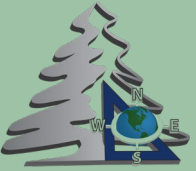


# Delaware County Stormwater Management Ordinance Update



**Municipal Information  
Workshop**

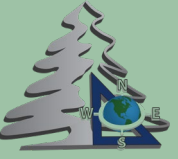
**May 26, 2022**



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# Outline

1. 2022 DEP MS4 Model Ordinance Summary of Changes
2. Act 167 Stormwater Management Plans/Model Ordinances
3. Delaware County-wide Model Stormwater Management Ordinance Updates
4. Tools for Implementation
5. Ordinance Update Timeline and Next Steps



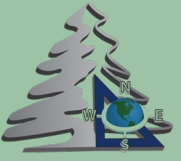
# Background

- DEP is directed under Act 167 to develop a **model stormwater ordinance**.
- **Existing MS4s** must update existing ordinances to be consistent with the model ordinance by **September 30, 2022**.
- **New MS4s** must adopt an ordinance consistent with the model ordinance **by September 30, 2022** or with 4<sup>th</sup> Annual MS4 Status Report.
- The Model Stormwater Management Ordinance satisfies **DEP's Act 167** requirements, and, for **MS4s**, regulatory requirements as implemented through **NPDES permits**.
- MS4s should consider requirements unique to specific county-wide or watershed-wide **Act 167 Plans**.



# 2022 DEP MS<sub>4</sub> Model Ordinance Summary of Changes

- Waivers
- Authorized Discharges
- Written Inspection Reports
- Optional Riparian Buffer Provisions
- Green Infrastructure and Low Impact Development



# Act 167 Stormwater Management Plans

- PA Act 167 of 1978
- Purpose: Reduce flooding and stormwater impacts of future development and redevelopment
- Mandates counties to prepare stormwater management plans and standards
- Mandates municipalities to adopt the stormwater management standards



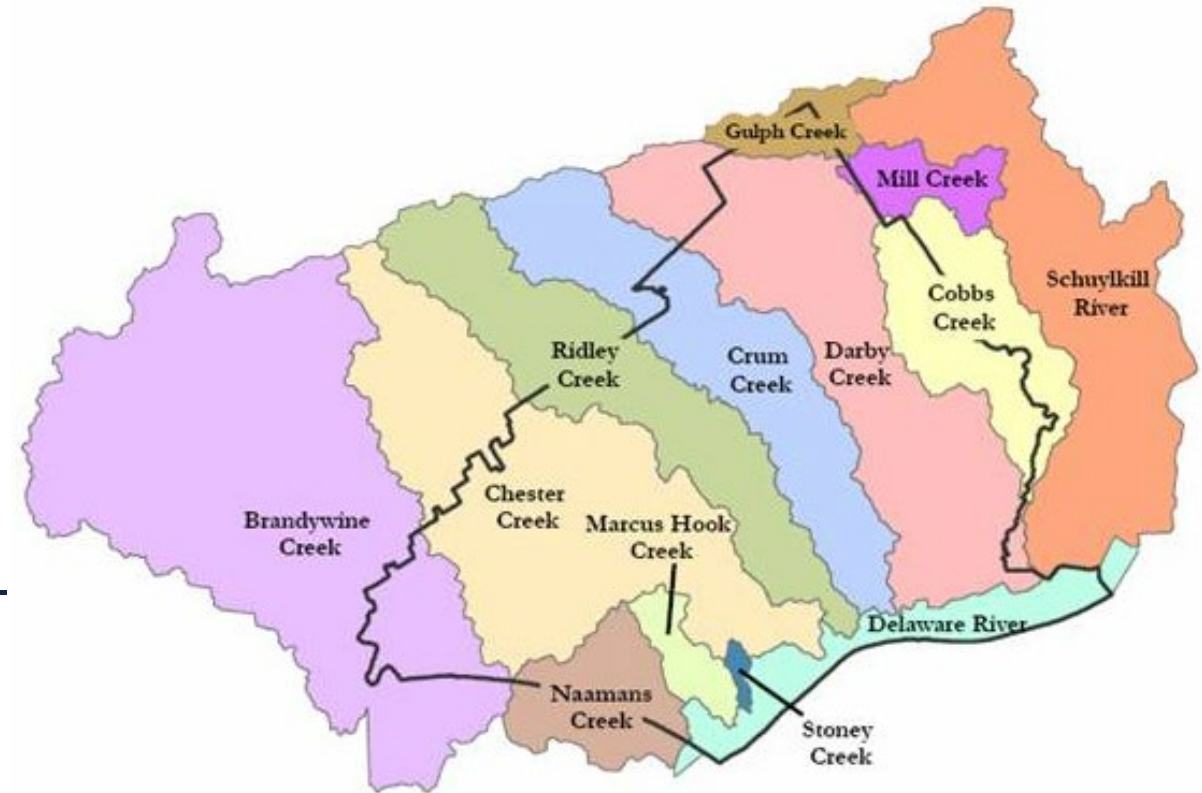
# Act 167 Stormwater Management Plans

- Countywide or Watershed-based plans
- Counties required to submit plans to DEP for approval
- Municipalities must enact ordinances consistent with Plans
- Counties required to update every 5 years
- Specific public and stakeholder input requirements

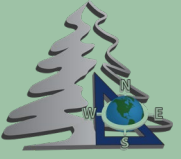


# Delaware County Act 167 Plans

- Ridley Creek (1988)
- Chester Creek (2002)
- Darby-Cobbs Creek (2005)
- Crum Creek (2011)
- Brandywine Creek/Chester County-wide Plan (2013, currently being updated)



# Delaware County Model Stormwater Management Ordinance



- Crum Creek Model Ordinance was updated in 2013
- Compliance with 2013 MS4 permit requirements
- Renamed the Crum Creek Generic Model Ordinance
- Not part of an Act 167 plan update





# Public and Stakeholder Input

- **February 11, 2022:** Announced update at Delaware County Sustainability Commission meeting
- **March 22, 2022:** Announced update at Delaware County Consortium of Governments (COG) meeting
- **April 19, 2022:** Presented draft updates at Ordinance Stakeholder meeting
- Accepted comments until the **end of April 2022.**
- An online **Water Resources Survey** is in the Chat window.





# Ordinance Components

Component	Name	Updates
<b>Ordinance</b>	<b>Delaware County-wide Stormwater Management Ordinance</b>	<b>Yes</b>
Appendix A	District Watershed Map	No
<b>Appendix B</b>	<b>Simplified Approach to SWM for Small Projects</b>	<b>Yes</b>
Appendix C-1	Sample SWM Site Plan Application and Proposed Schedule of Fees	No
Appendix C-2	SWM Site Plan Checklist	No
Appendix D	Implementation Flow Charts	No
Appendix E	Low Impact Development (LID) Practices	No
Appendix F	SWM Design Criteria	No
Appendix G	References	No
Appendix H	West Nile Virus Guidance	No
<b>Appendix I</b>	<b>Stormwater Controls and BMPs Operations &amp; Maintenance Agreement</b>	<b>Yes</b>
Appendix J	Riparian Buffer Trail Guidelines	No



# Major Updates

## Added Sections

- Erroneous Permit
- Waivers
- High Tunnel Exemption
- Riparian Buffers
- Removed Optional BMP Maintenance Fund section and added Inspection and BMP O&M Requirements
- Pet Waste



# Major Updates

## Definitions

Definition	Added/Updated
BMP (Best Management Practice)	Updated
Evapotranspiration	Added
Floodplain and Floodway	Updated
Green Infrastructure	Added
High Tunnel	Added
Impervious Surface	Updated
Low Impact Development (LID)	Added
Pet	Added
Regulated Impervious Surface	Added
Stormwater Control Measure (SCM)	Added
Stormwater Management Facility	Updated



# Miscellaneous Updates

- Minor clarifications to design criteria throughout
- Incorporated references to PA Stormwater BMP Manual (or latest design guidance as amended)
- Evapotranspiration can be quantified and credited towards meeting Water Quality requirements
- NPDES Permit Notice of Termination (NOT) requirement



# Ordinance Rollout Process

The screenshot shows a web browser window displaying the Delaware County website. The address bar shows the URL: [delcopa.gov/planning/currentprojects/CountywideModelStormwaterOrdinance.html](https://delcopa.gov/planning/currentprojects/CountywideModelStormwaterOrdinance.html). The page header includes the Delaware County logo and navigation links: ELECTED OFFICIALS, COURTS, A TO Z, PUBLIC ACCESS, STAY INFORMED, and LIVE, WORK, & PLAY. The main heading is "Countywide Model Stormwater Ordinance" with a breadcrumb trail: Home / Departments / Planning Department / Current Projects / Countywide Model Stormwater Ordinance.

*The Delaware County Planning Department, with Cedarville Engineering Inc., is updating the Generic Crum Creek Model Stormwater Ordinance.*

The updated Model Ordinance is designed to comply with the regulatory requirements of Pennsylvania Department of Environmental Protection's (PA DEP) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) program. The updates incorporated into the Model Ordinance are also designed to comply with the provisions included in PA DEP's 2022 Model Stormwater Ordinance.

The updated Model Ordinance is intended to be applicable countywide, and it is Delaware County's first step in determining the feasibility of countywide updates for Act 167 plans.

[Countywide Model Stormwater Management Ordinance Draft](#)

[Summary of Changes Table](#)

**STAKEHOLDER MEETING**  
What: Draft County-wide Stormwater Management Model Ordinance Review  
When: April 19, 2022, 1:00-3:00 PM  
Where: Virtually via Zoom  
<https://us02web.zoom.us/j/89933784846>

**PLANNING DEPARTMENT NAVIGATION**

[Access the Mapping and Data Portal](#)

- > [About Planning](#)
- > [Calendar](#)
- > [Current Projects](#)
- > [Delaware County 2035](#)
- > [Demographic Data](#)
- > [Development Review](#)
- > [Forms](#)
- > [Funding](#)
- > [Green Space and Trails Project](#)



# Tools



Release of water can begin at the start of the storm (i.e., the invert of the water quality orifice is at the invert of the facility). The design of the facility shall provide for protection from clogging and unwanted sedimentation.

- B. The temperature of receiving waters shall be protected through the use of BMPs that moderate temperature.

~~If a perennial or intermittent stream passes through, or a waterbody (i.e., lake, pond, wetland) is present on the site, the Applicant shall create a riparian buffer extending a minimum of *fifty (50) to one hundred fifty (150)* feet, to either side of the top of bank of the channel, lake, or wetland. The buffer area shall be planted with native vegetation and maintained in a vegetated state (Refer to Appendix B, Pennsylvania Native Plant List, contained in the PA BMP Manual).~~

~~1. The following provisions also apply to riparian buffers on lots in existence at the time of adoption of this Ordinance.~~

~~a. If the applicable rear or side yard setback is less than *fifty (50-150) feet*, the buffer width may be reduced to twenty-five (25) percent of the setback or twenty-five (25) feet, whichever is greater.~~

~~b. If a stream traverses a site in a manner that significantly reduces the use of the site, the buffer may be either:~~

- ~~i. Reduced to twenty-five (25) feet on either side, with municipal approval, or~~
- ~~ii. Reduced to ten (10) feet with municipal waiver.~~

~~2. Permitted uses within the buffer include the following, subject to municipal approval and provided that they comply with all federal, state, and local regulations:~~

- ~~a. Recreational trails. See Ordinance Appendix J Riparian Buffer Trail Guidelines.~~
- ~~b. Utility rights of way.~~
- ~~c. Bridges.~~
- ~~d. Other uses subject to municipal approval.~~

~~D. If an existing buffer is legally prescribed (i.e., deed, covenant, easement, etc.) and it exceeds the requirements of this Ordinance, the existing buffer shall be maintained.~~

C. Evapotranspiration may be quantified and credited towards meeting volume requirements according to the PADEP Post Construction Stormwater Management (PCSM) Spreadsheet and Instructions (December 2020) or the most recent guidance from PADEP.

## Section 307. Stream Bank Erosion Requirements

- A. In addition to controlling the water quality volume (in order to minimize the impact of stormwater runoff on downstream stream bank erosion), the primary requirement to control stream bank erosion is to design a BMP to detain the proposed conditions 2-year, 24-hour design storm to the existing conditions 1-year flow using the SCS Type II distribution. Additionally, provisions shall be made (such as adding a small orifice at the bottom of the outlet structure) to release the proposed conditions 1-year storm for a minimum of twenty-four (24) hours from a point in time when the maximum volume of water from the 1-year storm is stored

in a proposed BMP (i.e., the maximum water surface elevation is achieved in the facility). Release of water can begin at the start of the storm (i.e., the invert of the water quality orifice is at the invert of the facility).



# Tools



## **NOTES TO MUNICIPAL EDITOR:**

- 1) *This County-wide Model Stormwater Management Ordinance was developed by Delaware County to provide municipalities with assistance in complying with the 2022 Pennsylvania Department of Environmental Protection (PADEP) Model Stormwater Management Ordinance as required by the National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s). The base of this Model Ordinance is the Crum Creek Watershed Generic Model Stormwater Management Ordinance which is the 2011 Crum Creek Watershed Model Stormwater Management Ordinance which was updated for compliance with the 2012 PADEP Model Stormwater Management Ordinance and modified for use by all Delaware County municipalities for assistance in complying with NPDES Permit for Stormwater Discharges from Small MS4s.*
- 2) *It is recommended that municipalities enact the Model Ordinance as a stand-alone ordinance. In addition, it is recommended that municipalities review existing subdivision and land development and zoning ordinances and consider amending them to refer to and coordinate with the new stormwater management ordinance. Enactment in this manner is anticipated to provide maximum flexibility and authority for enforcement.*
- 3) *Municipality may, at its option, replace the term “Municipal Engineer” with “Municipality” in any or all places where “Municipal Engineer” currently appears throughout the Ordinance.*
- 4) *The text highlighted in blue indicates the Municipal Editor should enter in municipal-specific information. The text highlighted in green indicates additions to the original Crum Creek Watershed Generic Model Stormwater Management Ordinance. The text highlighted in red with a strikethrough indicates deletions from the original Crum Creek Watershed Generic Model Stormwater Management Ordinance.*
- 5) *To ensure applicability of this Ordinance to your Municipality, be sure to insert your Municipality’s name in each of the following locations:*
  - a) *Ordinance Title*
  - b) *Section 101*
  - c) *Article II, within the definitions of the following terms –*
    - i. *Governing Body*
    - ii. *Municipality*
    - iii. *Planning Commission*
    - iv. *Subdivision and Land Development Ordinance.*
- 6) *Where more than one Act 167 stormwater management plan applies to any given Municipality, it is recommended that the Municipality prepare and adopt one composite stormwater management ordinance that applies to the entire Municipality. If this County-wide Model Ordinance is used as the basis for a composite ordinance, then the following must be included:*
  - a) *The peak runoff release rate standards from the previously approved Act 167*



# Tools



## Delaware County-wide Model Stormwater Management Ordinance Updates – Summary of Changes

This table was created to document significant changes made to the Crum Creek Watershed Generic Stormwater Management Model Ordinance which previously served as the informal Delaware County-wide Ordinance. The Ordinance has been updated to for consistency with the Pennsylvania Department of Environmental Protection's (PA DEP) 2022 Model Stormwater Management (SWM) Ordinance, as well as general updates for clarity. This table summarizes the changes and does not include minor administrative updates. For complete documentation of the updates, please reference the Model Ordinance document itself. The Ordinance has been renamed the Delaware County-wide Model Stormwater Management Ordinance.

No.	Topic	Change	Reason for Update	Location Reference	Comments
1	Title	Revised ordinance title from "Crum Creek Watershed Stormwater Management Model Ordinance" to "Delaware County-wide Model Stormwater Management Ordinance."	General Update	Cover Page	Update to Cover Page.
2	Table of Contents	Added new sections that were inserted into the ordinance to the table of contents: Erroneous Permit, Waivers, and Riparian Buffers.	2022 MS4 Requirements	Table of Contents	Update to Table of Contents.
3	Notes to Municipal Editor	Added this section as instructions to whomever is editing the ordinance and customizing for the municipality.	General Update	Notes to Municipal Editor	Added to provide additional instruction to editor.
4	Green Infrastructure and Low Impact Development	Added statement regarding the intentions of Green Infrastructure (GI) and Low Impact Development (LID) use.	2022 MS4 Requirement	Subsection 102.H	Inserted language directly from PA DEP 2022 Model SWM Ordinance.
5	TMDLs	Added statement regarding the implementation of Total Maximum Daily Load (TMDL) requirements.	General Update	Subsection 103.S	Added for consistency with state and federal regulations.
6	Statutory Authority	Added reference to the Third Class City Code.	General Update	Subsection 104.E	Added language for clarification.
7	Exemptions	Added High Tunnels language.	Act 167 Requirement	Subsection 106.A.3	Inserted language directly from Act 167 amendment.
8	Erroneous Permit	Added this section for consistency with the PA DEP 2022 Model Ordinance.	2022 MS4 Requirement	Section 110	Inserted language directly from PA DEP 2022 Model SWM Ordinance
9	Waivers	Added this section as required by the PA DEP 2022 Model SWM Ordinance.	2022 MS4 Requirement	Section 111	Inserted language directly from PA DEP 2022 Model SWM Ordinance
10	Conservation District	Updated from the Crum Creek Model Ordinance to specify Delaware County.	General Update	Section 202	Inserted Delaware County.
11	Department	Added references to DEP, PA DEP, and PADEP.	General Update	Section 202	Inserted references to DEP, PA DEP, and PADEP.
12	Designee	Updated from the Crum Creek Model Ordinance to be specific to Delaware County.	General Update	Section 202	Inserted Delaware County Planning Department and Delaware County Conservation District.

Revised 4/13/2022



# New Decision Points

- 1. Green Infrastructure and Low Impact Development**
- 2. Riparian Buffer Provisions**
- 3. BMP O&M Inspection Requirements**
- 4. Pet Waste**



# Green Infrastructure and Low Impact Development

1) Decide whether to include **optional (more stringent) language** requiring justification for an applicant to not use these practices

2) Consider whether changes to **other municipal ordinances** would be required (SALDO, Zoning, etc.) to effectively implement





# Riparian Buffer Provisions

- 1) Decide whether to include DEP's **optional** riparian buffer provisions in your Stormwater Ordinance
- 2) DEP language requires a riparian buffer **easement**
- 3) DEP language specifies **management requirements**
- 4) Consider other **Municipal Ordinances** that may have riparian buffer requirements (Zoning, Floodplain, etc.).





# BMP O&M Inspection Requirements

## Three Options:

1. Municipal Inspection covered by a Stormwater BMP Maintenance Fund (included in original ordinance)
2. Landowner or Owner's Designee Inspection Requirements
3. Municipalities can include both options in their ordinance



## Inspection Frequencies:

- Annually for the first 5 years.
- Once every 3 years thereafter.
- Municipal Inspection Option 1: During or immediately after a 25-year or greater storm.
- Landowner Inspection Option 2: During or immediately after a 10-year or greater storm (provide reports to Municipality upon request).



# BMP O&M Inspection Requirements



## 1) Determine **who** will do inspections

- Municipality
- Responsible party
- Combination

## 2) Decide to establish/continue an **O&M Fund**

## 3) Develop or update your **BMP Inspection Program**



# Pet Waste



1) Requires all pet owners to properly **dispose of pet waste** on property that is not owned by that person

2) OPTIONAL for municipalities that do **NOT** have an **MS4 permit** or outfalls that discharge to streams impaired by **pathogens**



# September 30, 2022 Due Date

## Ordinance adoption due date:

- New permittees vs existing permittees
- Individual permittees vs General permittees
- What happens if you can't meet the deadline?

## What to include in the Annual Report as documentation:

- Date of adoption
- Attach copy of adopted ordinance

### PART C

#### SPECIAL CONDITIONS

##### I. STORMWATER MANAGEMENT PROGRAM (SWMP)

e. **BMP #5:** Enact a Stormwater Management Ordinance or SOP to implement and enforce a stormwater management program that includes prohibition of non-stormwater discharges to the regulated small MS4.

(1) Municipal permittees shall submit a copy of an ordinance that is consistent with DEP's 2022 Model Stormwater Management Ordinance (3800-PM-BCW0100j) as an attachment to an Annual MS4 Status Report by September 30, 2022 (existing permittees) or the fourth (4<sup>th</sup>) Annual MS4 Status Report following approval of coverage under this Permit (new permittees).

(2) Permittees that lack the authority to enact ordinances (non-municipal permittees and counties) shall develop and adopt an SOP that prohibits non-stormwater discharges consistent with this Permit, and shall submit a copy of the SOP as an attachment to an Annual MS4 Status Report by September 30, 2022 (existing permittees) or the fourth (4<sup>th</sup>) Annual MS4 Status Report following approval of coverage under this Permit (new permittees).







# Next Steps



1. Updated Ordinance and Summary of Changes will be **posted on website**.
2. Submitted to DEP for review **this week**.
3. Municipalities to **review, edit,** and **adopt** updated ordinance.
4. Municipalities to submit to DEP with Annual MS4 Status Report **due September 30, 2022**.



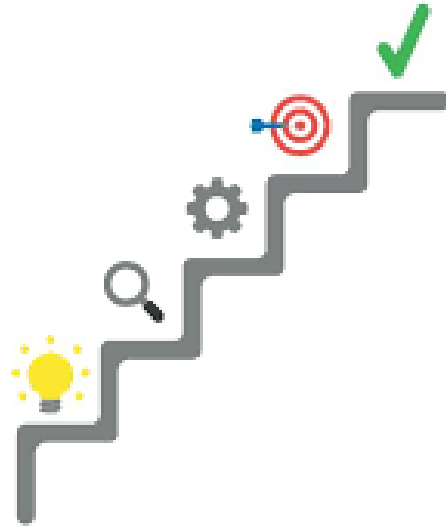
# General Update Process

- 1) **Work backwards** from 9/30/22 adoption due date and request to be added to agenda of public meetings (Planning Commission, Board/Council, etc.)
- 2) Obtain **Word document** of current ordinance
- 3) Enter updates as “**track changes**” based on 2022 County-wide Ordinance
- 4) **Municipal Engineer** to complete updates or at least provide input
- 5) **Solicitor** to review and format for adoption (amend current ordinance or repeal and replace)
- 6) Present at **public meeting(s)**
- 7) **Adoption** by Board/Council
- 8) Review and update **supporting implementation documents** (permit applications, website, etc.) as needed



# Future Act 167 Planning

- The County-wide Model Ordinance is first step in determining feasibility of County-wide updates to the Act 167 plans.
- A survey is in the Chat window and will be distributed via email for input on pursuing County-wide Act 167 planning.



# QUESTIONS?



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