Stormwater Management/ Act 167 Update

JIM PILLSBURY: HYDRAULIC ENGINEER, MS, PE

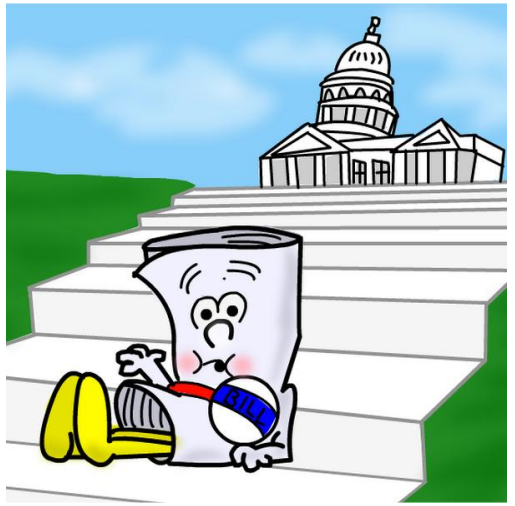
HANK BRADISH; STORMWATER TECHNICIAN/EIT

Westmoreland Conservation District

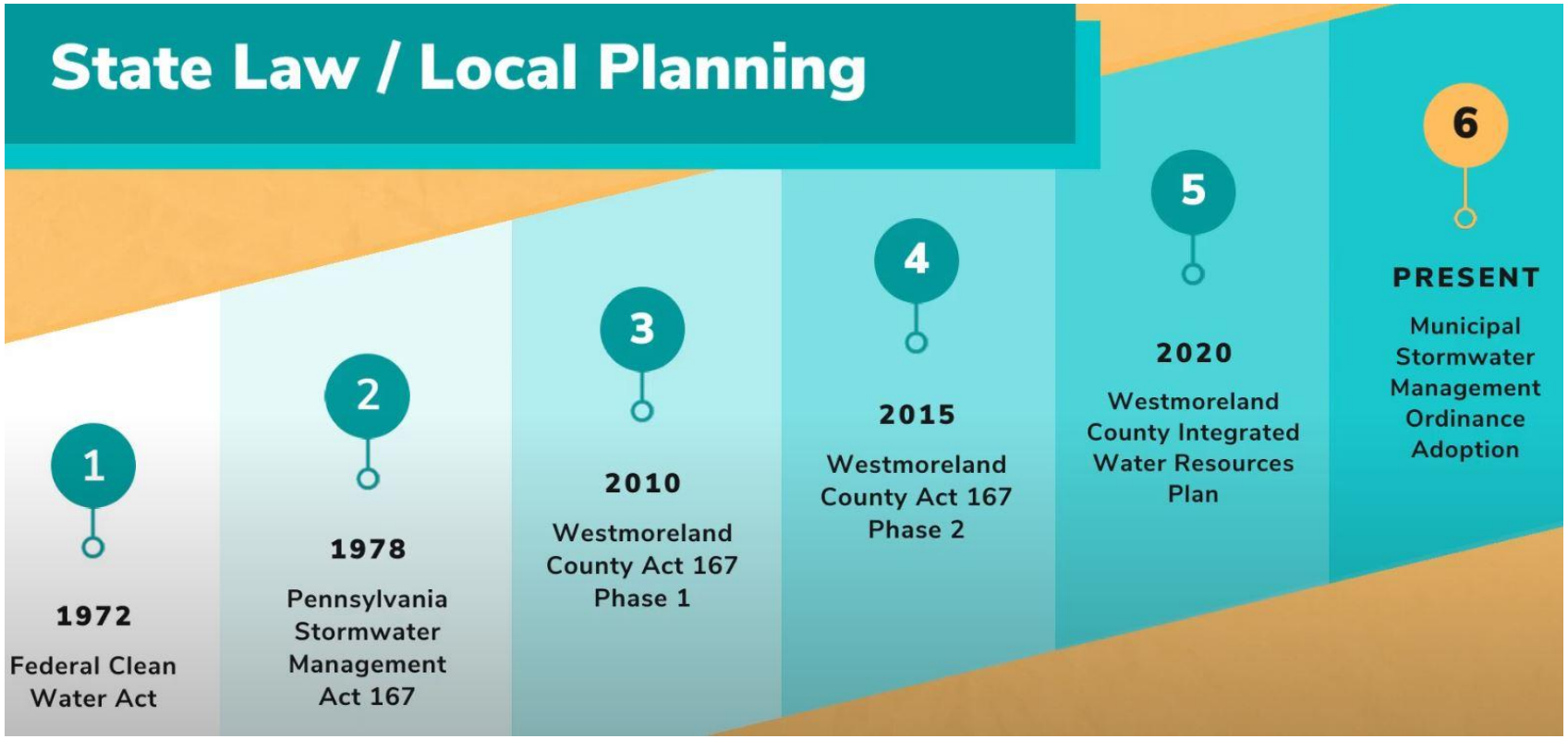
Feb. 20, 2026

Act 167

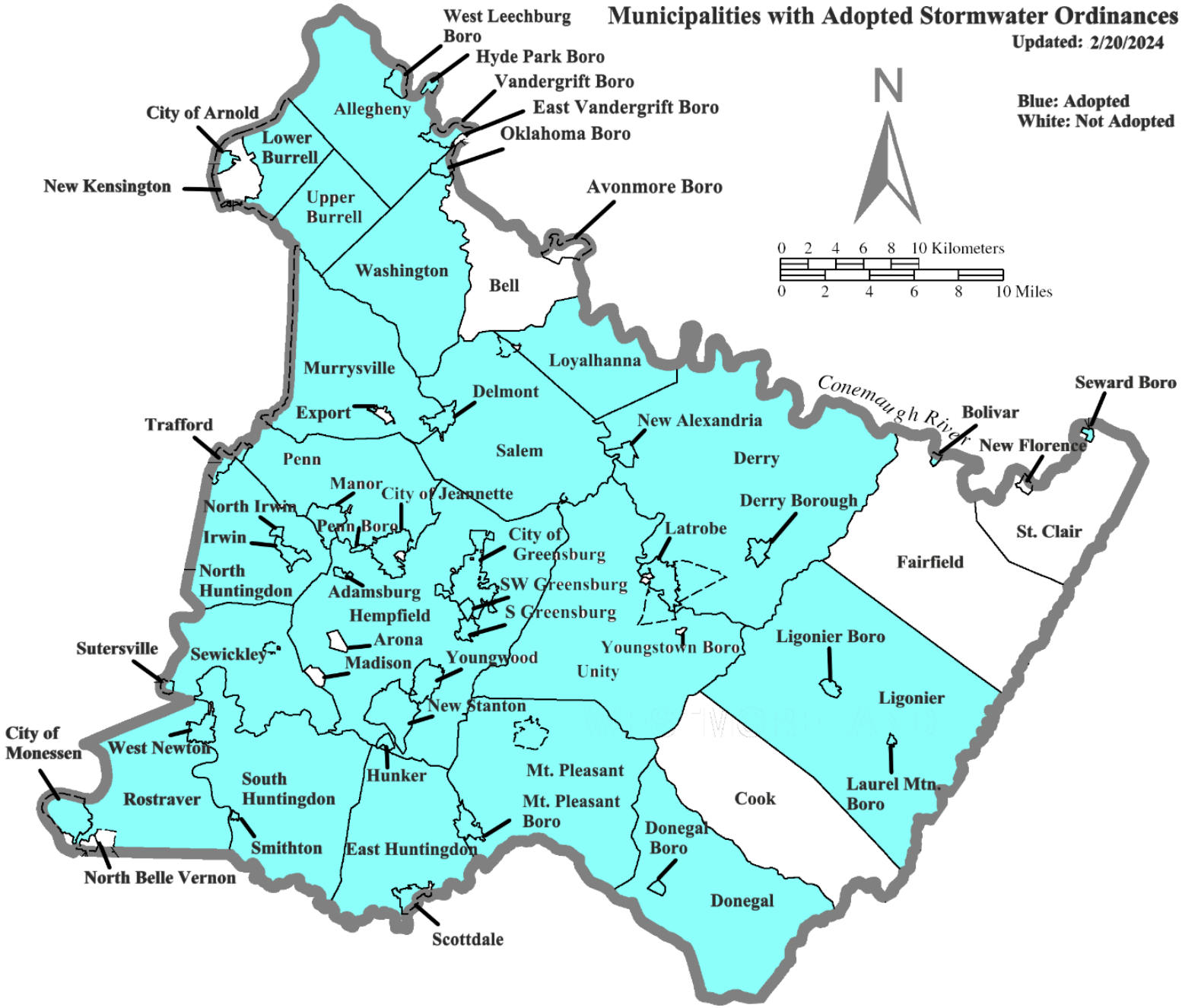
- The Pennsylvania Stormwater Management Act of 1978, or Act 167, required that within two years following the promulgation of guidelines by DEP, each county must prepare and adopt a watershed stormwater management plan ("Act 167 Plan") for each watershed located in the county as designated by DEP, in consultation with the municipalities located within each watershed, and must periodically review and revise such plans at least every five years.
- Encourage planning and management of stormwater runoff in each watershed.
- Authorize a comprehensive program designated to restore and protect the flood carrying capacity of Commonwealth streams; preserve natural stormwater runoff regimes; conserve groundwater



Current Status of Act 167



February 2026: Time to Update!



53/65 municipalities have adopted the ordinance

Act 167 Westmoreland County Phase 1

- Completed in 2010 by L.R. Kimball
- Watershed Plan Advisory Committee
- Includes a summary of county watershed characteristics
- Inventory of relevant problems
- Proposed scope of study, schedule and budget for completion of the phase 2 plan project.

- https://www.co.westmoreland.pa.us/DocumentCenter/View/2594/Final_Phase1_062510?bidId=

Act 167 Growing Greener Grant Phase 1 Grant **(Awarded 2026)**

- Awarded $50,000 to complete a new Phase 1 Study
- DEP reimburses up to 75% of total project costs
- Phase 1 study needs to be updated before Phase 2 can be updated.
- Phase 1 will require hiring a consultant to complete the study.
- Watershed Planning Advisory Committee will be required to meet periodically.

Municipal Support

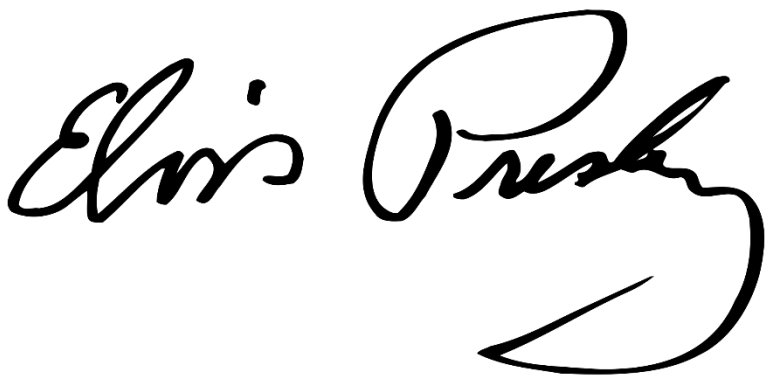
- Smithton Borough
- South Greensburg Borough
- St. Clair Twp.
- Trafford Borough
- Ligonier Borough
- Avonmore Borough
- Derry Twp.
- Southwest Greensburg
- Donegal borough
- City of Greensburg
- Mt. Pleasant Twp.
- Sewickley Twp.
- Irwin Borough
- Ligonier Township
- Manor Borough
- Municipality Murrysville
- City of New Kensington
- Penn Township

Additional Support

- Jacobs Creek Watershed Association
- Latrobe Municipal Authority
- Westmoreland Department of Planning and Development
- Turtle Creek Watershed Association
- Loyalhanna Watershed Association
- Westmoreland Board of Commissioners

Please Join the WPAC

- Your folders include a letter explaining what the watershed planning advisory committee is.
- Please sign and return the Watershed planning Advisory Committee Letter of Support



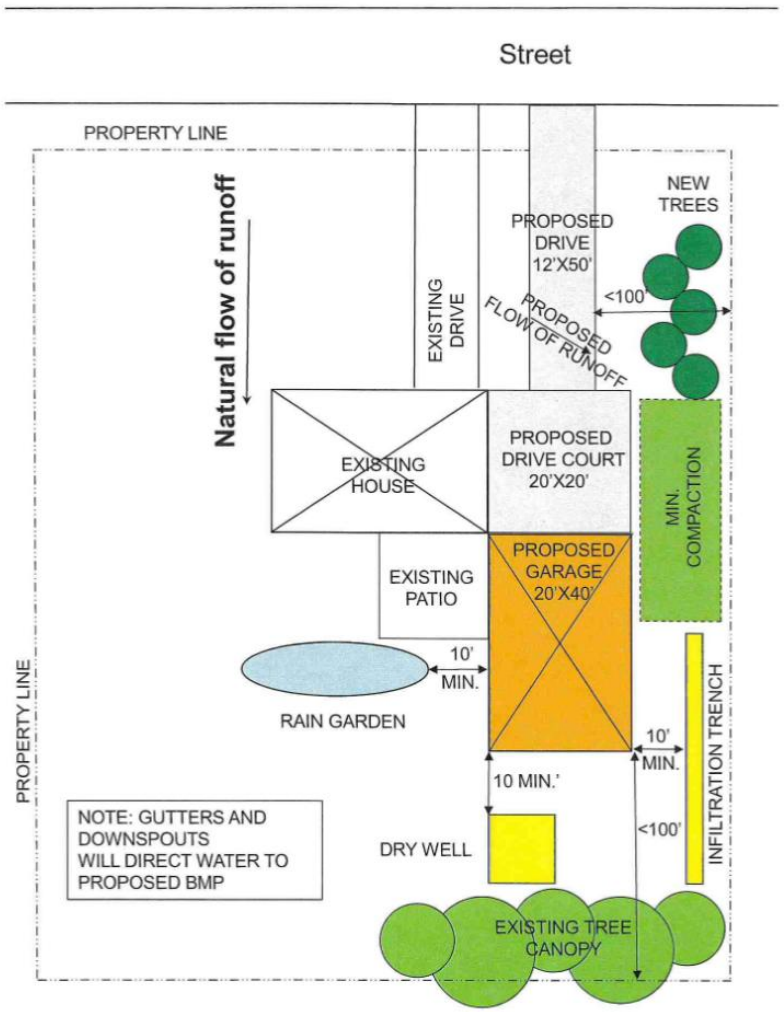
Phase 2 Proposed Updates

- Single family home clarification
- Making small project worksheets more user friendly
- Study additional watersheds that were not studied in the previous phase 2. Provide associated data to Westmorelandstormwater.org
- Adding additional BMPs that small project applicants can choose from
- Clarify ordinance language
- Bring ordinance into line with DEP's latest rules & regulations

Single family home construction—extent of disturbance

Small Project Sketch Plan: ***Example***

Project Name: _____ **Date:** _____.
Location: _____.



WCD 2-2020

Small Projects Sketch Plan

SMALL PROJECT STORMWATER MANAGEMENT WORKSHEET
For [Municipality]

Project Name: _____ **Date:** _____.
Location: _____.

TABLE 1: Determination of Control Volume Requirements:

New Impervious Surface	Area in SF	[1"] [2"] storm Multiplier (0.083) (0.167)	Required Control Volume [1"] [2"] in CF
	SF		CF
	SF		CF
	SF		CF
	SF		CF
	SF		CF
	SF		CF

Total Required Control Volume (enter in Table 2): _____ **CF**

TABLE 2: Determination of Volume Controlled:

Required Control Volume (Table 1)		**CF**
Non-structural BMP Credit (Table 6)	-	CF
Adjusted Required Control Volume (after credits) (Table 1 – Table 6)		**CF**
Structural BMP Control Volume (Table 10)		CF
TOTAL Volume Controlled (Table 6 + Table 10)		**CF**

NOTE: Total Volume Controlled shall be **greater than or equal to** Required Control Volume**.**

Determining Non-Structural BMP Credit:

TABLE 3: New Tree(s)

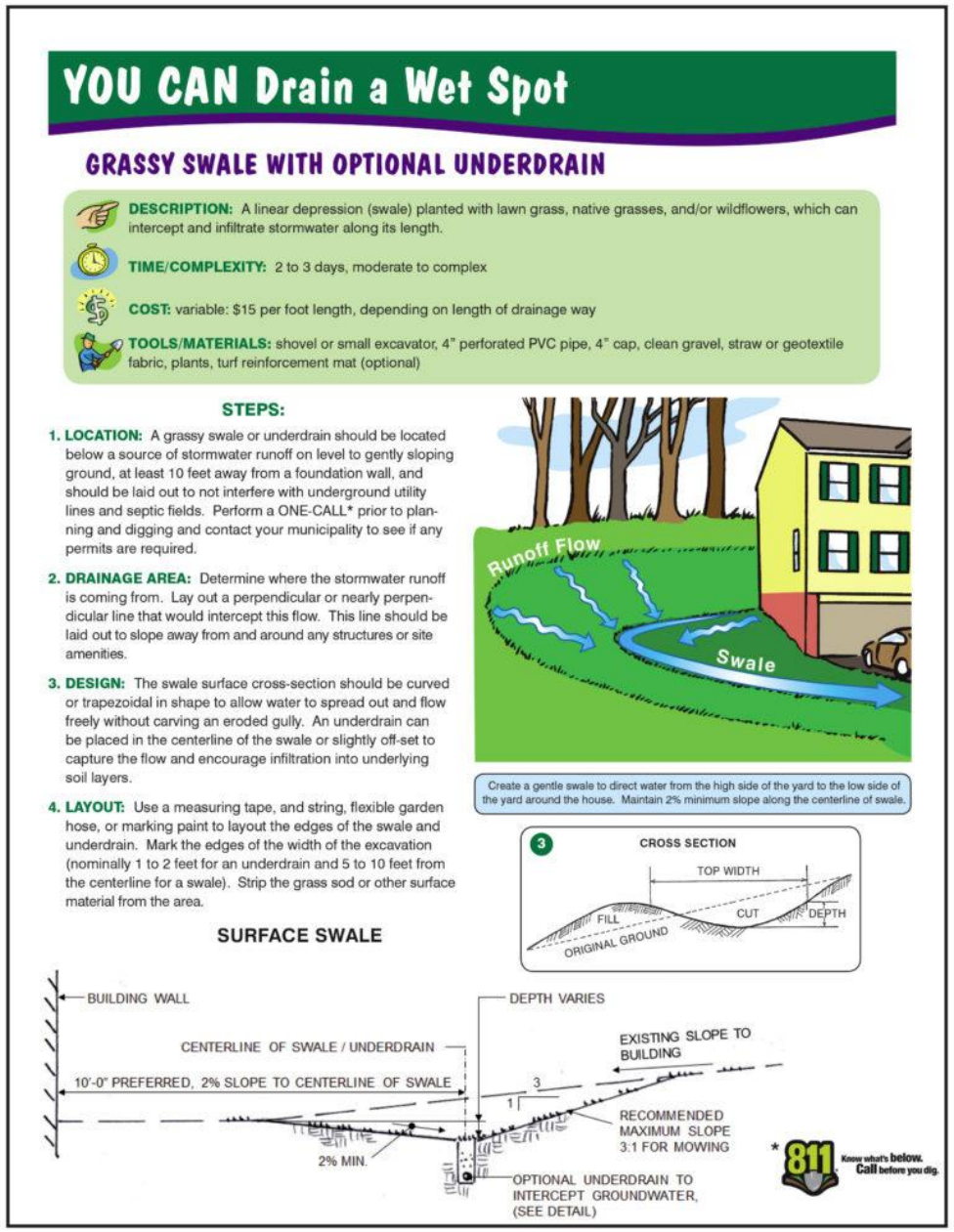
New Trees	Volume Control Multiplier	Tree Quantity	Volume Controlled (CF)
Deciduous	6 CF		CF
Evergreen	10 CF		CF

Total Volume Control Credit (new trees) **enter in Table 6**: _____ CF

TABLE 4: Existing Tree Canopy

Existing Tree Canopy (SF)	Distance of Impervious to Canopy (FT)	Volume Control Multiplier	Volume Controlled (CF)
SF	0 FT to 20 FT	0.0833	CF

Small Projects worksheet



YOU CAN Drain a Wet Spot

GRASSY SWALE WITH OPTIONAL UNDERDRAIN

DESCRIPTION: A linear depression (swale) planted with lawn grass, native grasses, and/or wildflowers, which can intercept and infiltrate stormwater along its length.

TIME/COMPLEXITY: 2 to 3 days, moderate to complex

COST: variable: $15 per foot length, depending on length of drainage way

TOOLS/MATERIALS: shovel or small excavator, 4" perforated PVC pipe, 4" cap, clean gravel, straw or geotextile fabric, plants, turf reinforcement mat (optional)

STEPS:

1. **LOCATION:** A grassy swale or underdrain should be located below a source of stormwater runoff on level to gently sloping ground, at least 10 feet away from a foundation wall, and should be laid out to not interfere with underground utility lines and septic fields. Perform a ONE-CALL* prior to planning and digging and contact your municipality to see if any permits are required.
2. **DRAINAGE AREA:** Determine where the stormwater runoff is coming from. Lay out a perpendicular or nearly perpendicular line that would intercept this flow. This line should be laid out to slope away from and around any structures or site amenities.
3. **DESIGN:** The swale surface cross-section should be curved or trapezoidal in shape to allow water to spread out and flow freely without carving an eroded gully. An underdrain can be placed in the centerline of the swale or slightly off-set to capture the flow and encourage infiltration into underlying soil layers.
4. **LAYOUT:** Use a measuring tape, and string, flexible garden hose, or marking paint to layout the edges of the swale and underdrain. Mark the edges of the width of the excavation (nominally 1 to 2 feet for an underdrain and 5 to 10 feet from the centerline for a swale). Strip the grass sod or other surface material from the area.

Create a gentle swale to direct water from the high side of the yard to the low side of the yard around the house. Maintain 2% minimum slope along the centerline of swale.

SURFACE SWALE

Additional BMP's: Grassy swale with underdrain

DEP's standards—what WCD uses to review plans—have changed since the Act 167 Plan was adopted

21.	conducted and is within the recommendations of Appendix C of the Stormwater BMP Manual or are otherwise technically sound.	☐	☐	☐
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 submittod.	☐	☐	☐
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 appropriatoly.	☐	☐	☐
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.	☐	☐	☐
25.	102.8(g)(2) – The PCSM Spreadsheet, Quality Worksheet was submitted, illustrating the net chango in water quality (pollutant loading) up to the 2-year/24-hour storm event.	☐	☐	☐
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).	☐	☐	☐

Managed Release Concept—a new approach to meeting Water Quality standards

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Clean Water

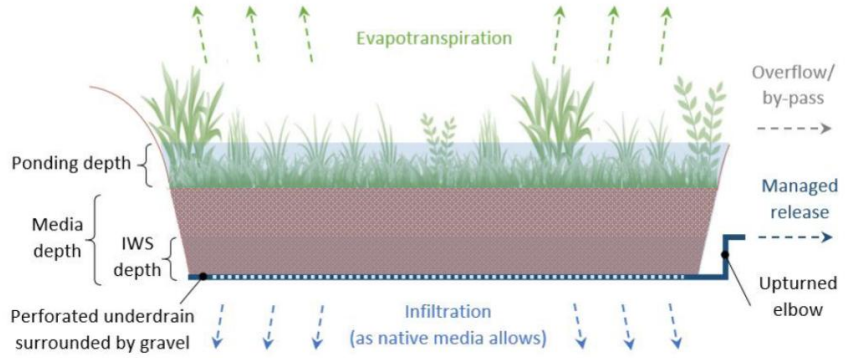
Managed Release Concept

August 25, 2020
Version 1.2

Description

Managed Release Concept (MRC) is a post-construction stormwater management (PCSM) strategy that comprises the collection, management, and filtration of captured runoff from the contributing drainage area through a best management practice (BMP) that is preferably vegetated and includes release of a portion of the captured runoff through an underdrain within the BMP. If the MRC BMP is not vegetated, then pretreatment is required to meet water quality requirements. MRC is intended to be used for project areas or subareas where infiltration is considered infeasible to meet regulatory requirements under § 102.8(g)(2). Figure 1 illustrates the components of a typical MRC BMP.

Figure 1: Managed Release Concept with Internal Water Storage (IWS) and Upturned Elbow for a Vegetated BMP



MRC requires that runoff from the 1.2-inch/2-hour storm[1] is temporarily impounded for use by vegetation, is filtered through a soil media or another acceptable pre-treatment device, is infiltrated through on-site undisturbed soils to the highest degree feasible, and is released through an underdrain or control structure at a rate similar to the lateral

A slide on Erosion Potential Analysis

Discussion Questions

- Does your municipality enforce the stormwater ordinance?
- What should be clarified or updated in the stormwater ordinance?
- Do you use westmorelandstormwater.org?
- How can we address water quality in the stormwater ordinance?
- Is the regulated development activity table working for your municipality?

D. Regulated Development Activities shall be as follows:

[REGULATED DEVELOPMENT ACTIVITY TABLE]

SWM Plan Requirement	**New Impervious Area for New and Redevelopment**	**Disturbed Area***	**Next Steps**
Exempt	0	Less than 1 acre	Comply with **Exemption** section of this ordinance
[No-Harm]	Up to [1,000] sf for urban OR [3,000] square feet for suburban/rural areas	Less than [3,000] sf urban OR [5,000] square feet for suburban/rural areas	Comply with **No-Harm** section of this ordinance
Waiver / Modification / Demonstrated Equivalency	Less than 1 acre, subject to municipal approval	Less than 1 acre	Comply with **Waiver / Modification / Demonstrated Equivalency** section of this ordinance
Small Project (per definition), refer to Appendix C	[1,000] [3,000] square feet to [10,000] square feet	[3,000] [5,000] square feet to [20,000] square feet	Submit **Small Project Site Plan** complete with all attachments
Stormwater Management Plan meeting the Ordinance requirements	Greater than [10,000] square feet if Exempt and Small Project criteria are not met, or if improvements do not meet No-Harm criteria	Greater than [20,000] square feet	Consult a qualified professional

Regulated Development Activity Table

Areas where we did not do much modeling

- Jacobs Creek (Mount Pleasant area, Scottdale area)
- Loyalhanna Creek (Latrobe area)
- Youghiogheny River (Rostraver)
- Pucketa Creek (New Kensington, Lower Burrell, Upper Burrell)
- Indian Creek (Donegal area)