge. In addition, applicant must provide a demonstration in both the E&S and PCSM plans that the discharge will not cause erosion, damage, or nuisance to off-site properties.

6. Potential Pollution Causing Materials

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.

There are no known Geologic or other soil conditions that have the potential to cause pollution during construction of the pipeline portion of the project.

7. Riparian Buffers

A. Does the project discharge to a river, stream, creek, lake, pond or reservoir with a designated use of high quality or exceptional value? If so, is earth disturbance occurring within 150 feet of the river, stream, creek, lake, pond or reservoir?

Yes No

If yes, go to B. If no, continue to Section 8.

B. Will you be protecting, converting, or establishing a 150 foot riparian buffer throughout the project area?

Protect Yes No Convert Yes No Establish Yes No

If No to all above, the application must contain a demonstration of riparian buffer or riparian forest buffer equivalency. (Continue to C)

C. What BMPs will you be using that will be functionally equivalent to that of either a riparian buffer or a riparian forest buffer whatever is applicable to the project? Please attach an equivalency demonstration.

An equivalency demonstration must be completed, including worksheets 12-15 and a narrative that shows that the alternative BMPs implemented will be functionally equivalent to that of either a riparian buffer or a riparian forest buffer, whichever is applicable to the project according to 102.14(a)(1) and (2).

D. Will the project propose any earth disturbance within 100 feet of a surface water? Yes No

If yes, the applicant shall provide an offset riparian forest buffer at a ratio of one to one for the disturbed area.

8. Thermal Impacts Analysis

Explain how thermal impacts associated with this project were avoided, minimized, or mitigated.

Thermal impacts of stormwater runoff from the pipeline portion of the project were avoided, minimized, and mitigated by restoring the disturbed areas to the conditions that existed prior to construction

9. Critical Stages
Identify the critical stages of implementation of the PCSM plan for which a licensed professional or designee shall be present on the project site.

The pipeline construction and restoration portion of the project does not propose any BMPs. As such, critical stages are not applicable and not shown on the drawings.

SECTION E. ANTIDegradation ANALYSIS MODULE
This Section is to be completed for Special Protection Waters Only
(Projects that drain to HQ/EV Waters and EV Wetlands).

PART 1 NONDISCHARGE ALTERNATIVES EVALUATION

E & S Plan	Official Use Only	PCSM Plan	Official Use Only
Check off the environmentally sound nondischarge Best Management Practices (BMPs) listed below to be used prior to, during, and after earth disturbance activities that have been incorporated into the E & S Plan based on the site analysis. For BMPs not checked, provide an explanation of why they were not utilized, attach additional sheets if necessary.		Check off the environmentally sound nondischarge Best Management Practices (BMPs) listed below to be used after construction that have been incorporated into the PCSM Plan based on the site analysis. For BMPs not checked, provide an explanation of why they were not utilized, attach additional sheets if necessary.	
<p>Nondischarge BMPs</p> <input type="checkbox"/> Alternative Siting <input type="checkbox"/> Alternative location <input type="checkbox"/> Alternative configuration <input type="checkbox"/> Alternative location of discharge <input type="checkbox"/> Limited Disturbed Area <input type="checkbox"/> Limiting Extent & Duration of Disturbance (Phasing, Sequencing) <input type="checkbox"/> Riparian Buffers (150 ft min) <input type="checkbox"/> Riparian Forest Buffer (150 ft min) <input type="checkbox"/> Other* _____		<p>Nondischarge BMPs</p> <input type="checkbox"/> Alternative Siting <input type="checkbox"/> Alternative location <input type="checkbox"/> Alternative configuration <input type="checkbox"/> Alternative location of discharge <input type="checkbox"/> Low Impact Development (LID / BSD) <input type="checkbox"/> Riparian Buffers (150 ft min) <input type="checkbox"/> Riparian Forest Buffer (150 ft min) <input type="checkbox"/> Infiltration <input type="checkbox"/> Water Reuse <input type="checkbox"/> Other* _____	

* Identify any and all best management practices, design standards and alternatives that collectively are substantially equivalent to a riparian buffer or riparian forest buffer in effectiveness, to minimize the potential for accelerated erosion and sedimentation and to protect, maintain, reclaim and restore water quality and for existing and designated uses of a perennial or intermittent river, stream or creek or lake, pond or reservoir of this Commonwealth to ensure compliance with 25 Pa. Code Chapter 93 (relating to water quality standards).

Will the nondischarge alternative BMPs eliminate the change in rate, volume, or quality during construction? Yes No
If yes, the antidegradation analysis is complete.
If no, proceed to Part 2.

Will the nondischarge alternative BMPs eliminate the change in rate, volume, or quality after construction? Yes No
If yes, the antidegradation analysis is complete.
If no, proceed to Part 2.

Part 2 Antidegradation Best Available Combination of Technologies (ABACT)

If the net change in stormwater discharge during or after construction is not fully eliminated by nondischarge BMPs, the applicant must utilize ABACT BMPs to manage the change. 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.

E & S Plan	Official Use Only	PCSM Plan	Official Use Only
<input type="checkbox"/> Treatment BMPs: <input type="checkbox"/> Sediment basin with skimmer <input type="checkbox"/> Sediment basin ratio of 4:1 or greater (flow length to basin width) <input type="checkbox"/> Sediment basin with 4-7 day detention <input type="checkbox"/> Flocculants <input type="checkbox"/> Land disposal: <input type="checkbox"/> Vegetated filters <input type="checkbox"/> Riparian buffers <150ft. <input type="checkbox"/> Riparian Forest Buffer <150ft. <input type="checkbox"/> Pollution prevention: <input type="checkbox"/> PPC Plans <input type="checkbox"/> Immediate stabilization <input type="checkbox"/> Street sweeping <input type="checkbox"/> Channels, collectors and diversions lined with permanent vegetation, rock, geotextile or other non-erosive materials <input type="checkbox"/> Stormwater reuse technologies: <input type="checkbox"/> Sediment basin water for dust control <input type="checkbox"/> Sediment basin water for irrigation <input type="checkbox"/> Other* _____		<input type="checkbox"/> Treatment BMPs: <input type="checkbox"/> Infiltration Practices <input type="checkbox"/> Wet ponds <input type="checkbox"/> Created wetland treatment systems <input type="checkbox"/> Vegetated swales <input type="checkbox"/> Manufactured devices <input type="checkbox"/> Bio-retention/infiltration <input type="checkbox"/> Green Roofs <input type="checkbox"/> Land disposal: <input type="checkbox"/> Vegetated filters <input type="checkbox"/> Riparian Buffers <150ft. <input type="checkbox"/> Riparian Forest Buffer <150ft. <input type="checkbox"/> Pollution prevention: <input type="checkbox"/> Disconnection of roof drainage <input type="checkbox"/> Bio-retention/bio-infiltration <input type="checkbox"/> Street sweeping <input type="checkbox"/> Nutrient, pesticide, herbicide or other chemical application plan alternatives <input type="checkbox"/> PPC Plans <input type="checkbox"/> Non-structural Practices <input type="checkbox"/> Land Preservation <input type="checkbox"/> Restoration BMPs <input type="checkbox"/> Stormwater reuse technologies: <input type="checkbox"/> Cisterns <input type="checkbox"/> Rain barrels <input type="checkbox"/> Dry hydrant with underground storage <input type="checkbox"/> Spray/Drip Irrigation <input type="checkbox"/> Other* _____	

* Identify any and all best management practices, design standards and alternatives that collectively are substantially equivalent to a riparian buffer or riparian forest buffer in effectiveness, to minimize the potential for accelerated erosion and sedimentation and to protect, maintain, reclaim and restore water quality and for existing and designated uses of a perennial or intermittent river, stream or creek or lake, pond or reservoir of this Commonwealth to ensure compliance with 25 Pa. Code Chapter 93 (relating to water quality standards).

Are the ABACT BMPs selected sufficient to minimize E & S discharges to the extent that existing or designated surface water uses are protected?
 Yes If yes, antidegradation analysis is complete.
 No If no, and the project discharges to a HQ water, proceed to Part 3. If no and the project discharges to an EV Water, contact the local conservation district or Department regional office.

Are the ABACT BMPs selected sufficient to achieve no net change and assure that existing or designated surface water uses are protected?
 Yes If yes, antidegradation analysis is complete.
 No If no, and the project is located in a HQ water, proceed to Part 3. If no and the project discharges to an EV Water, contact the local conservation district or Department regional office.

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

If the project discharges to HQ waters only, is there an important economic or social justification for the project?

Yes No If yes, please contact the Department regional office for the county in which the project is located.

SECTION F. CONSULTANT FOR THIS PROJECT

Plan Preparer's Name Jeffrey E Skinner, PE, PLS		eFACTS Consultant ID	
Title Project Engineer and Surveyor	Consulting Firm BCM Engineers	Seal (if applicable)	
Mailing Address 920 Germantown Pike, Suite 200			
City Plymouth Meeting	State PA	ZIP+4 19462	
Email jeffrey.skinner@atcassociates.com	Phone 6103133100	Ext 320	FAX 610-313-3151

SECTION G. COMPLIANCE HISTORY REVIEW

Is/was the applicant(s) in violation of any Department regulation, order, schedule of compliance or permit or in violation of any Department regulated activities within the past five years?

Yes No

If yes, list each permit order, schedule of compliance 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: N/A

Permit Number (if applicable): N/A

Brief description of non-compliance:

The applicant received an official Notice of Violation on 12/22/16 under 25 Pa Code Section 124.3 for failure to submit a notification form 10 working days prior to the start of demolition.

Steps taken to achieve compliance
Notification provided

Date(s) compliance achieved
Notification post marked 12/08/2016
The applicant learned of the violation verbally and resolved it before DEP was able to process the official, written letter.
Because the violation was for "failure to submit a notification", compliance was achieved when notification was received by DEP on 12/08/16.

Current Compliance Status: In-Compliance In Non-Compliance

If in non-compliance, please attach schedule for achieving compliance.

SECTION I. 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 in accordance with a system designed to assure that qualified personnel 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.

I grant permission to the agencies responsible for the permitting of this work, or their duly authorized representative to enter the project site for inspection purposes. I will abide by the conditions of the permit if issued and will not begin work prior to permit issuance.

(For individuals no indication of title is necessary, choose the box below. All others proceed to the next paragraph)

Individual; proceed to signature portion.

I hereby certify that I am the signatory pursuant to 25 Pa, Code § 92a.22 and 40 CFR §122.22 and that I am the person who is responsible for decision-making regarding environmental compliance functions for Birdsboro Power PA, LLC, the manager of one or more manufacturing, production, or operating facilities of the applicant and am authorized to make management decisions which govern the operation of regulated facility including having explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure the applicant's long term environmental compliance with environmental laws and regulations; and I am responsible for ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements.

(choose one of the following; not applicable for individuals):

The responsible corporate officer president vice president secretary treasure of _____ Corporation/Company
Entity name

The member or manager of Birdsboro Power LLC
Entity name

The general partner of _____ partnership/LP/LLP
Entity name

The principal executive officer or ranking elected official of _____ Municipality/State/Federal/other public agency
Entity name

Power of Attorney/delegation of contractual authority (documentation supporting delegation of contracting authority must be provided) for
_____ Entity name

SIGNATURES

Applicant

Co-Applicant (if applicable)

James Ryan, Manager
Print Name and Title of Person Signing

Print Name and Title of Person Signing


Signature of Applicant

Signature of Co-Applicant

4-3-17
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 Jeff Skinner

Phone 610-313-3100

FAX 610-313-3151

Notarization:

Commonwealth of Pennsylvania

County of BERKS

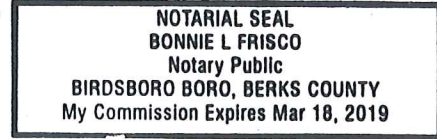
Sworn to and Subscribed to Before Me This

3 Day of APRIL, 2017

NOTARY

SEAL

COMMONWEALTH OF PENNSYLVANIA



Bonnie L. Frisco

My Commission Expires: MAR 18, 2019

Notary Public



COMPLETENESS REVIEW CHECKLIST

Check-off: C = Complete, NC = Not Complete

STANDARD E & S AND PCSM COMPLETENESS REVIEW CHECKLIST					
General					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	NOI	<input type="checkbox"/>	<input type="checkbox"/>	Fully completed, properly signed and notarized Notice of Intent Form (1 original and 2 copies)	
<input checked="" type="checkbox"/>	CL	<input type="checkbox"/>	<input type="checkbox"/>	Permit filing fee of \$500 (general permit) or \$1500 (individual permit) payable to the appropriate Clean Water Fund	
<input checked="" type="checkbox"/>	CL	<input type="checkbox"/>	<input type="checkbox"/>	Disturbed acre fee payable to the Commonwealth of Pennsylvania Clean Water Fund	
<input checked="" type="checkbox"/>	N2, ATT A	<input type="checkbox"/>	<input type="checkbox"/>	Proof of receipt of municipal and county Acts 14, 67, 68, and 127 notifications; copies of certified mail receipts or acknowledgment letters from the local municipality and county government.	
<input checked="" type="checkbox"/>	N2, ATT B	<input type="checkbox"/>	<input type="checkbox"/>	A signed PNDI receipt for the project area showing "No Known Impact", or "Avoidance Measures" or "Potential Impact" and proof of delivery to the appropriate jurisdictional agency(ies) where further coordination is required, as appropriate) (Reference the <i>Instructions for a General (PAG-02) OR Individual NPDES Permit for stormwater discharges associated with construction activities- Pennsylvania Natural Heritage Program (PNHP) & Pennsylvania Natural Diversity Inventory</i>)	
<input checked="" type="checkbox"/>	D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Complete Erosion and Sediment Control Plans (3 copies)	
<input checked="" type="checkbox"/>	D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Complete Post Construction Stormwater Management Plan (3 copies)	
<input type="checkbox"/>	N2	<input type="checkbox"/>	<input type="checkbox"/>	Fully completed General Information Form (GIF) (Individual Permits	
<input type="checkbox"/>	N2	<input type="checkbox"/>	<input type="checkbox"/>	PHMC coordination letter/clearance (Individual Permits for 10 acres or more of disturbance only)	
<input checked="" type="checkbox"/>	APP A	<input type="checkbox"/>	<input type="checkbox"/>	Appendix A land use questions	
Item Location: D = E&S Drawings, N = E&S Narrative, D or N = Drawings or Narrative D & N = Drawings and Narrative					
E&S Plan Planning & Design 102.4(b)(4)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N2,D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	The E&S Plan is separate from the PCSM Plan and labeled "E&S" or "Erosion and Sediment Control Plan" and is the final plan for construction.	D & N
<input checked="" type="checkbox"/>	N2, ATT C	<input type="checkbox"/>	<input type="checkbox"/>	Documentation provided that E&S Plan was prepared by person trained and experienced in E&S design methods and techniques applicable to the size and scope of the project	N
<input checked="" type="checkbox"/>	N3, D 216	<input type="checkbox"/>	<input type="checkbox"/>	E&S Plan minimizes extent and duration of earth disturbance	D & N
<input checked="" type="checkbox"/>	N3, D 216	<input type="checkbox"/>	<input type="checkbox"/>	E&S Plan maximizes protection of existing drainage features and vegetation	D & N
<input checked="" type="checkbox"/>	N3, D 216	<input type="checkbox"/>	<input type="checkbox"/>	E&S Plan minimizes soil compaction	D & N
<input checked="" type="checkbox"/>	N3, D 216	<input type="checkbox"/>	<input type="checkbox"/>	E&S Plan utilizes other measures or controls that prevent or minimize generation of increased stormwater runoff	D & N



Existing topographic features of the project site and the immediate surrounding area §102.4(b)(5)(i)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Topographic map(s) of the project site provided	D
<input checked="" type="checkbox"/>	N3, ATT. E, Cover Sheet	<input type="checkbox"/>	<input type="checkbox"/>	Location map (USGS quadrangle) provided	D or N

Types, depth, slope, locations and limitations of the soils §102.4(b)(5)(ii)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N3,ATT E, D 200	<input type="checkbox"/>	<input type="checkbox"/>	Soil map provided	D or N
<input checked="" type="checkbox"/>	N3,ATT F, D 200	<input type="checkbox"/>	<input type="checkbox"/>	Soil use limitations and their resolutions provided	D or N
Past, present and proposed land uses and proposed alteration to project site §102.4(b)(5)(iii)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N4	<input type="checkbox"/>	<input type="checkbox"/>	Past land uses for past 50 years addressed	N
<input checked="" type="checkbox"/>	N4	<input type="checkbox"/>	<input type="checkbox"/>	Present land uses for last 5 years addressed	N
<input checked="" type="checkbox"/>	D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Proposed alteration/land uses shown on a plan map	D
Volume and rate of runoff from the project site and its upstream watershed area §102.4(b)(5)(iv)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N4	<input type="checkbox"/>	<input type="checkbox"/>	Drainage area maps provided for proposed channels, basins, and traps	D or N
<input checked="" type="checkbox"/>	N4	<input type="checkbox"/>	<input type="checkbox"/>	Runoff calculations provided for proposed channels	N
Location of all surface waters and their classification under Chapter 93 §102.4(b)(5)(v)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N4, D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Surface waters shown on plan map(s)	D
<input checked="" type="checkbox"/>	N4, D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Existing/designated uses of all streams, lakes, ponds, wetlands or other surface waters identified	D or N
Narrative description of the location and type of perimeter and onsite BMPs §102.4(b)(5)(vi)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N4	<input type="checkbox"/>	<input type="checkbox"/>	E&S BMPs identified/described	N
<input checked="" type="checkbox"/>	D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	E&S BMPs shown on plan map(s)	D
Sequence of BMP installation and removal §102.4(b)(5)(vii)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D 212, 213, 300	<input type="checkbox"/>	<input type="checkbox"/>	Construction sequence provided	D
Supporting calculations and measurements §102.4(b)(5)(viii)					
Applicant		Department		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N5	<input type="checkbox"/>	<input type="checkbox"/>	Calculations provided for all proposed channels, traps, and basins	N
<input checked="" type="checkbox"/>	N5	<input type="checkbox"/>	<input type="checkbox"/>	Standard E&S worksheets or equivalents completely filled out	N
Plan drawings §102.4(b)(5)(ix)					
Applicant		Department		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Plan map(s) showing proposed earthmoving provided	D
<input checked="" type="checkbox"/>	D 301	<input type="checkbox"/>	<input type="checkbox"/>	Details and/or typicals provided for each proposed E&S BMP	D

Maintenance program §102.4(b)(5)(x)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N5,D 300	<input type="checkbox"/>	<input type="checkbox"/>	Maintenance of proposed BMPs addressed	D
<input checked="" type="checkbox"/>	N5,D 300	<input type="checkbox"/>	<input type="checkbox"/>	Inspection schedule for proposed BMPs provided	D
<input checked="" type="checkbox"/>	N5,D 300	<input type="checkbox"/>	<input type="checkbox"/>	Written report documenting inspections and repairs specified	D
Recycling or disposal of materials §102.4(b)(5)(xi)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N6,D 300	<input type="checkbox"/>	<input type="checkbox"/>	Anticipated construction wastes identified	D
<input checked="" type="checkbox"/>	N6,D 300	<input type="checkbox"/>	<input type="checkbox"/>	Instructions provided for proper recycling/disposal of materials provided	D
Geologic formations/soil conditions that may have the potential to cause pollution §102.4(b)(5)(xii)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N6,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Geologic/soil conditions addressed	D or N
<input checked="" type="checkbox"/>	N6,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Where potential for pollution identified, measures provided to avoid/minimize/or mitigate	D
Potential thermal impacts to surface waters §102.4(b)(5)(xiii)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N6,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Potential for thermal impacts addressed	D or N
<input checked="" type="checkbox"/>	N6,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Where potential for impacts exists, measures provided to avoid/minimize/or mitigate	D
E&S Plan designed and implemented to be consistent with PCSM Plan §102.4(b)(5)(xiv)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Proposed structural PCSM BMPs shown on the E&S plan map(s)	D
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Existing/proposed riparian buffers outside limits of disturbance	D
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Proposed infiltration BMPs outside proposed grading areas	D
Existing/proposed riparian forest buffers §102.4(b)(5)(xv)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Existing/proposed riparian forest buffers shown on plan map(s)	D
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Existing/proposed riparian forest buffers outside limits of disturbance	D
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Protection provided for wetlands within riparian forest buffer	D or N
<input checked="" type="checkbox"/>	N6, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Riparian buffer offset shown, if necessary	D
Antidegradation Analysis					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Equivalency demonstration for alternative BMPs to a riparian buffer or riparian forest buffer	
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Evaluation of nondischarge alternatives, including demonstration that a nondischarge alternative does not exist for both E&S and PCSM	N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	ABACT included where a nondischarge alternative does not exist for both E&S and PCSM	D or N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Nondischarge and ABACT BMPs have been identified for both E&S and PCSM	D or N

Item Location: D = PCSM Drawings, N = PCSM Narrative, D or N = Drawings or Narrative
D & N = Drawings and Narrative

General PCSM planning and design 102.8(b)

PCSM Plan - General

Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	The PCSM Plan is separate from the E&S Plan and labeled "PCSM" or "Post Construction Stormwater Management Plan" and is the final plan for construction.	D & N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Municipal or county engineer consistency letter provided	N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Act 167 plan is dated January 2005 or later	N
<input checked="" type="checkbox"/>	N7, ATT G	<input type="checkbox"/>	<input type="checkbox"/>	Documentation provided that PCSM Plan was prepared by person trained and experienced in PCSM design methods and techniques applicable to the size and scope of the project	N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Preserve the integrity of stream channels and maintain and protect the physical, biological and chemical qualities of the receiving stream	D or N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Prevent an increase in the rate of stormwater runoff	D or N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Minimize any increase in stormwater runoff volume	D or N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Minimize impervious areas	D & N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Maximize the protection of existing drainage features and existing vegetation	D & N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Minimize land clearing and grading	D & N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Minimize soil compaction	D or N
<input checked="" type="checkbox"/>	N7	<input type="checkbox"/>	<input type="checkbox"/>	Utilize other structural or nonstructural BMPs that prevent or minimize changes in stormwater runoff	D & N

Existing topographic features of the project site and the immediate surrounding area §102.8(f)(1)

Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N8, D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Topographic map(s) of the project site provided	D
<input checked="" type="checkbox"/>	N8, D Cover Sheet	<input type="checkbox"/>	<input type="checkbox"/>	Location map (USGS quadrangle) provided	D
<input checked="" type="checkbox"/>	N8, D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Type of cover	D

Types, depth, slope, locations and limitations of the soils and geologic formations §102.8(f)(2)

Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	ATT E, D 201-211	<input type="checkbox"/>	<input type="checkbox"/>	Soil map provided	D
<input checked="" type="checkbox"/>	ATT F, D 200	<input type="checkbox"/>	<input type="checkbox"/>	Soil use limitations and their resolutions provided	D or N
<input checked="" type="checkbox"/>	N8, D 200-211	<input type="checkbox"/>	<input type="checkbox"/>	Site characterization of soil and geology, including appropriate infiltration and geological studies that identify location, depths, and methodology	D & N
<input checked="" type="checkbox"/>	N8, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Geologic mapping features addressed where appropriate	D or N

Characteristics of the project site, including the past, present and proposed land uses and the proposed alteration to the project site §102.8(f)(3)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Permit boundaries	D
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Proposed limits of disturbance	D
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Proposed contours and grades	D
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Proposed improvements (i.e. roads, buildings, utilities etc.)	D
<input checked="" type="checkbox"/>	N8,	<input type="checkbox"/>	<input type="checkbox"/>	Past, present and proposed land uses	N
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Proposed waterways and stormwater management facilities shown on the plan maps	D
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Proposed impervious areas minimized & shown on plan map(s)	D
Net change in volume and rate of stormwater §102.8(f)(4)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N9	<input type="checkbox"/>	<input type="checkbox"/>	Design storm used for calculations identified	N
<input checked="" type="checkbox"/>	N9	<input type="checkbox"/>	<input type="checkbox"/>	Pre- and post-construction hydrology runoff rate and volume are identified for the each drainage area of entire project site	N
<input checked="" type="checkbox"/>	N9	<input type="checkbox"/>	<input type="checkbox"/>	The net change in runoff rate and volume are identified for each drainage area of the entire project site	N
<input checked="" type="checkbox"/>	N9	<input type="checkbox"/>	<input type="checkbox"/>	Summary table in NOI consistent with runoff calculations, when applicants have utilized the manual to meet design standards	N
<input checked="" type="checkbox"/>	N9	<input type="checkbox"/>	<input type="checkbox"/>	Documentation summarizing the PCSM requirements (rate, volume, and water quality) for a DEP approved Act 167 plan, if applicable	N
<input checked="" type="checkbox"/>	N9	<input type="checkbox"/>	<input type="checkbox"/>	Documentation summarizing the alternative approach's design criteria for rate, volume and water quality, if applicable	N
Receiving surface waters §102.8(f)(5)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Existing streams, wetlands, floodways, and watercourses shown on plan map(s)	D
<input checked="" type="checkbox"/>	N9, D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Existing and designated uses identified	D or N
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Boundaries for HQ or EV watersheds shown on plan map(s)	D
<input checked="" type="checkbox"/>	D201-211	<input type="checkbox"/>	<input type="checkbox"/>	Wetland boundaries consistent with delineation report	D
Written Description of the PCSM BMPs §102.8(f)(6)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N9,D 216	<input type="checkbox"/>	<input type="checkbox"/>	All permanent PCSM BMPs identified in the narrative and shown on plan drawings	D & N
<input checked="" type="checkbox"/>	N9,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Specifications for all permanent PCSM BMPs provided	D
<input checked="" type="checkbox"/>	N9,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Proprietary BMP systems are illustrated on the drawings in accordance with their manufacturer's requirements	D
Sequence of PCSM BMP implementation or installation §102.8(f)(7)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N10,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Complete and site specific sequence of BMP installations provided	D
<input checked="" type="checkbox"/>	N10,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Construction sequence addresses all structural BMPs	D
<input checked="" type="checkbox"/>	N10,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Sequence for individual BMP installation	D
<input checked="" type="checkbox"/>	N10,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Critical stages of BMP installation are identified	D
<input checked="" type="checkbox"/>	N10,D 216	<input type="checkbox"/>	<input type="checkbox"/>	Protection provided for infiltration BMPs until drainage areas completely stabilized	D

Supporting calculations §102.8(f)(8)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N10	<input type="checkbox"/>	<input type="checkbox"/>	Worksheets from the Stormwater BMP Manual provided when applicants have utilized the manual to meet design standards	N
<input checked="" type="checkbox"/>	N10	<input type="checkbox"/>	<input type="checkbox"/>	Figures contained on worksheets consistent with those in NOI/application when applicants have utilized the manual to meet design standards	N
<input checked="" type="checkbox"/>	N10	<input type="checkbox"/>	<input type="checkbox"/>	Calculations for all permanent BMPs and points of interest provided	N
<input checked="" type="checkbox"/>	N10	<input type="checkbox"/>	<input type="checkbox"/>	Methodology used for all calculations is identified. Calculations demonstrating that rate, volume, and water quality were met in accordance with 102.8(g)(2)(i-iii) and 102.8(g)(3)(i-ii) AND/OR a DEP approved Act 167 plan OR an alternative approach	N
<input checked="" type="checkbox"/>	N10	<input type="checkbox"/>	<input type="checkbox"/>	Routing analysis to demonstrate peak control for the 2-, 10-, 50-, and 100-year/24-hour storm events, which considers benefits of proposed BMPs provided	N
Plan drawings §102.8(f)(9)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D 216	<input type="checkbox"/>	<input type="checkbox"/>	Locations of all proposed BMPs shown along with tributary drainage areas	D
<input checked="" type="checkbox"/>	D 216	<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed discharges & points of interest shown	D
<input checked="" type="checkbox"/>	D 216	<input type="checkbox"/>	<input type="checkbox"/>	PCSM Plan drawings consistent with E&S Plan in relation to proposed contours, improvements, soils, wetlands, floodways, streams, discharge locations, etc.	D
<input checked="" type="checkbox"/>	D 216	<input type="checkbox"/>	<input type="checkbox"/>	Construction details provided for all PCSM BMPs	D
<input checked="" type="checkbox"/>	N11, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Dimensions and elevations consistent with those used in supporting calculations	D & N
Long-term operation and maintenance schedule §102.8(f)(10)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	D 216	<input type="checkbox"/>	<input type="checkbox"/>	Inspection schedule of each permanent BMP is provided	D
<input checked="" type="checkbox"/>	D 216	<input type="checkbox"/>	<input type="checkbox"/>	Directions for maintenance and/or replacement of each BMP provided	D
Recycling or disposal of materials §102.8(f)(11)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N11, D300	<input type="checkbox"/>	<input type="checkbox"/>	Project wastes identified	D
<input checked="" type="checkbox"/>	N11, D300	<input type="checkbox"/>	<input type="checkbox"/>	Directions for recycling /disposal of wastes provided	D
Geologic formations or soil conditions §102.8(f)(12)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N11, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Potential for geologic or soil conditions to cause pollution during construction identified	N
<input checked="" type="checkbox"/>	N11, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Instructions for proper handling and/or disposal of all materials which could cause pollution are provided	D
<input checked="" type="checkbox"/>	N11, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Typical details & instructions provided for proper handling and/or disposal of all such materials	D
<input checked="" type="checkbox"/>	N11, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Locations of all such materials clearly shown on plan maps	D

Potential thermal impacts §102.8(f)(13)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N11	<input type="checkbox"/>	<input type="checkbox"/>	Description provided of how thermal impacts of stormwater runoff from project site were avoided, minimized, or mitigated	N
Riparian forest buffer management plan §102.8(f)(14)					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input checked="" type="checkbox"/>	N12, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Existing and/or proposed riparian forest buffers shown on plan map(s)	D
<input checked="" type="checkbox"/>	N12, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Impairment and TMDL status of the receiving water(s) for the project indicated	N
<input checked="" type="checkbox"/>	N12, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Riparian buffer offset areas shown, if necessary	D & N
<input checked="" type="checkbox"/>	N12, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Riparian buffer or riparian forest buffer equivalency demonstration included, if necessary	D & N
<input checked="" type="checkbox"/>	N12, D 216	<input type="checkbox"/>	<input type="checkbox"/>	Checklist for functional equivalency of riparian buffers and riparian buffers included	N

COMPLETENESS ITEMS BY PERMIT TYPE

Check-off: C = Complete, NC = Not Complete

Item Location: D = E&S/PCSM Drawings, N = E&S/PCSM Narrative, D or N = Drawings or Narrative
 D & N = Drawings and Narrative

CHECKLIST FOR NEW NPDES PERMITS					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	1. All items included in the standard E&S and PCSM completeness review checklist	

CHECKLIST FOR NPDES PERMIT RENEWALS					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	1. If no changes have been made to the approved E & S and PCSM plan, the applicant does not need to submit these plans and letters again. However, if changes have been made to the plans, the revised plans must be resubmitted for approval and all letters must be reapplied for and included.	

CHECKLIST FOR PHASED NPDES PERMIT					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	1. All items included in new NPDES permit application	
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	2. Anticipated project plan for entire project	
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	3. Estimated time frame for phases	

CHECKLIST FOR NPDES PERMIT MAJOR AMENDMENT					
Applicant		Reviewer		Item	Item Location
Included	Page Number	C	NC		
<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	1. All items included in new NPDES permit application.	

APPENDIX A

Land Use Information Questions

Responses to the following questions are required to determine applicability of DEP's Land Use Policy for Permitting of Infrastructure and Facilities.

Note: Applicants are encouraged to submit copies of local zoning approvals with their authorization application.

LAND USE INFORMATION		
1.	Is there an adopted county or multi-county comprehensive plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2.	Is there an adopted municipal or multi-municipal comprehensive plan?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3.	Is there an adopted county-wide zoning ordinance, municipal zoning ordinance or joint municipal zoning ordinance?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p><i>If the applicant answers NO to either Question 1, 2, or 3, the provisions of the PA MPC are not applicable and the applicant does not need to respond to questions 4 and 5 below.</i></p> <p><i>If the applicant answers YES to questions 1, 2 and 3, the applicant should respond to questions 4 and 5 below.</i></p>		
4.	Does the proposed project meet the provisions of the zoning ordinance or does the proposed project have zoning approval? <i>If zoning approval has been received, attach documentation.</i>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
5.	Have you attached Municipal and County Land Use Letters for the project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

APPENDIX B
SAMPLE COUNTY LAND USE LETTER*

**(This sample letter and form is provided for the convenience of the applicant and the County. It does not prohibit the applicant from using a different template nor does it prohibit the County from submitting a different form of response.)*

Date:

Dear County Planning Director:

Acts 14, 67, 68 and 127, which amended the Municipalities Planning Code, direct state agencies to consider comprehensive plans and zoning ordinances when reviewing applications for permitting of facilities and infrastructure, and specify that state agencies may rely upon comprehensive plans and zoning ordinances under certain conditions as described in Sections 619.2 and 1105 of the Municipalities Planning Code. The Pennsylvania Department of Environmental Protection's Policy for Consideration of Local Comprehensive Plans and Zoning Ordinances in DEP Review of Permits for Facilities and Infrastructure (DEP's Land Use Policy) provides direction and guidance to DEP staff, permit applicants, and local and county governments for the implementation of Acts 67, 68 and 127 of 2000. This policy can be found at www.dep.pa.gov, keyword: Land Use.

In accordance with DEP's Land Use Policy, enclosed please find a County Land Use Letter that is to be submitted with our permit application to DEP for an NPDES Permit for Stormwater Discharges Associated with Construction Activities. Please complete the attached form and return within 30 days to:

Name of Applicant: _____

Address of Applicant: _____

Project Location: _____

Project Description: _____

Please do not send this form to DEP, as we must include the County Land Use Letter with our permit application. If we do not receive a response from you **within 30 days**, we shall proceed to submit our permit application to DEP without the County Land Use Letter. If the County Land Use Letter is not submitted with our permit application, and we provide proof to DEP that we attempted to obtain it, DEP will assume there are no substantive land use conflicts and proceed with the normal application review process.

If you have any questions, please do not hesitate to contact me at (phone number and/or email).

Sincerely,

Attachment – Sample County Land Use Letter

cc: /county commissioners

**APPENDIX B
SAMPLE COUNTY LAND USE LETTER**

Date: _____

To: _____ (Name of Applicant)

From: _____ County Planning Agency/Commission

Re: _____ (Name of DEP Permittee)

The County of _____ states that it:

_____ has adopted a county or multi-county comprehensive plan.

If yes, please provide date of adoption:

_____ has not adopted a county or multi-county comprehensive plan.

If applicable:

The above referenced project:

_____ is consistent with the adopted county or multi-county comprehensive plan.

_____ is not consistent with the adopted county or multi-county comprehensive plan.

Additional Comments (attach additional sheets if necessary):

Submitted By:

Name	
Title	
Contact Information (Address & Phone)	
Signature	
Date	

APPENDIX C
SAMPLE MUNICIPAL LAND USE LETTER*

**(This sample letter and form is provided for the convenience of the applicant and the Municipality. It does not prohibit the applicant from using a different template nor does it prohibit the Municipality from submitting a different form of response.)*

Date:

Dear Municipal Secretary:

Acts 14, 67, 68 and 127, which amended the Municipalities Planning Code, direct state agencies to consider comprehensive plans and zoning ordinances when reviewing applications for permitting of facilities and infrastructure, and specify that state agencies may rely upon comprehensive plans and zoning ordinances under certain conditions as described in Sections 619.2 and 1105 of the Municipalities Planning Code. The Pennsylvania Department of Environmental Protection's Policy for Consideration of Local Comprehensive Plans and Zoning Ordinances in DEP Review of Permits for Facilities and Infrastructure (DEP's Land Use Policy) provides direction and guidance to DEP staff, permit applicants, and local and county governments for the implementation of Acts 67, 68 and 127 of 2000. This policy can be found at www.dep.pa.gov, keyword: Land Use.

In accordance with DEP's Land Use Policy, enclosed please find a Municipal Land Use Letter that is to be submitted with our permit application to DEP for an NPDES Permit for Stormwater Discharges Associated with Construction Activities. Please complete the attached form and return within 30 days to:

Name of Applicant: _____

Address of Applicant: _____

Project Location: _____

Project Description: _____

Please do not send this form to DEP, as we must include the Municipal Land Use Letter with our permit application. If we do not receive a response from you **within 30 days**, we shall proceed to submit our permit application to DEP without the Municipal Land Use Letter. If the Municipal Land Use Letter is not submitted with our permit application, and we provide proof to DEP that we attempted to obtain it, DEP will assume there are no substantive land use conflicts and proceed with the normal application review process.

If you have any questions, please do not hesitate to contact me at (phone number and/or email).

Sincerely,

Attachment – Sample County Land Use Letter

cc: /township supervisor chair

**APPENDIX C
SAMPLE MUNICIPAL LAND USE LETTER**

Date: _____

To: _____ (Name of Applicant)

From: _____ Township/Borough/City

Re: _____ (Name of DEP Permittee)

The municipality of _____ states that it:
_____ has adopted a municipal or multi-municipal comprehensive plan.
If yes, please provide date of adoption:

_____ has not adopted a municipal or multi-municipal comprehensive plan.

The municipality of _____ states that it:
_____ has adopted a county zoning ordinance, or a municipal or joint-municipal zoning ordinance.
_____ has not adopted a county zoning ordinance, or a municipal or joint-municipal zoning ordinance.

If applicable:

The municipality of _____ states that its zoning ordinance is generally consistent with its municipal comprehensive plan and the county comprehensive plan.

The above referenced proposed project
_____ meets the provisions of the local zoning ordinance

If zoning approval is required for the project to proceed, the above referenced project:
_____ has received zoning approval.
_____ has not received zoning approval.

If the proposed project has not received zoning approval:

What is the status of the zoning request for the proposed project? (e.g., Special Exception Approval from the Zoning Hearing Board required, Conditional Use approval from the Governing Body required)

Is there a legal challenge by the applicant with regard to zoning for the proposed project?

Name and Contact Information for Municipal Zoning Officer:

Additional Comments (attach additional sheets if necessary):

Submitted By:

Name	
Title	
Contact Information (Address & Phone)	
Signature	
Date	

Appendix D. Worksheets

Worksheet 1. General Site Information

INSTRUCTIONS: Fill out Worksheet 1 for each watershed

Date:

Project Name:

Municipality:

County:

Total Area (acres):

Major River Basin:

Watershed:

Sub-Basin:

Nearest Surface Water(s) to Receive Runoff:

Chapter 93 – Designated Water Use/Existing Water Use:

Impaired according to Category 4 or 5 of the Integrated Water Quality Monitoring and Assessment Report? Yes No

List Causes of Impairment:

Is there an established TMDL that applies: Yes No

Total Maximum Daily Loads (TMDLS)

Is project subject to, or part of:

Municipal Separate Storm Sewer System (MS4) Requirements? Yes No

Existing or planned drinking water supply? Yes No

If yes, distance from proposed discharge (miles):

Approved Act 167 Plan? Yes No

Existing River Conservation Plan? Yes No

Worksheet 2. Sensitive Natural Resources from PA Stormwater Best Management Practices Chapter 5

INSTRUCTIONS

1. Provide Sensitive Resources Map according to non-structural BMP 5.4.1 in Chapter 5. This map should identify wetlands, woodlands, natural drainage ways, steep slopes, and other sensitive natural areas.

2. Summarize the existing extent of each sensitive resource in the Existing Sensitive Resources Table (below, using Acres). If none present, insert 0.

3. Summarize Total Protected Area as defined under BMPs in Chapter 5.

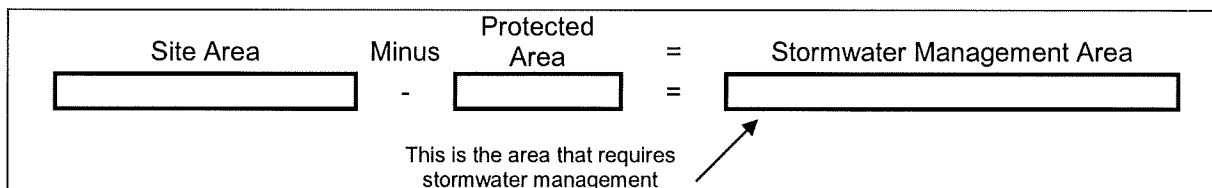
4. Do not count any area twice. For example, an area that is both a floodplain and a wetland may only be considered once.

EXISTING NATURAL SENSITIVE RESOURCE	MAPPED? Yes/no/n/a	TOTAL AREA (Ac.)	PROTECTED AREA (Ac.)
Waterbodies			
Floodplains			
Riparian Areas			
Wetlands			
Woodlands			
Natural Drainage Ways			
Steep Slopes, 15% - 25%			
Steep Slopes, over 25%			
Other:			
Other:			
TOTAL EXISTING:			

Worksheet 3. Nonstructural BMP Credits from PA Stormwater Best Management Practices Manual (SW BMP Manual)

PROTECTED AREA

1.1 Area of Protected Sensitive/Special Value Features (see WS 2) _____ Ac.
 1.2 Area of Riparian Forest Buffer Protection (see WS 2) _____ Ac.
 3.1 Area of Minimum Disturbance/Reduced Grading (See Chapter 8, page 21 – SW BMP Manual) _____ Ac
 TOTAL _____ Ac



VOLUME CREDITS

3.1 Minimum Soil Compaction (See Chapter 8, page 22 – SW BMP Manual)

Lawn _____ ft² x 1/4" x 1/12 = _____ ft³

 Meadow _____ ft² x 1/3" x 1/12 = _____ ft³

3.3 Protect Existing Trees (See Chapter 8, page 23 – SW BMP Manual)

For Trees within 100 feet of impervious area:

Tree Canopy _____ ft² x 1/2" x 1/12 = _____ ft³

5.1 Disconnect Roof Leaders to Vegetated Areas (See Chapter 8 page 25 – SW BMP Manual)

For runoff directed to areas protected under 5.8.1 and 5.8.2

Roof Area _____ ft² x 1/3" x 1/12 = _____ ft³

For all other disconnected roof areas

Roof Area _____ ft² x 1/4" x 1/12 = _____ ft³

5.2 Disconnect Non-Roof impervious to Vegetated Areas (See Chapter 8, page 26 – SW BMP Manual)

For Runoff directed to areas protected under 5.8.1 and 5.8.2

Impervious Area _____ ft² x 1/3" x 1/12 = _____ ft³

For all other disconnected roof areas

Impervious Area _____ ft² x 1/4" x 1/12 = _____ ft³

TOTAL NON-STRUCTURAL VOLUME CREDIT* _____ ft

**For use on Worksheet 5*

Worksheet 4. Change in Runoff Volume for 2-YR Storm Event

PROJECT: _____
Drainage Area: _____
2-Year Rainfall: _____ in

Total Site Area: _____ acres
Protected Site Area: _____ acres
Managed Area: _____ acres

Existing Conditions:

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	Ia (0.2*S)	Q Runoff ¹ (in)	Runoff Volume ² (ft ³)
Woodland								
Meadow								
Impervious								
TOTAL:								

Developed Conditions

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	Ia (0.2*S)	Q Runoff ¹ (in)	Runoff Volume ² (ft ³)
TOTAL:								

2-Year Volume Increase (ft³):

2-Year Volume Increase = Developed Conditions Runoff Volume – Existing Conditions Runoff Volume

1. Runoff (in) = $Q = (P - 0.2S)^2 / (P + 0.8S)$ where
 P = 2-Year Rainfall (in)
 S = $(1000 / CN) - 10$
2. Runoff Volume (CF) = $Q \times \text{Area} \times 1/12$
 Q = Runoff (in)
 Area = Land use area (sq. ft)

Note: Runoff Volume must be calculated for EACH land use type/condition and HSGI. The use of a weighted CN value for volume calculations is not acceptable.

Worksheet 5. Structural BMP Volume Credits

PROJECT: _____
SUB-BASIN: _____

Required Control Volume (ft³) – from Worksheet 4: _____

Non-structural Volume Credit (ft³) – from Worksheet 3: - _____
(maximum is 25% of required volume)

Structural Volume Reqmt (ft³) _____

(Required Control Volume minus Non-structural Credit)

Proposed BMPs from PA Stormwater Best Management Practices Manual Chapter 6	Area (ft ²)	Volume Reduction Permanently Removed (ft ³)
6.4.1 Porous Pavement		
6.4.2 Infiltration Basin		
6.4.3 Infiltration Bed		
6.4.4 Infiltration Trench		
6.4.5 Rain Garden/Bioretenion		
6.4.6 Dry Well / Seepage Pit		
6.4.7 Constructed Filter		
6.4.8 Vegetated Swale		
6.4.9 Vegetated Filter Strip		
6.4.10 Berm		
6.5.1 Vegetated Roof		
6.5.2 Capture and Re-use		
6.6.1 Constructed Wetlands		
6.6.2 Wet Pond / Retention Basin		
6.7.1 Riparian Buffer/Riparian Forest Buffer Restoration		
6.7.2 Landscape Restoration / Reforestation		
6.7.3 Soil Amendment		
6.8.1 Level Spreader		
6.8.2 Special Storage Areas		
Other		

Total Structural Volume (ft³): _____

Structural Volume Requirement (ft³): _____

DIFFERENCE _____

**Worksheet 6 – Small Site/Small Impervious Area
 Exception For Peak Rate Mitigation Calculations**

The following conditions must be met for exemption from peak rate analysis for small sites under CG-1:

- The 2-Year/24-Hour Runoff Volume increase must be met in BMPs designed in accordance with Manual Standards
- Total Site Impervious Area may not exceed 1 acre
- Maximum Development Area is 5 Acres
- Maximum site impervious cover is 50%
- No more than 25% Volume Control can be in Non-structural BMPs
- Infiltration BMPs must have an infiltration of at least 0.5 in/hr.

Site Area	Percent Impervious	Total Impervious
5 acre	20%	1 acre
2 acre	50%	1 acre
1 acre	50%	0.5 acre
0.5 acre	50%	0.25 acre

Worksheet 10 – Water Quality Compliance for Nitrate

Does the site design incorporate the following BMPs to address nitrate pollution? A summary “yes” rating is achieved if at least 2 Primary BMPs for nitrate are provided across the site or 4 secondary BMPs for nitrate are provided across the site (or the equivalent) “provided across the site” is taken to mean the specifications for that BMP set forward in Sections 5 and 6 are satisfied.

Proposed BMPs from PA Stormwater Best Management Practices Manual Chapter 5 & 6

	Yes	No
Primary BMPs for Nitrate:	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.4.2 – Protect/Conserve/Enhance Riparian Buffers	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.5.4 – Cluster Uses at Each Site	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.6.1 – Minimize Total Disturbed Area	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.6.3 – Re-Vegetate/Re-Forest Disturbed Areas (Native Species)	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.9.1 – Street Sweeping/Vacuuuming	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.1 – Riparian Buffer Restoration	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.2 – Landscape Restoration	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
Secondary BMPs for Nitrate:	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.4.1 – Protect Sensitive/Special Value Features	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.4.3 – Protect/Utilize Natural Drainage Features	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.6.2 – Minimize Soil Compaction	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.4.5 – Rain Garden/Bioretenion	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.4.8 – Vegetated Swale	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.4.9 – Vegetated Filter Strip	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.6.1 – Constructed Wetland	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.1 – Riparian Buffer Restoration	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.2 – Landscape Restoration	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.3 – Soils Amendment/Restoration	<input type="checkbox"/>	<input type="checkbox"/>

Worksheet 11 – BMPs for Pollution Prevention

Does the site design incorporate the following BMPs to address nitrate pollution? A summary “yes” rating is achieved if at least 2 Primary BMPs are provided across the site. “Provided across the site” is taken to mean that the specifications for that BMP set forward in Chapters 5 and 6 are satisfied.

Proposed BMPs from PA Stormwater Best Management Practices Manual Chapter 5 & 6

	Yes	No
BMPs for Pollution Prevention:	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.4.1 – Protect Sensitive/Special Value Features	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.4.2 – Protect/Conserve/Enhance Riparian Buffers	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.4.3 – Protect/Utilize Natural Flow Pathways in Overall Stormwater Planning and Design	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.5.1 – Cluster Uses at Each Site; Build on the Smallest Area Possible	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.6.1 – Minimize Total Disturbed Area - Grading	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.6.2 – Minimize Soil Compaction in Disturbed Areas	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.6.3 – Re-Vegetate/Re-Forest Disturbed Areas (Native Species)	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.7.1 – Reduce Street Imperviousness	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.7.2 – Reduce Parking Imperviousness	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.8.1 – Rooftop Disconnection	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.8.2 – Disconnection from Storm Sewers	<input type="checkbox"/>	<input type="checkbox"/>
NS BMP 5.9.15 – Street Sweeping	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.1 – Riparian Buffer Restoration	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.2 – Landscape Restoration	<input type="checkbox"/>	<input type="checkbox"/>
Structural BMP 6.7.3 – Soils Amendment and Restoration	<input type="checkbox"/>	<input type="checkbox"/>

Worksheet 12 – Water Quality Analysis of Pollutant Loading from All Disturbed Areas

Total Site Area (AC)	
Total Disturbed Area (AC)	
Disturbed Area Controlled by BMPs (AC)	

Total Disturbed Areas:

	Land Cover Classification	Pollutant			Cover (Acres)	Runoff Volume (AF)	Pollutant Load		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS** (LBS)	TP** (LBS)	NO ₃ (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.3					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low-Input	180	0.40	0.44					
	Lawn, High-Input	180	2.22	1.46					
	Golf Course Fairway/Green	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street/Highway	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic/Residential Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	60	0.46	0.47					
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
TOTAL LOAD									
REQUIRED REDUCTION (%)							85%	85%	50%
REQUIRED REDUCTION (LBS)									

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

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

Worksheet 13 – Pollutant Reduction Through BMP Applications*

*Fill this worksheet out for each BMP type with different pollutant removal efficiencies. Sum pollutant reduction achieved for all BMP types on final sheet.

BMP Type: _____

Disturbed Area Controlled by this BMPs (AC)

Disturbed Area Controlled by this BMPs:

	Land Cover Classification	Pollutant			Cover (Acres)	Runoff Volume (AF)	Pollutant Load**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS** (LBS)	TP** (LBS)	NO ₃ (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.3					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low-Input	180	0.40	0.44					
	Lawn, High-Input	180	2.22	1.46					
	Golf Course Fairway/Green	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street/Highway	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic/Residential Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	60	0.46	0.47					
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
TOTAL LOAD TO THIS BMP TYPE									
POLLUTANT REMOVAL EFFICIENCIES FROM APPENDIX A. STORMWATER MANUAL (%)									
POLLUTANT REDUCITON ACHIEVED BY THIS BMP TYPE (LBS)									
POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)									
REQUIRED REDUCTION from WS12 (LBS)									

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

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

Worksheet 14 – Water Quality Analysis of Pollutant Loading from Disturbance in Buffer Area

Total Disturbed Area (AC)	
Disturbed Area Controlled by this BMPs (AC)	

Existing Condition

Land Cover Classification	Pollutant			Cover (Acres)	Runoff Volume (AF)	Pollutant Load		
	TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS** (LBS)	TP** (LBS)	NO ₃ (LBS)
Forest	39	0.15	0.17					
Meadow	47	0.19	0.3					
TOTAL LOAD								

Post-Development

Land Cover Classification	Pollutant			Cover (Acres)	Runoff Volume (AF)	Pollutant Load		
	TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS** (LBS)	TP** (LBS)	NO ₃ (LBS)
Pervious Surfaces	Forest	39	0.15	0.17				
	Meadow	47	0.19	0.3				
	Fertilized Planting Area	55	1.34	0.73				
	Native Planting Area	55	0.40	0.33				
	Lawn, Low-Input	180	0.40	0.44				
	Lawn, High-Input	180	2.22	1.46				
	Golf Course Fairway/Green	305	1.07	1.84				
	Grassed Athletic Field	200	1.07	1.01				
Impervious Surfaces	Rooftop	21	0.13	0.32				
	High Traffic Street/Highway	261	0.40	0.83				
	Medium Traffic Street	113	0.33	0.58				
	Low Traffic/Residential Street	86	0.36	0.47				
	Res. Driveway, Play Courts, etc.	60	0.46	0.47				
	High Traffic Parking Lot	120	0.39	0.60				
	Low Traffic Parking Lot	58	0.15	0.39				
TOTAL LOAD								
Pollutant Load increase (LBS) =								

Pollutant Load increase (LBS) = Post development load – Pre-development load

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

Worksheet 15 – Pollutant Reduction Through BMP Applications*

*Fill this worksheet out for each BMP type with different pollutant removal efficiencies. Sum pollutant reduction achieved for all BMP types on final sheet.

BMP Type: _____

Disturbed Area Controlled by this BMPs:

	Land Cover Classification	Pollutant			Cover (Acres)	Runoff Volume (AF)	Pollutant Load**		
		TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)			TSS** (LBS)	TP** (LBS)	NO ₃ (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.3					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low-Input	180	0.40	0.44					
	Lawn, High-Input	180	2.22	1.46					
	Golf Course Fairway/Green	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street/Highway	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic/Residential Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	60	0.46	0.47					
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
TOTAL LOAD TO THIS BMP TYPE									
POLLUTANT REMOVAL EFFICIENCIES FROM APPENDIX A. STORMWATER MANUAL (%)									
POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)									
POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)									
REQUIRED REDUCTION from WS 14 (LBS)									

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

Checklist for Functional Equivalency of Riparian Buffers and Riparian Forest Buffers

	Riparian Buffer	Riparian Forest Buffer
Filtration of pollutants in runoff	<input type="checkbox"/>	<input type="checkbox"/>
Infiltration and maintenance of streamflow	<input type="checkbox"/>	<input type="checkbox"/>
Water quality maintenance	<input type="checkbox"/>	<input type="checkbox"/>
Habitat for wildlife and vegetation	<input type="checkbox"/>	<input type="checkbox"/>
Flood attenuation	<input type="checkbox"/>	<input type="checkbox"/>
Light control and water temperature moderation	<input type="checkbox"/>	<input type="checkbox"/>
Travel corridors for migration and dispersal	<input type="checkbox"/>	<input type="checkbox"/>
Ice damage control		<input type="checkbox"/>
Stream width		<input type="checkbox"/>
Food supply		<input type="checkbox"/>
Wood debris input		<input type="checkbox"/>
Support of aquatic food chains and webs as they relate to terrestrial food webs		<input type="checkbox"/>
Channel and shoreline stability/decrease in erosion		<input type="checkbox"/>
Reduced effects of storm events		<input type="checkbox"/>
Instream pollutant processing		<input type="checkbox"/>