



PCSM Completeness Recommendations

In the District's ongoing effort to obtain better more complete design plans and reduce the number of PCSM Technical Comments, the District would like you to consider the following recommendations on your permit application. While not all of these are technical deficiencies related to 25 Pa. Code Chapter 102, or may not pertain to your specific project, they may relate to potential issues during construction and/or implementation of the E&S and/or PCSM Plans. If not addressed during the completeness portion of the review, you can be assured that these comments will be included in the technical review phase. These comments will not result in a delay to the completeness determination of the application.

1. NOAA Atlas 14 precipitation data, is required by DEP or provide a discussion regarding why the NOAA Atlas 14 precipitation should not be used. *[25 Pa. Code § 102.8(b)(8)]*
2. The stormwater management design should be based on the maximum allowable impervious cover per the municipal zone or a minimum of an additional 10% of impervious area above what is shown on the plan. This allows for minor increases to impervious areas, without requiring submission of a major amendment for changes to calculations or delays at NOT. *[25 Pa. Code § 102.8(b)(8)]*
3. Pre-treatment is required for all subsurface basins. Provide pre-treatments for all subsurface basin facilities or clarify why pre-treatment is not necessary. Inlet filters are not recommended for use as pre-treatment BMPs due to their dependence on regular scheduled maintenance being performed. *[25 Pa. Code § 102.8(f)(8)]*
4. Provide drainage areas on the Pre-Construction and the Post-Construction Drainage Area Plans consistent with the values used in the calculations. Accurate drainage areas are required for the District to verify that the proposed SCMs are sufficient to remove the credited runoff volume and pollutants. *[25 Pa. Code § 102.8(f)(3) and § 102.8(g)(4)]*
5. PCSM Spreadsheet, Volume Management Calculations – pre-development condition 20% of existing impervious area should be denoted as meadow. This may impact the Pre-Construction value for volume in this table. *[25 Pa. Code § 102.8(b)(8)]*
6. Evapotranspiration (ET) credit for PCSM SCMs to help address volume control, require a proposed planting plan showing sufficient vegetation, including plug planting with a mix of native woody, herbaceous, and grass species. Seed mixes may be used in addition to plug plantings but must not be the only form of vegetation planted to qualify for ET credit. Grasses may be used, but may not be the only species planted, because other species with deeper penetrating root systems are needed to achieve the infiltration and ET credits calculated by the spreadsheet. *[DEP PCSM Spreadsheet Instructions Revised, April 28, 2022, § 102.8(g)(2)]*

7. Provide a demonstration of how the stormwater will be managed during non-irrigating times of the year. *[25 Pa. Code § 102.8(g)(2) and § 102.8(g)(3)]*
8. The soil testing was not conducted in accordance with Appendix C of the Stormwater BMP Manual. Refer to the standard protocols outlined in the BMP Manual for further guidance or use the Pre-Development Site Characterization (PDSC) Spreadsheet (Rev. 11/2024) which can be found on the DEP's website. Omitted information includes, but is not limited to, lack of test pit data, no indication of potential limiting zones, and no infiltration tests done in the area of the basins. *[25 Pa. Code § 102.8(g)(1) and § 102.11(a)(1)]*
9. Provide labels for all BMPs on the plans, include in the label the name of SCM facility, BMP number, top of berm elevation, bottom of basin elevation and area of bottom. *[25 Pa. Code § 102.8(b)(8)]*
10. Provide and label the location of all drainage points on the PCSM Plans and Drainage Area Plans. *[25 Pa. Code § 102.8(f)(9)]*
11. PCSM plan – add a notation on the plan: “The PCSM Stormwater Control Measures (SCM) design has been based on an impervious coverage of ___% (or impervious area of _____ sf) of each lot.” *[25 Pa. Code § 102.8(f)(9)]*
12. All subsurface (underground) SCMs should have manholes located at all four corners for future access and maintenance. *[25 Pa. Code § 102.8(f)(9)]*
13. Provide the location of all soil testing, pits, and borings on the PCSM plans. *[25 Pa. Code § 102.8(b)(8)]*
14. Provide clean-outs for the underdrains in the PCSM basins. *[25 Pa. Code § 102.8(b)(8)]*
15. The 2-yr/ 24-hour storm water surface elevation should be shown on the outlet structure riser detail (1.2-yr/ 2-hour storm water surface elevation should be shown for MRC SCMs) to ensure the entire runoff volume is being treated for volume and water quality requirements. This elevation should correspond with the PCSM SCM routing results. *[25 Pa. Code § 102.11(a)(1)]*
16. Identify any Landscape Restoration area, Street Sweeping areas, Spray Irrigation areas, etcetera. with SCM Name, BMP number and area in square feet, within each drainage area on the plan. Label the type and quantity of the trees that you are taking credit for, as they are considered a BMP. *[25 Pa. Code § 102.8(f)(6)]*
17. Clarify how SCMs will be protected from potential sediment pollution from upslope areas. For example, the SCM may receive sediment-laden flows from upslope disturbances, both overland and through the piped system. Sediment should not be allowed to enter the SCM, provide compost filter sock around SCM to prevent sediment laden surface water and plywood installed in inlets to prevent sediment from getting to the basins or other method to keep sediment out of SCM until they are stabilized. *[25 Pa. Code § 102.8(f)(7)]*

18. Add notes and details on the plans to address how unanticipated groundwater or seeps, when encountered, should be dealt with, and directed to state waters, if possible (not diverted to PCSM if BMP was not designed to receive it). *[25 Pa. Code § 102.8(f)(6)]*
19. The PCSM Plans should include all details necessary to construct the PCSM SCMs. Assume the entire site is blown up and must be reconstructed. *[25 Pa. Code § 102.8(f)(6)]*
20. Outlet barrels for permanent basins are to be a material that is not susceptible to crushing during installation and do not require a stone backfill for structural stability. Provide documentation demonstrating the specified material meets the guidance or revise the specification to a material that meets the guidance. *[25 Pa. Code § 102.8(f)(6)]*
21. The outlet pipes for permanent basins are to be set in a concrete cradle along with anti-seep collars (e.g., Standard Construction Details 7-6 and 7-17 shown in the E&S Manual). *[25 Pa. Code § 102.8(f)(6), § 102.11(a)(1), and § 102.11(a)(2)]*
22. The Amended Soils specification should meet the requirements in the BMP Manual of 20-30% organic content, Clay content less than 10%, Ph should be between 5.5 and 6.5 and a minimum depth of 18-30”(a minimum of 4” below the largest root ball). The District recommends minimal use of topsoil and to include a maximum of 50% sand. *[25 Pa. Code § 102.8(f)(6)]*
23. Filter fabric should completely wrap any subsurface stone SCM, the use of the geotextile fabric is to keep the soil from intruding into the stone and clog the voids. *[25 Pa. Code § 102.8(f)(9)]*
24. Limestone, Fertilizer, Seeding and Mulching Specifications should conform to the E&S Manual, unless specific soil testing is performed and specifies an alternate. *[25 Pa. Code § 102.8(f)(9)]*
25. Construction Sequence – Add a note to below the second paragraph; “The Permittee must record the Approved NPDES Permit and PCSM Plans and provide a copy of the filing to the District. The Pre-Construction Meeting cannot be scheduled until the filing is reviewed by the District. The District has five business days to determine if the filing is acceptable. The permittee must also invite to the pre-construction meeting co-permittees, operators, municipal representative(s), licensed professionals or designees, and all others responsible for implementing or monitoring the earth disturbance activity and implementation of E&S, PCSM and PPC Plans and critical stages of implementation of the approved PCSM Plan. *[25 Pa. Code § 102.11(a)(1)]*
26. Construction Sequence – The permittee must complete confirmation testing for infiltration capacity to verify that infiltration SCMs will perform as designed. Confirmation testing is a critical stage of SCM construction that must be overseen by a licensed professional or designee. The testing inspection must be performed after major earthwork is complete, after permanent stabilization of the SCM’s drainage area, and, prior to placing soil media or stone in an SCM. The permittee may not proceed to complete construction of the SCM until a licensed professional evaluates the confirmation testing and notifies the permittee that the infiltration SCM meets the purpose and intent of the approved PCSM Plan, without

overflowing at the storm event the SCM is designed to manage and will protect waters of the Commonwealth. If the licensed professional determines that the SCM will not function as designed, the District should be contacted to discuss any corrective measures to be performed. Changes should be performed under the direction of the licensed professional and the SCM retested. Changes may need an amendment to the approved PCSM Plan. If an amendment is required, the permittee may not proceed with implementing the changes until written approval is obtained from the District. Where confirmation testing for infiltration capacity is completed, the permittee must report the results of the testing on the SCM Construction Certification form. *[25 Pa. Code § 102.8(k)]*

27. List of Critical Stages should provide a specific list of SCMs and specific tasks that will be witnessed/ inspected by the licensed professional or their designee during construction and should include Nonstructural BMPs. Reference Critical Stages provided in the Fall 2024 District Workshop. *[25 Pa. Code § 102.8(f)(7)]*
28. Operation and Maintenance (O&M) - The permittee must conduct visual site inspections throughout the duration of construction and until the NOT has been approved. Weekly Inspections and within 24 hours after the end of storm event in the amount of 0.25 inch or greater over a 24-hour period or the occurrence of snowmelt sufficient to cause a discharge. The permittee must document each site inspection on DEP's Chapter 102 Visual Site Inspection Report (3800-FM-BCW0271d) or alternative document or electronic form that collects and retains identical information. Beginning December 8, 2025, qualified personnel must complete the Visual Site Inspection Reports. The permittee must take color photographs (with a date and time stamp) of E&S BMPs and PCSM SCMs on the project site monthly. *[25 Pa. Code § 102.4(b)(5)(x)]*
29. Operation and Maintenance (O&M) - The permittee must submit a complete Annual Report to the District by December 7 each year using DEP's Annual Report template (3800-PM-BCW0405e). The Annual Report must address activities under this Permit for the reporting period of October 1 – September 30. *[25 Pa. Code § 92a.61(g)]*
30. The Operation and Maintenance (O&M) – provide notes indicating what procedures must be taken in the event that the SCMs fail. *[25 Pa. Code §102.11(a)(1)]*
31. An Emergency Spillway should be provided for all above ground basins, to provide a controlled situation if the outlet structure fails. *[25 Pa. Code § 102. 8(g)(2)]*
32. The District recommends inserting the assigned NPDES permit number on each sheet of the plan drawings and/or the plan cover sheet at a minimum.
33. The District recommends that infiltration basin slopes be lined with ECB, TRM or FGM to aid in quick vegetative stabilization and help to avoid sediment damage to the infiltrator prior to adequate vegetative growth. Please show the extent of all linings on the plan drawings.

34. Under the PA Code, any catch basin that allows water to become stagnant and breeds mosquitoes is against the law.
- PA Code Title 25 Environmental Protection, Chapter 243. Nuisances, Section 243.12 Stagnant Water states: A person may not maintain or permit to be maintained, a pond, privy vault, cesspool, well, cistern, rain barrel or other receptacle containing water unless the receptacle is constructed or maintained in a manner to prevent the breeding of mosquitoes.
 - Provide smooth transition from pipe invert to pipe invert, similar to sanitary sewer manholes (poured concrete inverts).
35. The District notes from numerous field inspections that the use of inlet protection to keep sediment out of sediment basins is unreliable as the inlet protection clogs quickly and requires extensive maintenance. Consider alternative pre-treatment for drainage areas contributing to underground and infiltration BMPs.
36. The use of mastic or equivalent is recommended in all inlets located within grassed areas and PCSM BMP areas to prevent soil from washing into the storm sewer or infiltration area through unsealed joints in the inlet box and top.
37. Riprap aprons should be a minimum of 10 linear feet, R-4 riprap stone, 0.0% longitudinal and cross slope should be 0.0%, riprap should extend 2/3 the pipe diameter (height) up the side slopes of channel and around end wall. Provide dimensions of apron on plan including length, width, thickness, and stone size.
38. Pursuant to page 117 of the BMP Manual, slopes of infiltration berms should be 4:1 or flatter to avoid scalping during mowing operations. It is recommended to flatten the embankments of the infiltration berms to assist maintenance following the completion of the construction.
39. The use of plunge pools, stilling basins or other outlet basins are recommended for pipe outfalls. Experience has shown that riprap aprons are often installed incorrectly, erode at the sides, and do not spread flows across the width of the apron as intended. An example of an outlet basin and other energy dissipaters is shown on page 245-252 of the E&S Manual.

Your anticipated cooperation in this effort is greatly appreciated. The District also recommends meeting at any time before or during the review process to ensure the comments are being addressed adequately. If you have any questions, please do not hesitate to contact Thomas Forsythe, District Engineer at Thomas.forsythe@berkscd.com or (610) 372-4657.