



## NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) 2022 MODEL STORMWATER MANAGEMENT ORDINANCE

The Pennsylvania Storm Water Management Act (Act 167) requires municipalities to “adopt or amend, and shall implement such ordinances and regulations, including zoning, subdivision and development, building code, and erosion and sedimentation ordinances, as are necessary to regulate development within the municipality in a manner consistent with the applicable watershed storm water plan and the provisions of this act.”

Federal regulations at 40 CFR § 122.34 require the use of ordinances by small MS4s to address 1) the prohibition of unauthorized non-stormwater discharges (MCM #3), 2) erosion and sediment controls for construction activities involving earth disturbances of one acre or more (or disturbances less than one acre if the construction activity is part of a larger common plan of development or sale that would disturb one acre or more) (MCM #4), and 3) post-construction stormwater management for new development and redevelopment projects (MCM #5).

DEP is directed under Act 167 to develop a model stormwater ordinance. DEP’s intention in publishing the Model Stormwater Management Ordinance contained in this document is that its use will satisfy both Act 167 requirements and, for MS4s, regulatory requirements as implemented through NPDES permits. However, municipalities should consider requirements unique to specific county-wide or watershed-wide Act 167 Plans when developing ordinances. The title of this document contains the year 2022 because it is expected that MS4s will update existing ordinances to be consistent with the model ordinance in this document by September 30, 2022.

A Word version of the 2022 Model Ordinance is available on DEP’s website, [www.dep.pa.gov/MS4](http://www.dep.pa.gov/MS4), and may be used by municipalities to facilitate development of a new ordinance or modification to existing ordinances. Text highlighted in gray is an indicator where municipal-specific information should be entered. Text highlighted in yellow is optional content that municipalities are encouraged to use where applicable. **Note - use of the optional content may be used toward meeting pollutant load reduction obligations of the NPDES permit if the permittee can demonstrate reductions from the optional practices.**

It is recommended that the municipal solicitor review Article VIII – Enforcement and Penalties, and make any revisions necessary to ensure enforcement is pursued commensurate with applicable municipal code. Appendix A to the Model Stormwater Management Ordinance is a recommended format for a landowner Operation and Maintenance agreement.

# STORMWATER MANAGEMENT ORDINANCE

ORDINANCE NO. 422

Newberry Township  
1915 Old Trail Road  
Etters, York County, PA

Adopted at a Public Meeting Held on

February 28, 2023

Article I – General Provisions

Section 101.	Short Title
Section 102.	Statement of Findings
Section 103.	Purpose
Section 104.	Statutory Authority
Section 105.	Applicability
Section 106.	Repealer
Section 107.	Severability
Section 108.	Compatibility with Other Requirements
Section 109.	Erroneous Permit
Section 110.	Waivers

Article II – Definitions

Article III – Stormwater Management Standards

Section 301.	General Requirements
Section 302.	Exemptions
Section 303.	Volume Controls
Section 304.	Rate Controls
Section 305.	Riparian Buffers
Section 306.	Stormwater Design Requirements

Article IV – Stormwater Management Site Plan Requirements

Section 401.	Plan Requirements
Section 402.	Plan Submission
Section 403.	Plan Review
Section 404.	Modification of Plans
Section 405.	Resubmission of Disapproved SWM Site Plans
Section 406.	Authorization to Construct and Term of Validity
Section 407.	As-Built Plans, Completion Certificate and Final Inspection

Article V – Operation and Maintenance

Section 501.	Responsibilities of Developers and Landowners
Section 502.	Operation and Maintenance Agreements
Section 503.	Performance Guarantee

Article VI – Fees and Expenses

Section 601.	General
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Article VII – Prohibitions

Section 701.	Prohibited Discharges and Connections
Section 702.	Roof Drains and Sump Pumps
Section 703.	Alteration of SWM BMPs

Article VIII – Enforcement and Penalties

Section 801.	Right-of-Entry
Section 802.	Inspection
Section 803.	Enforcement
Section 804.	Suspension and Revocation
Section 805.	Penalties
Section 806.	Appeals

Article IX – References

Appendix 1 – Application for a Stormwater Management Permit Minor Land Disturbance  
Appendix 2 – Application for a Stormwater Management Permit Major Land Disturbance  
Appendix 3 – Operation and Maintenance Agreement

## **ARTICLE I – GENERAL PROVISIONS**

### **Section 101. Short Title**

This Ordinance shall be known and may be cited as the "Newberry Township Stormwater Management Ordinance."

### **Section 102. Statement of Findings**

The governing body of the municipality finds that:

- A. Inadequate management of accelerated runoff of stormwater resulting from development throughout a watershed increases runoff volumes, flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of streams and storm sewers, greatly increases the cost of public facilities to carry and control stormwater, undermines flood plain management and flood control efforts in downstream communities, reduces groundwater recharge, threatens public health and safety, and increases nonpoint source pollution of water resources.
- B. A comprehensive program of stormwater management (SWM), including reasonable regulation of development and activities causing accelerated runoff, is fundamental to the public health, safety, and welfare and the protection of people of the Commonwealth, their resources, and the environment.
- C. Stormwater is an important water resource that provides groundwater recharge for water supplies and supports the base flow of streams.
- D. The use of green infrastructure and low impact development (LID) are intended to address the root cause of water quality impairment by using systems and practices which use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near where it falls to earth. Green infrastructure practices and LID contribute to the restoration or maintenance of pre-development hydrology.
- E. Federal and state regulations require certain municipalities to implement a program of stormwater controls. These municipalities are required to obtain a permit for stormwater discharges from their separate storm sewer systems under the National Pollutant Discharge Elimination System (NPDES) program.

### **Section 103. Purpose**

The purpose of this Ordinance is to promote health, safety, and welfare within the municipality and its watershed by minimizing the harms and maximizing the benefits described in Section 102 of this Ordinance, through provisions designed to:

- A. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code 93 to protect, maintain, reclaim, and restore the existing and designated uses of the waters of this Commonwealth.
- B. Preserve natural drainage systems.
- C. Manage stormwater runoff close to the source, reduce runoff volumes and mimic predevelopment hydrology.
- D. Provide procedures and performance standards for stormwater planning and management.
- E. Maintain groundwater recharge to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
- F. Prevent scour and erosion of stream banks and streambeds.
- G. Provide proper operation and maintenance of all stormwater best management practices (BMPs) that are implemented within the municipality.
- H. Provide standards to meet NPDES permit requirements.

#### **Section 104. Statutory Authority**

The municipality is empowered to regulate land use activities that affect runoff by the authority of the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended, and/or the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, et seq., as amended, The Stormwater Management Act.

#### **Section 105. Applicability**

All regulated activities and all activities that may affect stormwater runoff, including land development and earth disturbance activity, are subject to regulation by this Ordinance.

#### **Section 106. Repealer**

Any other ordinance provision(s) or regulation of the municipality inconsistent with any of the provisions of this Ordinance is hereby repealed to the extent of the inconsistency only.

#### **Section 107. Severability**

In the event that a court of competent jurisdiction declares any section or provision of this Ordinance invalid, such decision shall not affect the validity of any of the remaining provisions of this Ordinance.

#### **Section 108. Compatibility with Other Requirements**

Approvals issued and actions taken under this Ordinance do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other code, law, regulation or ordinance.

#### **Section 109. Erroneous Permit**

Any permit or authorization issued or approved based on false, misleading or erroneous information provided by an applicant is void without the necessity of any proceedings for revocation. Any work undertaken or use established pursuant to such permit or other authorization is unlawful. No action may be taken by a board, agency or employee of the Municipality purporting to validate such a violation.

#### **Section 110. Waivers**

- A. If the Municipality determines that any requirement under this Ordinance cannot be achieved for a particular regulated activity, the Municipality may, after an evaluation of alternatives, approve measures other than those in this Ordinance, subject to Section 110, paragraphs B and C.
- B. Waivers or modifications of the requirements of this Ordinance may be approved by the Municipality if enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that the modifications will not be contrary to the public interest and that the purpose of the Ordinance is preserved. Cost or financial burden shall not be considered a hardship. Modification may be considered if an alternative standard or approach will provide equal or better achievement of the purpose of the Ordinance. A request for modifications shall be in writing and accompany the Stormwater Management Site Plan submission. The request shall provide the facts on which the request is based, the provision(s) of the Ordinance involved and the proposed modification.
- C. No waiver or modification of any regulated stormwater activity involving earth disturbance greater than or equal to one acre may be granted by the Municipality unless that action is approved in advance by the Department of Environmental Protection (DEP) or the delegated county conservation district.

## ARTICLE II – DEFINITIONS

For the purposes of this Ordinance, certain terms and words used herein shall be interpreted as follows:

- A. Words used in the present tense include the future tense; the singular number includes the plural, and the plural number includes the singular; words of masculine gender include feminine gender; and words of feminine gender include masculine gender.
- B. The word “includes” or “including” shall not limit the term to the specific example but is intended to extend its meaning to all other instances of like kind and character.
- C. The words “shall” and “must” are mandatory; the words “may” and “should” are permissive.

These definitions do not necessarily reflect the definitions contained in pertinent regulations or statutes, and are intended for this Ordinance only.

**Agricultural Activity** – Activities associated with agriculture such as agricultural cultivation, agricultural operation, and animal heavy use areas. This includes the work of producing crops including tillage, land clearing, plowing, disking, harrowing, planting, harvesting crops or pasturing and raising of livestock and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

**Applicant** – A landowner, developer, or other person who has filed an application to the municipality for approval to engage in any regulated activity at a project site in the municipality.

**Best Management Practice (BMP)** – Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from regulated activities, to meet state water quality requirements, to promote groundwater recharge, and to otherwise meet the purposes of this Ordinance. Stormwater BMPs are commonly grouped into one of two broad categories or measures: “structural” or “non-structural.” In this Ordinance, non-structural BMPs or measures refer to operational and/or behavior-related practices that attempt to minimize the contact of pollutants with stormwater runoff, whereas structural BMPs or measures are those that consist of a physical device or practice that is installed to capture and treat stormwater runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices, from large-scale retention ponds and constructed wetlands, to small-scale underground treatment systems, infiltration facilities, filter strips, low impact design, bioretention, wet ponds, permeable paving, grassed swales, riparian or forested buffers, sand filters, detention basins, and manufactured devices. Structural stormwater BMPs are permanent appurtenances to the project site.

**Conservation District** – A conservation district, as defined in Section 3(c) of the Conservation District Law (3 P. S. § 851(c)) that has the authority under a delegation agreement executed with DEP to administer and enforce all or a portion of the regulations promulgated under 25 Pa. Code 102.

**Design Storm** – The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence (e.g., a 5-year storm) and duration (e.g., 24 hours) used in the design and evaluation of stormwater management systems. Also see Return Period.

**Detention Volume** – The volume of runoff that is captured and released into the waters of the Commonwealth at a controlled rate.

**DEP** – The Pennsylvania Department of Environmental Protection.

**Development Site (Site)** – See Project Site.

**Disturbed Area** – An unstabilized land area where an earth disturbance activity is occurring or has occurred.

**Earth Disturbance Activity** – A construction or other human activity which disturbs the surface of the land, including, but not limited to: clearing and grubbing; grading; excavations; embankments; road maintenance; building construction; and the moving, depositing, stockpiling, or storing of soil, rock, or earth materials.

**Erosion** – The natural process by which the surface of the land is worn away by water, wind, or chemical action.

**Existing Condition** – The dominant land cover during the 5-year period immediately preceding a proposed regulated activity.

**FEMA** – Federal Emergency Management Agency.

**Floodplain** – Any land area susceptible to inundation by water from any natural source or delineated by applicable FEMA maps and studies as being a special flood hazard area. Also includes areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania DEP Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by DEP).

**Floodway** – The channel of the watercourse and those portions of the adjoining floodplains that are reasonably required to carry and discharge the 100-year flood. Unless otherwise specified, the boundary of the floodway is as indicated on maps and flood insurance studies provided by FEMA. In an area where no FEMA maps or studies have defined the boundary of the 100-year floodway, it is assumed--absent evidence to the contrary--that the floodway extends from the stream to 50 feet from the top of the bank of the stream.

**Forest Management/Timber Operations** – Planning and activities necessary for the management of forestland. These include conducting a timber inventory, preparation of forest management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting, site preparation, and reforestation.

**Green Infrastructure** – Systems and practices that use or mimic natural processes to infiltrate, evapotranspire, or reuse stormwater on the site where it is generated.

**Hydrologic Soil Group (HSG)** – Infiltration rates of soils vary widely and are affected by subsurface permeability as well as surface intake rates. Soils are classified into four HSGs (A, B, C, and D) according to their minimum infiltration rate, which is obtained for bare soil after prolonged wetting. The NRCS defines the four groups and provides a list of most of the soils in the United States and their group classification. The soils in the area of the development site may be identified from a soil survey report that can be obtained from local NRCS offices or conservation district offices. Soils become less pervious as the HSG varies from A to D (NRCS<sup>1,2</sup>).

**Impervious Surface (Impervious Area)** – A surface that prevents the infiltration of water into the ground. Impervious surfaces (or areas) shall include, but not be limited to: roofs; additional indoor living spaces, patios, garages, storage sheds and similar structures; and any new streets or sidewalks. Decks, parking areas, and driveway areas are not counted as impervious areas if they do not prevent infiltration.

**Karst** – A type of topography or landscape characterized by surface depressions, sinkholes, rock pinnacles/uneven bedrock surface, underground drainage, and caves. Karst is formed on carbonate rocks, such as limestone or dolomite.

**Land Development (Development)** – Inclusive of any or all of the following meanings: (i) the improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving (a) a group of two or more buildings or (b) the division or allocation of land or space between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features; (ii) any subdivision of land; (iii) development in accordance with Section 503(1.1) of the PA Municipalities Planning Code.

**Land Disturbance Activity** – The use of land defined as a regulated Activity

A. Minor Land Disturbance – The use of land involving

1. Installation of new impervious surface that is more than 2,500 sqft. but less than 5,000 sqft.
2. Land Disturbance greater than 10,000 sqft. but less than 1 acre.

B. Major Land Disturbance – The use of land involving

3. Installation of new impervious surface that is more than 5,000 sqft.
4. Land Disturbance is greater than 1 acre.



**Low Impact Development (LID)** – Site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration, evapotranspiration, and reuse of rainwater. LID can be applied to new development, urban retrofits, and revitalization projects. LID utilizes design techniques that infiltrate, filter, evaporate, and store runoff close to its source. Rather than rely on costly large-scale conveyance and treatment systems, LID addresses stormwater through a variety of small, cost-effective landscape features located on-site.

**Municipality** – Newberry Township, York County, Pennsylvania.

**NRCS** – USDA Natural Resources Conservation Service (previously SCS).

**Peak Discharge** – The maximum rate of stormwater runoff from a specific storm event.

**Pervious Area** – Any area not defined as impervious.

**Project Site** – The specific area of land where any regulated activities in the municipality are planned, conducted, or maintained.

**Qualified Professional** – Any person licensed by the Pennsylvania Department of State or otherwise qualified by law to perform the work required by this Ordinance.

**Regulated Activities** – Any earth disturbance activities or any activities that involve the alteration or development of land in a manner that may affect stormwater runoff.

**Regulated Earth Disturbance Activity** – Activity involving earth disturbance subject to regulation under 25 Pa. Code 92, 25 Pa. Code 102, or the Clean Streams Law.

**Retention Volume/Removed Runoff** – The volume of runoff that is captured and not released directly into the surface waters of this Commonwealth during or after a storm event.

**Return Period** – The average interval, in years, within which a storm event of a given magnitude can be expected to occur one time. For example, the 25-year return period rainfall would be expected to occur on average once every 25 years; or stated in another way, the probability of a 25-year storm occurring in any one year is 0.04 (i.e., a 4% chance).

**Riparian Buffer** – A permanent area of trees and shrubs located adjacent to streams, lakes, ponds and wetlands.

**Runoff** – Any part of precipitation that flows over the land.

**Sediment** – Soils or other materials transported by surface water as a product of erosion.

**State Water Quality Requirements** – The regulatory requirements to protect, maintain, reclaim, and restore water quality under Title 25 of the Pennsylvania Code and the Clean Streams Law.

**Stormwater** – Drainage runoff from the surface of the land resulting from precipitation or snow or ice melt.

**Stormwater Management Facility** – Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater management facilities include, but are not limited to: detention and retention basins; open channels; storm sewers; pipes; and infiltration facilities.

**Stormwater Management Site Plan** – The plan prepared by the developer or his representative indicating how stormwater runoff will be managed at the development site in accordance with this Ordinance. **Stormwater Management Site Plan** will be designated as **SWM Site Plan** throughout this Ordinance.

**Subdivision** – As defined in The Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247.

**USDA** – United States Department of Agriculture.

**Waters of this Commonwealth** – Any and all rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs, and all other bodies or channels of

conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

**Watershed** – Region or area drained by a river, watercourse, or other surface water of this Commonwealth.

**Wetland** – Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas.

## ARTICLE III – STORMWATER MANAGEMENT STANDARDS

### Section 301. General Requirements

A. For all regulated activities, unless preparation of an SWM Site Plan is specifically exempted in Section 302:

1. Preparation and implementation of an approved SWM Site Plan is required meeting the following.

#### Minor Land Disturbance

An application for a Stormwater Management Permit for a Minor Land Disturbance, as defined in this Ordinance, shall include:

- A. One (1) completed copy of the application for a Stormwater Management Permit (See Appendix 1).
- B. Two (2) paper copies and one (1) electronic PDF of the Stormwater Management Plan (See Section 401 for Plan Contents).
- C. Filing fee in the amounts specified in the fee schedule as established by resolution or ordinance of the Board of Supervisors

In the event the review of the Minor Land Disturbance Permit Application reveals the potential for impacts to downstream properties, the Township may require the Applicant to submit additional information to demonstrate compliance with the requirements of this Ordinance. Such information may include portions or all of the requirements for a major land disturbance.

#### Major Land Disturbance

An Application for a stormwater management permit for a land disturbance activity, as defined in this ordinance, shall include the following items:

- A. One (1) completed copy of the application for a Stormwater Management Permit (see Appendix No. 2).
  - B. Two (2) paper copies and one (1) electronic PDF of the Stormwater Management Plan and Report (See Section 401 for plan Contents).
  - C. Filing fee in the amount specified in the fee schedule as established by resolution or ordinance of the Board of Supervisors.
  - D. Performance bond, when applicable (see Section 503 and Article V of Subdivision and Land Development Ordinance).
2. No regulated activities shall commence until the municipality issues written approval of an SWM Site Plan, which demonstrates compliance with the requirements of this Ordinance.
- B. SWM Site Plans approved by the municipality, in accordance with Section 406, shall be on site throughout the duration of the regulated activity.
  - C. The municipality may, after consultation with DEP, approve measures for meeting the state water quality requirements other than those in this Ordinance, provided that they meet the minimum requirements of, and do not conflict with, state law including, but not limited to, the Clean Streams Law.
  - D. For all regulated earth disturbance activities, erosion and sediment control BMPs shall be designed, implemented, operated, and maintained during the regulated earth disturbance activities (e.g., during construction) to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law. Various BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual* (E&S Manual<sup>3</sup>), No. 363-2134-008, as amended and updated.

- E. Impervious areas:
1. The measurement of impervious areas shall include all of the impervious areas in the total proposed development even if development is to take place in stages.
  2. For development taking place in stages, the entire development plan must be used in determining conformance with this Ordinance.
  3. For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this Ordinance; except that the volume controls in Section 303 and the peak rate controls of Section 304 do not need to be retrofitted to existing impervious areas that are not being altered by the proposed regulated activity.
- F. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification to the adjacent property owner(s). Such stormwater flows shall be subject to the requirements of this Ordinance.
- G. All regulated activities shall include such measures as necessary to:
1. Protect health, safety, and property.
  2. Meet the water quality goals of this Ordinance by implementing measures to:
    - a. Minimize disturbance to floodplains, wetlands, and wooded areas.
    - b. Maintain or extend riparian buffers.
    - c. Avoid erosive flow conditions in natural flow pathways.
    - d. Minimize thermal impacts to waters of this Commonwealth.
    - e. Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible.
  3. Incorporate methods described in the *Pennsylvania Stormwater Best Management Practices Manual* (BMP Manual<sup>4</sup>). If methods other than green infrastructure and LID methods are proposed to achieve the volume and rate controls required under this Ordinance, the SWM Site Plan must include a detailed justification demonstrating that the use of LID and green infrastructure is not practicable.
- H. The design of all facilities over karst shall include an evaluation of measures to minimize adverse effects.
- I. Infiltration BMPs should be spread out, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other requirements of this Ordinance.
- J. Normally dry, open top, storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm.
- K. The design storm volumes to be used in the analysis of peak rates of discharge should be obtained from the latest version of the Precipitation-Frequency Atlas of the United States, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Spring, Maryland.
- NOAA's Atlas 14<sup>5</sup> can be accessed at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
- L. For all regulated activities, SWM BMPs shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Storm Water Management Act.
- M. Various BMPs and their design standards are listed in the BMP Manual<sup>4</sup>.

**Section 302. Exemptions**

A. Regulated activities that result in cumulative earth disturbances or new impervious areas listed below are exempt from the requirements in Section 303, Section 304, and Article IV of this ordinance, subject to the following:

1. New impervious areas or land disturbance areas shall not exceed the following based on total lot area:

Parcel Size (Acre)	Land Disturbance Area	New Impervious
0.25 - 0.5	<10,000 S.F.	<1,500 S.F.
0.5 - 1.0 ac	<10,000 S.F.	<2,000 S.F.
1.0 or greater	<43,560 S.F.	<2,500 S.F.*

\*The proposed discharge from the downspouts from the building is setback 40' from Property line and/or public right-of-way.

- B. Agricultural activity is exempt from the SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa. Code Chapter 102.
- C. Forest management and timber operations are exempt from the SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa. Code Chapter 102.
- D. Exemptions from any provisions of this Ordinance shall not relieve the applicant from the requirements in Sections 301.D. through K.
- E. The Municipality may deny or revoke any exemption pursuant to this Section at any time for any project that the Municipality believes may pose a threat to public health and safety or the environment.

**Section 303. Volume Controls**

The green infrastructure and low impact development practices provided in the BMP Manual<sup>4</sup> shall be utilized for all regulated activities wherever possible. Water volume controls shall be implemented using the *Design Storm Method* in Subsection A or the *Simplified Method* in Subsection B below. For regulated activity areas equal or less than one acre that do not require hydrologic routing to design the stormwater facilities, this Ordinance establishes no preference for either methodology; therefore, the applicant may select either methodology on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology and other factors.

- A. The *Design Storm Method* (CG-1 in the BMP Manual<sup>4</sup>) is applicable to any size of regulated activity. This method requires detailed modeling based on site conditions.
  1. Do not increase the post-development total runoff volume for all storms equal to or less than the 2-year 24-hour duration precipitation.
  2. For modeling purposes:
    - a. Existing (predevelopment) non-forested pervious areas must be considered meadow in good condition.
    - b. 20 % of existing impervious area, when present, shall be considered meadow in good condition in the model for existing conditions.
- B. The *Simplified Method* (CG-2 in the BMP Manual<sup>4</sup>) provided below is independent of site conditions and should be used if the *Design Storm Method* is not followed. This method is not applicable to regulated activities greater than one acre or for projects that require design of stormwater storage facilities. For new impervious surfaces:
  1. Stormwater facilities shall capture at least the first two (2) inches of runoff from all new impervious surfaces.

2. At least the first one inch of runoff from new impervious surfaces shall be permanently removed from the runoff flow, i.e., it shall not be released into the surface waters of this Commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.
3. Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases at least the first 0.5 inch of the permanently removed runoff should be infiltrated.
4. This method is exempt from the requirements of Section 304, Rate Controls.

#### **Section 304. Rate Controls**

- A. For areas not covered by a release rate map from an approved Act 167 Stormwater Management Plan:

Post-development discharge rates shall not exceed the pre-development discharge rates for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storm events. If it is shown that the peak rates of discharge indicated by the post-development analysis are less than or equal to the peak rates of discharge indicated by the pre-development analysis for 1-, 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storms, then the requirements of this section have been met. Otherwise, the applicant shall provide additional controls as necessary to satisfy the peak rate of discharge requirement.

- B. For areas covered by a release rate map from an approved Act 167 Stormwater Management Plan:

For the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storm events, the post-development peak discharge rates will follow the applicable approved release rate maps. For any areas not shown on the release rate maps, the post-development discharge rates shall not exceed the pre-development discharge rates.

#### **Section 305. Riparian Buffers**

- A. In order to protect and improve water quality, a Riparian Buffer Easement shall be created and recorded as part of any subdivision or land development that encompasses a Riparian Buffer.
- B. Except as required by Chapter 102, the Riparian Buffer Easement shall be measured to be the greater of the limit of the 100-year floodplain or a minimum of 35 feet from the top of the streambank (on each side).
- C. Minimum Management Requirements for Riparian Buffers.
1. Existing native vegetation shall be protected and maintained within the Riparian Buffer Easement.
  2. Whenever practicable invasive vegetation shall be actively removed, and the Riparian Buffer Easement shall be planted with native trees, shrubs and other vegetation to create a diverse native plant community appropriate to the intended ecological context of the site.
- D. The Riparian Buffer Easement shall be enforceable by the municipality and shall be recorded in the appropriate County Recorder of Deeds Office, so that it shall run with the land and shall limit the use of the property located therein. The easement shall allow for the continued private ownership and shall count toward the minimum lot area a required by Zoning, unless otherwise specified in the municipal Zoning Ordinance.
- E. Any permitted use within the Riparian Buffer Easement shall be conducted in a manner that will maintain the extent of the existing 100-year floodplain, improve or maintain the stream stability, and preserve and protect the ecological function of the floodplain.
- F. The following conditions shall apply when public and/or private recreation trails are permitted within Riparian Buffers:
1. Trails shall be for non-motorized use only.
  2. Trails shall be designed to have the least impact on native plant species and other sensitive environmental features.

- G. Septic drainfields and sewage disposal systems shall not be permitted within the Riparian Buffer Easement and shall comply with setback requirements established under 25 Pa. Code Chapter 73.

### **Section 306. Stormwater Design Requirements**

#### **A. Collection Facilities**

1. The design of storm water management collection facilities that service drainage areas within the site shall be based upon the peak flow from a twenty-five (25) year storm frequency event.
2. All developments shall include design provisions that allow for the overland conveyance of the post-development one hundred (100) year peak flows through the site without damage to any private or public property.
3. Method of Calculations. Runoff calculations for on-site storm water conveyance facilities shall be based upon the Rational Method or an acceptable engineering design method, subject to Township approval.
4. Criteria, Methodology and Assumptions. Appropriate values for runoff coefficients, time of concentration, and rainfall intensity shall be from the latest edition of the Commonwealth of Pennsylvania, Department of Transportation *Design Manual, Part 2, Highway Design, Chapter 10*. Use of other criteria, methodology, assumptions, references, calculation methods and/or computer modeling may be accepted, provided detailed design information and programming with references are submitted and approved by the Township.

#### **B. Storm Water Basins.**

1. The peak discharges and volumes of runoff may be determined by using the latest version of Technical Release No. 55, Urban Hydrology for Small Watersheds, or an acceptable engineering method, subject to Township approval.
2. Retention basins and detention basins shall be designed with a minimum one (1) foot freeboard above the design elevation of the one hundred (100) year water surface at the emergency spillway. Additionally, basins shall be designed to safely discharge the full 100-year peak discharge of a post-development storm event through an emergency spillway in a manner which will not damage the integrity of the basin. Basins shall not be located over any existing or proposed utility line. Infiltration facilities with a depth of 18" or less shall not be subject to this requirement.
3. Storm water basins located in known sinkhole-prone areas are required to be lined to prevent infiltration into the ground, unless intended to be infiltration facilities.
4. Basins shall be constructed and maintained to ensure the design capacity after sedimentation has taken place.
5. Basin discharge outlets shall be designed to release runoff in a condition which reflects pre-development characteristics.
6. Basins which are not designed to release all storm water shall be specifically identified as retention basins or permanent pond basins. All surface basins shall have provisions for de-watering, particularly the bottom, and shall not create swampy and/or unmaintainable conditions.
7. Discharge structures shall be designed to eliminate the possibility of blockage during operation.
8. Basins which are located in or adjacent to a residential zone and viewed by the Township as a potential hazard to the public safety shall be completely surrounded by a fence or wall of not less than four (4) feet in height.
9. Earth Fill Dams. Basins which are designed with earth fill dams shall be designed by a registered professional engineer with experience in earth-filled dams and shall incorporate the following minimum standards:
  - (1) The maximum water depth (measured from the base to the crest of the emergency spillway) shall not exceed six (6) feet, unless approved by waiver of the Township.

- (2) The minimum top width of all dams shall be five (5) feet, unless approved by waiver of the Township
- (3) The side slopes of earth fill dams shall not be steeper than three (3) horizontal to one (1) vertical on both sides of the embankment.
- (4) Basins without restricted access shall have impoundment areas with side slopes no greater than five (5) horizontal to one (1) vertical.
- (5) A cutoff trench of impervious material shall be provided under all dams.
- (6) All pipes and culverts through dams shall be reinforced concrete or HDPE and have properly spaced concrete cutoff collars.
- (7) All outlet structures shall be reinforced concrete.
- (8) Minimum floor elevations for all structures that would be affected by a basin, other temporary impoundments, or open conveyance systems where ponding may occur shall be two (2) feet above the 100-year water surface and/or one (1) foot above the 500-year water surface. If basement or underground facilities are proposed, detailed calculations addressing the effects of storm water ponding on the structure and water-proofing and/or flood-proofing design information shall be submitted for approval.

10. The Township may, upon recommendation of the Township Engineer, impose additional requirements on earth fill dams for the safety and welfare of the Township.

#### C. Pipe and Swale Design.

1. The capacity of gutters, inlets, culverts, outlet structures and swales shall consider all possible hydraulic conditions. The following are minimum design standards.
  - (1) Grass swales and roadside gutters shall consider both the channel velocity and stability.
  - (2) The "n" factors to be used for paved or rip-rap swales or gutters shall be based on the latest edition of the Pennsylvania Department of Transportation *Design Manual, Part 2, Highway Design*, Chapter 10.
  - (3) The "n" factors for corrugated metal pipe shall be based upon the manufacturer's standard.
  - (4) The velocity to be used in the design of any piped storm water conveyance system shall be a minimum of two and one-half (2½) feet per second.
  - (5) Inlets, culverts, and basin discharge systems shall be designed for the worst case condition. Inlet capacity shall be based on design standards provided by the latest edition of the Pennsylvania Department of Transportation's *Design Manual, Part 2, Highway Design*, Chapter 10. If acceptable information is not available, inlets in non-ponding areas shall be designed for a maximum capacity of five (5) cubic feet per second. Where ponding occurs, inlet capacity shall be based on accepted engineering design practices. Culvert design shall consider either inlet/outlet control or a combination of hydraulic losses through the system, whichever is greater. Basin discharge systems shall be designed to the same standards as culverts. If it cannot be readily determined which hydraulic condition controls, the basin discharge rate shall be based on the highest possible discharge rating curve, with the basin capacity sized to store the excessive storm runoff, based on the lowest possible discharge rating curve.
2. Storm Water Flow Along Streets and Access Drives. Inlets shall be along the curb line and are not permitted along the curb radius at an intersection. When possible, inlets shall be located away from the side lot property line to avoid conflicts with driveways. For the purpose of inlet placement, curb, gutter, or roadside swale, flow depths for a ten (10) year storm frequency with a five (5) minute duration shall not exceed three (3) inches in a swale condition, two (2) inches in a gutter condition, and one-half (½) inch across intersections and travel lanes. In no case shall inlets be spaced more than six hundred (600) feet apart and function at less than sixty-five percent (65%) efficiency based on the criteria in the *PennDOT Design Manual*.



3. **Manhole Locations.** Manholes shall not be spaced more than five hundred (500) feet apart. Additionally, manholes shall be placed at points of changes in the horizontal or vertical direction of storm sewers. Inlets may be substituted for manholes where they will serve a useful purpose.
4. **Alignment Requirement.** If less than a forty-eight (48) inch diameter, curves in pipes or box culverts without an inlet or manhole are prohibited. T-joints, elbows, and wyes are always prohibited on piping twelve (12") or greater.
5. **Minimum Pipe Size.** Storm water management pipe collection and conveyance systems shall have a minimum diameter of fifteen (15) inches.
6. **Material Specifications.** All materials and installations must be approved for use by the Township Engineer and comply with the Township Specification Manual.
7. **Surface Flow Characteristics.** The maximum swale, gutter, or curb velocity of storm water runoff shall be maintained at levels which result in a stable condition both during and after construction. The following are considered characteristics of a stable condition:
  - (1) It neither aggrades nor degrades beyond tolerable limits.
  - (2) The channel banks do not erode to the extent that the channel cross section is changed appreciably.
  - (3) Sediment bars do not develop.
  - (4) Erosion does not occur around culverts and bridges or elsewhere.
  - (5) Gullies do not form or enlarge due to the entry of uncontrolled storm water runoff.
  - (6) Grass-lined channels shall be considered stable if the calculated velocity does not exceed the allowable velocities shown below:
    - (i) Three (3) feet per second where only sparse vegetation can be established and maintained because of shade or soil condition.
    - (ii) Four (4) feet per second where normal growing conditions exist and vegetation is to be established by seeding.
    - (iii) Five (5) feet per second where a dense, vigorous sod can be quickly established or where water can be temporarily diverted during establishment of vegetation. Netting and mulch or other equivalent methods for establishing vegetation shall be used.
    - (iv) Six (6) feet per second where there exists a well established sod of good quality.

Where swale bends occur, the allowable velocities listed above shall be divided by the following factors:

Degree of Bend	Velocity
0 to 30	1.50
30 to 60	1.75
60 to 90	2.00
90 and over	2.50

The above grass-lined channel flows may be exceeded if the designer can provide acceptable supportive design criteria as proof of erosion prevention.

8. Where the velocity of storm water runoff exceeds the allowable velocity, erosion protection must be provided. The method of erosion protection proposed must be supported by the appropriate design information and/or references.

9. Sump Pump discharges and roof drains will be directed to lawn areas away from residences, into areas that will surface drain to conveyance structures (e.g., swales and storm sewer collection systems).

#### D. Erosion and Sedimentation.

1. All land disturbance facilities shall conform to the requirements of the York County Conservation District and the Pennsylvania Department of Environmental Protection, and with the following provisions:
2. A Pennsylvania Department of Environmental Protection "NPDES Construction Activities" permit in compliance with 25 Pa. Code Chapter 92 is required for any earth disturbance of one acre regardless of the planned runoff (hereinafter collectively referred to as "Regulated Earth Disturbance Activities"). This includes earth disturbance on any portion of, part of, or during any stage of, a larger common plan of development.
3. Evidence of any necessary permit(s) for Regulated Earth Disturbance activities from the appropriate DEP regional office or County Conservation District must be provided to the Township. The issuance of an NPDES Construction Permit (or permit coverage under the statewide General Permit (PAG-2)) satisfies the requirements of subparagraph 1 of this Paragraph Q.
4. A copy of the Erosion and Sediment Control plan and any required permit, as required by DEP regulations, shall be always available at the project site.
5. The following principles shall be applied to the design plan and construction schedule to minimize soil erosion and sedimentation: a) Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion. b) Whenever feasible, natural vegetation shall be retained and protected. c) The extent of the disturbed area and the duration of its exposure shall be kept to a minimum, within practical limits. d) Either temporary seeding, mulching, or other suitable stabilization measures shall be used to protect exposed critical areas during construction. e) Drainage provisions shall accommodate the storm water runoff both during and after construction. f) Soil erosion and sedimentation facilities shall be installed prior to any on-site grading. g) The design plan and construction schedule shall incorporate measures to minimize soil erosion and sedimentation. h) Retention and/or detention basins and water carrying facilities shall be stabilized in accordance with current engineering and Soil Conservation Service practices.
6. Floodplain. All storm water management plans shall conform with the Floodplain Standards specified in Latest Ordinance as amended.
7. Easements. When considered appropriate, easements shall be provided where storm water or surface water drainage facilities are existing or proposed, whether located within or beyond the boundaries of the property. Easements for maintenance of pipes and culverts shall run from outlet to inlet. Normal lot grading will not require easements. Swales which receive runoff from more than one other lot must be provided with an easement. Easements shall have a minimum width of twenty (20) feet and shall be adequately designed to provide area for (a) the collection and discharge of water, (b) the maintenance, repair, and reconstruction of the drainage facilities, and (c) the passage of machinery for such work. When considered appropriate, easements shall include a description of an ownership and maintenance program, in a recordable form, that clearly sets forth responsibility for all temporary and permanent storm water management facilities.

#### E. Ownership and Maintenance of Storm Water Management Facilities.

1. The intent of these regulations is to provide private ownership and maintenance of storm water management facilities, erosion and sedimentation control facilities and floodplain control facilities. Under no circumstances does the Township intend to accept dedication of erosion control and sedimentation basins. The Township does not encourage the dedication of storm water management facilities that are located outside public street rights-of-way. Where the Storm Water Management Plan proposes that the Township own or maintain a storm water management facility, a description of the methods, procedures, and the extent of maintenance shall be described in such an offer.
2. Maintenance of all storm water management facilities during development shall be the sole responsibility of the developer and shall include, but not be limited to:
  - (1) Removal of silt from all basins, traps or other structures or measures when thirty percent (30%) of capacity is filled with silt;

- (2) Periodic maintenance of temporary control facilities as described in the soil erosion and sedimentation control plan such as replacement of silt fencing, straw filters or similar measures;
  - (3) Establishment or re-establishment of vegetation by seeding and mulching or sodding of scoured areas or areas where vegetation has not successfully been established;
  - (4) Installation of necessary controls to correct unforeseen problems caused by storm events within designed frequencies;
  - (5) Removal of all temporary measures and installation of permanent measures upon completion of the project; and
  - (6) Requirements of the Pennsylvania Department of Environmental Protection, Chapter 102 Regulations.
3. Ownership of all storm water management facilities after construction shall be the sole responsibility of the developer or the private landowner as set forth in the plan. The only storm water management facilities which are to be controlled by the Township shall be those facilities which have been offered for dedication and accepted for dedication by the Township. Future offers for dedication can only be made for facilities which meet current Township specifications.

## ARTICLE IV – STORMWATER MANAGEMENT (SWM) SITE PLAN REQUIREMENTS

### Section 401. Plan Requirements

The following items shall be included in the SWM Site Plan:

- A. Appropriate sections from the municipal's Subdivision and Land Development Ordinance, and other applicable local ordinances, shall be followed in preparing the SWM Site Plans. In instances where the Municipality lacks Subdivision and Land Development regulations, the content of SWM Site Plans shall follow the county's Subdivision and Land Development Ordinance.
- B. The Municipality shall not approve any SWM Site Plan that is deficient in meeting the requirements of this Ordinance. At its sole discretion and in accordance with this Article, when a SWM Site Plan is found to be deficient, the municipality may either disapprove the submission and require a resubmission, or in the case of minor deficiencies, the Municipality may accept submission of modifications.
- C. Provisions for permanent access or maintenance easements for all physical SWM BMPs, such as ponds and infiltration structures, as necessary to implement the Operation and Maintenance (O&M) Plan discussed in paragraph E.9 below.
- D. The following signature block for the municipality:

"Township Engineer, on this date (Signature date), has reviewed and hereby certifies that the SWM Site Plan meets all design standards and criteria of the Municipal Ordinance No. 422."

- E. The SWM Site Plan shall provide the following information:
  - 1. The overall stormwater management concept for the project.
  - 2. A determination of site conditions in accordance with the BMP Manual<sup>4</sup>. A detailed site evaluation shall be completed for projects proposed in areas of carbonate geology or karst topography, and other environmentally sensitive areas, such as brownfields.
  - 3. Stormwater runoff design computations and documentation as specified in this Ordinance, or as otherwise necessary to demonstrate that the maximum practicable measures have been taken to meet the requirements of this Ordinance, including the recommendations and general requirements in Section 301.
  - 4. Expected project time schedule.
  - 5. A soil erosion and sediment control plan, where applicable, as prepared for and submitted to the approval authority.
  - 6. The effect of the project (in terms of runoff volumes, water quality, and peak flows) on surrounding properties and aquatic features and on any existing stormwater conveyance system that may be affected by the project.
  - 7. Plan and profile drawings of all SWM BMPs, including drainage structures, pipes, open channels, and swales.
  - 8. SWM Site Plan shall show the locations of existing and proposed on-lot wastewater facilities and water supply wells.
  - 9. The SWM Site Plan shall include an O&M Plan for all existing and proposed physical stormwater management facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities.
  - 11. A justification must be included in the SWM Site Plan if BMPs other than green infrastructure methods and LID practices are proposed to achieve the volume, rate and water quality controls under this Ordinance.
- F. Storm Water Management Plan Contents

Storm water management plans shall be prepared by professionals registered in the Commonwealth of Pennsylvania to perform such duties. Designs which entail engineering expertise shall be prepared by engineers with appropriate expertise.

The plan shall show, be accompanied by, or be prepared in accordance with the following:

#### 1. General

- a. The plan shall be clearly and legibly drawn at a scale of ten (10) feet, twenty (20) feet, thirty (30) feet, forty (40) feet, fifty (50) feet, or 100 feet to the inch. Profile plans shall maintain a ratio of 1:10 vertical to horizontal.
- b. The sheet size shall be (17" x 22") min, (24" x 36") max. If the plan is prepared in two (2) or more sections, a key map showing the location of the sections shall be placed on each sheet. If more than one (1) sheet is necessary, each sheet shall be numbered to show the relationship to the total number of sheets in the plan (e.g., Sheet 1 of 5).
- c. Plans shall be legible in every detail.
- d. Name and address of landowner, applicant, and individual who prepared the plan.
- e. Plan date and date of latest revision to plan, north point, graphic scale and written scale.
- f. Location map, drawn to scale, relating the property to at least two (2) intersections of existing road centerlines, including the approximate distance to the intersection of the centerlines of the nearest existing street intersection.
- g. Note on plan indicating any area that is proposed to be offered for dedication to the Township. Any area that is easemented and not to be offered for dedication shall be identified along with a statement that the Township is not responsible for the maintenance of any area not dedicated to and accepted for public use.
- h. Certificate, signed and sealed by an individual registered in the Commonwealth of Pennsylvania and qualified to perform such duties, indicating compliance with the provisions of this Part (see Appendix D).

#### 2. Existing Features

- a. Tract boundaries showing distances, bearings and curve data, as located by field survey or deed plotting, total acreage of tract, and total acreage of project if less than the entire tract.
- b. Existing contours, at a minimum vertical interval of two (2) feet for land with average natural slope of four percent (4%) or less and at a minimum vertical interval of five (5) feet for more steeply sloping land. Contours shall be accompanied by the location of the benchmark within or immediately adjacent to the subject tract and a notation indicating the datum used. The United States Geodetic Survey shall be used for benchmark datum.
- c. Names of all owners of all immediately adjacent land, names of all proposed or existing developments immediately adjacent, and locations and dimensions of any streets or easements shown thereon.
- d. Names, locations and dimensions of all existing buildings, street rights-of-way, railroads, utilities, watercourses, drainage facilities, floodplains, wetlands, on-lot sewage disposal facilities, easements, and other significant features located either within and adjacent to the property or two hundred (200) feet from the property.
- e. The size, slope capacity, material, elevation and condition of the existing storm water management system and any other facility that may be used to convey storm flows.
- f. Soil types as designated by the U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of York County.

- g. Designation of the location of on-site and off-site sub-watersheds.
- h. Designation of the location of the time of concentration for the on-site and off-site sub-watersheds.

### 3. Proposed Features

- a. Proposed land use, total number of lots and dwelling units, and extent of commercial, industrial or other non-residential uses.
- b. Locations and dimensions of all proposed streets, sidewalks, lot lines, building locations, parking compounds, impervious and semi-impervious surfaces, sanitary sewer facilities, water facilities, storm water management facilities, utilities, and other significant features. This information shall be provided to the detail necessary to construct the facilities.
- c. Proposed changes to land surface and vegetative cover including areas to be cut or filled.
- d. Proposed Topographical Data. This information shall be provided by contour lines indicating the existing and proposed grades of the site. Contour lines shall be provided at one (1) foot vertical intervals for slopes of ten percent (10%) or less, and at vertical intervals of five (5) feet for more steeply sloping land.
- e. Plans and profiles of proposed storm water management facilities including horizontal and vertical location. Additionally, a detail with all pertinent construction requirements shall be provided for outlet structures. This information shall be of the quality required for the construction of all facilities.
- f. The size, slope, capacity, material, elevation, and condition of the proposed storm water management system and other facility that may be used to convey storm flows. This information shall include invert elevations and top of grate elevations.
- g. Plans and profiles of all erosion and sedimentation control measures, temporary as well as permanent.
- h. Designation of the location of on-site sub-watersheds.
- i. Designation of the location of the time of concentration for the on-site sub-watersheds.

### 4. Written Report and Calculations

- a. Calculations, assumptions, criteria, methodology, and references used in the design of storm water management facilities, the establishment of capacities, and the pre-development and post-development peak discharge. This information shall include data on all sub-watersheds.
- b. For all basins, a plotting or tabulation of the storage volumes and discharge curves with corresponding water surface elevations, inflow hydrographs and outflow hydrographs.
- c. Geotechnical Report addressing all proposed groundwater recharge methods of storm water management, such as seepage pits, beds, trenches, basins:
- d. Representative percolation tests must be made throughout the proposed area in accordance with PA BMP manual.
- e. Description of all erosion and sedimentation control measures, temporary as well as permanent, including the staging of land moving activities, sufficient in detail to clearly indicate their function. All erosion and sedimentation control measures shall conform to the requirements of the Pennsylvania Department of Environmental Protection, *Soil Erosion and Sedimentation Control Manual*.
- f. Description of an ownership and maintenance program, in a recordable form, that clearly sets forth the ownership and maintenance responsibilities for all temporary and permanent storm water management facilities which shall include the following:

- 1) Description of the method and extent of the maintenance requirements.
- 2) Identification of an individual, corporation, association or other entity responsible for ownership and maintenance.
- 3) When maintained by a private entity, a copy of the legally binding document which provides that the Township shall have the right to:
  - (i) Inspect the facilities at any time.
  - (ii) Require the private entity to take corrective measures and assign the private entity reasonable time periods for any necessary action.
  - (iii) Authorize maintenance to be done by the Township or an agent or contractor of the Township and the liening of the cost of the work against the properties of the private entity responsible for the maintenance.

**Section 402. Plan Submission**

Five copies of the SWM Site Plan shall be submitted as follows:

1. One hard copy and 1 PDF to the municipality.
2. One hard copy and 1 PDF to the municipal engineer.

**Section 403. Plan Review**

- A. SWM Site Plans shall be reviewed by the municipality for consistency with the provisions of this Ordinance.
- B. The Municipality shall notify the applicant in writing within 45 days whether the SWM Site Plan is approved or disapproved. If the SWM Site Plan involves a Subdivision and Land Development Plan, the notification shall occur within the time period allowed by the Municipalities Planning Code (90 days). If a longer notification period is provided by other statute, regulation, or ordinance, the applicant will be so notified by the municipality.
- C. For any SWM Site Plan that proposes to use any BMPs other than green infrastructure and LID practices to achieve the volume and rate controls required under this Ordinance, the Municipality will not approve the SWM Site Plan unless it determines that green infrastructure and LID practices are not practicable.
- D. If the Municipality disapproves the SWM Site Plan, the Municipality will state the reasons for the disapproval in writing. The Municipality also may approve the SWM Site Plan with conditions and, if so, shall provide the acceptable conditions for approval in writing.

**Section 404. Modification of Plans**

A modification to a submitted SWM Site Plan that involves a change in SWM BMPs or techniques, or that involves the relocation or redesign of SWM BMPs, or that is necessary because soil or other conditions are not as stated on the SWM Site Plan as determined by the Municipality shall require a resubmission of the modified SWM Site Plan in accordance with this Article.

**Section 405. Resubmission of Disapproved SWM Site Plans**

A disapproved SWM Site Plan may be resubmitted, with the revisions addressing the Municipality's concerns, to the Municipality in accordance with this Article. The applicable review fee must accompany a resubmission of a disapproved SWM Site Plan.

**Section 406. Authorization to Construct and Term of Validity**

The Municipality's approval of an SWM Site Plan authorizes the regulated activities contained in the SWM Site Plan for a maximum term of validity of 5 years following the date of approval. The Municipality may specify a term of validity shorter than 5 years in the approval for any specific SWM Site Plan. Terms of validity shall commence on the date the Municipality signs the approval for an SWM Site Plan. If an approved SWM Site Plan is not completed according to Section 407 within the term of validity, then the Municipality may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by the Municipality shall be resubmitted in accordance with Section 405 of this Ordinance.

**Section 407. As-Built Plans, Completion Certificate, and Final Inspection**

- A. The developer shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM Site Plan. The as-built plans and an explanation of any discrepancies with the construction plans shall be submitted to the Municipality.
- B. The as-built submission shall include a certification of completion signed by a qualified professional verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications. The latitude and longitude coordinates for all permanent SWM BMPs must also be submitted, at the central location of the BMPs. If any licensed qualified professionals contributed to the construction plans, then a licensed qualified professional must sign the completion certificate.
- C. After receipt of the completion certification by the Municipality, the Municipality may conduct a final inspection.



## **ARTICLE V – OPERATION AND MAINTENANCE**

### **Section 501. Responsibilities of Developers and Landowners**

- A. The Municipality shall make the final determination on the continuing maintenance responsibilities prior to final approval of the SWM Site Plan. The municipality may require a dedication of such facilities as part of the requirements for approval of the SWM Site Plan. Such a requirement is not an indication that the municipality will accept the facilities. The municipality reserves the right to accept or reject the ownership and operating responsibility for any portion of the stormwater management controls.
- B. Facilities, areas, or structures used as SWM BMPs shall be enumerated as permanent real estate appurtenances and recorded as deed restrictions or conservation easements that run with the land.
- C. The O&M Plan shall be recorded as a restrictive deed covenant that runs with the land.
- D. The Municipality may take enforcement actions against an owner for any failure to satisfy the provisions of this Article.

### **Section 502. Operation and Maintenance Agreements**

- A. Prior to final approval of the SWM Site Plan, the property owner shall sign and record an Operation and Maintenance (O&M) Agreement (see Appendix A) covering all stormwater control facilities which are to be privately owned.
  - 1. The owner, successor and assigners shall maintain all facilities in accordance with the approved maintenance schedule in the O&M Agreement.
  - 2. The owner shall convey to the Municipality conservation easements to assure access for periodic inspections by the Municipality and maintenance, as necessary.
  - 3. The owner shall keep on file with the Municipality the name, address, and telephone number of the person or company responsible for maintenance activities; in the event of a change, new information shall be submitted by the owner to the Municipality within ten (10) working days of the change.
- B. The owner is responsible for the operation and maintenance (O&M) of the SWM BMPs. If the owner fails to adhere to the O&M Agreement, the Municipality may perform the services required and charge the owner appropriate fees. Nonpayment of fees may result in a lien against the property.

### **Section 503. Performance Guarantee**

For SWM Site Plans that involve subdivision and land development, the applicant shall provide a financial guarantee to the Municipality for the timely installation and proper construction of all stormwater management controls as required by the approved SWM Site Plan and this Ordinance in accordance with the provisions of Sections 509, 510, and 511 of the Pennsylvania Municipalities Planning Code.

## **ARTICLE VI – FEES AND EXPENSES**

### **Section 601. General**

The Municipality may include all costs incurred in the review fee charged to an applicant.

The review fee may include, but not be limited to, costs for the following:

- A. Administrative/clerical processing.
- B. Review of the SWM Site Plan.
- C. Attendance at meetings.
- D. Inspections.

## ARTICLE VII – PROHIBITIONS

### Section 701. Prohibited Discharges and Connections

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge including sewage, process wastewater, and wash water to enter a regulated small MS4 or to enter the surface waters of this Commonwealth is prohibited.
- B. No person shall allow, or cause to allow, discharges into a regulated small MS4, or discharges into waters of this Commonwealth, which are not composed entirely of stormwater, except (1) as provided in paragraph C below and (2) discharges authorized under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution a regulated small MS4 or to the waters of this Commonwealth:
  - 1. Discharges or flows from firefighting activities.
  - 2. Discharges from potable water sources including water line flushing and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).
  - 3. Non-contaminated irrigation water, water from lawn maintenance, landscape drainage and flows from riparian habitats and wetlands.
  - 4. Diverted stream flows and springs.
  - 5. Non-contaminated pumped ground water and water from foundation and footing drains and crawl space pumps.
  - 6. Non-contaminated HVAC condensation and water from geothermal systems.
  - 7. Residential (i.e., not commercial) vehicle wash water where cleaning agents are not utilized.
  - 8. Non-contaminated hydrostatic test water discharges, if such discharges do not contain detectable concentrations of TRC.
- D. In the event that the municipality or DEP determines that any of the discharges identified in Subsection C significantly contribute pollutants to a regulated small MS4 or to the waters of this Commonwealth, the municipality or DEP will notify the responsible person(s) to cease the discharge.

### Section 702. Roof Drains and Sump Pumps

Roof drains and sump pumps shall discharge to infiltration or vegetative BMPs wherever feasible.

### Section 703. Alteration of SWM BMPs

No person shall modify, remove, fill, landscape, or alter any SWM BMPs, facilities, areas, or structures that were installed as a requirement of this Ordinance without the written approval of the Municipality.

## **ARTICLE VIII – ENFORCEMENT AND PENALTIES**

### **Section 801. Right-of-Entry**

Upon presentation of proper credentials, the municipality or its designated agent may enter at reasonable times upon any property within the municipality to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Ordinance.

### **Section 802. Inspection**

The landowner or the owner's designee (including the Municipality for dedicated and owned facilities) shall inspect SWM BMPs, facilities and/or structures installed under this Ordinance according to the following frequencies, at a minimum, to ensure the BMPs, facilities and/or structures continue to function as intended:

1. Annually for the first 5 years.
2. Once every 3 years thereafter.
3. During or immediately after the cessation of a 10-year or greater storm.

Inspections should be conducted during or immediately following precipitation events. A written inspection report shall be created to document each inspection. The inspection report shall contain the date and time of the inspection, the individual(s) who completed the inspection, the location of the BMP, facility or structure inspected, observations on performance, and recommendations for improving performance, if applicable. Inspection reports shall be submitted to the Municipality within 30 days following completion of the inspection.

### **Section 803. Enforcement**

- A. It shall be unlawful for a person to undertake any regulated activity except as provided in an approved SWM Site Plan, unless specifically exempted in Section 302.
- B. It shall be unlawful to violate Section 703 of this Ordinance.
- C. Inspections regarding compliance with the SWM Site Plan are a responsibility of the Municipality.

### **Section 804. Suspension and Revocation**

- A. Any approval or permit issued by the Municipality pursuant to this Ordinance may be suspended or revoked for:
  1. Non-compliance with or failure to implement any provision of the approved SWM Site Plan or O&M Agreement.
  2. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule, or regulation relating to the Regulated Activity.
  3. The creation of any condition or the commission of any act during the Regulated Activity which constitutes or creates a hazard, nuisance, pollution, or endangers the life or property of others.
- B. A suspended approval may be reinstated by the Municipality when:
  1. The Municipality has inspected and approved the corrections to the violations that caused the suspension.
  2. The Municipality is satisfied that the violation has been corrected.
- C. An approval that has been revoked by the Municipality cannot be reinstated. The applicant may apply for a new approval under the provisions of this Ordinance.
- D. If a violation causes no immediate danger to life, public health, or property, at its sole discretion, the Municipality may provide a limited time period for the owner to correct the violation. In these cases, the Municipality will provide the owner, or the owner's designee, with a written notice of the violation and the time period allowed for

the owner to correct the violation. If the owner does not correct the violation within the allowed time period, the municipality may revoke or suspend any, or all, applicable approvals and permits pertaining to any provision of this Ordinance.

#### **Section 805. Penalties**

- A. Anyone violating the provisions of this Ordinance shall be guilty of a summary offense, and upon conviction, shall be subject to a fine of not more than \$500.00 for each violation, recoverable with costs. Each day that the violation continues shall be a separate offense and penalties shall be cumulative.
- B. In addition, the municipality may institute injunctive, mandamus, or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus, or other appropriate forms of remedy or relief.

#### **Section 806. Appeals**

- A. Any person aggrieved by any action of the Municipality or its designee, relevant to the provisions of this Ordinance, may appeal to the Municipality within 30 days of that action.
- B. Any person aggrieved by any decision of the Municipality, relevant to the provisions of this Ordinance, may appeal to the County Court of Common Pleas in the county where the activity has taken place within 30 days of the Municipality's decision.

## ARTICLE IX – REFERENCES

1. U.S. Department of Agriculture, National Resources Conservation Service (NRCS). *National Engineering Handbook*. Part 630: Hydrology, 1969-2001. Originally published as the *National Engineering Handbook*, Section 4: Hydrology. Available from the NRCS online at: <http://www.nrcs.usda.gov/>.
2. U.S. Department of Agriculture, Natural Resources Conservation Service. 1986. *Technical Release 55: Urban Hydrology for Small Watersheds*, 2nd Edition. Washington, D.C.
3. Pennsylvania Department of Environmental Protection. No. 363-0300-002 (December 2006), as amended and updated. *Pennsylvania Stormwater Best Management Practices Manual*. Harrisburg, PA.
4. Pennsylvania Department of Environmental Protection. No. 363-2134-008 (March 31, 2012), as amended and updated. *Erosion and Sediment Pollution Control Program Manual*. Harrisburg, PA.
5. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Hydrometeorological Design Studies Center. 2004-2006. *Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, Version 3.0*, Silver Spring, Maryland. Internet address: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.

## APPENDIX 3

### **OPERATION AND MAINTENANCE (O&M) AGREEMENT STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES (SWM BMPs)**

**THIS AGREEMENT**, made and entered into this day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_ (hereinafter the "Landowner"), and \_\_\_\_\_, \_\_\_\_\_ County, Pennsylvania (hereinafter "Municipality");

#### **WITNESSETH**

**WHEREAS**, the Landowner is the owner of certain real property as recorded by deed in the land records of \_\_\_\_\_ County, Pennsylvania, Deed Book \_\_\_\_\_ at page \_\_\_\_\_, (hereinafter "Property").

**WHEREAS**, the Landowner is proceeding to build and develop the Property; and

**WHEREAS**, the SWM BMP Operation and Maintenance (O&M) Plan approved by the Municipality (hereinafter referred to as the "O&M Plan") for the property identified herein, which is attached hereto as Appendix A and made part hereof, as approved by the Municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

**WHEREAS**, the Municipality, and the Landowner, his successors and assigns, agree that the health, safety, and welfare of the residents of the Municipality and the protection and maintenance of water quality require that on-site SWM BMPs be constructed and maintained on the Property; and

**WHEREAS**, the Municipality requires, through the implementation of the SWM Site Plan, that SWM BMPs as required by said SWM Site Plan and the Municipal Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors, and assigns.

**NOW, THEREFORE**, in consideration of the foregoing promises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM Site Plan.
2. The Landowner shall operate and maintain the BMPs as shown on the SWM Site Plan in good working order in accordance with the specific operation and maintenance requirements noted on the approved O&M Plan.
3. The Landowner hereby grants permission to the Municipality, its authorized agents and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the Municipality shall notify the Landowner prior to entering the property.
4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the Municipality or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMP(s). It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Municipality.
5. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Municipality for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the Municipality.
6. The intent and purpose of this Agreement is to ensure the proper maintenance of the on-site BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the Municipality from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted

against said employees and representatives from the construction, presence, existence, or maintenance of the BMP(s) by the Landowner or Municipality.

- 8. The Municipality intends to inspect the BMPs at a minimum of once every three years to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of \_\_\_\_\_ County, Pennsylvania, and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs, and any other successors in interests, in perpetuity.

ATTEST:

WITNESS the following signatures and seals:

(SEAL)

For the Municipality:

\_\_\_\_\_

For the Landowner:

\_\_\_\_\_

ATTEST:

\_\_\_\_\_ (City, Borough, Township)

County of \_\_\_\_\_, Pennsylvania

I, \_\_\_\_\_, a Notary Public in and for the county and state aforesaid, whose commission expires on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, do hereby certify that \_\_\_\_\_ whose name(s) is/are signed to the foregoing Agreement bearing date of the \_\_\_\_ day \_\_\_\_\_, 20\_\_\_\_, has acknowledged the same before me in my said county and state.

GIVEN UNDER MY HAND THIS \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

\_\_\_\_\_  
(SEAL)



Stormwater Management Ordinance


422

**ENACTED** and **ORDAINED** at a regular meeting of the

Newberry Township Board of Supervisors

on this 28<sup>h</sup> day of February, 2023.


This Ordinance shall take effect immediately.

  
\_\_\_\_\_  
Rob Harkins

Chairman, Board of Supervisors

  
\_\_\_\_\_  
Diane Shellenhamer

Vice-Chair, Board of Supervisors

  
\_\_\_\_\_  
Maxine Kauffman

Supervisor

  
\_\_\_\_\_  
Clair Wintermyer

Supervisor

\_\_\_\_\_  
Dave Kirkpatrick

Supervisor

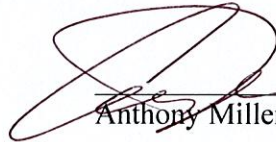
ATTEST:

  
\_\_\_\_\_  
Anthony Miller, Secretary

**CERTIFICATE**

I, the undersigned, Secretary of the Board of Supervisors of the Township of Newberry, York County, Pennsylvania (the "Township"), certify that the foregoing is a true and correct copy of an Ordinance of the Board of Supervisors of the Township which was duly enacted by 4 to 0 affirmative vote majority of the members of the Board of Supervisors of the Township at an open public meeting held after notice required by law on Feb 28 2023, and that said Ordinance has been recorded in the Ordinance Book of the Township; that said Ordinance was duly published as required by law; and that said Ordinance remains in effect, unaltered and unamended as of the date of this Certificate.

IN WITNESS WHEREOF, I set my hand and affix the official seal of the Township on this 28 day of February, 2023.

  
\_\_\_\_\_  
Anthony Miller, Secretary

