

# PCSM – Quick Facts

## Post-Construction Stormwater Measures (PCSMs)

- Permanent, engineer-designed features
- Not to be confused with BMPs – Temporary erosion and sediment control features (Chapter 205 Requirements)

## INDOT's list of PCSMs by Priority

1. Dry turf grass swale
1. Dry native grass swale
1. Filter strip
1. Dry detention (pond or swale/ditch)
2. Wet swale
2. Wet retention pond
3. Infiltration swale
3. Infiltration basin
4. Proprietary device

## Why are these PCSMs required?

- Municipal Separate Storm Sewer System (MS4) General Permit
- Construction Stormwater General Permit

## When are these PCSMs required?

- Projects that require a CSGP and
- Projects with 1 acre or more of net added impervious surface

## How are these PCSMs designed?

- To treat the first flush – the first 1 inch of rainfall that falls on the pavement (not designed to *treat* larger flows but must be able to convey them per Chapter 203)

## What about projects currently in progress?

- See Table 1 of Design Memo 22-22

**Table 1 from DM 22-22: Project Action based on project development process milestone and the amount of additional impervious area**

PDP Milestone	Added Impervious Surface <1 acre	Added Impervious Surface ≥ 1 acre and < 3 acres	Added Impervious Surface ≥ 3 acres
Stage 3 as of November 18, 2022	No action	No action - Project is advanced in development for design changes or additional project commitments	Credit measures already included in design through supporting calculations and designation as a post-construction stormwater measure
Stage 2 as of November 18, 2022	No action	Credit measures already included in design through supporting calculations and designation as a post-construction stormwater measure	Examine for measures to add or modify, consult with PM on acquiring ROW
Stage 1 as of November 18, 2022	No action	Examine for measures to add or modify, consult with PM on acquiring ROW	Examine for measures to add or modify, consult with PM on acquiring ROW
Prior to Stage 1 as of November 18, 2022	No action	Post-construction stormwater measures are required	Post-construction stormwater measures are required

This means that some of your current design contracts need amendments to incorporate PCSMs.

# Submittal Requirements

## With Stage 1 Design

- Preliminary locations of proposed PCSMs identified and labeled on plans
- PCSMs included in cost estimate

## With Stage 2 Design

- Locations of proposed PCSMs identified and labeled on plans
- Post-construction Stormwater Management Measures Report  
Narrative, Project Location Map, existing and proposed drainage area delineations, NRCS soils information, Water Quality Volume calculations, Water Quality Treatment Rate calculations or model output for flow through PCSM sizing, all supporting calculations for proposed PCSMs, including computer models
- Completed maintenance plans
- PCSMs included in cost estimate

## With Stage 3 Design and Final Tracings

- Locations of proposed PCSMs identified and labeled on plans with proposed Asset ID Numbers and design table
  - Plans will include locations of jurisdictional streams and wetlands
  - Plans will include design table for PCSMs, which will list proposed asset identification number, alignment, station, and offset. For linear PCSMs, list starting and ending station and offset.
- Updated Post-Construction Stormwater Management Measures Report, and required supplemental information, if changes were made to or impacting proposed PCSMs after Stage 2 submittal
- Completed maintenance plans
- PCSMs included in cost estimate

## With SWPPP (as an Appendix)

- Locations of proposed PCSMs identified and labeled on plans with proposed preliminary Asset ID Numbers and design table
  - Plans will include locations of jurisdictional streams and wetlands
  - Plans will include design table for PCSMs, which will list proposed asset identification number, alignment, station, and offset. For linear PCSMs, list starting and ending station and offset.
- Final approved version of the Post-Construction Stormwater Management Measures Report
- Completed maintenance plans
- PCSM approval memo

# How to Submit for Review

## Typical ERMS Uploads for Plans Submittals

- For Stage 2, 3, and Final Tracings, cc us in the ERMS Coordinator email ([PCSM@indot.IN.gov](mailto:PCSM@indot.IN.gov)) when a submittal is made (that includes PCSMs) until further direction is provided. State in transmittal letter PCSMs are included.

For PCSM Report Submittal, email report to [PCSM@indot.IN.gov](mailto:PCSM@indot.IN.gov)

- New upload location will be available in the future, look out for further guidance.

## PCSM Naming Convention

- Report – PCSM Report DES XXXXXXXX (Date) XX-XX-XXXX
  - For example: PCSM Report DES 1900162 2-23-2023
- Models – PCSM (Model Name) DES XXXXXXXX (Date) XX-XX-XXXX
  - For example: PCSM WinTR-55 DES 1900162 2-23-2023
- Use this basic naming convention for other file types

## Review Process

- Comment Form will be sent to designer via email as needed
  - INDOT PM will be cc'd, along with INDOT EWPO staff
  - PCSM Team review of plans is not part of the plan review process at this time; its an independent and separate review
- Report Approval Memo will be sent once design and report are approved
- Coordination meetings may be required
  - Designers are encouraged to ask questions ahead of submittals and request meetings if needed
- PCSM Reports will not be scored at this time; however, INDOT PMs will be aware of number of resubmittals

## Cost Estimates and Construction Specifications

- Reoccurring Special Provisions and Drawings are in the works
- For now, use traditional methods
  - USPs
  - Detail Sheets
  - Existing Pay Items
- PCSM Team can provide guidance if needed

# Resources

## Current Available Resources

- See Stormwater Webpage  
<https://www.in.gov/indot/engineering/environmental-services/storm-water/>
- Design Memorandum 22-22
- Post-construction Stormwater Measure Guidance
- PCSM Submittal Requirements
- PCSM Asset Naming Guidance
- Hydraulic Residence Time Calculation Template
- Water Quality Volume Calculation Template
- Maintenance Plan Templates

## Future Resources/Working

- Updates to Bridge and Drainage Assets Viewer
- Frequently Asked Questions
- Example Reports
- Reoccurring Special Provisions and Drawings
- CAD-ExcelSheets – PCSM Table for Plans
- Updates to Chapter 14

## Questions – Contact Us

- [PCSM@indot.IN.gov](mailto:PCSM@indot.IN.gov)
  - Email monitored by Jessica Eichhorst and Greg Couch
- Jessica Eichhorst – 317-766-1177 (cell, text or call)
- Greg Couch or Sandy Bowman