



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION



Bureau of Clean Water

Post-Construction Stormwater Management (PCSM) Manual

Agricultural Advisory Board

December 8, 2022

Tom Wolf, Governor

Ramez Ziadeh, P.E., Acting Secretary

PCSM Manual

- DEP contracted with Villanova University on October 1, 2017 to update the 2006 *Pennsylvania Stormwater BMP Manual*
- Work on the Manual is now substantially complete; DEP is renaming the Manual the *Pennsylvania PCSM Manual*
- Draft publication for a 90-day comment period in near future

PCSM Manual

Chapters

1 – Introduction

2 – PCSM Requirements

3 – SCM Technical
Guidance

Commonwealth of Pennsylvania



Pennsylvania Post-Construction Stormwater Management (PCSM) Manual

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PCSM Manual

Appendices

- A: Precipitation
- B: Soil Physics, Characterization, and Infiltration Testing
- C: Karst Terrain
- D: Evapotranspiration
- E: Hydrologic Budget and Water Balance
- F: Volume Management Analysis Methods
- G: Water Quality Analysis Methods
- H: Peak Rate Analysis Methods
- I: Vegetation for Use in Stormwater Management
- J: SCM Components and Specifications
- K: Construction Inspection, Operation and Maintenance
- L: Definitions and Acronyms
- M: Errata Sheet

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- Hierarchy of Stormwater Management:
 - Objective A – Protect Natural Landscapes
 - Objective B – Manage stormwater through infiltration and ET
 - Objective C – Managed Release Concept
 - Objective D – Rate Control

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- Existing concepts to be incorporated:
 - Water quality analysis method
 - Evapotranspiration credit
 - Managed Release Concept (MRC) SCMs
 - PAG-01 design approach

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- 3 stormwater analysis methods: design storm, continuous simulation, and water balance
- Climate change – use 90% UCI of NOAA Atlas-14 estimates or an adjustment factor

| PDS-based | | |
|------------------|-------------------------------|-------------------------------|
| Duration | 1 | 2 |
| 5-min | 0.347 (0.320-0.378) | 0.414 (0.380-0.451) |
| 24-hr | 2.70 (2.50-2.93) | 3.26 (3.01-3.54) |

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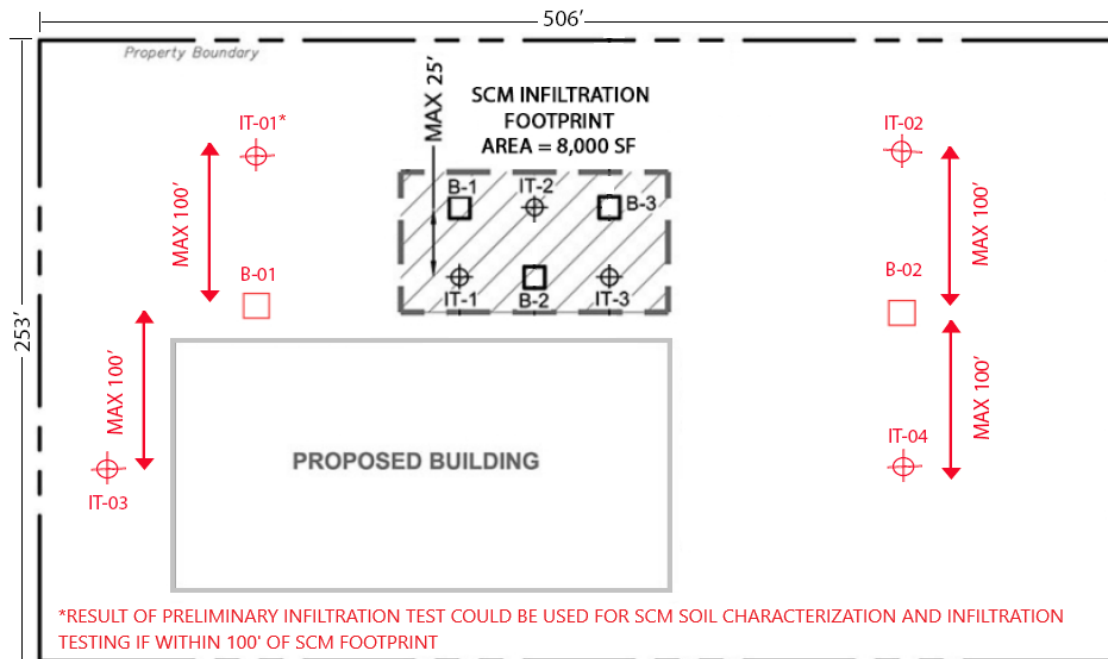
- Infiltration testing – to be done during pre-development site characterization and when SCM locations are selected.

PRELIMINARY SITE EVALUATION

- B-XX SOIL CHARACTERIZATION TEST LOCATION (SOIL BORING)
- ⊕ IT-XX INFILTRATION TEST LOCATION (SINGLE RING METHOD)

SCM SOIL CHARACTERIZATION AND INFILTRATION TESTING

- B-X SOIL CHARACTERIZATION TEST LOCATION (TEST PITS)
- ⊕ IT-X INFILTRATION TEST LOCATION (DOUBLE RING METHOD)

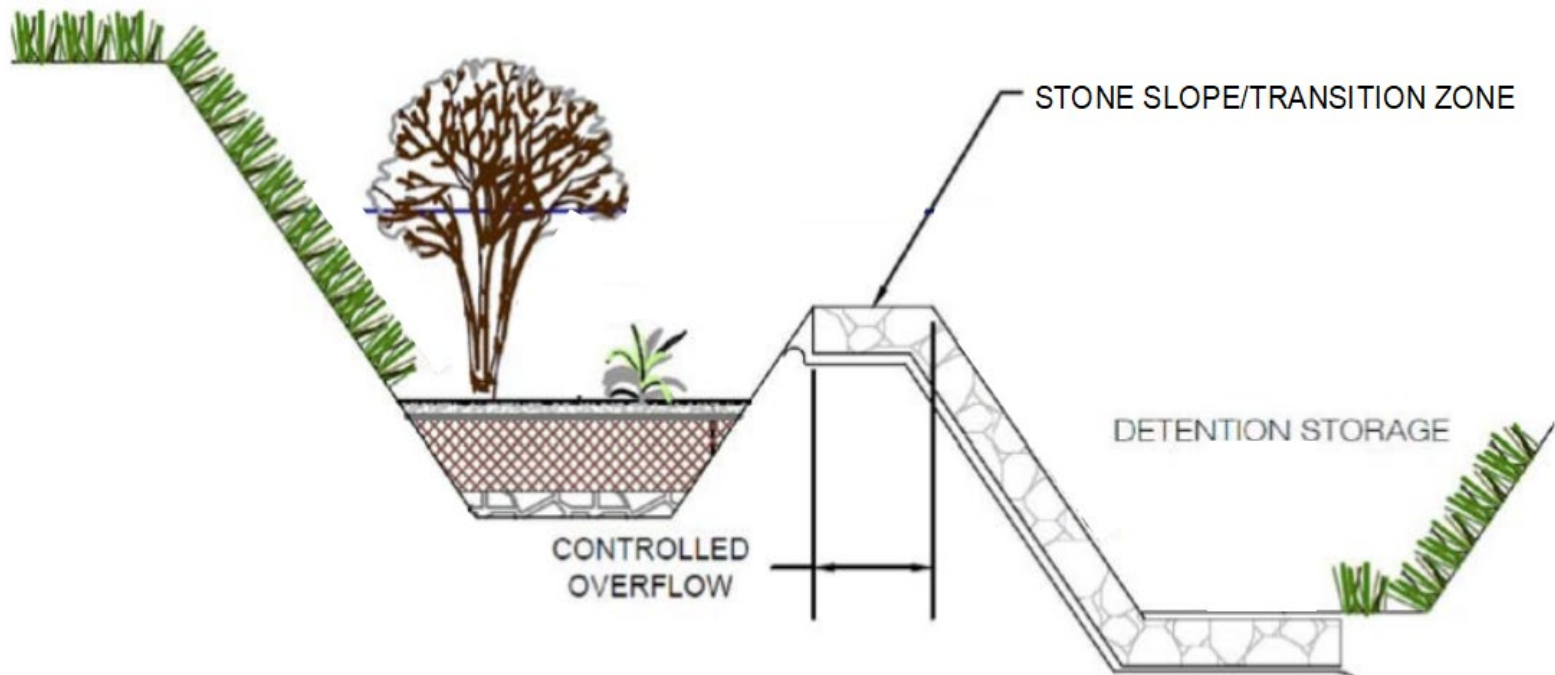


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- Confirmation infiltration testing – would be required anytime an E&S basin or trap is converted for use as a PCSM SCM or when the contractor is “inexperienced” (i.e., has constructed less than 3 infiltration SCMs in past two years)
- Can be done by conventional infiltration test; simulated runoff test; or inspection following a large storm

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- Emphasis on resiliency – separate WQ/volume SCMs from rate control SCMs



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