

**CHAPTER 102 INDIVIDUAL NPDES PERMIT
FACT SHEET**

Application No. PAD480196

The checklists contained in this fact sheet are intended to provide guidance to staff reviewing the application but are not intended to be inclusive of all administrative and technical considerations; staff may supplement the information on this checklist with additional factors prescribed under regulations.

Applicant and Project Information			
Applicant Name: <u>Arcadia Development Corporation</u>	Project Name: <u>Proposed Industrial Development</u>		
Applicant Address: <u>3332 Bingen Road</u> <u>Bethlehem, PA 18015</u>	Project Address: <u>300 Gateway Drive</u> <u>Bethlehem, PA 18017</u>		
Municipality: <u>Hanover Township</u>	County: <u>Northampton</u>		
Receiving Water(s): <u>Monocacy Creek via MS4</u>	Ch. 93 Class: <u>HQ-CWF, MF</u>		
Date Application Received: <u>5/25/2023</u>	Earth Disturbance: <u>23.0</u> acres		
Application Type: <u>New</u>			
<p>The project involves the demolition of an existing hotel and construction of a proposed warehouse. The project will also include construction of a water line, sanitary sewer, curbed roadways, parking lots, tractor trailer loading and storage, storm sewer and associated detention basin with spray irrigation.</p>			
Project Description:			

Application Completeness Review Checklist

COMPLETENESS ITEM	TRUE	FALSE	N/A
1. 102.6(a)(1) – One original and one copy of the complete application form (3800-PM-BCW0408b) were submitted and were completed as instructed in the Application Instructions (3800-PM-BCW0408a).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. 102.6(a)(1) – One original and one copy of the complete GIF (0210-PM-PIO0001).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3. 102.6(a)(1) – Two copies of County and Municipal Notification Forms (3800-FM-BCW0271b and 3800-FM-BCW0271c, respectively) with county and municipal signatures or proof that the county and municipality received the forms were submitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 102.6(a)(2) – Two copies of the PNDI receipt (draft receipts not acceptable), which will not expire prior to anticipated authorization of permit coverage, were submitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 102.6(a)(1) – One original and two copies of the complete E&S Module 1 (3800-PM-BCW0406a) were submitted and were completed as instructed in the Application Instructions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. 102.4(b)(5)(ix) – Details were provided for all E&S BMPs (Question 5 of E&S Plan Information) (can be provided on the E&S Plan Drawings).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b. 102.4(b)(5)(viii) – Standard E&S Worksheets from the E&S Manual (or their equivalent) were attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Approve	Deny	Signature	Date
<input checked="" type="checkbox"/>	<input type="checkbox"/>	James Lawrence CCD Application Manager Name	DRAFT
<input type="checkbox"/>	<input type="checkbox"/>	CCD Professional Engineer (if CCD is PCSM Delegated)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Dion Campbell CCD Manager Name	DRAFT
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Gregg Ciravolo DEP Application Manager Name	DRAFT
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Robert Jevin DEP Permits Chief / Program Manager Name	DRAFT

Application Completeness Review Checklist (Continued)

c.	102.4(b)(5)(viii) – Supporting E&S calculations were provided (for any calculation not handled by a Standard E&S Worksheet or an equivalent).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d.	102.4(c) – An Off-site Discharge Analysis was provided, if applicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	102.4(b)(5)(v) – If hydric soils are present, a wetland determination was submitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	102.4(b)(5)(ix) – Three sets or copies of E&S Plan Drawing(s) were submitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a.	102.4(b)(5)(i) – The Drawing(s) include existing and proposed topography (including any temporary contours) with appropriate contour labels.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b.	102.4(b)(5)(iii) – The Drawing(s) include the project site boundary.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c.	102.4(b)(5)(iii) – The Drawing(s) include the limit of earth disturbance within the project site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d.	102.4(b)(5)(v) – The Drawing(s) show receiving surface water(s) and watershed boundaries, if applicable, within the project site and floodway or floodplain.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e.	102.4(b)(5)(ix) – The Drawing(s) identify all discharge points.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	102.4(b)(5)(vi) – The Drawing(s) show the location of all BMPs and drainage areas to the BMPs as applicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g.	102.4(b)(5)(iii) – The Drawing(s) show existing and proposed utilities and site improvements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
h.	102.4(b)(5)(xv) – The Drawing(s) show existing and proposed riparian buffer(s), if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i.	102.4(b)(5)(iii) – The Drawing(s) show proposed off-site support activities, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j.	102.4(c) – The Drawing(s) show the Avoidance Measures specified on the signed PNDI receipt, if applicable. ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k.	102.4(b)(5)(vii) – The Drawing(s) provide for protection of infiltration PCSM BMPs until drainage areas are completely stabilized, if applicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l.	102.4(b)(5)(vii) & 102.4(b)(5)(xii) – The Drawing(s) show the sequence of construction, an operation and maintenance (O&M) program, and procedures for recycling or disposing of materials (not necessary if a separate narrative is attached).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	102.6(a)(1) – One original and two copies of the complete PCSM Module 2 (3800-PM-BCW0406b) were submitted and were completed as instructed in the Application Instructions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a.	102.8(n) – The project qualifies as a Site Restoration Project. ²	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
b.	102.8(g)(1) – A pre-development site characterization was provided (i.e., soils and geotechnical testing results and narrative of methods and results).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	102.8(g)(1) – Soil/geologic test results were attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	102.8(f)(8), 102.8(g)(2) & 102.8(g)(4) – Printout of DEP's PCSM Spreadsheet – Volume Worksheet was attached. ³	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	102.8(f)(8), 102.8(g)(2) & 102.8(g)(4) – Stormwater Analysis – Runoff Volume Questions 5 – 9 were answered and supporting calculations were provided. ³	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f.	102.8(f)(8), 102.8(g)(3) & 102.8(g)(4) – Printout of DEP's PCSM Spreadsheet – Rate Worksheet was attached. ⁴	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	102.8(f)(8), 102.8(g)(3) & 102.8(g)(4) – Stormwater Analysis – Peak Rate Questions 5 – 9 were answered and supporting calculations were provided. ⁴	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Application Completeness Review Checklist (Continued)

h.	102.8(f)(8), 102.8(g)(2) & 102.8(g)(4) – Printout of DEP’s PCSM Spreadsheet – Quality Worksheet was attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i.	102.11(b) – If Managed Release Concept (MRC) BMPs were proposed, MRC Design Summary Sheets were provided for each BMP and were sealed by a professional engineer.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	102.8(f)(9) – Three sets or copies of PCSM Plan Drawing(s) were submitted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a.	102.8(f)(1) – The Drawing(s) include existing and proposed topography with appropriate contour labels.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b.	102.8(f)(3) – The Drawing(s) include the project site boundary.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
c.	102.8(f)(3) – The Drawing(s) include the limit of earth disturbance within the project site.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
d.	102.8(f)(5) – The Drawing(s) show receiving surface water(s) and watershed boundaries, if applicable, within the project site and floodway or floodplain.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
e.	102.8(f)(9) – The Drawing(s) identify all discharge points.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	102.8(f)(6) – The Drawing(s) show the location of all BMPs with identifiers cross-referenced to PCSM Module 2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
g.	102.8(f)(9) – Details were provided for all PCSM BMPs (required for any PCSM BMP identified in Question 1 of PCSM Plan Information).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
h.	102.8(f)(3) – The Drawing(s) show existing and proposed utilities and site improvements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
i.	102.8(f)(14) – The Drawing(s) show existing and proposed riparian buffer(s), if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j.	102.8(f)(3) – The Drawing(s) show proposed off-site support activities, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
k.	102.8(f)(15) – The Drawing(s) show the Avoidance Measures specified on the signed PNDI receipt, if applicable. ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
l.	102.8(f)(7) & 102.8(f)(10) – The Drawing(s) show the sequence of PCSM BMP implementation, a long-term operation and maintenance (O&M) schedule, procedures for recycling or disposing of materials, and critical stages of BMP implementation (not necessary if a separate narrative is attached).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m.	102.8(f)(2) – The Drawing(s) show sensitive features including sinkholes, surface depressions, soil contamination hot spots, and wetlands, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
n.	102.8(g)(1) – The Drawing(s) show the location of test pits used for infiltration testing as cross-referenced to PCSM Module 2, Infiltration Information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	102.6(a)(1) – Three copies of the complete Antidegradation Analysis Module 3 (3800-PM-BCW0406c) were submitted and were completed as instructed in the Application Instructions if 1) there are proposed discharges to special protection waters, and/or 2) there are proposed discharges directly to waters impaired for siltation, sediment, turbidity, water/flow variability, flow alterations/modifications, or nutrients.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	102.6(a)(1) – Three copies of the complete Riparian Buffer Module 4 (3800-PM-BCW0406d) were submitted and were completed as instructed in the Application Instructions if the earth disturbance or project site is within 150 feet of a perennial or intermittent river, stream, or creek, lake, pond or reservoir designated for special protection.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.	102.6(a)(1) – PHMC clearance letter (for projects > 10 acres of disturbance).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Footnotes:

- 1 If the PNDI receipt indicates "Avoidance Measures," the applicant must have signed the PNDI receipt and included the avoidance measures on the E&S and PCSM Plans; otherwise clearance letters must be included in the application.
- 2 If the entire project meets 25 Pa. Code § 102.8(n), then responses to Questions 7.b – 7.h may be omitted.
- 3 The response to either Question 7.d or 7.e must be TRUE for the application to be deemed complete.
- 4 The response to either Question 7.f or 7.g must be TRUE for the application to be deemed complete.

Application Manager's Completeness Review Comments:

E&S Technical Review Checklist ^{1, 2}

TECHNICAL REVIEW ITEM	TRUE	FALSE	N/A
1. The Standard E&S Control Plan Technical Review Checklist is attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The Expanded E&S Control Plan Technical Review Checklist is attached.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. 102.11(a)(1) – E&S BMPs have been designed in accordance with the E&S Manual.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 102.11(b) – Where E&S BMPs have been designed with a deviation from the E&S Manual, such deviations were found to be consistent with 25 Pa. Code § 102.11(b).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. 102.11(b) – Alternative E&S BMPs are consistent with the Approved Alternative E&S BMP List .	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. 102.2(b) – There will be discharges directly to waters impaired for siltation, sediment, turbidity, water/flow variability, flow alterations/modifications, or nutrients.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a. 102.2(b) – The applicant has proposed E&S BMPs to treat such discharges consistent with a non-discharge alternative or ABACT.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Footnotes:

- 1 In addition to deficiencies identified through the use of the Standard or Expanded E&S Control Plan Technical Review Checklists, the Application Manager should consider an answer of FALSE a technical deficiency when both Questions 3 and 4 are FALSE, and when Questions 5 or 6.a are FALSE.
- 2 A technical review of the E&S Plan is not required for renewal applications or for amendment applications where there is no new earth disturbance.

Application Manager's E&S Technical Review Comments:

1. §102.4(b)(5)(i) The existing topographic features of the project site and the immediate surrounding area.
 - a. Please correct the 4 spelling errors for the permit record on Module 1, Box 1 of E&S Plan Information Section. The section should also contain additional existing topographic descriptions per the instructions.
2. §102.4(b)(5)(ii) The types, depth, slope, locations and limitations of the soils.
 - a. The soil types and subsequent information provided in the narrative (page 23) are not complete and consistent with the soils section provided in Module 1. Please review soil sections and discussions for consistency.
3. §102.4(b)(5)(iii) The characteristics of the earth disturbance activity, including the past, present, and proposed land uses and the proposed alteration to the project site.
 - a. Provide a legible Limit of Disturbance line for the earth disturbance proposed on Route 512, north of Gateway Dr.
4. §102.4(b)(5)(vi) A narrative description of the location and type of perimeter and on site BMPs used before, during, and after the earth disturbance activities.

- a. Sections vi through x of the narrative report appear to be repeated. Please review for consistency and update as necessary.
5. §102.4(b)(5)(vii) A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during, and after earth disturbance activities that ensure the proper functioning of all BMPs.
- a. Step 9 of the construction sequence infers there is FS-8B and FS-8C. The BMPs could not be located in plan view and are not on Standard Worksheet #1.
 - b. In order to avoid confusion, please revise Step 12 to indicate “prior to starting rough grading”.
6. §102.4(b)(5)(viii) Supporting calculations and measurements.
- a. Per the submitted material a surface water is not present on site. Please revise Worksheet 12. The basin does not apparently discharge to a surface waters (as defined in Chapter 102)
 - b. The District acknowledges the email correspondence with DEP (Mathew Miller) regarding jurisdiction of watercourse through the site. Please provide a drawing or describe extent of all areas determined to be non-Chapter 105 jurisdictional.
 - c. Baffle calculations are provided in the narrative but not proposed in plan or detail view. Please clarify.
 - d. EW100 is proposed to be a box culvert. Per Figures 9.4 etc. the nomographs are not to be used for box culverts.
 - e. Please clarify whether temporary EW100 and permanent EW100 are to be the box culvert noted on outlet protection calculations/details.
 - f. It appears a new discharge point is proposed at EW100 at existing basin. Please discuss the DP and provide appropriate documentation on various applications/spreadsheets.
 - g. In order to evaluate construction runoff impacts to existing stormwater basin at outfall of proposed EW100 and effectiveness of Step 16, please provide a pre-construction drainage area map for the existing basin.
 - h. Please clarify whether the rip rap apron data on the detail sheet is for the temporary EW100 or the permanent EW100 or both.
 - i. Provide all calculations and details associated with proposed Channel A.
 - j. RF-1 is proposed at terminus of Channel A. The dimension for total depth (D) provided in the design and details is not consistent with the dimension for Channel A on the Detail sheet. Please revise.
 - k. Outlet barrels for permanent basins should be set in a concrete cradle, as shown in Standard Construction Detail #7. Provide detail and sequencing for the installation of cradle.
7. §102.4(b)(5)(ix) Plan drawings.
- a. All rip rap apron outlet protection should be shown in plan view as installed on level grade. Revise temporary and permanent rip rap apron plan view designs accordingly.
 - b. Provide in the legend the abbreviation SDS (located at top of bypass) and its definition.
 - c. Label the retaining wall referenced on Step 10 and provide spot elevations.
 - d. There appears to be unlabeled CFS on Sheet 4 of 9 west of Specially Minerals property. Please identify and design accordingly.
 - e. The emergency spillway should be clearly labelled in plan view.
 - f. The cleanout stake should be placed near the center of the sediment basin. Additionally, per the E&SPC Manual, provide a detail for the cleanout stake.
 - g. It appears additional BMPs are required for the earth disturbance occurring to install EW100 and associated storm sewer into the existing basin.
 - h. Show all PCSM BMPs on all E&S drawings.
 - i. FS-8A is not located downslope of all earth disturbance and grading proposed upslope. The BMP should be relocated.
 - j. The construction detail and associated notes for Temporary cofferdam and pump bypass should be made more legible on Sheet 8 of 9.
 - k. The District requests that Sequence Step 12 be prominently placed in plan view on Sheets 3, 4, and 5 of 9.
 - l. The sequence note in plan view located beneath the Inlet 106 label should be completed.
 - m. Additional BMPs (e.g. barrier control) appear to be needed to protect the existing basin during construction of permanent EW100 and associated storm sewer down the slope.
 - n. Label the Holiday Inn parking lot expansion proposed in Offsite Improvements Construction Sequence.
 - o. FS-8B and FS-8C could not be located in plan view in vicinity of Gateway Drive per the sequence.

PCSM Technical Review Checklist ^{1, 2}

TECHNICAL REVIEW ITEM	TRUE	FALSE	N/A
1. The CCD is not PCSM delegated.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. 102.11(a)(2) – PCSM BMPs have been designed in accordance with the BMP Manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. 102.11(b) – Where PCSM BMPs have been designed with a deviation from the BMP Manual, they were found to be consistent with 25 Pa. Code § 102.11(b).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. 102.11(b) – Alternative PCSM BMPs are consistent with the Approved Alternative PCSM BMP List .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. 102.2(b) – There will be discharges directly to waters impaired for siltation, sediment, turbidity, water/flow variability, flow alterations/modifications, or nutrients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. 102.2(b) – The applicant has proposed PCSM BMPs to treat such discharges consistent with a non-discharge alternative or ABACT.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. 102.8(f)(1) – Existing topography of project site and immediate surrounding area were adequately explained (E&S Module 1, Question 1).	<input type="checkbox"/>	<input type="checkbox"/>	
7. 102.8(f)(2) – The types, depth, slope, locations and limitations of the soils and geologic formations were accurately characterized (E&S Module 1, Question 2).	<input type="checkbox"/>	<input type="checkbox"/>	
8. 102.8(f)(3) – Characteristics of the project site were adequately explained in terms of past (i.e., at least 50 years ago), present and proposed land uses (E&S Module 1, Question 3).	<input type="checkbox"/>	<input type="checkbox"/>	
9. 102.8(f)(4) – An adequate description (may be qualitative) of the volume and rate of runoff from the project site and any area upgradient of the project site that flows onto the project site has been provided (PCSM Module 2).	<input type="checkbox"/>	<input type="checkbox"/>	
10. 102.8(f)(5) – The locations of surface waters and their classifications under Chapter 93 have been identified on PCSM Plan Drawing(s) and in the Application.	<input type="checkbox"/>	<input type="checkbox"/>	
11. 102.8(f)(6) – All PCSM BMPs have been identified in PCSM Module 2 (PCSM Module 2, PCSM Plan Information, Question 1) and located on PCSM Plan Drawing(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. 102.8(f)(6) – PCSM BMP design details were provided on PCSM Drawing(s) and specifications for permanent stabilization were included on PCSM or E&S Plan Drawing(s) (E&S Module 1, Question 15, for stabilization only).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. 102.8(f)(7) – A sequence of PCSM BMP implementation in relation to earth disturbance activities and a schedule of inspections for critical stages of BMP implementation were provided (PCSM Module 2, PCSM Plan Information, Question 2).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. 102.8(f)(8) – Supporting calculations for the design of PCSM BMPs were provided and are technically sound.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. 102.8(f)(10) – A long-term O&M schedule for PCSM BMPs including BMP repair and maintenance activities was provided (PCSM Module 2, Long-Term O&M) and is consistent with the Stormwater BMP Manual or is otherwise technically sound.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. 102.8(f)(11) – Procedures ensuring proper measures for recycling or disposal of materials associated with or from PCSM BMPs were provided (PCSM Plan Drawings or PCSM Module 2, Long-Term O&M).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. 102.8(f)(12) – The applicant identified naturally occurring geologic formations or soil conditions that may have the potential to cause pollution and prepared a plan to avoid or minimize potential pollution (PCSM Module 2, PCSM Plan Information, Question 6).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. 102.8(f)(13) – The applicant has identified potential thermal impacts from post-construction stormwater and has proposed BMPs that will avoid, minimize or mitigate potential impacts (PCSM Module 2, PCSM Plan Information, Question 7).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PCSM Technical Review Checklist (Continued)

TECHNICAL REVIEW ITEM	TRUE	FALSE	N/A
19. 102.8(f)(14) – The applicant has proposed a riparian forest buffer, a riparian forest buffer management plan is attached, and is generally consistent with § 102.14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. 102.8(g) – A stormwater analysis was completed on a discharge point basis or on a watershed basis (i.e., all discharges to specific receiving waters analyzed collectively).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. 102.8(g)(1) – A pre-development site characterization and assessment of soil and geology was conducted and is within the recommendations of Appendix C of the Stormwater BMP Manual or are otherwise technically sound.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. 102.8(g)(2) – Calculations were provided to demonstrate the net change in volume up to the 2-year/24-hour storm event and the calculations are technically sound, or the PCSM Spreadsheet, Volume Worksheet was submitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. 102.8(g)(2) – A volume reduction standard contained in an approved and current Act 167 Plan was used, and the Application Manager has confirmed that 1) the Act 167 Plan was approved within the past five years, and 2) the standard from the Plan was applied appropriately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. 102.8(g)(2)(iv) – An alternative design standard has been proposed for managing the net change in volume and an adequate demonstration has been made that the alternative standard is at least as stringent as management of the net change up to the 2-year/24-hour storm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. 102.8(g)(2) – The PCSM Spreadsheet, Quality Worksheet was submitted, illustrating the net change in water quality (pollutant loading) up to the 2-year/24-hour storm event.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. 102.8(g)(2)(i) – All existing non-forested pervious areas have been considered meadow in good condition or better (if exceptions at § 102.8(g)(2)(i) apply select “N/A”) (PCSM Spreadsheet, Volume Worksheet or supporting calculations).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. 102.8(g)(2)(ii) – 20% of existing impervious surfaces to be disturbed has been considered meadow in good condition or better (if exceptions at §§ 102.8(g)(2)(ii) or (iii) apply select “N/A”) (PCSM Spreadsheet, Volume Worksheet or supporting calculations).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. 102.8(g)(4) – The precipitation depth for the 2-year/24-hour storm event is based on NOAA Atlas 14 or other reputable sources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. 102.8(g)(4) – Land covers and curve numbers have been appropriately determined to calculate pre- and post-construction runoff volumes and pollutant loadings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. 102.8(g)(2) – Structural and non-structural BMPs were proposed that will eliminate or manage the net change in volume and pollutant loading up to the 2-year/24-hour storm event, and the calculations demonstrating this are technically sound or the PCSM Spreadsheet was used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. 102.8(g)(3) – Calculations were provided to demonstrate the net change in peak rates for the 2, 10, 50, and 100-year/24-hour storm events and the calculations are technically sound, or the PCSM Spreadsheet, Rate Worksheet was submitted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. 102.8(g)(3) – Rate requirements contained in an approved and current Act 167 Plan were used, and the Application Manager has confirmed that 1) the Act 167 Plan was approved within the past five years, and 2) the standard from the Plan was applied appropriately.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. 102.8(g)(3)(iii) – An alternative design standard has been proposed for managing the net change in peak rates and an adequate demonstration has been made that the alternative standard is at least as stringent as management of the net change for the 2, 10, 50, and 100-year/24-hour storm events.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. 102.8(g)(3) – Structural and non-structural BMPs were proposed that will eliminate or manage the net change in peak rates, and the calculations demonstrating this are technically sound or the PCSM Spreadsheet was used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. 102.11(b) – Managed Release Concept (MRC) BMP(s) were proposed, MRC Design Summary Sheets were adequately completed, and MRC design standards have been met or alternative MRC design standards are considered technically sound.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. 102.8(b)(8) – There are wetlands on the project site and adequate efforts have been made to ensure no significant changes to pre-construction hydrology that would affect the wetlands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. 102.14(d)(1), 102.14(f)(2) & 102.14(f)(3) – If Riparian Buffer Module 4 is completed, the project qualifies for an exception or is an allowed or allowable activity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PCSM Technical Review Checklist (Continued)

TECHNICAL REVIEW ITEM	TRUE	FALSE	N/A
38. Act 162 – If Riparian Buffer Module 4 is completed, the project does not propose the use of a waiver, which is allowed only for E&S Permits.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. 102.14(b) – If Riparian Buffer Module 4 is completed, and a riparian forest buffer will be implemented, the riparian forest buffer meets the criteria in 25 Pa. Code § 102.14(b).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Act 162 – If Riparian Buffer Module 4 is completed, and an equivalency demonstration has been done, the equivalency demonstration is consistent with DEP guidance, and worksheets 12 and 13 from the BMP Manual and worksheets 14 and 15 from the Equivalency Demonstration (310-2135-002) guidance have been completed and are technically sound.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Act 162 – If Riparian Buffer Module 4 is completed, and offsetting is proposed, the offset riparian forest buffer is in the same drainage list as the project site riparian forest buffer, authorization for use of the offset site has been attached, and the offset buffer meets the criteria in 25 Pa. Code § 102.14(b).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Footnotes:

- 1 An answer of FALSE to any the questions that are applicable may be considered a technical deficiency except #1. If #5.a is FALSE and #5 is TRUE, it is a deficiency. If all answers in the following groups are FALSE, it is a deficiency: #22/23/24 and #31/32/33.
- 2 A technical review of the PCSM Plan is not required for renewal applications or for amendment applications where there is no new earth disturbance.

Application Manager’s Technical Review Comments:

8. §102.8(c) Consistency with E&S Plan. The PCSM Plan shall be planned, designed and implemented to be consistent with the E&S Plan under § 102.4(b) (relating to erosion and sediment control requirements).
 - a. The PCSM plan should be planned, designed and implemented to be consistent with the E&S Plan. If any design changes made as a result of the PCSM and E&S deficiencies should impact either plan, please make the necessary revisions and list them clearly in the response letter. §102.8(c)
9. §102.8(f)(8) Supporting calculations.
 - a. All existing impervious in existing conditions was classified as a D-soil type which is then also utilized when calculating the 20% of existing impervious should be considered meadow as D-soil. Please clarify if this entire area of existing impervious should be all D soils or if some of the existing impervious should be classified as meadow, soil group-B.
 - b. The proposed emergency spillway was not modeled into the weir structure input for the proposed detention basin in the rate analysis hydraflow pond input. Please revise.
 - c. It appears that the basin was designed to have a bottom elevation of 319.5-feet, but the hydraflow pond data section is only calculating the storage volume of the basin from 223.5-feet to 332-feet. Please address.
 - d. The outflow pipe from the detention basin shown on the outlet structure detail shows a 30” diameter pipe at 324.63-feet. This does not match the culvert inputted into the hydraflow culvert structure. In the rate analysis within hydraflow, this outlet pipe is at an elevation of 326-feet, 1% slope, and is 800-feet long. Please ensure that the plans or calculations are revised for consistency.
 - e. Please provide vegetated swale sizing worksheets/calculations within the PCSM narrative.
 - f. Please fill out the rates and volume pages of Module 2 corresponding to the PCSM spreadsheets and rate analysis.
 - g. There are two total POIs listed on the offsite discharge analysis map. Each of the POIs should be analyzed separately as a part of the offsite discharge analysis. Additionally, due to the overall distance between these POIs and the different stormwater conveyance systems that these discharges convey through before reaching the watercourse, it is recommended that separate PCSM spreadsheets should be analyzed for volume, rate and water quality.
 - h. Please provide an analysis for the existing swale and also the proposed bypass pipe that convey flow to the existing 48” pipe that transfers water offsite to compare the capacity of the conveyances.
10. §102.8(f)(9) Plan drawings.
 - a. All of the PCSM plans were not signed and sealed by a professional engineer. Please revise.

- b. Please provide an outlet structure detail for the proposed detention basin that also shows dimensions for the top of the structure.
- c. Provide a maintenance access road with a maximum slope of 15% and minimum width of 9 feet which allows full access to all outlet(s) and embankment areas.
- d. Please address the vegetative cover and land cover areas for all spray irrigation areas.
- e. Please clearly label and show the emergency spillway for the proposed detention basin A.
- f. There is a line of boulders on the PCSM plans that are within the spray irrigation areas 3, 4 and 5. Are these to be relocated in proposed conditions? The spray areas have approximately a 30-foot wide distance between the proposed impervious and the boulder locations while this does not match the existing parking lot area separation distance from the boulders (roughly 5-feet). If the proposed parking area is being reduced, which is increasing this distance, these areas beneath the impervious should not be receiving spray credit based on infiltration rates.

11. §102.8(h)(3), §102.11(a)(2) Detention Basin

- a. Provide both inner and outer embankment side slopes of 4:1 minimum as per the BMP manual. The detail appears to show 4:1 side slopes, however, it appears that this varies throughout the basin grading on the inner embankments. Please revise.
- b. Provide a basin with bottom that has a maximum 1% slope. The basin cross section is calling for a 2% minimum bottom slope.
- c. The minimum top embankment width of 9 feet is not provided. Please revise.
- d. The basin cross section is calling for a “synthetic liner as the top layer for the proposed basin. The synthetic liner is usually proposed beneath the proposed topsoil. If the synthetic liner is shown as the first layer in the basin, the basin may not be sized correctly with the additional 12” topsoil cover. Please provide a cross section for the basin showing all layers of media, liners, depths, etc.
- e. Please provide the specific seeding specifications to be utilized within the proposed detention basin.

12. §102.8(h)(3), §102.11(a)(2) Spray irrigation.

- a. Pop-up emitters are typically used in areas that are frequently mowed. If pop-up emitters are not being utilized or the spray areas will not frequently be mowed, provide the elevation of the spray nozzles. Typically, nozzles are positioned 3 feet to 5 feet above the ground elevation to prevent malfunctions due to vegetative growth.
 - b. If elevated spray nozzles whose spray pattern is perpendicular to the receiving soils is used, please provide elevations and notation on the PCSM plan. This is to ensure that the system will be sprayed along the same contour/elevation for even distribution and to prevent channelization of the stormwater.
 - c. Not all areas of proposed infiltration (spray irrigation areas) appear to be protected (fenced) during construction. Please describe how the infiltration areas will be protected from compaction during construction. The construction sequence should be more detailed relating to the spray irrigation system.
 - d. A review of the PCSM Spreadsheet revealed post-development meadow cover types. Based on the plans provided, it appears that they are provided in spray irrigation areas. As such, the BMP maintenance notes should clarify the seeding and mowing specifications for these areas. Please revise as necessary for clarity and consistency.
- §102.8(f)(10)
- e. Please clarify the winter operation of the runoff capture/reuse system and associated stormwater basin. The spray irrigation plans specify a winter program which does not match the PCSM plan drawings. The impacts of this system operation on the peak rate analysis should be addressed by the PCSM narrative and offsite discharge analysis.
- §102.8(f)(10)
- f. As currently depicted, the spray head dispersal areas will overlap. The application rates for those overlapping spray heads should be adjusted so the combined application rates do not exceed 0.5 inches per day, or the application rate based on infiltration credit in those specific spray areas. Please address whether the overlapping of spray areas was considered in the spray rate calculations.
 - g. Please provide notation that the system should be designed to completely drain when it is shut off.
 - h. Please demonstrate that a 90% ground vegetative cover (grasses, meadow, brush, short bushes, etc.) exists down slope of the system for the entire flow path and throughout the entire year.
 - i. Many of the spray areas receiving infiltration credit for the application rate (examples: zone 3, zone 4, zone 5), do not appear to have adequate area for this application. The plans indicate that there is a meadow or grassed area that will not be graded or disturbed on these narrow sections with boulders around 30-feet away. The street view in this location from the existing parking lot does not appear to have existing soils where infiltration credit can be applicable for this entire area. Please address.

13. §102.8(f)(15) Additional information requested by the Department.

a. Please provide a technical deficiency response letter to the district and DEP, with responses to each individual technical deficiency.

PNDI Review:

- 102.6(a)(2) – PNDI search receipt contained no potential impacts and/or avoidance measures were signed by the applicant. ¹
- 102.6(a)(2) – PNDI clearance letter(s) from the appropriate agencies if 1) the PNDI receipt indicates “Potential Impact” or 2) the PNDI receipt indicates “Avoidance Measures” and the applicant has not signed the PNDI receipt indicating that the applicant will fulfill those Avoidance Measures were submitted. ¹

Footnote:

¹ Clearance applies to threatened and endangered species only (i.e., not species of special concern).

Site-Specific Special Conditions and Rationale:

Public Comments:

- Notice of the receipt of the application and a tentative decision to issue a permit was published in *Pennsylvania Bulletin* on:
DRAFT _____ 30-day public comment end date: DRAFT _____
- Notice of the receipt of the application and a tentative decision to deny the application was published in *Pennsylvania Bulletin* on:
_____ 30-day public comment end date: _____
- Comments were received from the applicant during the comment period and are addressed in the final permit cover letter or application denial letter.
- Public comments were received during the comment period and were considered in making a final decision on the application.
- A public hearing was held due to significant interest. Date of hearing: _____
- A comment-response document has been developed to address comments/testimony received from the public.
- No public comments were received during the review of the application.