

**EDGMONT TOWNSHIP PLANNING COMMISSION**  
**REGULAR MEETING AGENDA**  
**March 27, 2023**

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This meeting will be held in person at the Edgmont Township Building, 1000 Gradyville Road Newtown Square, PA 19073. For those unable to attend in person, the meeting will also be broadcasted via the Zoom platform. Participants must register in advance of the meeting utilizing the following link:  
[https://us02web.zoom.us/webinar/register/WN\\_kVsookpdT8K3JJBkSJJynA](https://us02web.zoom.us/webinar/register/WN_kVsookpdT8K3JJBkSJJynA)

**Planning Commission Work Session – 6:30 p.m.**

- a. Agenda Items

**1. Open Meeting & Pledge of Allegiance – 7:00 p.m.**

- 2. Public Comment:** Public Comment is limited to **2 minutes per participant** and will be stopped at that point. Please be concise. In the Zoom platform, the Q & A or Raise Hand function may be used to ask your question.

**3. Consent Agenda**

- a. Meeting Agenda Approval  
b. January 23, 2023, Regular Meeting Minutes  
c. January 23, 2023, Joint Work Session Meeting Minutes

**4. Manager's Report**

**5. Old Business**

- a. Wedgewood Gardens, 1890 Middletown Road: Preliminary/Final Land Development Application  
b. Ordinance No. 251: Edgmont Township Stormwater Management Ordinance (County-Wide Update)

**6. New Business**

- a. Thornbury Township, Delaware County - Comprehensive Plan

**7. Upcoming/On-Going Applications & Expirations**

- a. White Horse Village Land Development Application – Indefinite Extension  
b. Endress+Houser Land Development Plan – Landmark Drive

**8. Upcoming Meetings**

- a. **Zoning Hearing Board:**  
▪ March 28, 2023, at 7:00 PM  
b. **Community Day Committee:**  
▪ April 6, 2023, at 10:00 AM  
c. **Board of Supervisors:**  
▪ April 11, 2023, at 7:30 PM, Work Session at 6:30 PM, Regular Meeting  
d. **Planning Commission:**  
▪ April 17, 2023, at 7:00 PM, Work Session at 6:30 PM

**9. Adjournment**

**Note:** The meeting of the Edgmont Township Planning Commission is electronically recorded. The recording is maintained as part of the record of the meeting until the minutes are transcribed. The tapes are for the use of transcribing minutes only. Planning Commission meetings will commence promptly at 7:00 p.m. and adjourn no later than 10:00 p.m. (may be extended if necessary). All applicants should make their presentations as brief as possible, so that there is sufficient time for discussion within the time constraints.

**EDGMONT TOWNSHIP PLANNING COMMISSION**  
**JANUARY REGULAR MEETING MINUTES**  
**January 23, 2023**

*\*This meeting of the Edgmont Township Planning Commission was held at the Edgmont Township Building and streamed live via Zoom Webinar.*

**Work Session** – Members of the Planning Commission, Planning Commission Solicitor, Township Land Planner (via Zoom), Township Manager, and Assistant Township Manager attended an advertised work session at 6:30 p.m. Members discussed items on the agenda. No action was taken.

1. **Open Meeting & Pledge of Allegiance:** C. Miller called the meeting to order at 7:00 p.m. with the Pledge of Allegiance. In attendance were Chip Miller, Chairman; Joseph Raspa, Vice Chairman; Ira Dunoff, Member; Stuart Rosenberg, Member; Tori Sheridan, Member; Hank Winchester, III, Alternate Member; Patrick McKenna, Esq., Planning Commission Solicitor; Michael Conrad, P.E., Township Engineer; Thomas Comitta, AICP, and Erin Gross, AICP, (via Zoom) Township Land Planners; Neil D. Vaughn, Township Manager; and Lacey Faber, Assistant Township Manager. There were twenty-two (22) guests present in person and via Zoom.
2. **Announcements:** C. Miller announced that David Malman, who served the Township for over 50 years as the Township Manager, Planning Commission Solicitor, and Fire Company Volunteer, has passed away at 67. He will be missed dearly and remembered for all his contributions to Edgmont Township.
3. **Public Comment:**
  - James Resinger, a resident of Forest Lane, asked if the School District has asked the Planning Commission for assistance in finding an alternate location for a school and asked if there have been private meetings with regard to the proposed Text Amendments.
  - Michael Risser, a resident of Middletown Road, asked if the Township is still working on the Gradyville Master Plan.
  - Debbie Resinger, a resident of Forest Lane, asked there is anything the Planning Commission can do to reverse the decision if the Board of Supervisors approves the Zoning Amendment for the school.
4. **Consent Approval of Agenda and Meeting Minutes:** J. Raspa made a motion to approve the January 23, 2023, meeting agenda as presented. T. Sheridan seconded the motion. There was no further discussion and the motion passed unanimously. S. Rosenberg made a motion to approve the November 14, 2022, Regular Planning Commission meeting minutes as presented. J. Raspa seconded the motion. There was no further discussion and the motion passed unanimously.
5. **Manager's Report:** N. Vaughn presented the following items from his Manager's Report:
  - **Edgmont Preserve:** Permits and CO's continue to be processed and approved for the development. The Township continues to meet bi-monthly with all stakeholders.
    - Staff continue to monitor site issues with Yerkes and the Conservation District, working with the Developer to rectify any issues, including sediment build-up on the roadways.
    - The odor issue previously reported has been rectified and no other issues have been reported.
    - The Township has received the as-builts for the sewer system and pump station. These are currently under review by Bradford Engineering.
  - **Runnymede Phase VII:**
    - Construction continues at the site with periodic inspections being completed at the site. No major issues have been noted or reported to the Township.
    - The Sawgrass stormwater improvements are set to begin in early 2023.
    - Met with GMH, Elford and the Fire Company regarding various fire operations components of the building including a dry standpipe system for the garages, Knox Boxes and an emergency radio repeater system.
  - **2022 Road Project:** The damage that occurred to Wilson Avenue from Carlton Pools has been repaired and Carlton has been invoiced for the repairs.

- **PECO**
  - The removal of the temporary lines within Runnymede is ongoing. The Flyway portion is expected to be completed the week of January 9<sup>th</sup> and the Charter Oak portion is expected to be completed by January 20<sup>th</sup>.
  - Asplundh has been contracted to perform tree trimming in various areas within the Township. This is expected to take place over the next several months.
- **Public Works / Maintenance**
  - Icy road signs have been installed on Delchester Road.
  - Neff has requested that the Township utilize another vendor for the Township Building painting due to staffing levels.
  - Checked roads during recent weather events; salt has been restocked at the salt shed.
- **Planning / Zoning Applications:**
  - **White Horse Village:** Extension in place for their current application. They are expecting to be back to the Planning Commission in the first quarter of 2023.
  - **Save Edgmont Appeal:** This application has been continued until the February 21, 2023 Zoning Hearing Board meeting.
  - **Wedgewood Gardens:** Submitted their Land Development application which follows a sketch plan submission from late 2021.

6. **New Business:**

a. **1890 Middletown Road - Wedgewood Gardens – Land Development Application:**

Present: Ken Ruch, Business Owner  
Luke Ruch, Business Owner  
Matt Ruch, Business Owner  
Justin Brewer, P.E., Applicants Engineer

J. Brewer provided the following presentation: Wedgewood Gardens has submitted a Land Development application for a new parking lot, the removal of a portion of the existing parking area, the installation of stormwater management facilities, a new walkway, and a new enclosed building. A landscape buffer is proposed along the residential boundary of the new proposed parking lot and the restoration of portions of existing parking lot to lawn/vegetation along Route 352. They are working with PennDOT in the preparation of a Highway Occupancy Permit for the new parking lot.

M. Conrad asked if there are any changes to the existing sanitary sewer or water. J. Brewer explained that there are currently septic improvements occurring on the property. K. Ruch explained that the property utilizes on-lot well and irrigation wells. M. Conrad asked that the plans be updated with septic and well locations. M. Conrad asked about traffic circulation and deliveries. L. Ruch explained that their delivery trucks typically deliver to their back driveway on Slitting Mill Road and larger shipments deliver to their Thornbury site. M. Conrad asked that notes be added to the plan outlining this information. M. Conrad asked if the dumpster area will remain in the same location, and if so to note it on the plan. K. Ruch stated the dumpster area is to remain in the same location. J. Brewer stated he will add these notes to the plan and added that the impervious coverage calculations will be corrected on the updated plan. C. Miller asked that the lighting specification sheets for the proposed parking lot lights be submitted for review.

T. Comitta explained that the plantings need to be in compliance with Zoning Hearing Board Decision. T. Comitta continued that the waiver requests appear reasonable, but the buffering needs to be compliant, and an Environmental Impact Assessment Report is required. J. Brewer stated he will reach out T. Comitta about the Environmental Impact Assessment Report and his review, and to M. Schneider with regard to his Traffic Engineering review.

P. McKenna noted that setbacks will need to be in compliance with Zoning requirements. There was no further discussion. No action was taken.

**b. Ordinance No. 251: Countywide Stormwater Management Update:** M. Conrad explained that Delaware County is updating their Act 167 Plan and as a result municipalities are required to update their local stormwater management ordinances. M. Conrad explained that Edgmont's Stormwater Management Ordinance already meets most of the changes required to be implemented, with a few updates to be implemented. M. Conrad outlined the following changes to be implemented as a part of the Stormwater Management Ordinance Update: Definitions, riparian buffer provisions, on lot best management practices, pest waste provisions, and evapotranspiration.

- **Michael Acciavatti, Esq.**, representing Guido and Anne Acciavatti, residents of Gradyville Road, asked how much discretion the Township has with regard to the updates. P. McKenna explained that there is not a great deal of leeway as the updates are required to be implemented per Delaware County's and DEP's direction. M. Acciavatti asked if there is the ability to regulate maintenance for old stormwater management systems. P. McKenna explained that typically stormwater management facilities are required to be put in based on the ordinance that was in place at the time of the development. M. Acciavatti asked that the Township please consider what they can with regard to maintenance of stormwater management systems.

There was no further discussion. No action was taken.

**c. 2022 Planning Commission Annual Report:** The 2022 Annual Report was reviewed with the Planning Commission. Upon review, there were no corrections or additions to the report. J. Raspa made a motion to approve the 2022 Planning Commission Annual Report as presented, and to submit the report to the Board to Supervisors for review. T. Sheridan seconded the motion. There was no further discussion and the motion passed unanimously.

**7. Upcoming Applications:**

**a. White Horse Village Land Development Application:** The Township has an indefinite extension of time for this application. They plan to be back before the Planning Commission sometime within the first quarter of 2023.

**8. Announcements:**

**a. Zoning Hearing Board:**

- January 24, 2023, at 7:00 PM (canceled due to lack of business)

**b. Community Day Committee:**

- February 2, 2023, at 10:00 AM

**c. Board of Supervisors:**

- February 14, 2023, at 7:30 PM, Work Session at 6:30 PM, Regular Meeting

**d. Planning Commission:**

- February 27, 2023, at 7:00 PM, Work Session at 6:30 PM

**9. Adjournment:** At 7:47 p.m. S. Rosenberg made a motion to adjourn the meeting. J. Raspa seconded the motion. There was no further discussion and the motion passed unanimously.

Respectfully submitted,

Lacey Faber  
Planning Commission Secretary

**EDGMONT TOWNSHIP JOINT WORK SESSION  
BOARD OF SUPERVISORS AND PLANNING COMMISSION  
MEETING MINUTES  
January 23, 2023**

**\*This meeting of the Edgmont Township Board of Supervisors and Planning Commission was held at the Edgmont Township Building and streamed live via Zoom Webinar.**

- 1. Open Meeting:** Chip Miller called the advertised Joint Work Session to order at 5:44 p.m. In attendance were:

Board of Supervisors: Ron Gravina, Chairman; James Hallam, Vice-Chairman; and Lindsey Conan, Member (via Zoom). Planning Commission: Chip Miller, Chairman; Joseph Raspa, Vice-Chairman; Tori Sheridan, Member; Ira Dunoff, Member; and Hank Winchester, Alternate Member. Township Professionals: Ken Kynett, Esq., Township Solicitor; Patrick McKenna, Esq., Planning Commission Solicitor; Michael Conrad, P.E., Township Engineer; and Erin Gross, AICP, Township Land Planner (via Zoom). Township Staff: Neil D. Vaughn, Township Manager and Lacey Faber, Assistant Township Manager. Stuart Rosenberg, Planning Commission Member was absent. There was one (1) guest present.

- 2. Public Comment:** There was no public comment.

**3. General Discussion:**

**a. Ordinance No. 251 – Stormwater Management County-Wide Update:** M. Conrad explained that the Township's s Stormwater Management Ordinance is to be updated in accordance with the County's Act 167 Plan update. He outlined the following changes to the existing Ordinance:

- Section 106.A.7 – Maintenance Exemption.
- Section 110.B – Waivers.
- General review of Section 201 – Particular Definitions: BMP (Best Management Practice); High Tunnels; Impervious Surface; Redevelopment; and Regulated Impervious Surface.
- Sections 306.C and 312 – Riparian Buffers.
- Section 306.D – Evapotranspiration: The combined processes of evaporation from the water or soil surface and transpiration of water by plants.
- Section 803 – Pet Waste.

N. Vaughn asked that the Board of Supervisors and Planning Commission review the updates and provide comments to staff within the next two weeks. There was no further discussion. No action was taken.

**b. Projects Update:**

- The following update was provided by Township Manager Vaughn:
  - White Horse Village is reevaluating their land development project and plan to be back before the Planning Commission within the first quarter of 2023. They have provided an indefinite extension to the Township.
  - The Rose Tree Media School District passed a LERTA Ordinance for Endress + Houser. This could be a potential project in the future.

- 4. Adjournment:** No action was taken. The work session adjourned at 6:02 p.m.

Respectfully submitted,

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Neil D. Vaughn, Township Secretary

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Lacey Faber, Planning Commission Secretary

# EDGMONT TOWNSHIP MANAGER'S REPORT

## March 2023

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- **Sunoco:** Final bond release was recommended by the Board of Supervisors pending the receipt of a letter from Thornbury Township signing off on the condition of Slitting Mill Road, the NPDES Notice of Termination approval, and an end wall repair on Slitting Mill Road. These items have been communicated to Sunoco and we are still awaiting a response from Sunoco after multiple attempts – **STILL PENDING.**
- **Edgmont Preserve:** Permits and CO's continue to be processed and approved for the development. The Township continues to meet bi-monthly with all stakeholders.
  - Staff continue to monitor site issues with Yerkes and the Conservation District, working with the Developer to rectify any issues, including sediment build-up on the roadways.
    - PA DEP has issued a violation notice to the Developer.
  - The Township has received the as-builts for the sewer system and pump station. These are currently under review by Bradford Engineering.
  - The "Ventry" flags at the development entrance have been pushed back for greater site distance.
  - Working on the Barn and Spring House area of the Township property in the front of the development. Obtained pricing for tree work to clear around both the Barn and Spring House as well as clearing of invasives.
- **Runnymede Phase VII:**
  - Construction continues at the site with periodic inspections being completed at the site. No major issues have been noted or reported to the Township.
  - The Sawgrass stormwater improvements are set to begin in early 2023.
  - Received the shop drawings for the basement standpipe system. Review of the drawings are currently underway.
  - Attended a site meeting regarding field changes to the walking trail. Awaiting documentation for these changes to disseminate to the Township professionals.
- **American Rescue Act Funding:** Staff have begun working through the approved budget from the first allotment of ARPA funds. The second allotment has been received and staff will be working on an amended budget for these additional funds to be approved by the BOS.
  - The radar sign has been placed in service and is currently placed along Runnymede Drive. Additional requests have been made for locations throughout the Township and we will begin to move the sign to these various locations.
  - The monument sign footings have been completed. Working with PECO and an electrician to have the power installed to the sign location.
  - Staff are currently working on a budget for the second round of funding.
- **Open Space, Trails & Recreation Plan Update:** TCA is still working on the initial draft of the plan in anticipation of a March 28, 2023, meeting with the Township Stakeholder group.
- **2023 Road Project:** Township staff and consultants have completed the annual road inspections and will begin deliberating on which projects should be completed. Continued work with Thornbury Township, Chester County on a joint road bid.
- **PECO**
  - Work continues on the reliability upgrades within the Runnymede Development. This is to replace all of the underground cabling within the development which has become unreliable, causing multiple outages. This work is expected to last into the fall.
  - Asplundh continues with tree trimming through-out the Township.
- **Public Works / Maintenance**
  - Checked roads and inlets during weather events.

- Office painting has been ongoing and is nearly completed. The blinds will be installed to the end of the month.
- The lighting upgrades have been completed in the Township Building.
- Continued to work through the 2022 traffic signal inspection list.
- **Planning / Zoning Applications:**
  - **White Horse Village:** Extension in place for their current application. They are expecting to be back to the Planning Commission in the first half of 2023.
  - **Save Edgmont Appeal:** This application has been continued until April.
  - **Wedgewood Gardens:** Have resubmitted their plan and is currently under review by the Township professionals. Tentatively will be attending the March Planning Commission meeting.
  - **1789 Slitting Mill Road:** Variance was approved at the February Zoning Hearing Board Meeting.
  - **1737 Slitting Mill Road:** A variance application has been submitted to allow a sport court outside of the required setbacks. This will be heard at the March Zoning Hearing Board meeting.
- Staff is continuing to work with the new permitting and financial management software.
- Continued work on the Stormwater Management Ordinance updates as discussed at the January 23, 2023, Joint Work Session.
- Continued work on IT security upgrades with the Township's IT vendor.
- Continued conversations with American Tower for the proposed lease extension for the cell tower.

**EDGMONT TOWNSHIP, DELAWARE COUNTY, PA  
STORMWATER MANAGEMENT ORDINANCE**

**ORDINANCE NO. 251 OF 2023**

**EDGMONT TOWNSHIP, DELAWARE COUNTY, PA**

**Adopted at a Public Meeting held on**

\_\_\_\_\_, 2023

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## ARTICLE I – GENERAL PROVISIONS

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

This chapter shall be known as the Edgmont Township, Delaware County, PA Stormwater Management Ordinance.

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

The governing body of Edgmont Township finds that:

- A. Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed increases flood flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of existing streams and storm sewers, greatly increases the cost of public facilities to convey and manage stormwater, undermines floodplain management and flood reduction efforts in upstream and downstream communities, reduces infiltration, and threatens public health and safety.
- B. Inadequate planning and management of stormwater runoff resulting from land development throughout a watershed can also harm surface water resources by changing the natural hydrologic patterns, accelerating stream flows (which increase scour and erosion of stream beds and stream banks, thereby elevating sedimentation), destroying aquatic habitat, and elevating aquatic pollutant concentrations and loadings such as sediments, nutrients, heavy metals, and pathogens. Groundwater resources are also impacted through loss of recharge.
- C. A comprehensive program of stormwater management, including minimization of impacts of development, redevelopment, and activities causing accelerated erosion and loss of natural infiltration, is fundamental to the public health, safety, welfare, and the protection of the people of the Municipality and all the people of the Commonwealth, their resources, and the environment.
- D. Stormwater can be an important water resource by providing infiltration for water supplies and baseflow of streams, which also protects and maintains surface water quality.
- E. Impacts from stormwater runoff can be minimized by using project designs that maintain the natural hydrologic regime and sustain high water quality, infiltration, stream baseflow, and aquatic ecosystems. The most cost-effective and environmentally advantageous way to manage stormwater runoff is through nonstructural project design that minimizes impervious surfaces and sprawl, avoids sensitive areas (i.e., stream buffers, floodplains, steep slopes), and considers topography and soils to maintain the natural hydrologic regime.

- F. Public education on the control of pollution from stormwater is an essential component in successfully addressing stormwater.
- G. 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).
- H. Non-stormwater discharges to municipal separate storm sewer systems (MS4's) can contribute to pollution of waters of the Commonwealth by the Municipality.
- I. 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) infiltration and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near where it falls to earth. Green infrastructure practices, LID, and CD contribute to the restoration or maintenance of pre-development hydrology.

### **Section 103. Purpose.**

The purpose of this chapter is to promote the public health, safety, general welfare, property, and water quality by implementing drainage and stormwater management practices, criteria, and provisions included herein for land development, construction, and Earth Disturbance Activities, to achieve the following throughout the Municipality.

- A. Promote alternative project designs and layouts that minimize the impacts on surface and groundwater.
- B. Promote nonstructural best management practices (BMPs).
- C. Minimize increases in runoff stormwater volume.
- D. Minimize impervious surfaces.
- E. Manage accelerated stormwater runoff and erosion and sedimentation problems and stormwater runoff impacts at their source by regulating activities that cause these problems.
- F. Provide review procedures and performance standards for stormwater planning and management.
- G. Utilize and preserve existing natural drainage systems as much as possible.
- H. Manage stormwater impacts close to the runoff source, requiring a minimum of structures and relying on natural processes.

- I. Focus on infiltration of stormwater to maintain base flow, to prevent degradation of surface and groundwater quality, and to otherwise protect water resources.
- J. Protect base flows and quality of streams and watercourses, where possible.
- K. Meet legal water quality requirements under state law, including regulations at 25 Pennsylvania Code Chapter 93 to protect, maintain, reclaim, and restore the existing and designated uses of the Waters of the Commonwealth.
- L. Address the quality and quantity of stormwater discharges from the development site.
- M. Provide standards to meet certain NPDES MS4 permit requirements.
- N. Implement an illicit discharge detection and elimination program that addresses non-stormwater discharges into the Municipality's separate storm sewer system (MS4).
- O. Preserve the flood-carrying capacity of streams.
- P. Prevent accelerated scour, erosion, and sedimentation of stream channels.
- Q. Provide performance standards and design criteria based on watershed-wide stormwater management planning.
- R. Provide proper operation and maintenance of all permanent stormwater management facilities and BMPs that are implemented within the Municipality.
- S. Implement the requirements of Total Maximum Daily Loads (TMDLs) where applicable to waters within or impacted by the Municipality.

**Section 104. Statutory Authority.**

The Municipality is empowered or required to regulate land use activities that affect runoff and surface and groundwater quality and quantity by the authority of:

- A. Act of October 4, 1978, 32 P.S., P.L. 864 (Act 167) Section 680.1 et seq., as amended, the "Storm Water Management Act" (hereinafter referred to as "the Act");
- B. Borough Code, 8 Pa.C.S.A Section 101 et seq.;
- C. First Class Township Code, 53, Section 55101 et seq.;
- D. Second Class Township Code, 53 P.S. Sections 65101 et seq.;
- E. Third Class City Code, 53 P.S. Sections 35101 et seq.; and

- F. Act of July 31, 1968, P.L. 805, No. 247, Pennsylvania Municipalities Planning Code, Act 247, as amended.

### **Section 105. Applicability/Regulated Activities.**

- A. All regulated activities and all activities that may affect stormwater runoff, including but not limited to land development, redevelopment, and earth disturbance activity located within the municipality, are subject to regulation by this chapter.
- B. This chapter contains the stormwater management performance standards and design criteria that are necessary from a watershed-wide perspective. Local stormwater management design criteria (e.g., inlet spacing, inlet type, collection system design and details, outlet structure design, etc.) shall continue to be regulated by the applicable municipal ordinances and applicable state regulations.

### **Section 106. Exemptions.**

An exemption shall not relieve the Applicant from implementing the requirements of any other Township ordinance or from implementing such measures as are necessary to protect public health, safety, and property. An exemption shall not relieve the Applicant from complying with the special requirements for watersheds draining to identified high quality (HQ) or exceptional value (EV) waters or any other current or future state or municipal water quality protection requirements. If a drainage problem is documented or known to exist downstream of, or is expected from the proposed activity, then the Municipality may withdraw exemptions listed in Table 106 and require the Applicant to comply with all requirements of this chapter. Even though the Applicant is exempt, he is not relieved from complying with other municipal ordinances or regulations.

General Exemptions: Table 106.1 summarizes the exemptions from certain provisions of this Chapter. Exemptions are for the items noted in Table 106.1 only, and shall not relieve the Applicant from other applicable sections of this Chapter.

Any regulated activity that is exempt from some provisions of the Chapter is exempt only from those provisions. If development is to take place in phases, the developer is responsible for implementing the requirements of the Chapter as the impervious cover/earth disturbance threshold is met. The date of the municipal Ordinance adoption shall be the starting point from which to consider tracts as “parent tracts” in which future subdivisions and respective impervious area and earth disturbance computations shall be cumulatively considered. Exemption shall not relieve the applicant from implementing such measures as are necessary to protect health, safety, and property.

For example: If a property owner proposes a 150 square foot shed after adoption of the municipal stormwater management Chapter, that property owner would be exempted from water quality and quantity requirements of the Chapter as noted in Table 106.1 of the Chapter. If, at a later

date, the property owner proposes to construct a 499 square foot room addition, the applicant would be required to comply with the requirements for the Simplified Method for the full 649 square feet of impervious cover created since adoption of the municipal Chapter. If an additional 700 square foot swimming pool/patio is proposed later, the property owner would be required to implement the full stormwater quantity and quality control submission requirements of this Chapter for the total 1,349 square feet of additional impervious surface added to the original property since adoption of the Municipal Chapter.

**TABLE 106.1  
CHAPTER EXEMPTIONS**

Ordinance Article or Section	Type of Project	Regulated Impervious Surface			Earth Disturbance		
		0-499 sq. ft.	500-999 Sq. ft.	1,000+ Sq. ft.	0-4,999 Sq. ft.	5,000 Sq. ft. < 1 acre	Greater or Equal to 1 acre
<b>Article IV</b> SWM Site Plan Requirements	Development Redevelopment	Exempt	Not Exempt Simplified Approach	Not Exempt	Exempt	Modified <sup>1</sup>	Not Exempt
<b>Section 304</b> Nonstructural Project Design	Development Redevelopment	Exempt	Not Exempt Simplified Approach	Not Exempt	Exempt	Not Exempt	Not Exempt
<b>Section 305</b> Infiltration Volume Requirements	Development Redevelopment	Exempt	Not Exempt Simplified Approach	Not Exempt	Exempt	Exempt	Not Exempt
<b>Section 306</b> Water Quality Requirements	Development Redevelopment	Exempt	Not Exempt Simplified Approach	Not Exempt	Modified <sup>2</sup>	Modified <sup>2</sup>	Not Exempt
<b>Section 307</b> Stream Bank Erosion Requirements	Development Redevelopment	Exempt	Not Exempt Simplified Approach	Not Exempt	Exempt	Exempt	Not Exempt
<b>Section 308</b> Stormwater Peak Rate Control and Management Districts	Development Redevelopment	Exempt	Exempt	Not Exempt	Exempt	Not Exempt	Not Exempt
Erosion and Sediment Pollution Control Requirements	Must comply with Title 25, Chapter 102 of the PA Code and other applicable state and municipal codes, including the Clean Streams Law.						Not Exempt

**Legend:**

- “Regulated Impervious Surface” in Table 106.1 includes new, additional, or replacement impervious surface/cover as part of development or redevelopment.

- Exempt - Exempt from required section provision only – SWM site plan submission may still be required if other section provisions are applicable.
- Modified<sup>1</sup> - Modified SWM site plan need only consist of items in Sections 402.A.2 and 4; 402B.7, 8, 11, and 22; and 402.D.1 and 3 and related supportive material needed to determine compliance with Sections 304 and 308. Modified SWM site plan is required that includes all elements of Section 304, as applicable.
- Modified<sup>2</sup> - Modified SWM site plan need only consist of items and related material needed to determine compliance with Section 311.
- Simplified Approach – Must comply with provisions of Appendix B.
- Redevelopment – See Section 308.I for alternate stormwater peak rate control criteria.

A. Exemptions for Specific Activities

1. Use of land for gardening or home consumption.
2. Agriculture when operated in accordance with a conservation plan, nutrient management plan, or erosion and sedimentation control plan approved by the County Conservation District, including activities such as growing crops, rotating crops, tilling soil, and grazing animals. For agriculture with an approved conservation plan, installation of new or expansion of existing farmsteads, animal housing, waste storage, and production areas having impervious surfaces that result in a net increase in impervious surface of between 500-999 square feet shall apply the simplified approach, and net increases in impervious surface of greater than or equal to 1,000 square feet shall be subject to the provisions of this Chapter.
3. High Tunnel if:
  - a) The High Tunnel or its flooring does not result in an impervious surface exceeding 25% of all structures located on the Landowner's total contiguous land area; and
  - b) The High Tunnel meets one of the following:
    - 1) The High Tunnel is located at least 100 feet from any perennial stream or watercourse, public road, or neighboring property line.
    - 2) The High Tunnel is located at least 35 feet from any perennial stream or watercourse, public road or neighboring property line and located on land with a slope not greater than 7%.
    - 3) The High Tunnel is supported with a buffer or diversion system that does not directly drain into a stream or other watercourse by managing stormwater runoff in a manner consistent with the requirements of Pennsylvania Act 167.
4. Forest management operations which are following the Department of

Environmental Protection's (PADEP) management practices contained in its publication "Soil Erosion and Sedimentation Control Guidelines for Forestry," are operating under an approved erosion and sedimentation plan, and must comply with the stream buffer requirements in Section 311.

5. Repaving without reconstruction.
6. Emergency Exemption - Emergency maintenance work performed for the protection of public health, safety, and welfare. A written description of the scope and extent of any emergency work performed shall be submitted to Edgmont Township within two (2) calendar days of the commencement of the activity. If Edgmont Township finds that the work is not an emergency, then the work shall cease immediately, until a stormwater site-plan in accordance with this chapter is submitted and approved by the municipality.
7. Maintenance Exemption - Any maintenance to an existing stormwater management system made in accordance with plans and specifications approved by the municipal Engineer or Edgmont Township.

#### **Section 107. Repealer.**

Any ordinance or ordinance provision of the Municipality inconsistent with any of the provisions of this and other federal and state regulations are hereby repealed to the extent of the inconsistency only.

#### **Section 108. Severability.**

Should any section or provision of this Chapter be declared invalid by a court of competent jurisdiction, such decision shall not affect the validity of any of the remaining provisions of this Chapter.

#### **Section 109. Compatibility with Other Ordinances or Legal Requirements.**

- A. Approvals issued pursuant to this Chapter do not relieve the Applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act, or ordinance.
- B. To the extent that this Chapter imposes more rigorous or stringent requirements for stormwater management, the specific requirements contained in this Chapter shall be followed.
- C. This chapter shall be made a part of and be incorporated in the SALDO by reference as if fully set forth at length therein. It is intended that the provisions of this chapter shall

replace and supersede the standards and requirements for stormwater management and erosion and sedimentation control in the SALDO to the extent that this chapter provides more restrictive standards and requirements. To the extent that the SALDO provides standards and requirements not addressed in this chapter, those provisions shall remain applicable.

- D. Nothing in this Chapter shall be construed to affect any of the Municipality's requirements regarding stormwater matters that do not conflict with the provisions of this Chapter, such as local stormwater management design criteria (e.g., inlet spacing, inlet type, collection system design and details, outlet structure design, etc.). Conflicting provisions in other municipal ordinances or regulations shall be construed to retain. The requirements of this Chapter shall supersede any conflicting requirements in other municipal ordinance or regulations.

### **Section 110. 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, or employee of the Municipality purporting to validate such a violation.

### **Section 111. Waivers.**

- A. If the Municipality determines that any requirement under this Chapter cannot be achieved for a particular regulated activity, the Municipality may, after an evaluation of alternatives, approve measures other than those in this Chapter, subject to Sections 111.B and 111.C.
- B. Waivers or modifications of the requirements of this chapter 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 chapter 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 (1) acre may be granted by the Municipality unless that action is approved in advance by PADEP or the Delaware County Conservation District.

## ARTICLE II – DEFINITIONS

### **Section 201. Interpretation.**

For the purposes of this Chapter, 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 word “person” includes an individual, firm, association, organization, partnership, trust, company, corporation, unit of government, or any other similar entity.
- D. The words “shall” and “must” are mandatory; the words “may” and “should” are permissive.
- E. The words “used” or “occupied” include the words “intended, designed, maintained, or arranged to be used, occupied, or maintained.”
- F. Any discrepancies in definitions shall be applied to the Chapter that they are referenced to.

### **Section 202. Definitions.**

**Accelerated Erosion** – Removal of the surface of the land through the combined action of man's activities and natural processes at a rate greater than would occur from natural processes alone.

**Agricultural Activities** – The work of producing crops and raising livestock including tillage, plowing, disking, harrowing, pasturing, nursery, and sod operations, excluding greenhouse structures, and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

**Alteration** – As applied to land, a change in topography as a result of the moving of soil and rock from one location or position to another; also, the changing of surface conditions by causing the surface to be more or less impervious; land disturbance.

**Applicant** – A landowner or other person who has filed an application to the Municipality for approval to engage in any regulated activity defined in Section 292-5 of this Chapter.

**As-built Drawings** – Engineering or site drawings maintained by the contractor as he constructs the project and upon which he documents the actual locations of the building components and

changes to the original contract documents. These documents, or a copy of same, are turned over to the municipal Engineer at the completion of the project.

**Bankfull** – The channel at the top-of-bank or point from where water begins to overflow onto a floodplain.

**Baseflow** – Portion of stream discharge derived from groundwater; the sustained discharge that does not result from direct runoff or from water diversions, reservoir releases, piped discharges, or other human activities.

**Bioretention** – A stormwater retention area that utilizes woody and herbaceous plants and soils to remove pollutants before infiltration occurs.

**BMP (Best Management Practice)** – Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from regulated activities, to meet state water quality requirements, to promote infiltration, and to otherwise meet the purposes of this Chapter. Stormwater BMPs are commonly grouped into one of two broad categories or measures: “structural” or “nonstructural.” In this Chapter, nonstructural BMPs or measures include certain low impact development practices used to minimize the contact of pollutants with stormwater runoff. These practices aim to limit the total volume of stormwater runoff and manage stormwater at its source by techniques such as protecting natural systems and incorporating existing landscape features. Nonstructural BMPs include, but are not limited to, low impact development practices such as the protection of sensitive and special value features such as wetlands and riparian areas, the preservation of open space while clustering and concentrating development, the reduction of impervious cover, and the disconnection of rooftops from storm sewers. Structural BMPs are those that consist of a physical 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, bioretention, wet ponds, permeable paving, grassed swales, riparian buffers, sand filters, detention basins, and manufactured devices. Structural and nonstructural stormwater BMPs are permanent appurtenances to the project Site.

**Buffer** – See Riparian Buffer.

**Channel** – An open drainage feature through which stormwater flows. Channels include, but shall not be limited to, natural and man-made drainageways, swales, streams, ditches, canals, and pipes flowing partly full.

**Channel Erosion** – The widening, deepening, or headward cutting of channels and waterways caused by stormwater runoff or bankfull flows.

**Cistern** – An underground reservoir or tank for storing rainwater.

**Conservation District** – The Delaware County Conservation District.

**Conveyance** – A natural or manmade, existing, or proposed Stormwater Management Facility, feature or channel used for the transportation or transmission of stormwater from one place to another. For the purposes of this Chapter, Conveyance shall include pipes, drainage ditches, channels, and swales (vegetated and other), gutters, stream channels, and like facilities or features.

**Culvert** – A structure with its appurtenant works, which carries water under or through an embankment or fill.

**Dam** – A man-made barrier, together with its appurtenant works constructed for the purpose of impounding or storing water or another fluid or semi-fluid. A dam may include a refuse bank, fill, or structure for highway, railroad, or other purposes which impounds or may impound water or another fluid or semi-fluid.

**Department** – The Pennsylvania Department of Environmental Protection. Also referred to as “DEP”, “PA DEP”, or “PADEP.”

**Designee** – The agent of the Delaware County Planning Department, Delaware County Conservation District, and/or agent of the Governing Body involved with the administration, review, or enforcement of any provisions of this Chapter by contract or memorandum of understanding.

**Design Professional (Qualified)** – A Pennsylvania Registered Professional Engineer, Registered Landscape Architect, Registered Professional Land Surveyor trained to develop SWM site plan, or any person licensed by the Pennsylvania Department of State or qualified by law to perform the work required by the Chapter.

**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., twenty-four (24) hours), used in the design and evaluation of stormwater management systems.

**Detention or To Detain** – The prevention of, or to prevent, the discharge, directly or indirectly, of a given volume of stormwater runoff into surface waters by temporary storage.

**Detention Basin** – An impoundment designed to collect and retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate. Detention basins are designed to drain completely soon after a rainfall event and become dry until the next rainfall event.

**Developer** – Any landowner, equitable owner, or authorized agent of such landowner who makes or causes to be made a subdivision of land or a land development.

**Development, Land** – Any man-made change to improved or unimproved real estate, including but not limited to the construction, reconstruction, renovation, repair, expansion, or alteration of buildings or other structures; the placement of manufactured homes; streets, and other paving;

utilities; filling, grading and excavation; mining; dredging; drilling operations; storage of equipment or materials; and the subdivision of land.

**Development Site** – The specific tract or parcel of land where any regulated activity set forth in Section 292-5 of this Chapter is planned, conducted, or maintained.

**Diameter at Breast Height (DBH)** – The diameter of an existing tree at breast height, 4 1/2 feet above the ground at the center of the tree.

**Diffused Drainage Discharge** – Drainage discharge that is not confined to a single point location or channel, including sheet flow or shallow concentrated flow.

**Discharge** – 1. (verb) To release water from a project, site, aquifer, drainage basin, or other point of interest; 2. (noun) The rate and volume of flow of water such as in a stream, generally expressed in cubic feet per second (see Peak Discharge).

**Discharge Point** – The point of discharge for a stormwater facility.

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

**Ditch** – A man-made waterway constructed for irrigation or stormwater conveyance purposes.

**Downslope Property Line** – That portion of the property line of the lot, tract, or parcels of land being developed, located such that overland or pipe flow from the project site would be directed towards it by gravity.

**Drainage Easement** – A right-of-way granted to use private land to facilitate the flow of water as deemed necessary by the Township within which the owner shall erect no permanent structures but may use the land in any other way not inconsistent with the grantee's rights.

**Drainage Facility** – Any trench, ditch, swale, gutter, pipe, culvert, storm sewer or other similar depression or structure designed, intended or constructed for the purpose of controlling stormwater runoff within a subdivision or groundwater within and away from a subdivision, land development area or contiguous areas.

**Drainage Permit** – A permit issued by the Municipality after the stormwater management site plan has been approved.

**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; the moving, depositing, stockpiling, or storing of soil, rock, or earth materials.

**Emergency Spillway** – A conveyance area that is used to pass peak discharge greater than the maximum design storm controlled by the stormwater facility.

**Encroachment** – A structure or activity that changes, expands, or diminishes the course, current, or cross-section of a watercourse, floodway, or body of water.

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

**Erosion and Sediment (E&S) Control Plan** – A plan that is designed to minimize accelerated erosion and sedimentation. Said plan must be submitted to and approved by the appropriate Conservation District before construction can begin.

**Evapotranspiration (ET)** – The combined processes of evaporation from the water or soil surface and transpiration of water by plants.

**Exceptional Value (EV) Waters** – Surface waters of high quality which satisfy Pennsylvania Code Title 25 Environmental Protection, Chapter 93, Water Quality Standards, §93.4b(b) (relating to anti-degradation).

**Existing Conditions** – The initial condition of a project site prior to the proposed alteration. If the initial condition of the site is undeveloped land, the land use shall be considered as “meadow” unless the natural land cover is proven to generate a lower curve number or Rational “c” value, such as forested lands.

**FEMA** – Federal Emergency Management Agency.

**Financial Hardship** – A situation where the greatest possible profit cannot be fully realized from development/redevelopment on a given parcel of land due to added costs or burdens associated with the design, construction, and/or maintenance of stormwater structures, facilities, buffers and/or setbacks.

**Flood** – A temporary condition of partial or complete inundation of land areas from the overflow of streams, rivers, and other waters of this Commonwealth.

**Floodplain** – Any land area susceptible to inundation by water from any natural source or as delineated by the applicable Department of Housing and Urban Development, Federal Emergency Management Agency (FEMA) maps and studies as being a Special Flood Hazard Area.

**Floodway** – The channel of a watercourse and those portions of the adjoining floodplains which are reasonably required to carry and discharge the 100-year frequency flood (also called the base flood or one percent (1%) annual chance 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 frequency floodway, it is assumed, absent evidence to the contrary, that the floodway extends from the stream to fifty (50) feet from the top-of-bank.

**Fluvial Geomorphology** – The study of landforms associated with river channels and the processes that form them.

**Forestry (Forest Management/Timber Operations)** – The management of forests and timberlands when practiced in accordance with accepted silvicultural principles, through developing, cultivating, harvesting, transporting and selling trees for commercial purposes, which do not involve any land development.

**Freeboard** – A vertical distance between the elevation of the design high-water and the top of a dam, levee, tank, basin, swale, or diversion berm. The space is required as a safety margin in a pond or basin.

**Grade** – 1. (noun) A slope, usually of a road, channel, or natural ground, specified in percent and shown on plans as specified herein. 2. (verb) To finish the surface of a roadbed, the top of an embankment, or the bottom of an excavation.

**Grassed Waterway** – A natural or man-made waterway, usually broad and shallow, covered with erosion-resistant grasses used to convey surface water.

**Green Infrastructure** – Systems and practices that use or mimic natural processes to infiltrate, evapotranspire, or reuse stormwater on the site where it is generated. Also referred to as Green Stormwater Infrastructure (GSI).

**Groundwater** – Water beneath the earth’s surface that supplies wells and springs and is often between saturated soil and rock.

**Groundwater Recharge** – Replenishment with water within rock or soil interstices which have the capacity to store water, or which permit the transfer of water to a geologic storage area.

**HEC-HMS** – The U.S. Army Corps of Engineers, Hydrologic Engineering Center (HEC) - Hydrologic Modeling System (HMS). This model was used to model the Darby-Cobbs and Crum Creek watersheds during the Act 167 plan development and was the basis for the standards and criteria of this Chapter.

**High Quality (HQ) Waters** – Surface waters having quality which exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water by satisfying Pennsylvania Code Title 25 Environmental Protection, Chapter 93, Water Quality Standards, § 93.4b(a).

**High Tunnel** – A structure which meets the following:

- Is used for the production, processing, keeping, storing, sale or shelter of an agricultural commodity as defined in section 2 of the Act of December 19, 1974 (P.L. 973, No. 319), known as the “Pennsylvania Farmland and Forest Land Assessment Act of 1974,” or the storage of agricultural equipment or supplies; and

- Is constructed with all the following:
  - has a metal, wood, or plastic frame;
  - when covered, has a plastic, woven textile, or other flexible covering; and
  - has a floor made of soil, crushed stone, matting, pavers, or a floating concrete slab.

**Hotspots** – Areas where land use or activities generate highly contaminated runoff with concentrations of pollutants in excess of those typically found in stormwater.

**Hydrograph** – A graph representing the discharge of water versus time for a selected point in the drainage system.

**Hydrologic Regime** – The hydrologic cycle or balance that sustains quality and quantity of stormwater, baseflow, storage, and groundwater supplies under natural conditions.

**Hydrologic Soil Group** – A classification of soils by the Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS), into four runoff potential groups. The groups range from A soils, which are very permeable and produce little runoff, to D soils, which are not very permeable and produce much more runoff.

**Impervious Surface** – A surface that prevents the infiltration of water into the ground. Impervious surfaces shall include, but are not limited to, streets, sidewalks, pavements, additional indoor living spaces (dwellings), patios, garages, storage sheds, and similar structures, driveway areas, roofs, tennis or other paved courts, swimming pools, artificial turf fields or coverings, and porous pavement or similar surface materials. For the purposes of determining compliance with this Chapter, compacted soils or stone surfaces used for vehicle parking and movement shall be considered impervious. Uncompacted gravel areas with no vehicular traffic shall be considered pervious per review by the Municipal Engineer. Surfaces that were designed to allow infiltration (i.e., pavers and areas of porous pavement) may be considered to function as a BMP per review by the Municipal Engineer. Additionally, for the purposes of determining compliance with this Chapter, the total horizontal projection area of all ground-mounted and free-standing solar collectors, including solar photovoltaic cells, panels, and arrays, shall be considered pervious so long as the Municipal Engineer determines that the area underneath the solar photovoltaic cells, panels, and arrays is maintained as a vegetated pervious surface.

**Impoundment** – A retention or detention basin designed to retain stormwater runoff and release it at a controlled rate.

**Infill** – Development that occurs on smaller parcels that remain undeveloped but are within or in very close proximity to urban or densely developed areas. Infill development usually relies on existing infrastructure and does not require an extension of water, sewer, or other public utilities.

**Infiltration** – Movement of surface water into the soil, where it is absorbed by plant roots, evaporated into the atmosphere, or percolated downward to recharge groundwater.

**Infiltration Structures** – A structure designed to direct the flow of rain into storage in geologic structures where soils are proven to accommodate the proposed infiltration.

**Inflow** – The flow entering the stormwater management facility and/or BMP.

**Inlet** – The upstream end of any structure through which water may flow.

**Intermittent Stream** – A stream that flows only part of the time. Flow generally occurs for several weeks or months in response to seasonal precipitation or groundwater discharge.

**Invert** – The lowest surface, the floor or bottom of a culvert, drain, sewer, channel, basin, BMP, or orifice.

**Land Development** – Any of the following activities:

A. The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:

(1) A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or

(2) The division or allocation of land or space, whether initially or cumulatively, 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;

B. A subdivision of land.

**Limiting Zone** – A soil horizon or condition in the soil profile or underlying strata that includes one of the following:

- A seasonal high water table, whether perched or regional, determined by direct observation of the water table or indicated by soil mottling.
- A rock with open joints, fracture or solution channels, or masses of loose rock fragments, including gravel, with insufficient fine soil to fill the voids between the fragments.
- A rock formation, other stratum, or soil condition that is so slowly permeable that it effectively limits downward passage of water.

**Lot** – A contiguous area of land held or to be held in one ownership and not divided by a street, not including any land within the limits of a street right-of-way upon which said lot abuts, even if such right-of-way is maintained by the owner of the lot; a designated parcel, tract or area of land established by a plan and to be used, developed or built upon as a unit.

**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.

**Main Stem (Main Channel)** – Any stream segment or other runoff conveyance used as a reach in watershed-specific hydrologic models.

**Managed Release Concept (MRC)** - A post-construction stormwater management (PCSM) strategy that comprises the collection, management, and filtration of captured runoff from the contributing drainage area through a best management practice (BMP) that is preferably vegetated and includes release of a portion of the captured runoff through an underdrain within the BMP. If the MRC BMP is not vegetated, then pretreatment is required to meet water quality requirements. MRC is intended to be used for project areas or subareas where infiltration is considered infeasible to meet regulatory requirements. Refer to the “Managed Release Concept” Version 1.2 (August 25, 2020) guidance document or latest guidance from PA DEP.

**Manning Equation (Manning Formula)** – A method for calculation of velocity of flow (e.g., feet per second) and flow rate (e.g., cubic feet per second) in open channels based upon channel shape, roughness, depth of flow, and slope. “Open channels” may include closed conduits so long as the flow is not under pressure.

**Maximum Design Storm** – The maximum (largest) design storm that is controlled by the stormwater facility.

**Municipal Engineer** – A professional engineer licensed as such in the Commonwealth of Pennsylvania, duly appointed as the Engineer for a Municipality, planning agency, or joint planning commission.

**Municipality** – Edgmont Township, Delaware County, Pennsylvania.

**Natural Condition** – Pre-development condition.

**Natural Hydrologic Regime** – See Hydrologic Regime.

**Natural Recharge Area** – Undisturbed surface area or depression where stormwater collects and a portion of which infiltrates and replenishes the underground and groundwater.

**Nonpoint Source Pollution** – Pollution that enters a waterbody from diffuse origins in the watershed and does not result from discernible, confined, or discrete conveyances.

**Non-stormwater Discharges** – Water flowing in stormwater collection facilities, such as pipes or swales, which is not the result of a rainfall event or snowmelt.

**Nonstructural Best Management Practice (BMPs)** – Methods of controlling stormwater runoff quantity and quality, such as innovative site planning, impervious area and grading reduction, protection of natural depression areas, temporary ponding on site, and other techniques.

**NPDES** – National Pollutant Discharge Elimination System, the federal government’s system for issuance of permits under the Clean Water Act, which is delegated to PADEP in Pennsylvania.

**NRCS** – Natural Resource Conservation Service (previously SCS).

**Open Channel** – A conveyance channel that is not enclosed.

**Outfall** – “Point source” as described in 40 CFR § 122.2 at the point where the Municipality’s storm sewer system discharges to surface waters of the Commonwealth.

**Outflow** – The flow exiting the stormwater management facility and/or BMP.

**Outlet** – Points of water disposal to a stream, river, lake, tidewater, or artificial drain.

**Parent Tract** – The parcel of land from which a land development or subdivision originates, determined from the date of municipal adoption of this Chapter.

**Parking Lot Storage** – Involves the use of parking areas as temporary impoundments with controlled release rates during rainstorms.

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

**Pennsylvania Stormwater Best Management Practices Manual** (Document Number 363-0300-002) (December 2006, and as subsequently amended) - The Best Management Practices Manual published by the Pennsylvania Department of Environmental Protection. The manual is to supplement federal and state regulations and the Department of Environmental Protection’s Comprehensive Stormwater Management Policy that emphasizes effective site planning as the preferred method of managing runoff while also providing numerous examples of BMPs that can be employed in Pennsylvania to further avoid and minimize flooding and water resource problems.

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

**Pet** – A domesticated animal (other than a disability assistance animal) kept for amusement or companionship.

**Pipe** – A culvert, closed conduit, or similar structure (including appurtenances) that conveys stormwater.

**Planning Commission** – The Planning Commission of Edgmont Township.

**Point Source** – Any discernible, confined, and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, or conduit from which stormwater is or may be discharged, as defined in state regulations at 25 Pennsylvania Code § 92.1.

**Post-construction** – Period after construction during which disturbed areas are stabilized, stormwater controls are in place and functioning, and all proposed improvements in the approved land development plan are completed.

**Pre-construction** – Prior to commencing construction activities.

**Pre-development Condition** – Undeveloped/natural condition.

**Pretreatment** – Techniques employed in stormwater BMPs to provide storage or filtering to trap coarse materials and other pollutants before they enter the system, but not necessarily designed to meet the water quality volume requirements of Section 306.

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

**Qualified Professional** – See Design Professional (Qualified).

**Rational Formula** – A rainfall-runoff relation used to estimate peak flow.

**Reach** – Any stream segment or other runoff conveyance used in the watershed-specific hydrologic models.

**Recharge** – The replenishment of groundwater through the infiltration of rainfall, other surface waters, or land application of water or treated wastewater.

**Reconstruction** – Demolition and subsequent rebuilding of impervious surface.

**Record Drawings** – Original documents revised to suit the as-built conditions and subsequently provided by the Engineer to the client. The Engineer reviews the contractor's as-builts against his/her own records for completeness, then either turns these over to the client or transfers the information to a set of reproducible, in both cases for the client's permanent records.

**Redevelopment** – Any development that requires demolition or removal of existing structures or impervious surfaces at a site and replacement with new impervious surfaces. Maintenance activities such as top layer grinding, and re-paving are not considered to be redevelopment. Interior remodeling projects and tenant improvements are also not considered to be redevelopment.

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

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

**Regulated Impervious Surface** – Proposed impervious surface as part of a current proposed activity and all existing impervious surfaces installed after August 22, 2012, as part of a previous activity.

**Release Rate** – The percentage of existing conditions peak rate of runoff from a site or subarea to which the proposed conditions peak rate of runoff must be reduced to protect downstream areas.

**Repaving** – Resurfacing of the impervious surface that does not involve reconstruction of an existing paved (impervious) surface.

**Replacement Paving** – Reconstruction of and full replacement of an existing paved (impervious) surface.

**Retention or To Retain** – The prevention of direct discharge of stormwater runoff into receiving waters or water bodies by temporary or permanent containment in a pond or depression; examples include systems which discharge by percolation to groundwater, and/or evaporation processes and which generally have residence times of less than three (3) days.

**Retention Basin** – A reservoir, formed from soil or other material, which is designed to retain permanently a certain amount of stormwater from a catchment area and which also may be designed to detain temporarily additional stormwater runoff from the catchment area. Retention basins also may receive fresh water from year-round streams. Retention basins always contain water and thus may be considered man-made lakes or ponds.

**Return Period** – The average interval, in years, within which a storm event of a given magnitude can be expected to recur. For example, the 25-year return period rainfall would be expected to recur on the average of once every twenty-five (25) years.

**Riparian** – Pertaining to anything connected with or immediately adjacent to the banks of a stream or other body of water.

**Riparian Buffer** – An area of land adjacent to a body of water, including, without limitation, a perennial or intermittent stream, wetlands, and ponds, and managed to maintain the integrity of stream channels and shorelines to reduce the impact of upland sources of pollution by trapping, filtering, and converting sediments, nutrients, and other chemicals; and to supply food, cover, and thermal protection to fish and other wildlife.

**Riser** – A vertical pipe extending from the bottom of a pond that is used to control the discharge rate from the pond for a specified design storm.

**Road Maintenance** – Earth disturbance activities within the existing road cross-section, such as grading and repairing existing unpaved road surfaces, cutting road banks, cleaning or clearing drainage ditches, and other similar activities.

**Roof Drains** – A drainage conduit or pipe that collects water runoff from a roof and leads it away from the structure.

**Rooftop Detention** – The temporary ponding and gradual release of stormwater falling directly onto flat roof surfaces using controlled-flow roof drains in building designs.

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

**SALDO** – Subdivision and land development ordinance.

**Sediment** – Deposited silt or other matter that is being or has been moved from its site of origin by water or other means of erosion.

**Sediment Basin** – A barrier, dam, or retention or detention basin located and designed in such a way as to retain rock, sand, gravel, silt, or other material transported by water during construction.

**Sediment Pollution** – The placement, discharge, or any other introduction of sediment into the waters of the Commonwealth.

**Sedimentation** – The process by which mineral or organic matter is accumulated or deposited by the movement of water or air.

**Seepage Pit/Seepage Trench** – An area of excavated earth filled with loose stone or similar coarse material into which surface water is directed for infiltration into the underground water.

**Separate Storm Sewer System** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) primarily used for collecting and conveying stormwater runoff.

**Shallow Concentrated Flow** – Stormwater runoff flowing in shallow, defined ruts prior to entering a defined channel or waterway.

**Sheet Flow** – A flow process associated with broad, shallow water movement on sloping ground surfaces that is not channelized or concentrated.

**Soil Cover Complex Method** – A method of runoff computation developed by NRCS that is based on relating soil type and land use/cover to a runoff parameter called curve number (CN).

**Source Water Protection Areas (SWPA)** – The zone through which contaminants, if present, are likely to migrate and reach a drinking water well or surface water intake.

**Special Protection Subwatersheds** – Watersheds that have been designated by PADEP as EV or HQ waters.

**Spillway** – A conveyance that is used to pass the peak discharge of the maximum design storm that is controlled by the stormwater facility.

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

**Storage Indication Method** – A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage) with outflow defined as a function of storage volume and depth.

**Storm Frequency** – The number of times that a given storm “event” occurs or is exceeded on the average in a stated period of years (see Return Period).

**Storm Sewer** – A pipe or conduit that carries intercepted surface runoff, street wash and other wash waters or drainage, but excludes domestic sewage and industrial wastes.

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

**Stormwater Control Measure** – Physical features used to effectively control, minimize, and treat stormwater runoff. Also may be referred to as Stormwater Management Practice (SMP). [See “Best Management Practice (BMP)”].

**Stormwater Management District** – Those subareas of a watershed in which some type of detention is required to meet the plan requirements and the goals of Act 167.

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

**Stormwater Management Plan** – The watershed plan for managing stormwater runoff for a watershed, adopted by Delaware and Chester Counties as required by the Act of October 4, 1978, P.L. 864 (Act 167), as amended, and known as the “Storm Water Management Act.” See also Watershed Stormwater Management Plan.

**Stormwater Management (SWM) Site Plan** – The plan prepared by the Applicant or his representative indicating how stormwater runoff will be managed at the particular site of interest according to this Chapter, and including all necessary design drawings, calculations, supporting text, and documentation to demonstrate that Ordinance requirements have been met, hereafter referred to as “SWM site plan.”

**Stream** – A natural watercourse.

**Stream Buffer** – The land area adjacent to each side of a stream essential to maintaining water quality (see also Riparian Buffer).

**Stream Enclosure** – A bridge, culvert, or other structure in excess of one hundred (100) feet in length upstream to downstream which encloses a regulated water of the Commonwealth.

**Subarea (Subwatershed)** – The smallest drainage unit of a watershed for which stormwater management criteria have been established in the stormwater management plan.

**Subdivision** – The division or redivision of a lot, tract or parcel of land by any means into two or more lots, tracts, parcels or other divisions of land, including changes in existing lot lines, for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, conveyance or other transfer of ownership or building or lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than 10 acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

**Surface Waters of the Commonwealth** – Any and all rivers, streams, creeks, rivulets, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs, and all other bodies or channels of conveyance of surface waters, or parts thereof, whether natural or artificial, within or on the boundaries of the Commonwealth.

**Swale** – An elongated depression in the ground which collects and channels surface water runoff.

**SWM Site Plan** – See Stormwater Management Site Plan.

**Timber Operations** – See Forest Management.

**Time-of-concentration (T<sub>c</sub>)** – The time required for surface runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed. This time is the combined total of overland flow time and flow time in pipes or channels, if any.

**Top-of-bank** – Highest point of elevation in a stream channel cross-section at which a rising water level just begins to flow out of the channel and over the floodplain.

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

**Undeveloped Condition** – Natural condition (see also Pre-development Condition).

**Vernal Pond** – Seasonal depressional wetlands that are covered by shallow water for variable periods from winter to spring but may be completely dry for most of the summer and fall.

**Watercourse** – A channel or conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

**Waters of the 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 the Commonwealth.

**Watershed** – Region or area drained by a river, watercourse, or other body of water, whether natural or artificial.

**Watershed Stormwater Management Plan** – A watershed plan for managing stormwater runoff for a watershed, adopted by Delaware and Chester Counties as required by the Act of October 4, 1978, P.L. 864 (Act 167), as amended, and known as the “Storm Water Management Act” (e.g., Chester Creek, Ridley Creek, Crum Creek, Darby-Cobbs Creeks). See also Stormwater Management Plan.

**Wellhead** – 1. A structure built over a well, 2. The source of water for a well.

**Wellhead Protection Area** – The surface and subsurface area surrounding a water supply well, well field, or spring supplying a public water system through which contaminants are reasonably likely to move toward and reach the water source.

**Wet Basin** – Pond for urban runoff management that is designed to detain urban runoff and always contains water.

**Wetland** – Areas with hydric soils that are inundated or saturated by surface and/or groundwater which support hydrophytic vegetation, such as swamps, bogs, marshes and the like, such areas being regulated by the U.S. Army Corps of Engineers and/or the PA DEP.

**Woods** – A natural groundcover with more than one (1) viable tree of a DBH of six (6) inches or greater per fifteen hundred (1,500) square feet which existed within three (3) years of application; a cover condition for which SCS curve numbers have been assigned or to which equivalent Rational Method runoff coefficients have been assigned.

## ARTICLE III – STORMWATER MANAGEMENT

### **Section 301. General Requirements.**

- A. Applicants proposing regulated activities in the Municipality which do not fall under the exemption criteria shown in Section 106 shall submit a stormwater management site plan consistent with this chapter and the applicable watershed stormwater management plan to the Municipality for review. The stormwater management criteria of this chapter shall apply to the total proposed development even if development is to take place in stages.
- B. No regulated activity within the Municipality shall commence until the Municipality issues approval of a SWM plan, which demonstrates compliance with the requirements of this chapter.
- C. The Applicant is required to design the site to minimize surface discharge of stormwater and the creation of impervious surfaces in order to maintain, as much as possible, the natural hydrologic regime.
- D. The SWM site plan must be designed consistent with the sequencing provisions of Section 304 to ensure maintenance of the natural hydrologic regime, to promote infiltration, and to protect groundwater and surface water quality and quantity. The SWM site plan designer must proceed sequentially in accordance with Article III of this Chapter.
- E. Stormwater drainage systems shall be designed in order to preserve natural flow conditions to the maximum extent practicable.
- F. Alteration of existing drainage discharge onto adjacent property shall only be proposed in accordance with PADEP guidance document “Chapter 102 Off-Site Discharges of Stormwater to Non-Surface Waters – Frequently Asked Questions (FAQ)” dated January 2, 2019, or latest guidance document from PADEP. Such discharge shall be subject to any applicable discharge criteria specified in this Chapter and still must meet the requirements of Act 167.
- G. Areas of existing diffused drainage discharge, whether proposed to be concentrated or maintained as diffused drainage areas, shall be subject to any applicable discharge criteria in the general direction of existing discharge, except as otherwise provided by this Chapter. If diffused drainage discharge is proposed to be concentrated and discharged onto adjacent property, the Applicant must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge or otherwise prove that no erosion, sedimentation, flooding, or other impacts will result from the concentrated discharge.

- H. Where a development site is traversed by a stream, drainage easements of adequate width as determined by the Municipal Engineer shall be provided on either side of the stream and conform to the line of such streams.
- I. Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc., is encouraged where soil conditions permit in order to reduce the size or eliminate the need for detention facilities or other structural BMPs.
- J. All stormwater runoff from new development or redevelopment shall be pretreated for water quality prior to discharge to surface or groundwater. Rooftop runoff may go directly to an infiltration BMP or be evapotranspirated.
- K. All regulated activities within the Municipality shall be designed, implemented, operated, and maintained to meet the purposes of this Chapter, through these two elements:
1. Erosion and sediment control during earth disturbance activities (e.g., during construction), and
  2. Water quality protection measures after completion of earth disturbance activities (i.e., after construction), including operations and maintenance.
- L. The BMPs shall be designed, implemented, and maintained to meet state water quality requirements and any other more stringent requirements as determined by the Municipality. Applicants shall utilize the *Pennsylvania Stormwater Best Management Practices Manual* (PA BMP Manual), as amended, or other sources acceptable to the Municipal Engineer, for testing and design standards for BMPs, and where there is a conflict with the provisions of this Chapter, the most restrictive applies.
- M. Post-construction water quality protection shall be addressed as required by Section 306.
- N. Operations and maintenance of permanent stormwater BMPs shall be addressed as required by Article VII.
- O. All BMPs used to meet the requirements of this Chapter shall conform to the state water quality requirements and any more stringent requirements as set forth by the Municipality.
- P. Techniques described in Appendix E (Low Impact Development) of this Chapter shall be considered because they reduce the costs of complying with the requirements of this Chapter and the state water quality requirements.
- Q. In selecting the appropriate BMPs or combinations thereof, the Applicant shall consider the following:
1. Total contributing drainage area.

2. Permeability and infiltration rate of the site's soils.
  3. Slope and depth to bedrock.
  4. Seasonal high water table.
  5. Proximity to building foundations and wellheads.
  6. Erodibility of soils.
  7. Land availability and configuration of the topography.
  8. Peak discharge and required volume control.
  9. Stream bank erosion.
  10. Efficiency of the BMPs to mitigate potential water quality problems.
  11. The volume of runoff that will be effectively treated.
  12. The nature of the pollutant being removed.
  13. Maintenance requirements.
  14. Creation/protection of aquatic and wildlife habitat.
  15. Recreational value.
  16. Enhancement of aesthetic and property values.
- R. The design of all stormwater management facilities shall incorporate sound engineering principles and practices in a manner that does not aggravate existing stormwater problems. The Municipality reserves the right to disapprove any design that would result in construction in or continuation of a stormwater problem area.
- S. The applicant may meet the stormwater management criteria through off-site stormwater management measures as long as the proposed measures are in the same subwatershed as shown in Appendix A.
- T. Stormwater Hotspots – Stormwater runoff from hotspots shall be pretreated prior to surface or groundwater infiltration to prevent pollutant runoff. Industrial sites referenced in 40 CFR 125 are examples of hotspots.

Below is a list of examples of hotspots:

- Vehicle salvage yards and recycling facilities

- Vehicle fueling stations
- Vehicle service and maintenance facilities
- Vehicle and equipment cleaning facilities
- Fleet storage areas (bus, truck, etc.)
- Industrial sites based on Standard Industrial Classification Codes
- Marinas (service and maintenance areas)
- Outdoor liquid container storage
- Outdoor loading/unloading facilities
- Public works storage areas
- Facilities that generate or store hazardous materials
- Commercial container nursery
- Contaminated sites/brownfields
- Other land uses and activities as designated by an appropriate review authority

The following land uses and activities are not normally considered hotspots:

- Residential streets and rural highways
- Residential development
- Institutional development
- Office developments
- Nonindustrial rooftops
- Pervious areas, except golf courses and nurseries (which may need an integrated pest management (IPM) plan)

While streets and highways (average daily traffic volume (ADT) greater than thirty thousand (30,000)) are not considered stormwater hotspots, it is important to ensure that highway stormwater management facilities are designed to adequately protect receiving streams and/or groundwater.

The Environmental Protection Agency's (EPA) NPDES stormwater program requires some industrial sites to prepare and implement a stormwater pollution prevention plan.

- U. The following standards for protection of adjacent and downgradient properties from off-site conveyance must be accomplished:

For any location where a new concentrated discharge of stormwater from any frequency rainfall event, up to and including the 100-year storm and the volume of runoff up to and including the 2-year storm onto or through adjacent property(ies) or downgradient property(ies), the following are required:

1. A drainage easement (or other legal agreement/approval) must be obtained for conveyance of discharges onto or through adjacent properties per the PADEP guidance document "Chapter 102 Off-Site Discharges of Stormwater to Non-Surface Wasters – Frequently Asked Questions (FAQ)" dated January 2, 2019, or latest guidance document from PADEP.

2. The conveyance must be designed to avoid erosion, flooding, or other damage to the properties through which it is being conveyed.

### **Section 302. Permit Requirements by Other Governmental Entities.**

The following permit requirements may apply to certain regulated earth disturbance activities and must be met prior to commencement of regulated earth disturbance activities, as applicable:

- A. All regulated earth disturbance activities subject to permit requirements by PADEP under regulations at Title 25 Pennsylvania Code Chapter 102.
- B. Work within natural drainageways subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105.
- C. Any stormwater management facility that would be located in or adjacent to surface waters of the Commonwealth, including wetlands, subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105.
- D. Any stormwater management facility that would be located on or discharging to a state highway right-of-way or require access to or from a state highway, shall be subject to approval by PennDOT.
- E. Culverts, bridges, storm sewers, or any other facilities which must pass or convey flows from the tributary area and any facility which may constitute a dam subject to permit by PADEP under Title 25 Pennsylvania Code Chapter 105.

### **Section 303. Erosion and Sediment Control During Regulated Earth Disturbance Activities.**

- A. No regulated earth disturbance activities within the Municipality shall commence until the Municipality receives an approval from the PADEP in compliance with Title 25 Chapter 102 of the Pennsylvania Code of an erosion and sediment control plan for construction activities if applicable.
- B. PADEP has regulations regarding an erosion and sediment control under Title 25 Pennsylvania Code Chapter 102.
- C. In addition, under Title 25 Pennsylvania Code Chapter 92, a PADEP “NPDES Construction Activities” Permit is required for regulated earth disturbance activities.
- D. Evidence of any necessary permit(s) for regulated earth disturbance activities from the appropriate PADEP regional office or County Conservation District must be provided to the Municipality. The issuance of an NPDES Construction Permit (or permit coverage

under the statewide General Permit (PAG-2)) satisfies the requirements of subsection 403.A.

E. Soil erosion and sedimentation control.

1. Soil erosion and sedimentation control and stormwater management plans shall be submitted for all subdivisions and/or land developments within the Township. The Township or its designated representative ensure and enforce compliance with the appropriate standards, including without limitation the Township grading Chapter, [1] which is incorporated herein by reference.

*[1] Editor's Note: See Ch. 193, Grading and Excavations.*

2. Measures used to control soil erosion and reduce sedimentation shall as a minimum meet the latest revised standards, specifications and/or regulations of:

- a) The U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), as adopted by the Delaware County Conservation District in its Erosion and Sediment Control Handbook.
- b) The Department in its Erosion and Sediment Pollution Control Manual.
- c) "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), College Park, Maryland.

3. Land disturbance activities for all subdivision and/or land developments shall be conducted only in compliance with the following principles:

- a) There shall be no increase in discharge of sediment or other solid materials from the site as a result of stormwater runoff, and any increase shall be deemed a violation of this chapter.
- b) Erosion and sedimentation control devices, such as temporary vegetation and mulch, temporary earthen berms, interceptor dikes, ditches, diversion terraces, rock filter berms, crushed stone tire scrubbers, silt basins, silt fences, and the like, appropriate to the scale of operations, shall be installed concurrent with earthmoving activities, and whenever any situation is created which would contribute to increased soil erosion.
- c) Earthmoving operations shall be minimized where possible and practicable to preserve desirable natural features and the topography of the site.
- d) Stripping of vegetation, regrading or other development shall be done in such a way that will minimize soil erosion.
- e) To the maximum extent practicable, mature, healthy trees of at least eight inches in caliper and other significant existing vegetation shall be retained and protected. Such trees shall not be removed, except as provided on the approved

subdivision and/or land development plan. The filling of soil more than five inches over the roots of trees to be preserved is prohibited. The roots are presumed to extend out from the tree as far as the branches of the tree extend outward.

- f) Land disturbance shall be limited to the actual construction site and an access strip. The amount of disturbed area and the duration of exposure shall be kept to a minimum. Disturbed areas shall be stabilized with vegetation, mulch, erosion control fabric, and the like as soon as possible after earthmoving procedures.
  - g) Provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development. Water runoff shall be minimized and retained on site wherever possible to facilitate groundwater recharge.
  - h) Temporary vegetation and/or mulching shall be used to protect critical areas during development. "Critical areas" shall be construed to mean those portions of a site which are extremely vulnerable to soil erosion.
  - i) The permanent final vegetation and structural soil erosion control and drainage measures shall be installed as soon as practical in the development in accordance with the approved plans.
  - j) Sediment in the runoff water shall be trapped until the disturbed area is stabilized by the use of debris and sediment basins, silt fences or other approved measures. Sediment deposits in basins, silt fences, and the like shall be removed at periodic intervals during the construction period.
  - k) Soils and rock or geologic formations with water supply potential shall be protected from contamination by surface water or other source or disruption caused by construction activity. Prior to any work, protective procedures shall be developed and submitted to the Township Engineer for review and approval.
4. The following practices shall be required for all subdivisions and/or land developments, unless the Township determines that they are not applicable.
- a) Silt fences or other approved measures shall be utilized in lieu of straw bale silt barriers and shall be securely anchored in place.
  - b) Approved sediment filtering devices shall be placed at all inlets, headwalls, basin outlets and similar drainage structures during the construction period in order to prevent sediment from entering any watercourse, storm drainage system, or other areas downstream.

- c) Temporary on-lot berms may be required during construction. The top width of the berms shall be a minimum of three feet in width, with side slopes of 3:1 maximum.
  - d) Crushed stone tire scrubbers shall be placed at all entrances to construction areas immediately at the time of commencement of construction. Tire scrubbers shall be of sufficient width and length to prevent the transportation of sediment off of the construction site.
  - e) Temporary and permanent seeding and mulch specifications shall be noted on all plans. The specifications shall include lime and fertilizer rates of application, as well as other provisions regarding procedures and materials. The Township may require hydroseeding of all graded areas associated with street construction and stormwater management basins.
  - f) During roadway grading, interceptor dikes shall be installed on all roadway subgrades with slopes in excess of 5% to prevent soil erosion of the subgrade. The interceptor dikes shall divert stormwater runoff through silt traps or silt fences.
  - g) The crushed stone base course for driveways, roadways and parking areas shall be applied as soon as possible after grading procedures, in order to prevent soil erosion of the subgrade.
  - h) Drainage swales and ditches, and all slopes greater than four to one shall be protected against erosive velocities with soil erosion control measures, such as erosion control fabric and other material as approved by the Township.
  - i) Energy dissipaters and/or stilling basins shall be installed at the outlet end of all storm drainage facilities.
  - j) Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase to maintain their maximum infiltration capacity.
5. Maintenance of erosion and sedimentation control facilities.
- a) Whenever sedimentation is caused by stripping vegetation, regarding other development, it shall be the responsibility of the person causing such sedimentation to remove the accumulated sediment from all adjoining or downstream properties, surfaces, drainage systems and watercourses and to repair any damage at his expense as quickly as possible.
  - b) All necessary soil erosion and sedimentation control measures installed under this chapter shall be adequately maintained by the landowner or developer after completion of the approved plan or until such measures are permanently

stabilized as determined by the Township and thereafter as required by Article X of Chapter 305, Subdivision and Land Development (SALDO).

6. Additional erosion and sediment control design standards and criteria are recommended to be applied where infiltration BMPs are proposed. At a minimum, they shall include the following:
  - a) Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase to maintain maximum infiltration capacity.
  - b) Infiltration BMPs shall not be constructed nor receive runoff until the entire drainage area contributory to the infiltration BMP has achieved final stabilization.

F. A copy of the erosion and sediment control plan and any required permit, as required by Department regulations, shall be available on the project site at all times.

#### **Section 304. Nonstructural Project Design Process (Sequencing to Minimize Stormwater Impacts).**

The design of all regulated activities shall include the following to minimize stormwater impacts to reduce the surface discharge of stormwater, reduce the creation of unnecessary impervious surfaces, prevent the degradation of waters of the Commonwealth, and maintain as much as possible the natural hydrologic regime of the site.

- A. The Applicant shall apply Low Impact Development (LID) methods such as those listed in Appendix E, provided that use of this method does not conflict with other local codes.
- B. The Applicant shall demonstrate that the design process follows the sequence noted below. The goal of the sequence is to minimize the increases in stormwater runoff and impacts to water quality resulting from the proposed regulated activity:
  1. The following items in this subsection shall be addressed prior to development of other stormwater management site plan design elements:
    - a) Prepare an Existing Resource and Site Analysis Map (ERSAM) showing environmentally sensitive areas including, but not limited to, steep slopes, ponds, lakes, streams, wetlands, hydric soils, vernal pools, stream buffers, and hydrologic soil groups. Land development, any existing recharge areas, and other requirements outlined in the municipal SALDO shall also be included.
    - b) Establish a stream buffer according to Section 311.
    - c) Prepare a draft project layout avoiding sensitive areas identified in Section 304.B.1.a.

- d) Identify site-specific existing conditions drainage areas, discharge points, recharge areas, and hydrologic soil groups A and B (areas conducive to infiltration).
  - e) Evaluate nonstructural stormwater management alternatives:
    - 1) Minimize earth disturbance.
    - 2) Minimize impervious surfaces.
    - 3) Break up large impervious surfaces.
  - f) Determine into what management district the site falls (Appendix A) and conduct an existing conditions runoff analysis.
2. The following items in this subsection may be addressed in any order provided that all items in Section 304.B.1 have been completed.
- a) Satisfy the infiltration objective (Section 305) and provide for stormwater pretreatment prior to infiltration.
  - b) Provide for water quality protection in accordance with Section 306 water quality requirements.
  - c) Provide stream bank erosion protection in accordance with Section 307 stream bank erosion requirements.
  - d) Prepare final project design to maintain existing conditions drainage areas and discharge points, to minimize earth disturbance and impervious surfaces, and, to the maximum extent possible, to ensure that the remaining site development has no surface or point discharge.
  - e) Conduct a proposed conditions runoff analysis based on the final design that meets the management district requirements (Section 308).
  - f) Manage any remaining runoff prior to discharge through detention, bioretention, direct discharge, or other structural control.

### **Section 305. Infiltration Volume Requirements.**

Providing for infiltration consistent with the natural hydrologic regime is required. Design of the infiltration facilities shall consider infiltration to compensate for the reduction in the recharge that occurs when the ground surface is disturbed, or impervious surface is created.

If it cannot be physically accomplished, then the design professional shall be responsible for demonstrating to the satisfaction of the municipality that this cannot be physically accomplished on the site (e.g., shallow depth to bedrock or limiting zone, open voids, steep slopes, etc. per the PA BMP Manual. A financial hardship as defined in Section 202 is not acceptable to avoid implementing infiltration facilities. If infiltration can be physically accomplished, the volume of runoff to be infiltrated shall be determined from Section 305.A.2, dependent on demonstrated site conditions, and shall be the greatest volume that can be physically infiltrated or alternative methods consistent with the PA BMP Manual (as amended) or other PADEP guidance, such as the Managed Release Concept, may be used to manage this volume with approval from the Municipal Engineer. For example:

- Any applicant (developer or redeveloper) shall first attempt to infiltrate the volume required in Section 305.A.2.a.
- If the Section 305.A.2.a requirement cannot be physically accomplished, then the applicant is required to attempt to infiltrate the volume required in Section 305.A.2.b.
- Finally, if the 305.A.2.b infiltration volume cannot be physically accomplished, the applicant must, at a minimum, infiltrate the volume required in 305.A.2.c

A. Infiltration BMPs shall meet the following minimum requirements:

1. Infiltration BMPs intended to receive runoff from developed or redeveloped areas shall be selected based on suitability of soils and site conditions and shall be constructed on soils that have the following characteristics:
  - a) A minimum depth of twenty-four (24) inches between the bottom of the BMP and the top of the limiting zone.
  - b) An infiltration rate sufficient to accept the additional stormwater volume and dewater completely as determined by field tests conducted by the Applicant's design professional.
  - c) The infiltration facility shall be capable of completely draining the retention (infiltration) volume ( $Re_v$ ) within three (3) days (72 hours) from the end of the design storm.
2. The size of the infiltration facility and  $Re_v$  shall be based upon the following volume criteria:
  - a) Modified Control Guideline One (MCG-1) of the PA BMP Manual – The retention (infiltration) volume ( $Re_v$ ) to be captured and infiltrated shall be the net 2-year 24-hour volume. The net volume is the difference between the post-development runoff volume and the pre-development runoff volume. The post-development total runoff volume for all storms equal to or less than the 2-year 24-hour duration precipitation shall not be increased. For modeling purposes, existing (pre-development) non-forested pervious areas must be considered meadow in good condition or its equivalent, and twenty (20)

percent of existing impervious area, when present, shall be considered meadow in good condition.

- b) Infiltrating the entire  $Re_v$  volume in Section 305.A.2.a (above) may not be feasible on every site due to site-specific limitations such as shallow depth to bedrock or the water table. If it cannot be physically accomplished, then the following criteria from Modified Control Guideline Two (MCG-2) of the PA BMP Manual must be satisfied:

At least the first one-inch (1.0”) of runoff from new or replacement impervious surfaces shall be infiltrated.

$$Rev = 1 \text{ (inch)} * \text{impervious area (square feet)} \div 12 \text{ (inches)} = \text{cubic feet (cf)}$$

An asterisk (\*) in equations denotes multiplication.

- c) Only if infiltrating the entire  $Re_v$  volume in Section 305.A.2.b (above) cannot be physically accomplished, then the following minimum criteria from Modified Control Guideline Two (MCG-2) of the PA BMP Manual must be satisfied:

Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire water quality volume (WQv) (Section 306.A); however, in all cases at least the first one-half inch (0.5”) of the WQv shall be infiltrated. The minimum infiltration volume ( $Re_v$ ) required would, therefore, be computed as:

$$Rev = I * \text{impervious area (square feet)} \div 12 \text{ (inches)} = \text{cubic feet (cf)}$$

An asterisk (\*) in equations denotes multiplication.

Where:

I = The maximum equivalent infiltration amount (inches) that the site can physically accept or 0.50 inch, whichever is greater.

The retention volume values derived from the methods in Section 305.A.2.a, 305.A.2.b, or 305.A.2.c is the minimum volume the Applicant must control through an infiltration BMP facility. If site conditions preclude capture of runoff from portions of the impervious area, the infiltration volume for the remaining area should be increased an equivalent amount to offset the loss.

Only if the minimum of 0.50 inch of infiltration requirement cannot be physically accomplished, a waiver from Section 305, Infiltration Volume Requirements is required from the Municipality.

- B. Soils - A detailed soils evaluation of the project site shall be required to determine the suitability of infiltration facilities. The evaluation shall be performed by a qualified design professional and at minimum address soil permeability, depth to bedrock, and subgrade stability. The general process for designing the infiltration BMP shall be:
  - 1. Analyze hydrologic soil groups as well as natural and man-made features within the site to determine general areas of suitability for infiltration practices. In areas where development on fill material is under consideration, conduct geotechnical investigations of sub-grade stability; infiltration may not be ruled out without conducting these tests.
  - 2. Provide field tests as required in the PA BMP Manual.
  - 3. Design the infiltration structure for the required retention ( $Re_v$ ) volume based on field determined capacity at the level of the proposed infiltration surface.
  - 4. If on-lot infiltration structures are proposed by the Applicant's design professional, it must be demonstrated to the Municipality that the soils are conducive to infiltrate on the lots identified.
- C. Infiltration facilities should, to the greatest extent practicable, be located to avoid introducing contaminants via groundwater, and be in conformance with an approved source water protection assessment or source water protection plan.
- D. Roadway drainage systems should provide an opportunity to capture accidental spills. Road de-icing material storage facilities shall be designed to avoid salt and chloride runoff from entering waterways and infiltration facilities. The qualified design professional shall evaluate the possibility of groundwater contamination from the proposed infiltration facility and perform a hydrogeologic justification study if necessary.
- E. The anti-degradation analysis found in Chapter 93 shall be applied in HQ or EV streams.
- F. An impermeable liner will be required in detention basins where the possibility of groundwater contamination exists. The Municipality may require a detailed hydrogeologic investigation.
- G. The applicant should provide safeguards against groundwater contamination for land uses that may cause groundwater contamination should there be a mishap or spill.
- H. Subsurface disposal of stormwater.

1. Various methods of subsurface disposal may be employed. The effectiveness and applicability of each should be evaluated at each location. Acceptable methods include, but are not limited to, infiltration basins and/or berms, seepage beds and/or trenches, and the like.
2. The design and construction of all subsurface facilities shall provide proper procedures to prevent silt from clogging the aggregate backfill.
3. The following procedures and materials shall be required for all subsurface facilities:
  - a) Excavation for the infiltration facility shall be performed with equipment which will not compact the bottom of the seepage bed/trench, or like facility.
  - b) The bottom of the bed and/or trench shall be scarified prior to the placement of aggregate.
  - c) Only clean aggregate, free of fines, shall be allowed.
  - d) The top and sides of all seepage beds, trenches, or like facilities shall be covered with drainage filtration fabric.
  - e) Perforated distribution pipes connected to centralized catch basins and/or manholes with provisions for the collection of debris shall be provided in all facilities. The perforated pipes shall distribute stormwater throughout the entire seepage bed/trench, or like facility.
4. The landowner or developer shall be responsible for the proper installation, operation, and maintenance of all subsurface stormwater management facilities. If, in the opinion of the Township, the underground system is not functioning properly, the landowner or developer shall be required to make the necessary improvements/corrections to the system or provide an alternate stormwater management facility which is functional.

### **Section 306. Water Quality Requirements and Riparian Buffers.**

The Applicant shall comply with the following water quality requirements of this Article.

To control post-construction stormwater impacts from regulated activities and conform to state water quality requirements, BMPs which replicate pre-development stormwater infiltration and runoff conditions must be provided in the site design such that post-construction stormwater discharges do not degrade the physical, chemical, or biological characteristics of the receiving waters. The green infrastructure and Low Impact Development (LID) practices provided in the PA BMP Manual, as well as the guidance on green infrastructure and LID provided in Appendix E shall be utilized for all regulated activities wherever possible. This may be achieved by the following:

- Infiltration: replication of pre-construction stormwater infiltration conditions,
  - Treatment: use of water quality treatment BMPs to provide filtering of chemical and physical pollutants from the stormwater runoff, and
  - Stream bank and stream bed protection: management of volume and rate of post-construction stormwater discharges to prevent physical degradation of receiving waters (e.g., from scouring).
- A. Developed areas shall provide adequate storage and treatment facilities necessary to capture and treat stormwater runoff. The infiltration volume computed under Section 305 may be a component of the water quality volume if the Applicant chooses to manage both components in a single facility. If the calculated water quality volume (WQv) is greater than the volume required to be infiltrated as described in Section 305.A.2, then the difference between the two volumes shall be treated for water quality by an acceptable stormwater management practice(s). The required water quality volume (WQv) is the storage capacity needed to capture and treat a portion of stormwater runoff from the developed areas of the site.

To achieve this requirement, the following criterion is established:

The Post-construction total runoff volume shall not exceed the Predevelopment total runoff volume for all storms equal to or less than the two-year, 24-hour duration precipitation (design storm). If the Municipal Engineer concurs that this criterion cannot be met, a minimum of one half (0.5)-inches of runoff from all Regulated Impervious Surfaces shall be managed. For modeling purposes, existing (pre-development) non-forested pervious areas must be considered meadow in good condition or its equivalent, and twenty (20) percent of existing impervious area, when present, shall be considered meadow in good condition.

This volume requirement can be managed by the permanent volume of a wet basin or the detained volume from other BMPs. Where appropriate, wet basins shall be utilized for water quality control and shall follow the guidelines of the PA BMP Manual referenced in Appendix G.

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.
- C. If a perennial or intermittent stream passes through, or a water body (i.e., lake, pond, wetland) is present on the site, the applicant shall create a riparian buffer extending a minimum of the greater of 50 feet or such other distance as required by federal and state

buffer policies and regulations, 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 chapter:
  - a) If the applicable rear or side yard setback is less than 50 feet, the buffer width may be reduced to 25% of the setback or 35 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 reduced to 25% of the setback or 35 feet, whichever is greater.
  - c) Notwithstanding the foregoing, if an existing buffer is legally prescribed (e.g., deed covenant, easement, etc.) and it exceeds the requirement of this chapter, the existing buffer shall be maintained.
2. Permitted uses within the buffer include the following, subject to Township approval and provided that they comply with all federal, state, and local regulations:
  - a) Recreational trails. See Riparian Buffer Trail Guidelines.[2]  
[2] *Editor's Note: The document "Riparian Buffer Trail Guidelines" is included as an attachment to this chapter.*
  - b) Utility rights-of-way.
  - c) Bridges.
  - d) Other uses subject to Township approval, provided they do not interfere with, alter, or otherwise disturb the buffer.
- D. 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.
- E. If an existing buffer is legally prescribed (i.e., deed, covenant, easement, etc.) and it exceeds the requirements of this chapter, the existing buffer shall be maintained.

### **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).

- B. The minimum orifice size in the outlet structure to the BMP shall be three (3) inches in diameter where possible, and a trash rack shall be installed to prevent clogging. On sites with small drainage areas contributing to this BMP that do not provide enough runoff volume to allow a 24-hour attenuation with the 3-inch orifice, the calculations shall be submitted showing this condition. When the calculated orifice size is below three (3) inches, gravel filters (or other methods) are recommended to discharge low-flow rates subject to the municipal engineer's satisfaction. When filters are utilized, maintenance provisions shall be provided to ensure filters meet the design function. All facilities shall make use of measures to extend the flow path and increase the travel time of flows in the facility.

### **Section 308. Stormwater Peak Rate Control.**

- A. Each watershed has been divided into either stormwater management districts or release rate districts as shown on the respective Management District or Release Rate Maps in Appendix A.
  - 1. In addition to the watershed-specific requirements specified in Tables 308.1, 308.3, and 308.4 below, the erosion and sedimentation control (Section 303), the nonstructural project design (Section 304), the infiltration (Section 305), the water quality (Section 306), and the stream bank erosion (Section 307) requirements shall be implemented.
  - 2. Standards for managing runoff from each subarea in a watershed for the 2-, 5-, 10-, 25-, 50-, and 100-year design storms are shown in Tables 308.1, 308.3, and 308.4. Development sites located in each of the management/release rate districts must control proposed conditions runoff rates to existing conditions runoff rates for the design storms in accordance with the Table/s.
- B. General - Proposed conditions rates of runoff from any regulated activity shall not exceed the peak release rates of runoff from existing conditions for the design storms specified on the Stormwater Management District Watershed Map (Appendix A) and this section of the Chapter.
- C. District Boundaries - The boundaries of the stormwater management districts are shown on an official map that is available for inspection at the municipal and County Planning offices. A copy of the official map at a reduced scale is included in Appendix A. The exact location of the stormwater management district boundaries as they apply to a given

development site shall be determined by mapping the boundaries using the 2-foot topographic contours (or most accurate data required) provided as part of the SWM site plan.

- D. Sites Located in More than One (1) District or Watershed - For a proposed development site located within two (2) or more stormwater management district subareas, the peak discharge rate from any subarea shall meet the management district criteria for which the discharge is located. The natural hydrology of each respective subarea shall be maintained, and drainage shall not be redirected from one subarea to another. Under circumstances where the Applicant shows this cannot be accomplished, a waiver is required by the Municipality.

<b>TABLE 308.1 PEAK RATE CONTROL STANDARDS IN THE CRUM CREEK WATERSHED</b>		
<b>District</b>	<b>Proposed Condition Design Storm</b>	<b>Existing Condition Design Storm</b>
A	2-year	1-year
	5-year	5-year
	10-year	10-year
	25-year	25-year
	50-year	50-year
	100-year	100-year
B	2-year	1-year
	5-year	2-year
	10-year	5-year
	25-year	10-year
	50-year	25-year
	100-year	100-year

<b>TABLE 308.3 RIDLEY CREEK WATERSHEDS PEAK RATE CONTROL STANDARDS IN THE RIDLEY CREEK WATERSHEDS</b>		
<b>Proposed Condition Design Storm</b>	<b>(Reduce to)</b>	<b>Existing Condition Design Storm</b>
2 - year		1 - year
5 - year		5 - year
10 - year		10 - year
25 - year		25 - year
50 - Year		50 - year
100 - year		100 - year

**TABLE 308.3: For the Ridley Creek Watershed** - the Delaware Direct table should be used for all subareas listed as 100% release rate. However, for subareas below 100%, the Municipal Engineer should make a determination as to the correct requirement.

**TABLE 308.3: For the Chester Creek Watershed:** watershed subareas with a 100% should confirm that the peak rate control requirement is at least as stringent as the Delaware Direct requirement.

<b>TABLE 308.4 CONTROL CRITERIA FOR CHESTER CREEK WATERSHED STORMWATER MANAGEMENT DISTRICTS</b>	
<b>DISTRICT</b>	<b>CONTROL CRITERIA</b>
100%	Post-development peak discharge for all design storms must be no greater than pre-development peak discharges.
75%	Post-development peak discharge for all design storms must be no greater than 75 percent of the pre-development peak discharges.
50%	Post-development peak discharge for all design storms must be no greater than 50 percent of the pre-development peak discharges.

**TABLE 308.4: Off-site Areas** - Off-site areas that drain through a proposed development site are not subject to release rate criteria when determining allowable peak runoff rates. On-site drainage facilities shall be designed to safely convey off-site flows through the development site.

- E. Site Areas - Where the site area to be impacted by a proposed development activity differs significantly from the total site area, only the proposed impact area utilizing stormwater management measures shall be subject to the peak rate control standards noted above. Unimpacted areas for which the discharge point has not changed are not subject to the peak rate control standards.
- F. “Downstream Hydraulic Capacity Analysis” - Any downstream capacity hydraulic analysis conducted in accordance with this Chapter shall use the following criteria for determining adequacy for accepting increased peak flow rates:
  - 1. Natural or man-made channels or swales must be able to convey the increased runoff associated with a 2-year storm event within their banks at velocities consistent with protection of the channels from erosion. Velocities shall be based upon criteria and methodologies acceptable to the municipality.

2. Natural or man-made channels or swales must be able to convey increased 25-year storm event runoff without creating any increased hazard to persons or property.
  3. Culverts, bridges, storm sewers or any other hydraulic facilities which must pass or convey flows from the tributary area must be designed in accordance with PADEP Chapter 105 regulations (if applicable) and, at a minimum, pass the increased 25-year storm event runoff.
  4. Water quality requirements defined in Section 307 must be met.
  5. Post construction peak rates shall not exceed the existing peak rates for the respective subarea.
- G. Alternate Criteria for Redevelopment Sites - For redevelopment sites, one of the following minimum design parameters shall be accomplished, whichever is most appropriate for the given site conditions as determined by Edgmont Township;
1. Meet the full requirements specified by Tables 308.1, 308.3, and 308.4 and Sections 308.A through 308.F, or
  2. Reduce the total pre-development impervious surface on the site by at least twenty percent (20%); based upon a comparison of existing impervious surface to regulated impervious surface. In this case, calculations must be provided that show the peak rate has not increased.
- H. Stormwater management.
1. Where a development site is traversed by watercourses, riparian buffers shall be provided conforming to the line of such watercourses. The width of the buffers shall be determined as set forth in this chapter. Excavating, placing of fill, building structures, or making any alterations that may adversely affect the flow of stormwater within any portion of the riparian buffer shall be prohibited unless the proposed work is associated with a regulated wetlands mitigation program. The buffer must be defined and preserved through a deed covenant.
  2. Any stormwater management facilities regulated by this chapter that would be located in or adjacent to waters of the commonwealth or wetlands shall be subject to approval by the Department through the joint permit application process or, where deemed appropriate by the Department, the general permit process. When there is a question as to whether wetlands may be involved, it is the responsibility of the applicant or his agent to show that the land in question cannot be classified as wetlands; otherwise, approval to work in the area must be obtained from the Department.

3. Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration structures, etc., are required, where soil conditions permit, to reduce the size or eliminate the need for detention facilities.
4. In order to promote overland flow and infiltration/percolation of stormwater, roof drains must discharge into an accepted BMP providing infiltration and filtering of the stormwater.
5. Detention/retention basins.
  - a) Detention basins shall be designed in accordance with the Soil Cover Complex Method and the procedures developed by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS) as outlined in its Technical Release No. 55, Urban Hydrology for Small Watersheds, with specific attention given to antecedent moisture conditions, flood routing, and peak discharge, and Hydrology National Engineering Handbook Section 4. However, for development areas of less than five acres, the Rational Method may be used to compute the sizing of basins.
  - b) Basins shall be designed to detain the quantity of water resulting from a 100-year, twenty-four-hour storm under full development conditions. Stormwater management calculations shall ensure that the predevelopment peak discharge from the development site is not exceeded after development for the two-, five-, ten-, twenty-five-, fifty-, and 100-year design storms (see § 292-17, Stormwater peak rate control, and § 292-18, Calculation methodology). Rainfall data shall be based on NOAA Atlas 14 partial duration series estimates (available online at <http://hdsc.nws.noaa.gov/hdsc/pfds>). The time of concentration method shall be utilized in the development of the runoff hydrographs and peak discharges. Storage discharge curves shall be provided for all basins. Average antecedent moisture conditions and Type II distribution storm shall be assumed.
  - c) Outlet control structures.
    - 1) All outlet control structures shall be constructed of galvanized steel, aluminum or concrete, properly anchored to prevent flotation, and equipped with childproof, nonclogging, removable trash racks over all design openings 12 inches or greater in diameter, except those openings designed to carry perennial stream flows.
    - 2) Temporary sedimentation controls shall be provided during construction to prevent the flow of sediment through the basin outlet pipe. Such measures may include temporary riser pipes, rock-filled gabions, and the like.
  - d) Emergency spillways. Whenever possible, the emergency spillway for basins shall be constructed on undisturbed ground. Emergency spillways shall be

constructed of reinforced concrete, concrete-mound slabs, vegetated earth, concrete rubble, and the like. All emergency spillways shall be constructed so that the basin berm is protected against soil erosion. The minimum capacity of the emergency spillway shall be designed to pass the difference between the 100-year post development and 100-year predevelopment flows. Emergency spillways shall extend along the upstream and downstream berm embankment slopes. The emergency spillway shall not discharge stormwater over earthen fill and/or easily erodible material without adequate protection against soil erosion.

- e) Freeboard. The minimum freeboard shall be two feet. ("Freeboard" is the difference between the design flow elevations in the emergency spillway and the top of the settled basin embankment.)
- f) Basin outlet pipes. Basin outlet pipes shall be equipped with watertight joints.
- g) Antiseep collars. Antiseep collars shall be installed around the principal pipe barrel within the normal saturation zone of the basin berms. The antiseep collars and their connections to the pipe barrel shall be watertight. The antiseep collars shall extend to a minimum of two feet beyond the outside of the principal pipe barrel. The maximum spacing between collars shall be 14 times the minimum projection of the collar measured perpendicular to the pipe. Design calculations for antiseep collars must be submitted with the basin calculations.
- h) Basin outlets. Energy-dissipating devices (riprap, stilling basin, concrete aprons, and the like) shall be placed at all basin outlets. Rock level spreader berms shall be required where basins do not discharge into an existing drainage swale, ditch or channel. Concrete endwalls shall be placed at all basin outlets. All basin outlet pipes 12 inches in diameter or greater shall be equipped with childproof devices to deter entry by pedestrians or animals. Design calculations for proposed energy dissipaters must be submitted with basin calculations.
- i) Slope of detention basin embankment. The maximum slope of earthen basin embankments shall be four to one. The top or toe of any slope shall be located a minimum of 15 feet from adjacent property lines with the exception of the downstream property line where the toe of the embankment shall be placed a sufficient distance to allow for energy dissipating devices but in no case less than 40 feet unless approved otherwise by the Township. Whenever possible, the side slopes and basin shape shall blend with the natural topography. Straight side slopes and rectangular basins shall be avoided whenever possible.
- j) Width of berm. The minimum top width of detention basin berms shall be 10 feet.

- k) Construction specifications. The plans shall indicate the construction specifications and compaction requirements for all detention/retention basins.
- l) Slope of basin bottom. In order to ensure proper drainage of detention basins, a minimum grade of 2% shall be provided. A level bottom may be permitted, provided that the basin bottom is landscaped with appropriate wetland-type vegetation.
- m) Cutoff trench. A cutoff trench shall be excavated along the center line of the dam on earth-fill embankments. The minimum depth shall be three feet. The minimum bottom width shall be 10 feet or wide enough to permit operation of compaction equipment. The side slopes shall be no steeper than 1:1. The trench shall be kept free from standing water during the backfilling operations.
- n) Cuts and fills. No excavation or fill shall be made with a cut or fill slope steeper than four horizontal to one vertical. A written statement shall be required from a civil engineer licensed by the commonwealth, having experience in soils engineering, certifying that he has inspected the site and that any proposed deviation from the slope specified above should not endanger any property or result in personal injury. Retaining walls will be required if a stable slope cannot be maintained. Any retaining wall design must be designed by an experienced structural engineer licensed by the commonwealth and approved by the Township. The toe of any cut or fill slope must be located a minimum of 15 feet from adjacent property lines with the exception stated in Subsection I(5)(i) above.
- o) Landscaping.
  - 1) A minimum of six inches of topsoil shall be placed on all areas affected by the basin construction (bottom of basin, side slopes, top of berm, and the like).
  - 2) All earthen basins shall be hydroseeded with temporary and permanent grasses or other approved ground covers within seven days after final grading.
  - 3) Fencing may be required around detention/retention basins where the Board of Supervisors determines that circumstances warrant the fencing. Whenever fencing is not required, shrub plantings shall be installed around the facility.
  - 4) The perimeter of all basins shall be built and maintained as lawn.
- p) Basins shall be installed prior to any earthmoving or land disturbances which they will serve.

- q) Whenever a basin is to be located in an area underlain by limestone or other unstable rock formation, a geological evaluation of the proposed location shall be conducted to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent groundwater contamination and, where necessary, sinkhole formation.
  - r) Permanent pond. A five-foot-wide bench sloping at 4% shall be provided for all detention/retention basins designed to contain a permanent pond of water. When a permanent pond is proposed, a report of a certified geotechnical specialist must be provided, certifying that the water will not become stagnant. The basin side slopes below the waterline must not exceed 4:1.
6. Maintenance of stormwater management facilities.
- a) All stormwater management facilities, including detention and retention basins designed and constructed for the purposes specified in this chapter, shall be maintained in accordance with the plans filed with and approved by the Township; the responsibility of the property owner(s) upon whose property the facilities are located; and in accordance with any deed restrictions or notes on the SWM site plan. The landowner or developer may establish a homeowners' association that, with the Township's approval, shall be the responsible owner of all stormwater management facilities located in the area of the development.
  - b) In order to ensure proper maintenance and function of stormwater management facilities, the Township or its designee may perform inspections.
  - c) If at any time the Township, or its designee, discovers any violation or condition not conforming with those designs and plans filed with and approved by the Township in regards to the operation of a stormwater management facility, the Township shall notify the responsible owners of the violation and the manner in which it can be corrected.
  - d) Under no conditions shall any person be allowed to remove, modify, alter or change any previously approved stormwater management facility unless an alternate facility is approved by the Township.
  - e) In the event the landowner, developer, or homeowner's association, as the case may be, shall refuse or neglect to comply with the provisions of this section as interpreted by the Township, the Township may direct the work to correct any violation or noncompliance with the terms of this chapter, and all other Chapters and codes of the Township and institute action for payment of costs incurred. In addition, the Township may pursue any other remedy available under this chapter or at law or in equity.

**Section 309. Calculation Methodology.**

- A. Stormwater runoff from all development sites with a drainage area of greater than five (5) acres shall be calculated using a generally accepted calculation technique that is based on the NRCS Soil Cover Complex Method. Table 309.1 summarizes acceptable computation methods. The method selected by the design professional shall be based on the individual limitations and suitability of each method for a particular site. The use of the Rational Method to estimate peak discharges for drainage areas greater than five (5) acres shall be permitted only upon approval of the Municipal Engineer.

<b>TABLE 309.1 ACCEPTABLE COMPUTATION METHODOLOGIES FOR SWM SITE PLAN</b>		
<b>METHOD</b>	<b>DEVELOPED BY</b>	<b>APPLICABILITY</b>
TR-20 (or commercial computer package based on TR-20)	USDA NRCS	Applicable where use of full hydrology computer model is desirable or necessary.
TR-55 (or commercial computer package based on TR-55)	USDA NRCS	Applicable for land development plans where limitations described in TR-55.
HEC-1/ HEC-HMS	US Army Corps of Engineers	Applicable where use of a full hydrologic computer model is desirable or necessary.
Rational Method (or commercial computer package based on Rational Method)	Emil Kuichling(1889)	For sites up to five (5) acres, or as approved by the Municipality and/or municipal Engineer.
Other Methods	Varies	Other computation methodologies approved by the Municipality and/or municipal Engineer.

- B. All calculations consistent with this Chapter using the Soil Cover Complex Method shall use the appropriate design rainfall depths for the various return period storms. Rainfall depths shall be according to NOAA Atlas 14 values consistent with a partial duration series. When stormwater calculations are performed for routing procedures or water quality functions, the duration of rainfall shall be twenty-four (24) hours.
- C. The following criteria shall be used for peak rate runoff calculations:
1. For development sites not considered redevelopment, the ground cover used in determining the existing conditions flow rates shall be as follows:
    - a) Wooded sites shall use a ground cover of “woods in good condition.” Portions of a site having more than one viable tree measuring a diameter at breast height (DBH) of six (6) inches or greater per fifteen hundred (1,500) square

feet shall be considered wooded where such trees existed within three (3) years of application.

- b) The undeveloped portion of the site including agriculture, bare earth, and fallow ground shall be considered as “meadow in good condition,” unless the natural ground cover generates a lower curve (CN) number or Rational “c” value (i.e., woods) as listed in Tables F-1 or F-2 in Appendix F.
2. For redevelopment sites, existing non-wooded pervious areas shall be considered meadow in good condition or its equivalent and twenty (20) percent of existing impervious area, when present, shall be considered meadow when in good condition.
- D. All calculations using the Rational Method shall use rainfall intensities consistent with appropriate times-of-concentration (duration) and storm events with rainfall intensities obtained from NOAA Atlas 14 partial duration series estimates, or the latest version of the PennDOT Drainage Manual (PDM Publication 584). Times-of-concentration shall be calculated based on the methodology recommended in the respective model used. Times of concentration for channel and pipe flow shall be computed using a minimum of 5 minutes.
  - E. Runoff curve numbers (CN) for both existing and proposed conditions to be used in the Soil Cover Complex Method shall be obtained from Table F-1 in Appendix F.
  - F. Runoff coefficients (c) for both existing and proposed conditions for use in the Rational Method shall be obtained from Table F-2 in Appendix F.
  - G. Hydraulic computations to determine the capacity of pipes, culverts, and storm sewers shall be consistent with methods and computations contained in the Federal Highway Administration Hydraulic Design Series Number 5 (Publication No. FHWA-NHI-01-020 HDS No. 5). Hydraulic computations to determine the capacity of open channels shall be consistent with methods and computations contained in the Federal Highway Administration Hydraulic Engineering Circular Number 15 (Publication No. FHWA-NHI-05-114 HEC 15). Values for Manning’s roughness coefficient (n) shall be consistent with Table F-3 in Appendix F.
  - H. Outlet structures for stormwater management facilities shall be designed to meet the performance standards of this chapter using any generally accepted hydraulic analysis technique or method.
  - I. The design of any stormwater detention facilities intended to meet the performance standards of this chapter shall be verified by routing the design storm hydrograph through these facilities using an acceptable method. The design storm hydrograph shall be computed using a calculation method that produces a full hydrograph. The Municipality may approve the use of any generally accepted full hydrograph approximation technique

that shall use a total runoff volume that is consistent with the volume from a method that produces a full hydrograph.

### Section 310. Storm Sewer and Surface Drainage.

#### A. Storm sewer system.

##### 1. Design flow rate.

- a) The storm sewer system shall be designed to carry a twenty-five-year peak flow rate. Storm sewer systems which convey runoff to a stormwater management facility must be designed to convey the 100-year peak flow rate. The peak flow rate into each inlet shall be indicated on the SWM site plan. The design flow rate shall be determined by the rational formula,  $Q = CIA$ .

**Where:**

$Q$  = Peak runoff rate, cubic feet per second (CFS)

$C$  = Runoff coefficient equal to the ratio of the peak runoff rate to the average rate of rainfall over a time period equal to the time of concentration.

$I$  = Average rainfall intensity in inches per hour for a time equal to the time of concentration.

$A$  = Drainage area in acres.

- b) Appropriate values for the runoff coefficient and rainfall intensity shall be taken from the following source:

PA DOT

Design Manual, Part 2 Highway Design  
August 1981 (or the latest revisions thereto)

##### 2. Storm sewer system design.

- a) The storm sewer system shall be designed to the more restrictive of the following: to collect stormwater at any point where three cubic feet to five cubic feet per second is accumulated during the design storm, and/or inlets/manholes shall not be spaced more than 300 feet apart on pipe sizes up to 24 inches in diameter and not more than 400 feet apart on greater sizes.
- b) Inlets, manholes, grates, covers, frames and the like shall conform to the PA DOT roadway construction standards and Form 408 specifications and

all amendments, revisions or updates thereto. All inlets and manholes shall be precast concrete.

3. Bridge/culvert/channel design.

- a) Bridges and culverts shall have ample waterway to carry expected flows, based on minimum storm frequency of 25 years or as required by the Department. Bridge and/or culvert design shall be in accordance with the PA DOT and/or the Department requirements. All culverts shall be provided with concrete end walls or concrete end sections unless approved otherwise by the Township.
- b) All drainage channels shall be designed to carry a flow rate equal to a 100-year, twenty-four-hour storm.
- c) All drainage channels shall be designed to prevent the erosion of the stream bed and stream bank areas. The flow velocity in all vegetated drainage channels shall not exceed the maximum permissible velocity to prevent soil erosion. Suitable bank stabilization shall be provided where required to prevent soil erosion of the drainage channels. Where storm sewers discharge into existing drainage channels at an angle greater than 30° from parallel with the downstream channel flow, the far side bank shall be stabilized by the use of riprap, masonry and/or concrete walls. The stabilization shall be designed to prevent soil erosion and frost heave under and behind the stabilizing media.
- d) Any vegetated drainage channel requiring mowing of the vegetation shall have a maximum slope of four horizontal to one vertical on those areas to be mowed.
- e) The design of all channels shall, as a minimum, conform to the design procedures outlined in:
  - United States Department of Transportation
  - Federal Highway Administration
  - Roadside Drainage Channels
  - Hydraulic Design Series No. 4
  - Hydraulic Design Series No. 3
  - Standards and Specifications for Soil
  - Erosion and Sediment Control in Developing Areas
  - United States Department of Agriculture
  - Soil Conservation Service
  - College Park, Maryland

4. Overflow system. An overflow system shall be provided to carry flow to the detention basin when the capacity of the storm drain pipe system is exceeded. The overflow system shall be sufficient capacity to carry the difference between

the 100-year and the twenty-five-year peak flow rates.

5. Inlet capacity.
  - a) All inlets must be designed to accommodate the twenty-five-year peak flow rate except at low points where they shall accommodate the twenty-five-year peak flow rate. The capacity of Type C, M, or S inlets shall be determined from the following source:
    - PA DOT
    - Design Manual,
    - Part 2 Highway Design
    - August 1981 (or the most recent revisions thereto), Chapter 10
  - b) The capacity of each inlet shall be indicated on the SWM site plan. All SWM site plans shall indicate that inlet grates be installed in such a manner that the roadway stormwater will be directed into the inlet and away from the roadway. At curbed street/driveway intersections, inlets shall be placed on the tangent section and not in the curved portion of the curbing.
6. Straight pipe sections. All storm sewers shall be designed to follow straight courses. No angular deflections of storm sewer pipe sections in excess of  $5^{\circ}$  shall be permitted. No vertical curves shall be permitted in any storm sewer system.
7. Minimum grade and size. All storm drain pipes shall be designed to maintain a minimum grade of 1%. All storm sewer pipes shall have a minimum inside diameter of 15 inches.
8. Pipe capacity. The capacity of all pipe culverts shall, as a minimum, provide the required carrying capacity as determined by the following sources:
  - United States Department of Transportation Federal Highway Administration Hydraulic Engineering Circular No. 5, Hydraulic Charts for the Selection of Highway Culverts.
  - United States Department of Transportation Federal Highway Administration Hydraulic Design Series No. 3, Design Charts for Open Channel Flow.
  - United States Department of Transportation Bureau of Public Roads Hydraulic Engineering Circular No. 10, Capacity Charts for the Hydraulic Design of Highway Culverts.
9. Pipe arches. Where headroom is restricted, equivalent pipe arches may be used in lieu of circular pipes.
10. Pipe material and gauge thickness. All storm sewers shall be either reinforced cement concrete, corrugated aluminum or corrugated galvanized steel pipe. Storm sewers shall be of the proper class and thickness to support the above fill

material. Pipe class and gauge or thickness shall be noted on the plans.

11. Allowable headwater depth. At all inlets or manholes, the maximum allowable headwater depth shall be one foot below the top of the inlet grate or the manhole cover.
12. Horizontal pipe deflections. A manhole or inlet shall be provided at all horizontal deflections in the storm pipe system exceeding 5°.
13. Minimum and maximum cover. In lawn areas, a minimum cover satisfactory to the Township shall be maintained over all storm drain pipes. Under streets, the top of storm drain pipes shall be at least 0.5 foot below subgrade elevation. The maximum cover over storm drain pipes shall be 10 feet unless approved otherwise by the Township.
14. Storm sewer system outlets. Storm sewer system outlet pipes shall extend to proposed stormwater management facilities, natural, and the like. A concrete end wall shall be required on all storm sewer system outlet pipes. All storm/sewer outlets 12 inches in diameter or greater shall be equipped with a galvanized, childproof bar rack, bolted to the end wall.
15. Drainage easements.
  - a) All storm sewer easements through undedicated land shall be a minimum of 20 feet.
  - b) Where a site is traversed by a watercourse, a drainage easement or right-of-way conforming substantially with the line of such watercourse and of such width as will be adequate to preserve natural drainage and provide sufficient width for maintenance shall be created, as determined by the Township.
16. Diversion of surface water runoff. All storm sewers and/or drainage swales shall be designed to carry such runoff into a detention basin or similar facility utilized to control the rate of runoff, unless approved otherwise by the Township.

B. Maintenance of storm sewer systems and watercourses.

1. Maintenance of all drainage facilities and watercourses within any subdivision and/or land development is the responsibility of the landowner or developer until and unless they are accepted for dedication by the Township in accordance with Article X of Chapter 305, Subdivision and Land Development.
2. It is the responsibility of any landowner or developer doing any act on or across a watercourse or swale or upon the floodplain or right-of-way thereof to maintain as nearly as possible in its present state the stream, watercourse, swale, floodplain or right-of-way for the duration of the construction activity and to return it to its

original or equal condition after such activity is completed.

3. Maintenance of drainage facilities or watercourses originating on private property is the responsibility of the owner to the owner's point of open discharge at the property line or at a watercourse within the property.
4. No landowner or developer shall block, impede the flow of, alter, construct any structure, or deposit any material, or commit any act which will affect normal or flood flow in any watercourse without having obtained prior approval from the Township and the Department.

### **Section 311. Other Requirements.**

- A. All wet basin designs shall incorporate biologic controls consistent with the West Nile Guidance found in Appendix H, PADEP document 363-0300-001 "Design Criteria – Wetlands Replacement/Monitoring," or contact the Pennsylvania State Cooperative Wetland Center ([www.wetlands.psu.edu/](http://www.wetlands.psu.edu/)) or the Penn State Cooperative Extension Office ([www.extension.psu.edu/extmap.html](http://www.extension.psu.edu/extmap.html)).
- B. Any stormwater basin required or regulated by this Chapter designed to store runoff and requiring a berm or earthen embankment shall be designed to provide an emergency spillway to handle flow up to and including the 100-year proposed conditions. The height of embankment must provide a minimum of one (1) foot of freeboard above the maximum pool elevation computed when the facility functions for the 100-year proposed conditions inflow. Should any stormwater management facility require a dam safety permit under PADEP Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of Chapter 105 concerning dam safety. Chapter 105 may require the passing of storms larger than 100-year event.
- C. Any drainage conveyance facility and/or channel not governed by Chapter 105 regulations must be able to convey, without damage to the drainage structure or roadway, runoff from the 25-year storm event. The larger the events (50-year and 100-year) must also be safely conveyed in the direction of natural flow without creating additional damage to any drainage structures, nearby structures, or roadways.
- D. Conveyance facilities transporting flow to or exiting from stormwater management facilities (i.e., detention basins) shall be designed to convey the 100-year frequency storm.
- E. Roadway crossings or structures located within designated floodplain areas must be able to convey runoff from a 100-year design storm consistent with Federal Emergency Management Agency National Flood Insurance Program – Floodplain Management Requirements.
- F. Any facility located within a PennDOT right-of-way must meet PennDOT minimum design standards and permit submission requirements.

- G. Adequate erosion protection and energy dissipation shall be provided along all open channels and at all points of discharge. Design methods shall be consistent with the Federal Highway Administration Hydraulic Engineering Circular Number 11 (Publication No. FHWA-IP-89-016) and the PADEP Erosion and Sediment Pollution Control Program Manual (Publication No. 363-2134-008).

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

**Section 401. General Requirements.**

For any of the activities regulated by this Chapter, the preliminary or final approval of subdivision and/or land development plans, the issuance of any building or occupancy permit, or the commencement of any earth disturbance activity may not proceed until the property owner, Applicant, or his/her agent has received written approval of a SWM site plan from the Municipality and an adequate erosion and sediment control plan review by the Conservation District unless the project qualifies for an exemption in Section 106.

**Section 402. SWM Site Plan Contents.**

The SWM site plan shall consist of a general description of the project including sequencing items described in Section 304, calculations, maps, and plans. A note on the maps shall refer to the associated computations and erosion and sediment control plan by title and date. The cover sheet of the computations and erosion and sediment control plan shall refer to the associated maps by title and date. All SWM site plan materials shall be submitted to the Municipality in a format that is clear, concise, legible, neat, and well organized; otherwise, the SWM site plan shall not be accepted for review and shall be returned to the Applicant.

The following items shall be included in the SWM site plan, when applicable:

- A. General
  - 1. General description of the project, including those areas described in Section 304.B.
  - 2. General description of proposed permanent stormwater management techniques, including construction specifications of the materials to be used for stormwater management facilities.
  - 3. Complete hydrologic, hydraulic, and structural computations for all stormwater management facilities.
  - 4. An erosion and sediment control plan, including all reviews and letters of adequacy from the Conservation District.
  - 5. A general description of proposed nonpoint source pollution controls.
  - 6. The SWM Site Plan Application and completed fee schedule form and associated fee (Ordinance Appendix C-1).
  - 7. The SWM Site Plan Checklist (Appendix C-2).

- B. Maps or Plan Sheets: Map(s) or plan sheets of the project area shall be submitted on 24-inch x 36-inch sheets and/or shall be prepared in a form that meets the requirements for recording at the offices of the Recorder of Deeds of Delaware County. If the SALDO has more stringent criteria than this Chapter, then the more stringent criteria shall apply. The contents of the map(s) shall include, but not be limited to:
1. The location of the project relative to highways, municipal boundaries, or other identifiable landmarks.
  2. Existing contours at intervals of two (2) feet.
  3. Existing streams, lakes, ponds, or other waters of the Commonwealth within the project area.
  4. Other physical features including flood hazard boundaries, stream buffers, existing drainage courses, areas of natural vegetation to be preserved, and the total extent of the upstream area draining through the site.
  5. The locations of all existing and proposed utilities, sanitary sewers, and water lines within fifty (50) feet of property lines.
  6. An overlay showing soil names and boundaries.
  7. Limits of earth disturbance, including the type and amount of impervious area that would be added.
  8. Proposed structures, roads, paved areas, and buildings.
  9. Final contours at intervals of two (2) feet.
  10. The name of the development, the name and address of the owner of the property, and the name of the individual or firm preparing the plan.
  11. The date of submission.
  12. A graphic and written scale of one (1) inch equals no more than fifty (50) feet; for tracts of twenty (20) acres or more, the scale shall be one (1) inch equals no more than one hundred (100) feet.
  13. A north arrow.
  14. The total tract boundary and size with distances marked to the nearest foot and bearings to the nearest degree.
  15. Existing and proposed land use(s).

16. A key map showing all existing man-made features beyond the property boundary that would be affected by the project.
17. Location of all open channels.
18. Overland drainage patterns and swales.
19. A 15-foot-wide access easement around all stormwater management facilities that would provide ingress to and egress from a public right-of-way.
20. The location of all erosion and sediment control facilities.
21. A note on the plan indicating the location and responsibility for maintenance of stormwater management facilities that would be located off site. All off-site facilities shall meet the performance standards and design criteria specified in this Chapter.
22. A statement, signed by the Applicant, acknowledging that any revision to the approved SWM site plan must be approved by the Municipality, and that a revised erosion and sediment control plan must be submitted to the Conservation District for a determination of adequacy.
23. The following signature block signed and sealed by the qualified Licensed Professional responsible for the preparation of the SWM Site Plan:

“I, (Licensed Professional), on this date (date of signature), hereby certify that the SWM site plan meets all design standards and criteria of the Edgmont Township Stormwater Management Ordinance.” [*Note: license stamp should be included here*]
24. The following signature block for the Municipality:

“On behalf of Edgmont Township, (Municipal official or designee), on this date (date of signature), has reviewed and hereby certifies to the best of my knowledge that the SWM Site Plan meets all design standards and criteria of the Edgmont Township Stormwater Management Ordinance.”

C. Supplemental information to be submitted to the Municipality:

1. A written description of the following information shall be submitted by the Applicant and shall include:
  - a) The overall stormwater management concept for the project designed in accordance with Section 304.

- b) Stormwater runoff computations as specified in this Chapter.
  - c) Stormwater management techniques to be applied both during and after development.
  - d) Expected project time schedule.
  - e) Development stages or project phases, if so proposed.
  - f) An operations and maintenance plan in accordance with Section 702 of this Chapter.
2. An erosion and sediment control plan.
- a) Soil erosion and sedimentation control and stormwater management plans shall be submitted for all subdivisions and/or land developments within the Township. The Township or its designated representative ensure and enforce compliance with the appropriate standards, including without limitation the Township grading ordinance,<sup>13</sup> which is incorporated herein by reference.
  - b) Measures used to control soil erosion and reduce sedimentation shall as a minimum meet the latest revised standards, specifications and/or regulations of:
    - 1) The U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), as adopted by the Delaware County Conservation District in its Erosion and Sediment Control Handbook.
    - 2) The Department in its Erosion and Sediment Pollution Control Manual.
    - 3) "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas" by the U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS), College Park, Maryland.
3. A description of the effect of the project (in terms of runoff volumes and peak flows) on adjacent properties and on any existing municipal stormwater collection system that may receive runoff from the project site.
4. A Declaration of Adequacy and Highway Occupancy Permit from the Pennsylvania Department of Transportation (PennDOT) District office when utilization of a PennDOT storm drainage system is proposed.

D. Stormwater Management Facilities

1. All stormwater management facilities must be located on a plan and described in detail.

2. The locations of existing and proposed septic tank infiltration areas and wells must be shown.
3. All calculations, assumptions, loading ratios (guidelines presented in the PA BMP Manual), and criteria used in the design of the stormwater management facilities must be shown.

### **Section 403. Plan Submission.**

The Municipality shall require receipt of a complete SWM site plan, as specified in this Chapter.

- A. Proof of application or documentation of required permit(s) or approvals for the programs listed below shall be part of the plan, if applicable:
  1. NPDES Permit for Stormwater Discharges from Construction Activities
  2. PADEP permits as needed
    - a) PADEP Joint Permit Application
    - b) Chapter 105 (Dam Safety and Waterway Management)
    - c) Chapter 106 (Floodplain Management)
  3. PennDOT Highway Occupancy Permit
  4. Any other permit under applicable state or federal regulations
- B. The plan shall be coordinated with the state and federal permit process and the municipal SALDO review process. The process implementing the provisions in this Chapter is illustrated in Appendices D-1 and D-2.
- C. For projects that require SALDO approval, the SWM site plan shall be submitted by the Applicant as part of the preliminary plan submission where applicable for the regulated activity.
- D. For regulated activities that do not require SALDO approval, see Section 301, General Requirements.
- E. Five (5) copies of the SWM site plan shall be submitted by the applicant for review in accordance with established criteria and procedures:
  1. Two (2) copies to the Municipality accompanied by the requisite municipal review fee, as specified in this Chapter.

2. Two (2) copies to the County Conservation District.
  3. One (1) copy to the municipal Engineer.
- F. Any submissions to the agencies listed above that are found to be incomplete shall not be accepted for review and shall be returned to the Applicant with a notification in writing of the specific manner in which the submission is incomplete.

**Section 404. Stormwater Management (SWM) Site Plan Review.**

- A. SWM plans shall be submitted to the municipality for review by the municipal engineer for consistency with this Chapter and the respective Act 167 Stormwater Management Plan. Any plan found incomplete may not be accepted for review and may be returned to the Applicant. The municipal Engineer will review the SWM site plan for any subdivision or land development against the municipal SALDO provisions not otherwise superseded by this Chapter.
- B. The applicant shall respond to the Conservation District comments on the SWM site plan prior to being considered for final approval by the Municipality.
- C. For activities regulated by this Chapter (Section 105), the municipal Engineer will notify the Applicant and the Municipality in writing, with a copy to the Building Permit Officer, within 30 calendar days, whether the SWM site plan is consistent with the stormwater management plan.
1. If the municipal Engineer determines that the SWM site plan is consistent with the stormwater management ordinance, the municipal Engineer will forward a letter of consistency to the municipality, who will then forward a copy to the Applicant.
  2. If the municipal Engineer determines that the SWM site plan is inconsistent or noncompliant with the stormwater management ordinance, the municipal Engineer will forward a letter to the municipality, with a copy to the Applicant citing the reason(s) and specific Chapter sections for the inconsistency or noncompliance. Inconsistency or noncompliance may be due to inadequate information to make a reasonable judgment as to compliance with the stormwater management plan. Any SWM site plans that are inconsistent or noncompliant may be revised by the Applicant and resubmitted when consistent with this Chapter.
- D. For regulated activities under this Chapter that require an NPDES Permit Application, the Applicant shall forward a copy of the municipal Engineer's letter stating that the SWM site plan is consistent with the stormwater management ordinance to the Conservation District. PADEP and the Conservation District may consider the municipal Engineer's review comments in determining whether to issue a permit.
- E. The Municipality will not grant preliminary or final approval to any subdivision or land development for regulated activities specified in this Chapter if the SWM site plan has

been found by the municipal Engineer to be inconsistent with the stormwater management ordinance. All required permits from PADEP must be obtained prior to approval of any subdivision or land development.

- F. No building permits for any regulated activity specified in this Chapter will be approved by the Municipality if the SWM site plan has been found to be inconsistent with the stormwater management ordinance, as determined by the municipal Engineer and Conservation District, or without considering the comments of the municipal Engineer and Conservation District. All required permits from PADEP must be obtained prior to issuance of a building permit.
- G. The Applicant shall be responsible for completing record drawings of all stormwater management facilities included in the approved SWM site plan. The record drawings and an explanation of any discrepancies with the design plans shall be submitted to the municipal Engineer for final approval. In no case will the Municipality approve the record drawings until the Municipality receives a copy of an approved Declaration of Adequacy and/or Highway Occupancy Permit from the PennDOT District office, NPDES Permit, and any other applicable permits or approvals from PADEP or the Conservation District. The above permits and approvals must be based on the record drawings.
- H. The Municipality's approval of a SWM site plan shall be valid for a period not to exceed 5 years commencing on the date that the Municipality signs the approved SWM site plan. If stormwater management facilities included in the approved SWM site plan have not been constructed, or if constructed, record drawings of these facilities have not been approved within this 5 year time period, then the Municipality may consider the SWM site plan inconsistent or noncompliant and may revoke any and all permits. SWM site plans that are determined to be inconsistent or noncompliant by the Municipality shall be resubmitted in accordance with Section 406 of this Chapter.

#### **Section 405. Revision of Plans.**

- A. A revision to a submitted SWM site plan under review by the Municipality for a development site that involves the following shall require a resubmission to the Municipality of a revised SWM site plan consistent with Section 403 of this Chapter and be subject to review as specified in Section 404 of this Chapter:
  - 1. Change in stormwater management facilities or techniques,
  - 2. Relocation or redesign of stormwater management facilities, or
  - 3. Is necessary because soil or other conditions are not as stated on the SWM site plan as determined by the municipal Engineer.
- B. A revision to an already approved or inconsistent or noncompliant SWM site plan shall be submitted to the Municipality, accompanied by the applicable municipal review and inspection fee. A revision to a SWM site plan for which a formal action has not been

taken by the Municipality shall be submitted to the Municipality accompanied by the applicable municipal review and inspection fee.

**Section 406. Resubmission of Inconsistent or Noncompliant SWM Site Plans.**

An inconsistent or noncompliant SWM site plan may be resubmitted with the revisions addressing the municipal Engineer's concerns documented in writing. It must be addressed to the municipality in accordance with Section 403 of this Chapter, distributed accordingly, and be subject to review as specified in Section 404 of this Chapter. The applicable municipal review and inspection fee must accompany a resubmission of an inconsistent or noncompliant SWM site plan.

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## **ARTICLE V – INSPECTIONS**

### **Section 501. Inspections.**

- A. The municipal Engineer or his municipal designee shall inspect all phases of the installation of the permanent BMPs and/or stormwater management facilities as deemed appropriate by the municipal Engineer.
- B. During any stage of the work, if the municipal Engineer or his municipal designee determines that the permanent BMPs and/or stormwater management facilities are not being installed in accordance with the approved stormwater management plan, the Municipality may revoke any existing permits or other approvals and issue a cease-and-desist order until a revised SWM site plan is submitted and approved, as specified in this Chapter, and until the deficiencies are corrected.
- C. A final inspection of all BMPs and/or stormwater management facilities shall be conducted by the municipal Engineer or his municipal designee to confirm compliance with the approved SWM site plan prior to the issuance of any occupancy permit.

### **Section 502. As-built Plans, Completion Certificate, and Final Inspections.**

- A. The developer shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM site plan for activities involving regulated impervious surfaces 1,000 sq. ft. or greater. The as-built plans and all explanation of any discrepancies with the construction plans shall be submitted to the Municipality within three (3) months of the completion of construction of the SWM BMPs.
- B. As-built plans shall show the location (including latitude and longitude coordinates) and as-built conditions of all SWM BMPs and include the following information: impervious surfaces included in the approved SWM site plan; topographic contours; and existing, proposed, and built impervious surfaces shown in the as-built drawings.
- C. The as-built submission shall include a certification of completion signed by a Design Professional verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications.
- D. The municipality will review the as-built submission for consistency with the approved SWM site plan as well as actual conditions at the project site. After receipt of the completion certification by the Municipality, the Municipality may conduct a final inspection.
- E. If an NPDES Permit for Stormwater Discharges Associated with Construction Activities was required for the Regulated Activity, a Notice of Termination (NOT) approval must be obtained upon completion of construction prior to final approval of the project by the Municipality.

## ARTICLE VI – FEES AND EXPENSES

### **Section 601. Municipality SWM Site Plan Review and Inspection Fee.**

Fees have been established by the Municipality to defray plan review and construction inspection costs incurred by the Municipality. All fees shall be paid by the Applicant at the time of SWM site plan submission. A review and inspection fee schedule has been established by resolution by the Edgmont Township Board of Supervisors based on the size of the regulated activity and based on the costs for reviewing SWM site plans and conducting inspections pursuant to Section 501. Edgmont Township shall periodically review and update the inspection fee schedule to ensure that review costs are adequately reimbursed.

### **Section 602. Expenses Covered by Fees.**

The fees required by this Chapter shall at a minimum cover:

- A. Administrative costs.
- B. The review of the SWM site plan by the Municipality and the municipal Engineer.
- C. The site inspections.
- D. The inspection of stormwater management facilities and drainage improvements during construction.
- E. Attendance at meeting.
- F. The final inspection upon completion of the stormwater management facilities and drainage improvements presented in the SWM site plan.
- G. Any additional work required to enforce any permit provisions regulated by this Chapter, correct violations, and assure proper completion of stipulated remedial actions.

**ARTICLE VII – OPERATION AND MAINTENANCE (O&M)**  
**RESPONSIBILITIES AND EASEMENTS**

**Section 701. Performance Guarantee.**

- A. For all activities requiring submittal of a SWM site plan, the Applicant shall provide a financial guarantee to the Municipality for the timely installation and proper construction of all stormwater management facilities as:
  - 1. Required by the approved SWM site plan equal to or greater than the full construction cost of the required facilities, or
  - 2. The amount and method of payment provided for in the SALDO.
- B. For other regulated activities, the Municipality may require a financial guarantee from the Applicant.

**Section 702. Responsibilities for Operations and Maintenance (O&M) of Stormwater Controls and BMPs.**

- A. The SWM site plan shall include a BMP operations and maintenance plan that describes how the permanent (e.g., post-construction) stormwater controls and BMPs will be properly operated, inspected, and maintained.
- B. Establish access easements that include all significant stormwater controls, conveyances, and BMPs, and indicate a 15-foot perimeter area surrounding these features that will provide the municipality sufficient ingress to and egress from a public right-of-way.
- C. The following items shall be included in the stormwater control and BMP operations and maintenance plan, as applicable:
  - 1. Map(s) of the project area, in a form that meets the requirements for recording at the offices of the Recorder of Deeds of Delaware County, shall be submitted on 24 -inch x – 36 -inch sheets. The contents of the maps(s) shall include, but not be limited to:
    - a) Clear identification of the location and nature of permanent stormwater controls and BMPs,
    - b) The location of the project site relative to highways, municipal boundaries, or other identifiable landmarks,
    - c) Existing and final contours at intervals of two (2) feet, or others as appropriate,

- d) Existing streams, lakes, ponds, or other bodies of water within the project site area,
  - e) Other physical features including flood hazard boundaries, sinkholes, streams, existing drainage courses, and areas of natural vegetation to be preserved,
  - f) The locations of all existing and proposed utilities, sanitary sewers, and water lines within fifty (50) feet of property lines of the project site,
  - g) Proposed final changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added,
  - h) Proposed final structures, roads, paved areas, and buildings, and access easement boundaries,
  - i) A description of how each permanent stormwater control and BMP will be operated and maintained,
  - j) The identity and contact information associated with the person(s) responsible for operations and maintenance,
  - k) The name of the project site, the name and address of the owner of the property, and the name of the individual or firm preparing the plan, and
  - l) A statement, signed by the landowner, acknowledging that the stormwater controls and BMPs are fixtures that can be altered or removed only after approval by the Municipality.
- D. The stormwater control and BMP operations and maintenance plan for the project site shall establish responsibilities for the continuing operation and maintenance of all permanent stormwater controls and BMPs, as follows:
- 1. If a plan includes structures or lots that are to be separately owned and in which streets, sewers, and other public improvements are to be dedicated to the Municipality, stormwater controls and BMPs may, at the Municipality's discretion, also be dedicated to and maintained by the Municipality.
  - 2. If a plan includes operations and maintenance by a single owner or if sewers and other public improvements are to be privately owned and maintained, the operations and maintenance of stormwater controls and BMPs shall be the responsibility of the landowner.
- E. The Municipality will make the final determination on the continuing operations and maintenance responsibilities. The Municipality reserves the right to accept or reject the

operations and maintenance responsibility for any or all of the stormwater controls and BMPs.

**Section 703. Municipal Review of a Stormwater Control and BMP Operations and Maintenance Plan.**

- A. The Municipality will review the stormwater control and BMP operations and maintenance plan for consistency with this Chapter and any permits issued by PADEP.
- B. The Municipality will notify the Applicant in writing whether or not the stormwater control and BMP operations and maintenance plan is approved.
- C. The Municipality will require an as-built plan per Section 502 showing all constructed stormwater controls and BMPs and an explanation of any discrepancies with the approved operations and maintenance plan.

**Section 704. Adherence to an Approved Stormwater Control and BMP Operations and Maintenance Plan.**

It shall be unlawful to alter or remove any permanent stormwater control and BMP required by an approved stormwater control and BMP operations and maintenance plan or to allow the property to remain in a condition which does not conform to an approved stormwater control and BMP operations and maintenance plan.

**Section 705. Operations and Maintenance Agreement for Privately Owned Stormwater Controls and BMPs.**

- A. Prior to final approval of the site's SWM site plan (including plans for private facilities constructed under the simplified method), the Applicant shall sign and record an operations and maintenance agreement with the Municipality covering all stormwater controls and BMPs that are to be privately owned (refer to Appendix I). The maintenance agreement shall be transferred with transfer of ownership in perpetuity. The agreement shall be substantially the same as the agreement in Appendix I.
- B. Other items may be included in the agreement where determined necessary to guarantee the satisfactory operation and maintenance of all permanent stormwater controls and BMPs. The agreement shall be subject to the review and approval of the Municipality.

**Section 706. Stormwater Management Easements.**

- A. Stormwater management easements are required for all areas used for off-site stormwater control, unless a waiver is granted by the Municipality.

- B. Stormwater management easements shall be provided to the municipality by the Applicant or property owner for access for inspections and maintenance, the preservation of stormwater runoff conveyance, infiltration, and detention areas, and for other stormwater controls. The purpose of the easement shall be specified in any agreement under Section 705.

**Section 707. Recording of an Approved Stormwater Control and BMP Operations and Maintenance Plan and Related Agreements.**

- A. The owner of any land upon which permanent stormwater controls and BMPs will be placed, constructed, implemented, or permanently maintained, as described in the stormwater control and BMP operations and maintenance plan, shall record the following documents in the Office of the Recorder of Deeds for [insert] County, within fifteen (15) days of approval of the stormwater control and BMP operations and maintenance plan by the Municipality:
1. The operations and maintenance plan, or a summary thereof,
  2. Operations and maintenance agreements under Section 705, and
  3. Easements under Section 706.
- B. The Municipality may suspend or revoke any approvals granted for the project site upon discovery of failure on the part of the owner to comply with this section.

**Section 708. Township stormwater control and BMP operation and maintenance fund.**

- A. Persons installing stormwater controls or BMPs shall be required to pay a specified amount to the Township Stormwater Control and BMP Operation and Maintenance Fund to help defray costs of periodic inspections and maintenance expenses. The amount of the deposit shall be determined as follows:
1. If the stormwater control or BMP is to be privately owned and maintained, the deposit shall cover the cost of periodic inspections performed by the Township, as estimated by the Township Engineer, for a period of 10 years. This is to be paid in a manner specified by the Township. After that period of time, inspections will be performed at the expense of the Township.
  2. If the stormwater control or BMP is to be owned and maintained by the Township, the deposit shall cover the estimated costs for maintenance and inspections for 10 years. The Township will establish the estimated costs utilizing information submitted by the applicant.
  3. The amount of the deposit to the fund shall be converted to present worth of the annual series values. The Township shall determine the present worth equivalents,

which shall be subject to the approval of the Board of Supervisors.

- B. If a stormwater control or BMP is proposed that also serves as a recreational facility (e.g., ball field or lake), the Township may reduce or waive the amount of the maintenance fund deposit based upon the value of the land for public recreational purpose.
- C. If, at some future time, a stormwater control or BMP (whether publicly or privately owned) is eliminated due to the installation of storm sewers or other storage facility, the unused portion of the maintenance fund deposit will be applied to the cost of abandoning or demolishing the facility and connecting to the storm sewer system or other facility. Any amount of the deposit remaining after the costs of abandonment or demolition will be used for inspection, maintenance, and operation of the receiving stormwater management system.
- D. If stormwater controls or BMPs are accepted by the Township for dedication, the Township may require persons installing stormwater controls or BMPs to pay a specified amount to the Township Stormwater Control and BMP Operation and Maintenance Fund to help defray costs of operations and maintenance activities. The amount may be determined as follows:
  - 1. The amount shall cover the estimated costs for operations and maintenance for 10 years, as determined by the Township.
  - 2. The amount shall then be converted to present worth of the annual series values.
- F. If a stormwater control or BMP is proposed that also serves as a recreational facility (e.g., ball field or lake), the Township may adjust the amount due accordingly.
- G. The Township may require applicants to pay a fee to the Township Stormwater Control and BMP Operation and Maintenance Fund to cover long-term maintenance of stormwater controls and BMPs.
- H. The Township may require applicants to pay a fee to the Township Stormwater Control and BMP Operation and Maintenance Fund to cover stormwater-related problems which may arise from the land development and earth disturbance.

## ARTICLE VIII – PROHIBITIONS

### **Section 801. Prohibited Discharges.**

- 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 the Municipality's separate storm sewer system, riparian buffers, wetlands, or other Waters of the Commonwealth is prohibited.
- B. No person shall allow, or cause to allow, stormwater discharges into the Municipality's separate storm sewer system that are not composed entirely of stormwater, except as provided in subsection C below, and discharges allowed under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution to the waters of the Commonwealth:
  - 1. Discharges from firefighting activities;
  - 2. Potable water sources including water line and fire hydrant flushings if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).
  - 3. Non-contaminated irrigation drainage water.
  - 4. Routine external building washdown (which does not use detergents or other compounds).
  - 5. Non-contaminated HVAC condensation and water from geothermal systems.
  - 6. Residential (i.e., not commercial) vehicle wash water where agents are not utilized.
  - 7. Springs and water from crawl space pumps.
  - 8. Uncontaminated water from foundation or from footing drains.
  - 9. Flows from riparian habitats and wetlands.
  - 10. Lawn watering.
  - 11. Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used.
  - 12. Uncontaminated groundwater.

13. Non-contaminated hydrostatic test water discharges if such discharges do not contain detectable concentrations of TRC.
  14. Diverted stream flows.
- D. In the event that the Municipality determines that any of the discharges identified in Section 801.C significantly contribute to pollution of waters of the Commonwealth, or is so notified by PADEP, the Municipality will notify the responsible person to cease the discharge.
  - E. Upon notice provided by the Municipality under Section 801.D, the discharger will have a reasonable time, as determined by the Municipality, to cease the discharge consistent with the degree of pollution caused by the discharge.
  - F. Nothing in this section shall affect a discharger's responsibilities under state law.

#### **Section 802. Prohibited Connections.**

The following connections are prohibited, except as provided in Section 801.C above:

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge, including sewage, process wastewater, wash water entering the separate storm sewer system, and any connections to the storm drain system from indoor drains and sinks. Any drain or Conveyance that delivers non-stormwater discharges directly into wetlands, Riparian Buffers, or other Waters of the Commonwealth is prohibited.

#### **Section 803. Pet Waste.**

- A. All pet owners and keepers are required to immediately and properly dispose of their pet's solid waste deposited on any property, public or private, not owned or possessed by that person by putting it in a dog waste receptacle, bagging it and disposing in a trash can/receptacle, or flushing it to a sanitary sewer system or on-lot septic system.
- B. Any owner or keeper who requires the use of a disability assistance animal shall be exempt from this requirement while such animal is being used for that purpose.
- C. Any person(s) found to be in violation of these provisions of this chapter shall be subject to enforcement and penalties as specified under Article IX of this Chapter.

#### **Section 804. Roof Drains and Sump Pumps.**

- A. Roof drains and sump pumps shall not be connected to sanitary sewers.

- B. Roof drains and sump pumps shall not be connected to streets, storm sewers, or roadside ditches except on a case-by-case basis as determined by the municipality.
- C. Roof drains and sump pumps shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable where advantageous to do so.

**Section 805. Alteration of BMPs.**

- A. No person shall modify, remove, fill, landscape, or alter any existing stormwater control or BMP unless it is part of an approved maintenance program without the written approval of the Municipality.
- B. No person shall place any structure, fill, landscaping, or vegetation into a stormwater control or BMP or within a drainage easement that would limit or alter the functioning of the stormwater control or BMP without the written approval of the Municipality.

## **ARTICLE IX – ENFORCEMENT AND PENALTIES**

### **Section 901. Right-of-Entry.**

- A. Upon presentation of proper credentials, duly authorized representatives of the Municipality may enter at reasonable times upon any property within the Municipality to inspect the implementation, condition, or operation and maintenance of all erosion and sediment controls and permanent stormwater BMPs, Conveyances, or other stormwater management facilities both during and after completion of a Regulated Activity, or for compliance with any requirement of this Chapter.
- B. Persons working on behalf of the Municipality shall have the right to temporarily locate on or in any stormwater control or BMP in the Municipality such devices as are necessary to conduct monitoring and/or sampling of the discharges from such stormwater control or BMP.
- C. If the property owner or representative does not grant access to the Municipality within 24 hours of notification, it will be a violation of this Chapter.

### **Section 902. Public Nuisance.**

- A. The violation of any provision of this Chapter is hereby deemed a public nuisance.
- B. Each day that a violation continues shall constitute a separate violation.

### **Section 903. Enforcement Generally.**

- A. Whenever the Municipality finds that a person has violated a prohibition or failed to meet a requirement of this Chapter, the Municipality may order compliance by written notice to the responsible person. Such notice may, without limitation, require the following remedies:
  - 1. Performance of monitoring, analyses, and reporting;
  - 2. Elimination of prohibited connections or discharges;
  - 3. Cessation of any violating discharges, practices, or operations;
  - 4. Abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
  - 5. Payment of a fine to cover administrative and remediation costs;
  - 6. Implementation of stormwater controls and BMPs; and

7. Operation and maintenance of stormwater controls and BMPs.
- B. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violations(s). Said notice may further advise that, if applicable, should the violator fail to take the required action within the established deadline, the work will be done by the Municipality or designee, and the expense thereof shall be charged to the violator.
  - C. Failure to comply within the time specified shall also subject such person to the penalty provisions of this Chapter. All such penalties shall be deemed cumulative and shall not prevent the Municipality from pursuing any and all other remedies available in law or equity.

**Section 904. Suspension and Revocation of Permits and Approvals.**

- A. Any building, land development, or other permit or approval issued by the Municipality may be suspended or revoked by the Municipality for:
  1. Noncompliance with or failure to implement any provision of the permit.
  2. A violation of any provision of this Chapter or any other law or regulation applicable to the regulated activity.
  3. The creation of any condition or the commission of any act during construction or development that constitutes or creates a hazard or nuisance, pollution, or endangers the life, health, or property of others.
- B. Prior to revocation or suspension of a permit and at the request of the Applicant, the Governing Body shall schedule a hearing to discuss the noncompliance if there is no immediate danger to life, public health, or property. The expense of a hearing shall be the Applicant's responsibility.
- C. A suspended permit or approval may be reinstated by the Municipality when:
  1. The municipal Engineer or designee has inspected and approved the corrections to the stormwater controls and BMPs or the elimination of the hazard or nuisance, and/or
  2. The Municipality is satisfied that the violation has been corrected.
- D. A permit or approval that has been revoked by the Municipality cannot be reinstated. The Applicant may apply for a new permit in accordance with this chapter.

**Section 905. Penalties.**

- A. Any person violating the provisions of this Chapter shall be subject to a fine as established by the Municipality for each violation, recoverable with costs. Each day that the violation continues shall constitute a separate offense and the applicable fines are 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 Chapter. 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 906. Notification.**

In the event that a person fails to comply with the requirements of this Chapter or fails to conform to the requirements of any permit issued hereunder, and the Municipality chooses to pursue enforcement action, the Municipality will provide written notification of the violation. Such notification will state the nature of the violation(s) and establish a time limit for correction of these violation(s). Failure to comply within the time specified will subject such person to the penalty provisions of this Chapter. All such penalties will be deemed cumulative and shall not prevent the Municipality from pursuing any and all remedies. It shall be the responsibility of the owner of the real property on which any regulated activity is proposed to occur, is occurring, or has occurred to comply with the terms and conditions of this chapter.

**Section 907. Enforcement.**

The municipal Governing Body is hereby authorized and directed to enforce all of the provisions of this Ordinance. All inspections regarding compliance with the SWM site plan shall be the responsibility of the municipality or its designee.

- A. A set of design plans approved by the Municipality shall be on file and available for viewing at the site throughout the duration of the construction activity. Periodic inspections may be made by the Municipality or its designee during construction.
- B. It shall be unlawful for any person, firm, or corporation to undertake any regulated activity under Section 105 on any property except as provided for in the approved SWM site plan and pursuant to the requirements of this Ordinance. It shall be unlawful to alter or remove any control structure required by the SWM site plan pursuant to this Ordinance or to allow the property to remain in a condition that does not conform to the approved SWM site plan.
- C. At the completion of the project and as a prerequisite for the release of the performance guarantee, the owner or his representatives shall:
  - 1. Provide a certification of completion from an engineer, architect, surveyor, or other qualified person verifying that all stormwater facilities have been

constructed according to the plans and specifications and approved revisions thereto.

2. Provide a set of as-built (record) drawings per Section 502.
- D After receipt of the certification by the Municipality, a final inspection shall be conducted by the municipality or its designee to certify compliance with this chapter.
- E An occupancy permit will not be issued unless the certification of completion pursuant to Section 907.C.1 has been secured. The occupancy permit shall be required for each lot owner and/or Applicant for all subdivisions and land developments in the Municipality.

**Section 908. Appeals.**

- A. Any person aggrieved by any action of Edgmont Township or its designee relevant to the provision of this Ordinance may appeal to The Board of Supervisors within thirty (30) days of that action.
- B. Any person aggrieved by any decision of the Board of Supervisors relevant to the provision of this Ordinance may appeal to the County Court of Common Pleas in the County where the activity has taken place within thirty (30) days of the municipal decision.

**Section 909. Effective Date.**

This Chapter shall take effect and be in force immediately after its enactment by the Board of Supervisors, and shall thereafter be submitted in due course by the Township Manager for codification in and as a part of the official Edgmont Township Code.

**ENACTED AND ORDAINED** this \_\_\_\_<sup>th</sup> day of \_\_\_\_\_, A.D., 2023.  
This Ordinance shall take effect immediately.

\_\_\_\_\_  
Ron Gravina, Chairman

\_\_\_\_\_  
Jim Hallam, Vice Chairman

\_\_\_\_\_  
Lindsey Conan, Supervisor

I hereby certify that the foregoing Ordinance was advertised in the Delaware County Daily Times on \_\_\_\_\_, a newspaper of general circulation in the Municipality and was duly enacted and approved as set forth at a regular meeting of the Municipality's Governing Body held on \_\_\_\_\_.

\_\_\_\_\_  
Neil D. Vaughn, Township Secretary