# CHADDS FORD TOWNSHIP PLANNING COMMISSION
# TUESDAY, February 20, 2024 – REGULAR MEETING AGENDA

This meeting will be held in person at the Chadds Ford Township Building, 10 Ring Road, Chadds Ford, PA 19317. The meeting will also be broadcast live via Zoom webinar. The Zoom link can be found on the Township website or by clicking here.

## 7:00 PM PLEDGE OF ALLEGIANCE AND OPEN MEETING

## ANNUAL ORGANIZATION

## ANNOUNCEMENTS

**PUBLIC COMMENT (Agenda Items):** Please be concise. In the Zoom platform, please use the Q & A function to ask your question.

1. **MINUTES:**
   a. December 13, 2023, Planning Commission Regular Meeting Minutes

2. **MANAGERS REPORT**

3. **OLD BUSINESS:**
   a. Cultural Campus Text Amendment
   b. Countywide Stormwater Ordinance

4. **NEW BUSINESS:**
   a. 438 Webb Road – 2 Lot Subdivision Application
   b. Chadds Ford Township Zoning Map Review
   c. 2023 Planning Commission Annual Report

5. **MISCELLANEOUS DISCUSSION:**
   a. 1597 Baltimore Pike – Potential Zoning Ordinance/MAP Amendment

## ONGOING, UPCOMING, & PAST PLANNING COMMISSION BUSINESS:

| Topic | Type | Applicant | Review Clock | PC Recommendation | BOS Approval |
|---|---|---|---|---|---|
| Zoning Ordinance | Ordinance Amendment | N/A | | 9/13/23 | |
| SLDO Ordinance | Ordinance Amendment | N/A | | 9/13/24 | |
| Cultural Campus | ZO Text & Map Amendment | BCMA | | 11/8/24 | |
| Zoning Map | Map Amendment | N/A | | | |
| Stormwater Ordinance | Ordinance Amendment | N/A | | | |
| 438 Webb Road | S&LD Application | | 5/20/24 (90 Days) | | |
| **KEY: SLDO – Subdivision & Land Development Ordinance; ZO – Zoning Ordinance; S&LD – Subdivision & Land Development** | | | | | |

**PUBLIC COMMENT (non-Agenda Items):** Please be concise. In the Zoom platform, please use the Q & A function to ask your question.

## ADJOURNMENT

*The meetings of the Chadds Ford Township Planning Commission are electronically recorded, and recordings are maintained until the minutes of the meeting are transcribed. Recordings are for the purpose of transcribing meeting minutes only.*

**CHADDS FORD TOWNSHIP PLANNING COMMISSION**
**REGULAR MEETING MINUTES**
**Wednesday, December 13, 2023**

This meeting was held at the Chadds Ford Township building, 10 Ring Road, Chadds Ford, PA 19317

Vice Chair Hoxter opened the Planning Commission Regular meeting at 7:00 p.m. with the Pledge of Allegiance. In attendance were Valerie Hoxter, Vice Chair; Timotha Trigg, member; Kathleen Goodier, member; Tom Bradley, member; Erin Gross, ACIP, Township Land Planner (via Zoom); Michael Maddren, Esq., Planning Commission Solicitor; Michael Schneider, PE, Township Engineer; Samantha Reiner (via Zoom), Board of Supervisors Planning Commission Liaison; Lacey Faber, Township Manager; and Emily Pisano, Assistant Township Manager. One (1) member of the public attended in person.

1. **ANNOUNCEMENTS:** The members of the Planning Commission expressed gratitude and thanks for Timotha Trigg, and all her hard work and dedication over the years as a Planning Commission member. They wished her well in her new role as a Township Board of Supervisor.
   - Carolyn Daniels (Ridings Way) also expressed her thanks to T. Trigg.

2. **PUBLIC COMMENT:** There was no public comment.

3. **MINUTES:** K. Goodier made a motion to approve the minutes from the November 8, 2023, Regular Planning Commission meeting. T. Bradley seconded the motion. There was no further discussion and the motion passed unanimously.

4. **OLD BUSINESS**
   a. **Countywide Stormwater Ordinance:** The Planning Commission discussed the Countywide Stormwater Ordinance, which included the following:
      - Chair Huffman submitted comments for the Planning Commission to discuss via email, which included: Selecting the largest riparian buffer and setback, requiring the maximum number of inspections, consideration of classifying pools as pervious, and removal of the pet waste provision.
      - Pet waste was determined to be removed from the ordinance and pools were to be considered as pervious.
      - Establishing the average height of a deck not to exceed five (5) feet, using Bethel Township's definition of impervious, which will require certain criteria to consider a deck impervious.
      - Including Low Impact Development & Green Infrastructure in purpose.
      - Section 707 – Utilize Option No. 1
      - Utilizing Delaware County's proposed language for riparian buffers with the exception of the use of the word "easement."
      - Comparing definitions with those used in Chadds Fords Zoning and SLDO Ordinances.
      - Reviewing the capitalization of certain terms throughout the Ordinance.

      The Planning Commission determined they would like to see the discussed changes implemented in February or March. No action was taken.

**ADJOURNMENT:** There being no further business or public comment, upon motion of Vice Chair Hoxter, seconded by T. Bradley and unanimous vote, the meeting was adjourned at 8:20 p.m.

Respectfully submitted,

Lacey Faber
Township Secretary/Manager

# MANAGERS REPORT

The following are events, projects, and updates for the Boards information and consideration:

- **PennDOT:**
  - Ring Road: Staff have reached out to PennDOT to discuss the ongoing issues along Ring Road. These have been sent to our Government Affairs Liaison.
  - Creek Road Bridge Repair: Staff have been in contact with the management team for the Creek Road Bridge repair project. The project Notice to Proceed was released on 1/29/24 and is anticipated to start in April or May. It has been confirmed that they are NOT utilizing Township roads as a part of their detour plan.

- **Township E-Newsletter:** Township staff have launched the NEW and IMPROVED Chadds Ford Today Mini Update. The e-newsletter will be sent out monthly to update the public on current Township happenings and information, community events and news, and provide business spotlights. It has been well received by the public and we have received quite a few compliments.

- **Walkable Chadds Ford:** Staff held a meeting on January 24th with Walkable Chadds Ford (WCF) personnel to discuss the project. As an update, the last submission of the revised plans was submitted to PennDOT on December 1st and the engineers anticipate this will be the last revision prior to the final submission of the combined plan set for public bid.
  - January 25th, staff met with Simone Collins to discuss their last invoice, which contains work dated back to May 2023. Moving forward, Simone Collins will provide invoices on a prompt basis, ensuring they can be paid based on current work. The invoice was for work that was required due to the Hanks easement and realignment of the plan.

- **January 9, 2024, Storm; Declaration of an Emergency Disaster:** During Storm Finn, flooding closed Route 1 and Creek Road, and Ring Road causing traffic and detours. Due to Phil Wenrich being on vacation, and a lack of an assistant Emergency Management Coordinator, I went out to drive the roads and report incidents in real time, ensuring we were added to the list of areas that needed to be addressed as soon as possible. In the event of an emergency such as these, it is important to report issues in real time to ensure the proper organizations know what issues need to be addressed and they are added to the list of action items.

- **Ordinance Public Hearings:** The Board discussed moving forward with preparing the Zoning Map amendments, which will include the Cultural Campus District. This will go to the Planning Commission for review at their February meeting. Additionally, the Board directed staff to start with the advertising process for the Zoning and Subdivision and Land Development Ordinance amendments. Currently, staff and township professionals are working on a timeline and advertisements for the public hearings.

- **UCC Board of Appeals/Open Space/State and National Parks Representative/ZHB Alternate:** There is 1 vacancy on each of these.

# MANAGERS REPORT

- **Emergency Services:**
  - 2/29/24 – Staff have a meeting with Steven Shultz from Delaware County Emergency services to review our Emergency Operations Plan. The County reached out to discuss these items after the most recent storms in the Township.
  - 3/5/24 - Staff have a meeting, initiated by Thornbury Township, with Thornbury, Edgmont, Concord, Middletown, and Chester Heights to discuss collaboration on emergency management efforts.
  - After these two meetings are held and we have had the opportunity to collect more information, we plan to discuss dates for the proposed stakeholders meeting.

- **Training:**
  - PSATS Secretaries Training: Lacey and Laura will be at Secretaries training on 2/28, which focuses on reporting requirements for Second Class Townships.
  - PSATS: Lacey, Samantha, and Timotha have been registered for the Pennsylvania State Association of Township Supervisors Annual Conference, April 14-17, 2024. This conference focuses on 2nd Class Township education and legislation.
  - GFOA: Laura has been registered for the Annual Government Finance Officers Association of PA Conference, May 19-22, 2024. The conference will focus on cyber security strategies, AP process improvement, pension management, fraud prevention, government accounting, municipal market trends, and cash & investment management.
  - APMM: Lacey & Emily have been registered for the Association for PA Municipal Management Annual Conference, May 20 – 22, 2024. This conference offers training specifically tailored to municipal managers, including ethics, policy & procedures, and overall municipal administration.

*New CC-Cultural Campus Zoning District*
*for Chadds Ford Township, PA*

# Chapter 135. Zoning

## Article XVII. CC District (Cultural Campus)

### § 135 - 111. Purpose.

In addition to the general goals listed in the Purposes (§ 135-2) and Community Development Objectives **(**§135-3), the purposes of this Article are:

A. To provide for the special needs of educational, cultural, environmental, and institutional uses with extensive and variable facilities and public access requirements;

B. To preserve, in addition, the character of substantial Green Areas associated with or under Common Ownership with such uses; and

C. To promote the sensitive development of such uses within and adjacent to the Chadds Ford Village Historic District and the Baltimore Pike Overlay (BPO District) in a manner that is consistent with the Comprehensive Plan for Chadds Ford Township and other relevant planning efforts, and which promotes preservation of the scenic, historical, architectural, cultural, and artistic heritage of the Township.

### § 135 – 112. Intent.

The CC District is intended to apply to large tracts, or smaller contiguous parcels under Common Ownership or common control (see **§** 135-116).

### § 135 - 113. Permitted uses.

Except as set forth in §135-113.D below for National Historic Landmark properties, a Building or group of Buildings may be erected, altered, or used and a Lot or Premises may be used for any of the following purposes or combinations thereof, and no other:

A. Uses by Right

(1) Cultural Facilities, such as museums, art galleries, libraries, community centers and related educational and office facilities.

(2) Environmental and conservation offices.

(3) Public Garden.

(4) Woodland, preserve, or other conservation purpose.

(5) Agriculture or Agricultural Operation.

(6) Forestry.

(7) Municipal use.

(8) Temporary event parking.

B. Conditional Uses.

Any of the following uses, separately or in combination thereof with other uses authorized by § 135-113, shall be permitted as a Conditional Use when authorized by the Board of Supervisors, subject to the standards and procedures set forth herein and in Article XXVI.

(1) Auditoriums, Concert Halls and Performing Arts Centers.

(2) Single-Family Detached Dwellings in Structures formerly used as a residence.

(2) Bed-and-Breakfast Inns, subject to the standards of Article XXVI.

(3) Public Markets.

(4) Banquet and/or conference facilities.

(5) Commercial retail or Professional Office establishments, wholly contained within a Building not greater than 5,000 square feet in gross floor area. Drive-through services and outdoor storage, sales, or display shall be prohibited.

(6) Restaurants, cafeterias, and outdoor cafes. Drive-through services shall be prohibited.

C. Accessory Uses

Accessory Uses shall be permitted as follows:

(1) Buildings, Uses or Structures of a nature customarily incidental and subordinate to any permitted principal use or Structure.

(2) Dwelling Units accessory to a permitted educational institution, Cultural Facility, environmental or conservation center, Public Garden, or an Agricultural Operation, where approved as a Conditional Use subject to the following:
   (a) All individuals living in such Dwelling Units must be employees, academic interns, or students of the principal Use, or temporary guests, such as scholars or artists in residence.
   (b) Facilities for the lodging of overnight visitors or guests for compensation, such as a Hotel or Motel, shall be prohibited in the CC District.

(3) Facilities for tours associated with visitation of Cultural Facilities or Public Garden uses, including provisions for vehicular accessibility.

(4) Restaurants, cafeterias, and outdoor cafes may be established as accessory uses to educational institutions, Cultural Facilities, or Public Garden uses, subject to Conditional Use approval. Drive-through services shall be prohibited.

(5) A gift shop may be established as an accessory use to a Cultural Facility, Public Garden, or environmental or conservation offices.

(6) Event, banquet, and/or conference space may be established as an accessory use to an educational institution, Cultural Facility or Public Garden. Outdoor events for greater than 225 persons shall require permitting in compliance with Chapter 102, Special Events.

(7) Non-commercial garages and parking areas accessory to permitted principal and accessory uses on Lots under Common Ownership with the uses to which they are accessory.

(8) Municipal Use, including parking available for municipal purposes.

D. Special Use Provisions for National Historic Landmark Properties:

(1) Except in Structures existing at the time of adoption of this section, no permitted use shall occupy more than 3,000 square feet of indoor space.

(2) Principal Conditional Uses, as provided in §135-113.B above, shall not be permitted on National Historic Landmark properties.

(3) All uses permitted on National Historic Landmark properties shall be designed to complement the historical integrity of the Landmark.

**§ 135-114. Area and bulk regulations.**

A. Area and bulk regulations. The following area and bulk requirements shall apply to all uses permitted by § 135-113 except existing non-conforming uses and Single-Family Detached Dwellings established in former residential Structures. Existing non-conforming uses and Single-Family Detached Dwellings established in former residential Structures shall be consistent with the area and bulk requirements in place prior to becoming non-conforming with the adoption of this section. Where a project consists of Contiguous Lots in Common Ownership or under common control, the provisions of this section may be applied as if those Lots were a single Lot and without regard to Lot Lines separating them.

| CC • General Requirements | |
|---|---|
| **Standard** | **Size / Parameter** |

| | Permitted Uses | Conditional Uses or Conditional Approval | Permitted Uses on Less than Two Acres Prior to the Effective Date of this article |
|---|---|---|---|
| **(1) Lot Area** | **Two (2) Acres** minimum, for every principal Building erected or used for any Principal Permitted Use. | **Two (2) Acres** minimum, for every principal Building erected or used for any Principal Permitted Use. | n/a |
| **(2) Gross Floor Area (no requirement unless noted)** | n/a | Commercial retail stores or Professional Offices, wholly contained within a Building **not greater than 5,000 square feet.** Residential dwellings including accessory dwelling units **not less than 750 square feet.** | n/a |
| **(3) Lot Width** | **200 feet**, minimum at the Building Line. | **200 feet**, minimum at the Building Line. | **85 feet**, minimum at the Building Line. |
| | **100 feet**, minimum at the Street Line. | **100 feet,** minimum at the Street Line. | **50 feet,** minimum at the Street Line. |
| **(4) Front Yard and Corner Lot Setbacks** | **75 feet**, minimum, along U.S. Route 1 (Baltimore Pike), and **50 feet** for any other Street Line. | **75 feet**, minimum, along U.S. Route 1, and **50 feet** for any other Street Line. | **35 feet**, minimum, from the Street Line. |
| **(5) Side Yards** | **50 feet**, minimum, each. | **50 feet**, minimum, each. | **20 feet**, minimum, each. |
| **(6) Rear Yard** | **50 feet**, minimum. | **50 feet**, minimum. | **40 feet**, minimum. |
| **(7) Parking/ Driveway** | Subject to **Article XXIV.** | Subject to **Article XXIV.** | Subject to **Article XXIV.** |
| **(8) Building Coverage** | **25 percent**, maximum. | **30 percent**, maximum. | **35 percent**, maximum. |
| **(9) Impervious Coverage** | **50 percent**, maximum. | **See § 135-114-D**. | **65 percent**, maximum. |
| **(10) Building Height** | **40 feet**, maximum, subject to **Article** | **See §§ 135-114-B (1) and B (2).** | **40 feet**, maximum, subject to **Article** |

| | | | |
|---|---|---|---|
| | **XXVI & § 135-114-B(1).** | | **XXVI & § 135-114-B (1).** |
| **(11) Green Area** | **35 percent**, minimum, subject to **§ 135-114-C**. | **35 percent**, minimum, subject to **§ 135-114-C**. | **35 percent**, minimum, subject to **§ 135-114-C**. |
| **(12) Landscaping, Buffering and Setbacks for Accessory Uses** | See **Article XXV and XXVI**. | | |

B. Additional provisions for Building height in the CC District:

Within the FEMA designated floodplain, Building height shall be measured a vertical distance from the regulatory flood elevation rather than from the average elevation of the finished grade along the exterior walls of the Structure but shall not exceed fifty (50) feet when measured from the average elevation of the finished grade along the exterior walls of the Structure.

C. Additional provisions for Green Areas in the CC District:

(1) Any application for building permit, zoning permit, Special Exception, Conditional Use, or Land Development approval shall indicate on the proposed Plan:
   i. Any specific limitations to public use or enjoyment of Green Areas:
   ii. The responsible party for enforcing such limitations, and:
   iii. The Applicant shall agree to an annual update to the Township regarding compliance, subject to approval by the Board of Supervisors.

D. Additional provisions for Impervious Coverage in the CC District:

(1) Subject to Conditional Use approval, maximum Impervious Coverage may be increased if there is a corresponding increase in Green Area and where the Board of Supervisors is satisfied that the Green Area provided in excess of thirty-five (35) percent as provided above shall result in one or more of the following:
   i. Greater protection of the Township's Natural or Cultural resources;
   ii. Increased amount of land available for community or Recreational Use;
   iii. Permanent protection of any Historic Resource eligible for listing, or included on, the National Register of Historic Places; or
   iv. Exceeding the standards and requirements of Chapter 105, Stormwater Management, of the Township Code.

For example, if Green Area were increased by five percentage points to 40 percent, maximum impervious coverage could be permitted to increase by five percentage points to 55 percent.

**§ 135-115. Additional standards for all uses.**

In addition to the design standards contained in Chapter 110, Subdivision and Land Development, Article V. Design Standards of the Code of Chadds Ford Township, the standards below shall govern design within the CC District.

A. Tract considerations.

The finished topography of the Tract shall adequately facilitate the proposed Development without excessive earth moving, tree clearance or destruction of natural features. Natural features such as streams and wooded slopes shall be preserved and incorporated into the final landscaping of the Development wherever possible and desirable per the Township Engineer. The Applicant shall specify the means whereby trees and other natural features shall be protected during Construction. The location of trees and other natural features shall be considered when planning the locations of Green Areas, locations of Buildings, underground services, walks, paved areas and finished grade levels.

B. Building sites:

(1) Every Building and other Structure shall be located and situated to promote pedestrian and visual access to Green Area to the extent practicable**.**

(2) The physical design of any Land Development Plan shall make adequate provisions for emergency and public services, and provide safe accommodation for pedestrian and vehicular traffic.

(3) Development near the perimeter of the Tract shall be designed to be harmonious with neighboring areas or buffered therefrom in compliance with Article XXV.

C. Landscaping. Landscaping shall be regarded as an essential feature of every Development in the CC District. In addition to the preservation of natural features, trees and slopes of the Tract; careful attention shall be given to landscaping of parking areas and provisions for street trees, foundation and buffer plantings as required by this chapter and Chapter 110, specifically §110-36.

D. Community Facilities & Amenities.

(1) Refuse stations shall be designed with suitable screening and in locations convenient for collection and removal, and shall not be offensive to neighboring Properties or public view.

(2) Adequate lighting shall be provided in the outdoor areas used after dark in accordance with Chapter 110. Appropriate lighting fixtures shall be provided for walkways and to identify vehicular travel, steps, ramps, directional changes and Signs. All lighting shall be in accordance with the standards of the Illumination Engineering Society (IES) and shall comply with the following:

a. All lighting shall be designed, constructed, and arranged to prevent glare. No lighting shall be directed to cause a nuisance or disturbance to adjoining Properties, or to cause any difficulty with visibility from streets;
b. Glare control shall be accomplished through proper selection and application of lighting equipment.
c. All directional lighting fixtures used for Signs shall be top-mounted and shall be aimed toward the ground;
d. Lighting shall be Dark Sky Friendly Lighting based on the International Dark-Sky Association standards;
e. Consideration shall be made for blue light or safety station/refuge spots throughout a Development or campus, particularly in parking lot(s), along Trails, and at trailhead(s).

(3) All permanent electric, telephone, cable, telecommunications and other service lines shall be underground and shall comply with all Township ordinances unless demonstrated to not be practicable.

(4) Off-street parking and loading. Adequate off-street parking and loading facilities shall be provided as specified in Article XXIV of this chapter. In addition:
a. Parking needs shall be independently calculated for each use in the CC District in accordance with Article XXIV.
b. For any Development, a portion of proposed parking facilities may be designed as shared parking or Remote Parking served by shuttles within the CC District subject to Conditional Use approval.

(5) The use of electric vehicle charging stations shall be permitted to serve visitors and/or employees of any use permitted herein.

(6) Other than parking of private automobiles, all storage shall be structurally enclosed or otherwise permanently screened from view.

(7) Storm Sewer Systems for the Development shall be designed, constructed and operated in compliance with Chapter 105.

(8) Sanitary Sewer Systems for the Development shall be designed, constructed and operated in compliance with Chapter 95.

(9) Signs. Signs shall be permitted as specified in Article XXIII. of this chapter.

(10) All mechanical equipment shall be screened from public view unless demonstrated to not be practicable.

E. Soil erosion and sedimentation control. Soil erosion and sedimentation control shall be regulated as set forth in Chapters 105 and 110.

**§ 135-116. Ownership.** Any Lot or Tract or area, comprising one parcel or more than one contiguous parcels, subject to a Land Development plan or building permit, shall be:

A. Held in Common Ownership and shall be operated under unified control and management, or

B. In the event of multiple ownership, a written agreement between the parties and owners involved shall be submitted to evidence that the development and management shall be in accordance with a single plan with common authority and responsibility.

**Add Definitions:**

**AUDITORIUMS, CONCERT HALLS AND PERFORMING ARTS CENTERS –** Facilities providing indoor or outdoor seating for meetings or live performances, including any community use of same, whether for use by a principal Cultural Facility or for rent or by donation. Movie theaters, adult cabarets or taverns shall be prohibited.

**BANQUET AND/OR CONFERENCE FACILITIES –** Facilities used for conferences, seminars, and banquets that may include accommodations for food preparation and eating, recreation, entertainment, resource facilities, meeting rooms, and services primarily for guests of the facilities, including use by a principal Cultural Facility or use for rent or by donation.

**BLUE LIGHT STATIONS –** Emergency telephone facilities in public spaces providing direct communication to emergency services, the location of which is usually indicated by a blue light.

**COMMON OWNERSHIP –** As applied to more than one Lot, ownership by the same party(ies) and/or subject to unified control and management with binding documentation of agreement by all ownership parties**.**

**CULTURAL FACILITIES –** Indoor and outdoor facilities that promote presentation and interpretation of the arts, drama, music, dance, science and history.

**NATURAL FEATURES –** Any naturally occurring tree, plant life, habitat or geological site, not including man-made improvements.

**PUBLIC GARDEN:** An outdoor passive recreation facility open to the public for the enjoyment and interpretation of various plantings and potential outdoor installations of art and sculpture.

**PUBLIC MARKET** – An indoor or outdoor market consisting of two or more vendors, typically operating on a seasonal basis and selling regionally produced items.

**REMOTE PARKING –** Parking intended to meet required parking or overflow parking on a Property remote from the use(s) served, either owned by the same party(ies) as the use(s) served or secured by documented agreement from another Owner.

***Note: "Tract" is a current definition, to be revised to include the CC District:***

**TRACT** –

A. In the context of a Planned Residential Development or any application in the CC District, a Lot of land intended for Development that may consist of one or more Contiguous Lots held in Single and Separate Ownership at the time of application and developed pursuant to a common Plan by agreement of the Owners. The holder of an option or contract to purchase, a lessee who is authorized by the terms of the lease to develop the Tract with a lease for a remaining term of not less than 40 years, or other Persons having an enforceable proprietary interest in such land shall be deemed Owners for the purposes of this chapter.
B. In the context of all other Development, an area, Parcel, site, Lot, or Property which is or previously was the subject of a Subdivision and/or Land Development Plan application.

**Other Pertinent Revisions to New Zoning Ordinance.**

***Revise § 135-11.C(3) to read as follows:***

(3) For the purposes of this chapter, the districts shall be considered to be restrictive in the following order, listed from most restrictive to least restrictive: MC, R-1, R-2, PRD, CC, RM-A, POC, PBC, PBC-1, LI, LI-1, B, and B-1.

***Note: § 135-12 "Order of Overlay Precedence" applies to all districts, which now includes CC.***

***Revise the introductory phrase of § 135-179.E to read as follows:***

E. Location of Parking Spaces. Required off-street Parking Spaces shall be on the same Lot as the Principal Permitted Use served unless otherwise permitted in this article. In the case of a Lot with common parking areas for two (2) or more uses, sufficient parking per **§ 135-178.** shall be provided in the immediate vicinity of each use. In the CC District, Remote Parking may be permitted by the Board of Supervisors subject to § 135-115.D(4)b.

***Revise §135-186.D.(5) to read as follows:***

(5) All Buildings in the B, B-1, POC, BPO, PBC, PBC-1, LI, LI-1, MC, R-MA, CC and PRD districts shall be landscaped in accordance with the following criteria:

*Note: The remainder of this subsection details the specific foundation planting requirements that will now also apply within the CC District.*

***Revise §135-186.D.(6) to read as follows:***

(6) Principal Buildings in the R-1, R-2 and CC Districts shall be screened when it is determined that Buffer plantings are needed to mitigate potential adverse visual impacts to existing abutting residential uses, and/or when Subdivisions of five (5) or more Lots in the R-1 and R-2 districts abut existing residential uses. Buffer plantings shall be placed

around the perimeter of the Lot or Lots of the Subdivision abutting existing uses or where otherwise needed to mitigate adverse visual impacts.

***Revise the introductory phrase of § 135-196.A.2 to read as follows:***

(2) Permanent, unoccupied, open Sheds, storage Sheds, and wagon Sheds may only be located within residential zoning districts, or where accessory to pre-existing or former residential Structures in the CC District, upon the issuance of a zoning permit, and:

***Revise § 135-10.A to read as follows:***

A. For the purposes of this chapter, Chadds Ford Township is hereby divided into the following districts:

| | | |
|---|---|---|
| Article IV | R-1 District | Residence |
| Article V | R-2 District | Residence |
| Article VI | R-MA District | Residence-Multi-Family/Apartment Building |
| Article VII | PRD Overlay District | Planned Residential Development Overlay |
| Article VIII | B District | Business |
| Article IX | B-1 District | Business -1 |
| Article X | PBC District | Planned Business Center |
| Article XI | PBC-1 District | Planned Business Center – 1 |
| Article XII | POC District | Planned Office Center |
| Article XIII | LI District | Light Industrial |
| Article XIV | LI-1 District | Light Industrial – 1 |
| Article XV | Reserved | |
| Article XVI | MC District | Municipal Conservation |
| Article XVII | CC District | Cultural Campus |
| Article XVIII | Wireless Communications Facilities Overlay District | |
| Article XIX | Floodplain Conservation Overlay District | |
| Article XX | Historic Overlay District | |
| Article XXI | BP Overlay District | Baltimore Pike |
| Article XXII | Steep Slope Conservation Overlay District | |

***Revise § 135-171 to read as follows:***

**§ 135-171. Regulations for Number of Signs in Nonresidential Districts**

**A.** The number of On-Premises Signs allowed on a property within a specific Zoning District in the chart below are pursuant to all regulations for specific types of Signs in **§ 135-172, "Regulations for Specific Types of Signs."**

**B.** Any and all Sign types without any designation in any and all columns of **§ 135-171.** are not permitted.

**C.** Billboard Signs permitted in B-1 and PBC-1 by Special Exception per **§ 135-172.G.(1)**

| D. NONRESIDENTIAL | | | | | | |
|---|---|---|---|---|---|---|
| **ZONING DISTRICT** | **PARALLEL** | **PARALLEL** | **FREESTANDING** | | | **FREESTANDING** |
| | **AWNING, CANOPY or PROJECTING** | **WALL or MARQUEE** | **GROUND or POLE** | **TEMPORARY** | **NUMERICAL IDENTIFICATION** | **BILLBOARD** |
| **(1) B-BUSINESS or B-1 BUSINESS-1** | | | | | | |
| (a) **One (1) business** | 1 per Lot (if no other Parallel Sign) | 1 per Lot (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign) | 2 per Lot (count includes Portable Sign) | 1 per Lot | - |
| (b) **Two (2) or more Businesses** | 1 per business (if no other Parallel Sign) | 1 per business (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign per business) | 1 per business (count includes Portable Sign) | 1 per business | 1 per Lot in B-1 only (count includes any Freestanding Sign) |
| **(2) LI – LIGHT INDUSTRIAL or LI-1 LIGHT INDUSTRIAL -1** | | | | | | |
| (a) **One (1) business** | 1 per Lot (if no other Parallel Sign) | 1 per Lot (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign) | 2 per Lot (count includes Portable Sign) | 1 per Lot | - |
| (b) **Two (2) or more Businesses** | 1 per business (if no other Parallel Sign) | 1 per business (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign for each business) | 1 per business (count includes Portable Sign) | 1 per business | - |
| **(3) PBC – PLANNED BUSINESS CENTER or PBC-1 – PLANNED BUSINESS CENTER-1** | | | | | | |
| (a) **One (1) business** | 1 per Lot (if no other Parallel Sign) | 1 per Lot (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign) | 2 per Lot (count includes Portable Sign) | 1 per Lot | - |
| (b) **Two (2) or more businesses** | 1 per business (if no other Parallel Sign) | 1 per business (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign for each business) | 1 per business (count includes Portable Sign) | 1 per business | 1 per Lot in PBC-1 only (count includes any Freestanding Sign) |
| **(4) POC – PLANNED OFFICE CENTER** | | | | | | |
| (a) **One (1) business** | 1 per Lot if no other Parallel Sign) | 1 per Lot if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign) | 2 per Lot (count includes Portable Sign) | 1 per Lot | - |
| (b) **Two (2) or more businesses** | 1 per Lot (if no other Parallel Sign) | 1 per Lot (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign for each business) | 1 per business (count includes Portable Sign) | 1 per business | - |
| **(5) CC** | 1 per Lot (if no other Parallel Sign) | 1 per Lot (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign for each principal use) | 2 per Lot (count includes Portable Sign) | 1 per principal use | - |
| **(6) MC** | 1 per Lot (if no other Parallel Sign) | 1 per Lot (if no other Parallel Sign) | 1 per Lot (in addition to 1 Parallel Sign for each business) | 2 per Lot (count includes Portable Sign) | - | - |

***Revise the chart in § 135-185.B to read as follows:***

| **District** | **Buffer Area Requirement** | **Buffer Planting Strip Requirement** | **Berm Requirement** |
|---|---|---|---|
| (1) R-1 | - | - | - |
| (2) R-2 | - | - | - |
| (3) R-MA | 100 feet wide | 30 feet wide | - |

| | | | |
|---|---|---|---|
| | abutting R-1 or R-2<br>30 feet wide<br>abutting all districts other than R-1 and R-2 | abutting R-1 or R-2<br>15 feet wide<br>abutting all districts other than R-1 and R-2 | |
| | | | |
| (4) B | 40 feet wide | 30 feet wide | - |
| (5) B-1 | 40 feet wide | 30 feet wide | - |
| (6) PBC | 40 feet wide abutting residential<br>30 feet wide abutting nonresidential | 30 feet wide abutting residential<br>20 feet wide abutting nonresidential | - |
| (7) PBC-1 | 40 feet wide abutting residential<br>30 feet wide abutting nonresidential | 30 feet wide abutting residential<br>20 feet wide abutting nonresidential | - |
| (8) POC | 40 feet wide abutting residential<br>30 feet wide abutting nonresidential | 30 feet wide abutting residential<br>20 feet wide abutting nonresidential | - |
| (9) LI | 85 feet wide abutting residential<br>60 feet wide abutting nonresidential | 75 feet wide abutting residential<br>50 feet wide abutting nonresidential | - |
| (10) LI-1 | 85 feet wide abutting residential<br>60 feet wide abutting nonresidential | 75 feet wide abutting residential<br>50 feet wide abutting nonresidential | - |
| (11) CC | 35 feet wide | 25 feet wide | |
| (12) MC | 35 feet wide | 25 feet wide | - |
| (13) Historic Overlay District | 40 feet wide abutting residential<br>30 feet wide abutting nonresidential | 30 feet wide abutting residential<br>20 feet wide abutting nonresidential | 3 to 5 feet in height abutting residential and nonresidential |
| (14) BP Overlay | 40 feet wide abutting residential<br>30 feet wide abutting nonresidential | 30 feet wide abutting residential | - |

| | | | |
|---|---|---|---|
| | | 20 feet wide abutting nonresidential | |
| (15) Open Space Conservation Option | 75 feet wide | 25 feet wide | |
| (16) CC | | | |

# STORMWATER MANAGEMENT (SWM) 2/15/2024

## ARTICLE I – GENERAL PROVISIONS

### § 105-101. Short Title

This chapter shall be known as the Chadds Ford Township Stormwater Management, Grading, Soil Erosion, and Sediment Control Ordinance.

### § 105-102. Statement of Findings

The Chadds Ford Township Board of Supervisors 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 increasing 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 this Township and all of 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 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 (e.g., 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 the Township to implement a program of Stormwater controls. The Township is required to obtain a permit for Stormwater Discharges from their Separate Storm Sewer Systems under the National Pollutant Discharge Elimination System (NPDES).

H. Nonstormwater Discharges to municipal Separate Storm Sewer Systems can contribute to pollution of Waters of the Commonwealth by the Township.

I. The use of Green Infrastructure and Low Impact Development (LID) are intended to address the root cause(s) of water quality impairment by using systems and practices that use or mimic natural processes to: 1) infiltrate and Recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near where it falls to earth. Green Infrastructure practices and LID contribute to the restoration or maintenance of pre-development hydrology.

**§ 105-103. Purpose**

The purpose of this ordinance is to promote the public health, safety, and 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 Township:

A. Promote alternative project designs and layouts that minimize the impacts on surface water 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, Erosion and Sedimentation problems, and Stormwater Runoff impacts at their source(s) 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 Baseflow to prevent degradation of surface water and Groundwater quality, and to otherwise protect water resources.

J. Protect Baseflow 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 or any successor thereto 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 NPDES MS4 permit requirements.

N. Implement an illicit Discharge detection and elimination program that addresses Nonstormwater Discharges into the Township'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 Township.

S. Implement the requirements of Total Maximum Daily Loads (TMDLs) where applicable to waters within or impacted by the Township.

T. Implement Green Infrastructure and Low Impact Development practices to address water quality impairment.

**§ 105-104. Statutory Authority**

Chadds Ford Township 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) § 680.1 et seq., as amended, the "Storm Water Management Act."

B. Second Class Township Code, 53 P.S. §§ 65101 et seq.

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

**§ 105-105. 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 Chadds Ford Township, are subject to regulation by this ordinance.

B. This ordinance 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 Township ordinances and applicable state regulations.

**§ 105-106. Exemptions**

An exemption shall not relieve the Applicant from implementing the requirements of this chapter 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 Chadds Ford Township may withdraw exemptions listed in Table 106 and require the Applicant to comply with all requirements of this chapter. Even if the Applicant is exempt from any provision of this chapter, he or she is not relieved from complying with other Township ordinances or regulations.

A. General Exemptions

1. 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.

2. Any Regulated Activity that is exempt from some provisions of this chapter is exempt only from those provisions. If Development is to take place in phases, the Developer is responsible for implementing the requirements of this chapter once the impervious cover/earth disturbance threshold has been met. The date of this chapter adoption shall be the starting point from which to consider tracts as "Parent Tracts" in which future Subdivisions and respective Impervious Surface 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 Ordinance, that property owner would be **exempted from water quality and quantity requirements of this chapter as noted in Table 106.1 of this 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 ordinance**. If an additional 700 square foot 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 Township ordinance**.

**TABLE 106.1**
**Ordinance Exemptions**

| Ordinance Article or Section | Type of Project | Regulated Impervious Surface | | | Earth Disturbance | | |
|---|---|---|---|---|---|---|---|
| | | 0-499 sq. ft. | 500-1,000 sq. ft. | 1,000+ sq. ft. | 0-3,999 sq. ft. disturbance | 4,000 sq. ft. to < 1 acre | ≥ 1 acre |
| **Article IV** SWM Site Plan Requirements | Development Redevelopment | Exempt | Not Exempt Simplified Approach | Not Exempt | Exempt | Modified[1] | Not Exempt |
| **§ 105-304** Nonstructural Project Design | Development Redevelopment | Exempt | Not Exempt Simplified Approach | Not Exempt | Exempt | Not Exempt | Not Exempt |
| **§ 105-305** Infiltration Volume Requirements | Development Redevelopment | Exempt | Not Exempt Simplified Approach | Not Exempt | Exempt | Exempt | Not Exempt |
| **§ 105-306** Water Quality Requirements | Development Redevelopment | Exempt | Not Exempt Simplified Approach | Not Exempt | Modified[2] | Modified[2] | Not Exempt |
| **§ 105-307** Stream Bank Erosion Requirements | Development Redevelopment | Exempt | Not Exempt Simplified Approach | Not Exempt | Exempt | Exempt | Not Exempt |
| **§ 105-308** 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 25 Pa Code Chapter 102 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[1] - Modified SWM Site Plan need only consist of items in §§ 105-105-402.A.2 and 4; 105-402B.7, 8, 11, and 22; and 105-402.D.1 and 3 and related supportive material needed to determine compliance with §§ **105**-304 and 105-308. Modified SWM Site Plan is required that includes all elements of 304, as applicable.
- Modified[2] - Modified SWM Site Plan need only consist of items and related material needed to determine compliance with § 105-311.
- Simplified Approach **– Must comply with provisions of Appendix B of this chapter.**
- Redevelopment – See § 105-308.H for alternate Stormwater peak rate control criteria.

B. Exemptions for Specific Activities

1. Use of land for gardening for home consumption.

2. Agricultural Activities when operated in accordance with a conservation plan, nutrient management plan, or Erosion and Sediment Control Plan approved by the County Conservation District, including activities such as growing crops, rotating crops, tilling soil, and grazing animals. For Agricultural Activities 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 that adhere to the Department of Environmental Protection's (PADEP) guidelines outlined in the publication "Soil Erosion and Sedimentation Control Guidelines for Forestry," operate with an approved Erosion and Sediment Control Plan, and must comply with the Stream Buffer requirements specified in §105-311.

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 the Chadds Ford Township within two calendar days of the commencement of the activity. If the 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 Township.

7. Maintenance Exemption - Any maintenance to an existing Stormwater management system made in accordance with plans and specifications approved by the Township Engineer.

**§ 105-107. 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. Nothing in this chapter shall be construed to affect any of the Township'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.). The requirements of this chapter shall supersede any conflicting requirements in other Township ordinance or regulations.

**§ 105-108. 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 Township purporting to validate such a violation.

**§ 105-109. Waivers**

A. If the Township determines that any requirement under this chapter cannot be achieved for a particular Regulated Activity, the Township may, after an evaluation of alternatives, approve measures other than those in this chapter, subject to Subsections B and C.

B. Waivers or modifications of the requirements of this chapter may be approved by the Township 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 this 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 this chapter. 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 this chapter involved and the proposed modification.

C. No waiver or modification of any regulated Stormwater activity involving Earth Disturbance greater than or equal to 1 acre may be granted by the Township unless that action is approved in advance by PADEP or the Delaware County Conservation Distric

# ARTICLE II – DEFINITIONS

## § 105-201. Interpretation

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

A. The present tense includes all other tenses; the singular includes the plural, and the plural includes the singular; the masculine gender includes the feminine and neuter;

B. The word "includes" or "including" shall not limit the term to the specific example, but is intended to extend its meaning to all other instances of like kind and character.

C. The words "shall" and "must" are mandatory; the words "may" and "should" are permissive.

D. The words "used" or "occupied" include the words "intended, designed, maintained, or arranged to be used, occupied, or maintained."

E. Numbers and numerals are written in accordance with the APA style guide.

F. When capitalized in this chapter, the terms defined below have the meanings given them in this section. When not capitalized, the same terms have their common meaning.

G. Words not defined shall have the meaning given in Chapter 135, Zoning, or other Township Codes and ordinances, the Municipalities Planning Code, or other applicable state and federal statutes, laws, and regulations. If not defined in the aforementioned, the definition in the most recent edition of Merriam-Webster's Unabridged Dictionary shall be used.

## § 105-202. Definitions

**Accelerated Erosion** – The removal of the surface of the land through the combined action of man's activity and the natural processes of a rate greater than would occur because of the 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 Surface is not considered an agricultural activity.

**Alteration** – As applied to land, a change in topography as a result of the moving of soil and/or 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 Township for approval to engage in any Regulated Activity defined in § 105 of this ordinance.

**As-Built Plans** – Engineering or site drawings that document the actual locations of the building components and changes to the original Record Drawings. These documents, or a copy of same,

shall be signed and sealed by the Design Professional and submitted to the Township 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 soils and woody and herbaceous plantss 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 ordinance. Stormwater BMPs are commonly grouped into one of two broad categories or measures: "structural" or "nonstructural." In this ordinance, 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 device or practice that is installed to capture and treat Stormwater Runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices, from large-scale Retention ponds and constructed Wetlands to small-scale underground treatment systems, Infiltration facilities, filter strips, 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.

**Clean Fill** - Uncontaminated, non-water-soluble, nondecomposable inert solid material. The term includes soil, rock, stone, dredged material, used asphalt (except milled asphalt), and brick, rock or concrete from construction and demolition activities that is separate from other waste and recognizable as such (25 Pa. Code §§ 271.101 and 287.101). The term does not include materials placed in or on the Waters of the Commonwealth unless otherwise authorized.

**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 ordinance, 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 that 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 purpose that impounds or may impound water or another fluid or semi-fluid.

**Designee** – An agent of the Delaware County Planning Department, Delaware County Conservation District, and/or agent of the Board of Supervisors involved with the administration, review, or enforcement of any provision(s) of this chapter by contract or memorandum of understanding.

**Design Professional** – 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 this 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., 24 hours), used in the design and evaluation of Stormwater management systems.

**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 remain dry until the next rainfall event.

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

**Developer** – A Person, company, or organization who seeks to undertake any Regulated Earth Disturbance Activities at a Project Site in the Township.

**Development** – Any human-induced change to improved or unimproved real estate, whether public or private, including, but not limited to, Land Development, construction, installation or expansion of a building or other structure, land division, street construction, drilling, and site Alteration such as embankments, dredging, grubbing, grading, paving, parking or storage facilities, excavation, filling, stockpiling, or clearing. As used in this chapter, Development encompasses both new Development and Redevelopment.

**Development Site** – The specific tract or parcel of land where any Regulated Activity set forth in § 105-105 is planned, conducted, or maintained.

**Diameter at Breast Height** (DBH) –The diameter of a tree trunk measured at a point 4.5 feet from the ground surface at the center of the base 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 Management 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.

**Drainage Easement** – A right granted by a landowner to a grantee allowing the use of private land for Stormwater management purposes.

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

**Emergency Spillway** – A Conveyance area that is used to pass a Peak Discharge greater than the maximum Design Storm controlled by the Stormwater Management Facility.

**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 Conservation District before construction can begin.

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

**Exceptional Value (EV) Waters** – Surface waters of high quality that satisfy 25 Pa. Code §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 the 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 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 50 feet from the Top of Bank.

**Forest Management**– Planning and associated activities necessary for the management of forest lands. These include timber inventory and preparation of Forest Management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting, and reforestation.

**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.

**Grading Permit**– A permit issued by the Township after the Stormwater Management Site Plan has been approved.

**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.

**Groundwater** – Water beneath the earth's surface that supplies wells and springs, and which fills the pores and fractures in underground materials such as sand, gravel, and other rock.

**Groundwater Recharge** – The replenishment of existing natural underground water supplies from rain or overland flow.

**HEC-HMS** – The U.S. Army Corps of Engineers, Hydrologic Engineering Center (HEC) - Hydrologic Modeling System (HMS). This system 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 that exceeds levels necessary to support recreation in and on the water and the propagation of fish, shellfish, and other wildlife by satisfying 25 Pa. Code § 93.4b(a).

**High Tunnel** – A structure that:

1. Is used for the production, processing, keeping, storing, sale, or shelter of an agricultural commodity as defined in § 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;
2. Has a metal, wood, or plastic frame;
3. When covered, has a plastic, woven textile, or other flexible covering; and
4. 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.

**HQ** – See High Quality Waters

**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, patios, driveway areas, roofs, garages, storage sheds, and similar structures, and tennis or other paved courts. [For decks and swimming pools, see Note below.] 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 Township Engineer. Surfaces that were designed to allow Infiltration (e.g., pavers and areas of porous pavement) are not to be considered Impervious Surface if designed to function as a BMP per review by the Township 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 Township Engineer determines that the area underneath the solar photovoltaic cells, panels, and arrays is maintained as a vegetated pervious surface.

Note:

1. The water surface area of swimming pools is not considered impervious for stormwater management purposes.
2. Decks are not considered impervious if they meet the following requirements:
   a. The average elevation of the deck is at least 5 feet above the ground;
   b. The openings between deck planks are at least ¼-inch wide; and
   c. The surface below the deck is either lawn or other suitable vegetative cover, or uncompacted crushed stone with no impermeable membrane underneath.

**Impoundment** – A Retention or Detention Basin designed To Retain Stormwater Runoff and release it at a controlled rate.

**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 Runoff into the underground water (e.g., French drains, Seepage Pits, or Seepage Trenches).

**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 well-defined Channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the seasonal high water table. The flow may be heavily supplemented by Stormwater Runoff. An Intermittent Stream often lacks the biological and hydrological characteristics commonly associated with the conveyance of water.

**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:

1. The improvement of one Lot or two or more contiguous Lots, tracts, or parcels of land for any purpose involving:
   a. A group of two or more 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
   b. 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;
2. A Subdivision of land;
3. Development in accordance with § 503(1.1) of the Pennsylvania Municipalities Planning Code.

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

1. A seasonal high water table, whether perched or regional, determined by direct observation of the water table or indicated by soil mottling.

2. 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.
3. A rock formation, other stratum, or soil condition that is so slowly permeable that it effectively limits downward passage of water.

**Lot** – A designated parcel, tract, or area of land established by a plat or otherwise as permitted by law 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.

**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.

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

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

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

**Nonstormwater Discharges** – Water flowing in Stormwater collection facilities, such as Pipes or Swales, that 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 Surface 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 Township's Storm Sewer system Discharges to 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 Township adoption of this chapter.

**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.

**Perennial Stream** – A well-defined Channel that contains water year-round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a Perennial Stream, but it also carries Stormwater Runoff. A Perennial Stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.

**Person** – An individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

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

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

**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 Pa Code § 92a.2.

**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 § 105-306.

**Project Site** – The specific area of land where any Regulated Activities in the Township are planned, conducted, or maintained.

**Rational Formula / Rational Method** – 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** – The approved Stormwater Management Site Plan prepared for recording by the Design Professional.

**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 Repaving are not considered to be Redevelopment. Interior remodeling projects and tenant improvements are also not considered to be Redevelopment.

**Regulated Activity** – Any Redevelopment, earth disturbance activity, or other activity that involves the Alteration or Development of land in a manner that may affect Stormwater runoff.

**Regulated Earth Disturbance Activity** – Activity involving earth disturbance subject to regulation under 25 Pa Code Chapters 92, 102 or the Pennsylvania Clean Streams Law, 35 P.S. §§ 691.1–691.1001.

**Regulated Impervious Surface –** Proposed Impervious Surface as part of a current proposed activity and all existing Impervious Surfaces installed after May 6, 2015 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.

**Retention Basin** – A reservoir formed from soil or other materials that is designed To Retain permanently a certain amount of Stormwater from a catchment area and 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** 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 3 days.

**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 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 that is managed to maintain the integrity of Stream Channels and shorelines to 1) reduce the impact of upland sources of pollution by trapping, filtering, and converting Sediments, nutrients, and other chemicals; and 2) 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 Drain** – A drainage conduit or Pipe that collects water Runoff from a roof and leads it away from the structure.

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

**SALDO** – Subdivision and Land Development Ordinance.

**Sediment** – Soil or other materials transported by surface water as a product of Erosion.

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

**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.

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

**Separate Storm Sewer System** – A Conveyance or system of Conveyances (including roads with drainage systems, Township 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).
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**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, 35 P.S. §§ 691.1–691.1001.

**Storm Sewer** – A system of Pipes and/or open Channels that conveys intercepted Runoff and Stormwater from other sources but excludes domestic sewage and industrial wastes.

**Stormwater** – Drainage Runoff 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.

**Stream** – A type of Watercourse.

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

**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, 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.

**Swale** – A low-lying stretch of land that gathers or carries surface water runoff.

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

**Time-of-Concentration (Tc)** – 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 –** The point along either side of a Stream at which the slope change in the natural topography defines a Channel capable of containing the flow in a natural Watercourse during normal flow conditions.

**Township** – The Township of Chadds Ford, Delaware County, Pennsylvania

**Township Engineer** – A professional Engineer (P.E.) licensed as such in the Commonwealth of Pennsylvania, duly appointed as the Engineer for the Township; or a firm of such Engineers employed by the Township or retained as a consultant thereto.

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

**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.

**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.

**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.

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

**Wet Basin** – Pond for urban Runoff management that is designed To Detain urban Runoff and always contains water.

**Wetland** – An area with hydric soils that are inundated or saturated by surface water and/or groundwater that supports 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 viable tree of a DBH of 6 inches or greater per 1,500 square feet which existed within 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

## § 105-301. General Requirements

A. Applicants proposing Regulated Activities in the Township that do not fall under the exemption criteria shown in § 106 shall submit a Stormwater Management Site Plan consistent with this chapter and the applicable Watershed Stormwater Management Plan to the Township 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 Township shall commence until the Township issues approval of a SWM plan, which demonstrates compliance with the requirements of this chapter.

C. The Applicant is required to design the project 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 § 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 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. 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 10 feet shall be provided on either side of, 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 Township 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 Township. Applicants shall utilize the Pennsylvania Stormwater Best Management Practices Manual (PA BMP Manual), as amended, or other sources acceptable to the Township 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 § 105-306.

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 Township.

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 Township 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 Ordinance 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.

1. Examples of Hotspots:
   a. Vehicle salvage yards and recycling facilities
   b. Vehicle fueling stations
   c. Vehicle service and maintenance facilities
   d. Vehicle and equipment cleaning facilities
   e. Fleet storage areas (bus, truck, etc.)
   f. Industrial sites included on Standard Industrial Classification Code List
   g. Marinas (service and maintenance areas)
   h. Outdoor liquid container storage
   i. Outdoor loading/unloading facilities
   j. Public works storage areas
   k. Facilities that generate or store hazardous materials
   l. Commercial container nurseries
   m. Contaminated sites/brownfields
   n. Other land uses and activities as designated by an appropriate review authority

2. The following land uses and activities are not normally considered Hotspots:
   a. Residential streets and rural highways
   b. Residential Development
   c. Institutional Development
   d. Office developments
   e. Nonindustrial rooftops
   f. Pervious Areas, except golf courses and nurseries (which may need an Integrated Pest Management (IPM) plan)

3. Even though streets and highways are not generally considered Hotspots, it remains crucial to ensure that Stormwater Management Facilities along streets and highways are designed to adequately protect receiving Streams and/or Groundwater.

4. 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:

   1. For any location where a new concentrated Discharge is proposed onto or through adjacent property(ies) or downgradient property(ies), the following are required:

      a. 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 Waters – Frequently Asked Questions (FAQ)" dated January 2, 2019, or latest guidance document from PADEP.

      b. The Conveyance must be designed to avoid Erosion, Flooding, or other damage to the properties through which it is being conveyed.

**§ 105-302. Permit Requirements by Other Governmental Entities**

The following permit requirements 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 are subject to permit requirements by PADEP under regulations at 25 Pa Code Chapter 102.

B. Work within natural drainageways is subject to permit by PADEP under 25 Pa Code Chapter 105.

C. Any Stormwater Management Facility that would be located in or adjacent to Waters of the Commonwealth, including Wetlands, is subject to permit by PADEP under 25 Pa 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 requires approval by PennDOT.

E. Culverts, bridges, Storm Sewers, or any other facilities that must pass or convey flows from the tributary area and any facility that may constitute a Dam is subject to permit by PADEP under 25 Pa Code Chapter 105.

**§ 105-303. Erosion and Sediment Control During Regulated Earth Disturbance Activities**

A. Regulated Earth Disturbance Activities in the Township cannot begin until the Township receives PADEP approval of an Erosion and Sediment Control Plan in accordance with 25 Pa Code Chapter 102, if applicable to the construction activities.

B. PADEP regulations regarding Erosion and Sediment control are set forth in 25 Pa Code Chapter 102.

C. In addition, under 25 Pa 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 Township. The issuance of an NPDES Construction Permit (or permit coverage under the statewide General Permit (PAG-2)) satisfies the requirements of **§** 105-403.A.

E. A copy of the Erosion and Sediment Control Plan and any required permit, as required by PADEP regulations, shall be available on the Project Site at all times.

F. Whenever vegetation and/or topography are to be disturbed, such activity must be in conformance with 25 Pa Code Chapter 102 and in accordance with the requirements of the Delaware County Conservation District and the Code of Chadds Ford Township.

G. Additional Erosion and Sediment control design standards and criteria are required when Infiltration BMPs are proposed, including:

1. Areas proposed for Infiltration BMPs shall be protected from Sedimentation and compaction during the construction phase to maintain their maximum Infiltration capacity.

2. To ensure compliance with 25 Pa. Code Chapter 102, the timing of the installation and operation of the Infiltration BMP shall be at the discretion of the Township Engineer.

H. Soil Erosion and Sedimentation control; general regulations.

1. All Subdivisions and Land Developments are required to comply with the Clean Streams Law of Pennsylvania (, 35 P.S. §§ 691.1–691.1001) and 25 Pa Code Chapter 102, as amended from time to time.

2. The soil Erosion and Sediment Control Plan must be available at all times at the construction site. The permit allowing earthmoving activity shall be obtained by the landowner or Developer before any construction on the site shall begin.

3. The sequence of soils stabilization to control soil Erosion and Sedimentation must address seasonal effects such as the inability to establish vegetation during winter months, the influence of freezing, and the like.

4. Measures shall be taken to preclude the tracking of mud, soil and the like from construction vehicles and equipment onto streets which serve the site. Such measures shall include temporary scrub pads with collector sumps and cleaning devices, which construction vehicles shall pass through prior to leaving the site.

5. Erosion and Sedimentation control measures shall be required on all Erosion and Sedimentation control and Stormwater Management Plans for all Subdivisions and/or Land Developments within the Township. The Township or its designated representative shall ensure and enforce compliance with the appropriate standards.

6. All soil Erosion and Sedimentation control and grading activities shall be performed in such a manner so as not to endanger or damage public or private property or to cause physical damage or personal injury. A landowner or Developer shall be responsible for any property damage or personal injury caused by his or her activities.

7. There shall be no increase in Discharge of Sediment or other solid materials from the site as a result of Stormwater Runoff; and, in the event of any increase, the landowner and/or Developer shall be responsible.

8. Soil 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 Erosion.

9. Earthmoving operations shall be minimized where possible and practicable to preserve desirable natural features and the topography of the site.

10. Stripping of vegetation, regrading, and other Development activities shall be done in a way that minimizes Erosion.

11. To the maximum extent possible, mature, healthy trees of 12 inches or greater 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 5 inches is presumed to extend out from the tree as far as the tree's branches extend outward.

12. 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 practical

minimum. Disturbed Areas shall be stabilized with vegetation, mulch, Erosion control fabric, and the like as soon as possible after earthmoving procedures.

13. 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.

14. All bare earth shall be promptly seeded, sodded or otherwise stabilized and effectively protected from soil Erosion. In the event that work on a project ceases for more than 10 days, whether temporarily or permanently, all Graded surfaces shall be seeded, sodded, planted or otherwise protected from soil Erosion, immediately, weather permitting, and shall be watered, tended and maintained until growth is well established.

15. The permanent final vegetation and structural Erosion control and drainage measures shall be installed as soon as practical in the Development in accordance with the approved plans.

16. 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, as directed by the Township.

17. Procedures shall be established for protecting soils and rock or geologic formations with water supply potential from contamination by surface water or other source or disruption caused by construction activity.

18. Silt fences shall be utilized in lieu of straw bale silt barriers downhill of all construction areas. In general, straw bale silt barriers will be allowed only on projects with a construction period of less than 60 days and where the uphill drainage area is less than 1/2 acre. In all applications, silt fences and straw bale silt barriers shall be securely anchored in place and embedded into the soil.

19. Silt fences or silt traps 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.

20. Crushed stone tire scrubbers shall be placed at all entrances to construction areas. Tire scrubbers shall be sufficient width and length to prevent the transportation of Sediment off of the construction site.

21. 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. In critical areas, the Township may require hydroseeding.

22. During roadway grading, interceptor dikes shall be installed on all roadway subgrades with slopes in excess of 5% to prevent Erosion of the subgrade. The interceptor dikes shall divert Stormwater Runoff into silt traps or silt fences.

23. 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 Erosion of the subgrade.

24. Drainage Swales and Ditches, and all slopes greater than three to one, shall be protected against erosive velocities with Erosion control measures such as Erosion control fabric and other material as approved by the Township.

25. Energy dissipators and/or stilling basins shall be installed at the Outlet end of all storm drainage facilities.

26. Whenever Sedimentation is caused by stripping vegetation, regrading or 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.

27. All necessary soil Erosion and Sediment control measures installed under this chapter shall be adequately maintained by the Developer after completion of the approved plan or until such measures are permanently stabilized as determined by the Township.

28. Provisions satisfactory to the Township Engineer or Code Enforcement Officer shall be made for all earth disturbance activities to control dust.

**§ 105-304. 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 may 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 Ponds, Stream Buffers, and Hydrologic Soil Groups. Land Development, any existing Recharge areas, and other requirements outlined in the Township SALDO shall also be included.

b. Establish a Stream Buffer according to § 105-306.D.

c. Prepare a draft project layout avoiding sensitive areas identified in § 105-304.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 (Ordinance 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 § 105-304.B.1 have been completed.

a. Satisfy the Infiltration objective (§ 105-305) and provide for Stormwater Pretreatment prior to Infiltration.

b. Provide for water quality protection in accordance with § 105-306 water quality requirements.

c. Provide Stream bank Erosion protection in accordance with § 105-307 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 (§ 105-308).

f. Manage any remaining Runoff prior to Discharge through Detention, Bioretention, direct discharge, or other structural control.

**§ 105-305. Infiltration Volume Requirements**

A. 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.

B. If it cannot be physically accomplished, then the Design Professional shall be responsible for demonstrating to the satisfaction of the Township 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 § 105-202 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 § 105-305.C.2 depending 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 Township Engineer. For example:

1. Any Applicant (Developer or redeveloper) shall first attempt to infiltrate the volume required in § 105-305.C.2.a.

2. If the § 105-305.C.2.a requirement cannot be physically accomplished, then the Applicant is required to attempt to infiltrate the volume required in § 105-305C.2.b.

3. Finally, if the §105-305.C.2.b Infiltration volume cannot be physically accomplished, the Applicant must, at a minimum, infiltrate maximum volume the site can accommodate.

C. 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 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 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 20% of existing Impervious Surface, when present, shall be considered meadow in good condition.

b. Infiltrating the entire $Re_v$ volume in § 105-305.C.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:

[1]. At least the first 1 inch of Runoff from new or replacement Impervious Surfaces shall be infiltrated.

$$\textbf{Re}_v \textbf{ in cubic feet (ft}^3\textbf{)} = \textbf{1 inch} * \frac{\textbf{1 foot}}{\textbf{12 inches}} * \textbf{impervious area (ft}^2\textbf{)}$$

An asterisk (*) in equations denotes multiplication.

[2]. The Retention volume values derived from the methods in § 105-305.C.2.a or 105-305.C.2.b 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 Surface, the Infiltration volume for the remaining area shall be increased an equivalent amount to offset the loss.

[3]. Only when the minimum Infiltration requirement cannot be physically accomplished, a waiver from § 105-305, Infiltration Volume Requirements is required from the Township.

D. 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 at least 2 feet below the Stormwater Management Facility 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 volume ($Re_v$) 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 Township that the soils are conducive to infiltrate on the Lots identified.

E. 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.

F. 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.

G. The antidegredation analysis found in Chapter 93 shall be applied in HQ or EV Streams.

H. An impermeable liner will be required in Detention Basins where the possibility of Groundwater contamination exists. The Township may require a detailed hydrogeologic investigation.

I. The Applicant shall provide safeguards against Groundwater contamination for land uses that may cause Groundwater contamination should there be a mishap or spill.

**§ 105-306. Water Quality Requirements**

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

A. 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:

1. Infiltration: replication of Pre-construction Stormwater Infiltration conditions,

2. Treatment: use of water quality treatment BMPs to provide filtering of chemical and physical pollutants from the Stormwater runoff, and

3. 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).

B. Developed areas shall provide adequate storage and treatment facilities necessary to capture and treat Stormwater runoff. The Infiltration volume computed under § 105-305 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 § 105-305.C.2, then the difference between the two volumes shall be treated for water quality by an acceptable Stormwater Management

Practice(s). The required WQv is the storage capacity needed to capture and treat a portion of Stormwater Runoff from the developed areas of the site.

1. To achieve this requirement, the following criterion is established:

    a. The Post-construction total Runoff volume shall not exceed the Predevelopment total Runoff volume for all storms equal to or less than the 2-year, 24-hour duration precipitation (Design Storm). If the Township Engineer concurs that this criterion cannot be met, a minimum of 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 20% of existing Impervious Surface, when present, shall be considered meadow in good condition.

2. 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 Ordinance Appendix G.

3. 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.

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

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 (e.g., by deed, covenant, easement, etc.) and it exceeds the requirements of this chapter, the existing Buffer shall be maintained.

**§ 105-307. 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 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 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 3 inches, gravel filters (or other methods) are recommended to Discharge low-flow rates subject to the Township 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.

**§ 105-308. 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 and 308.2 below, the Erosion and Sediment control (§ 105-303), the nonstructural project design (§ 105-304), the Infiltration (§ 105-305), the water quality (§ 105-306), and the Stream bank Erosion (§ 105-307) 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 Storms are shown in Tables 308.1 and 308.2. 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.

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 (Ordinance 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 Township Building and County Planning offices. A copy of the official map at a reduced scale is included in Ordinance 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 District or Watershed - For a proposed Development Site located within two 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 Township.

**TABLE 308.1**

**CONTROL CRITERIA FOR CHESTER CREEK WATERSHED STORMWATER MANAGEMENT DISTRICTS**

| DISTRICT | CONTROL CRITERIA |
|---|---|
| 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 308.2**

**PEAK RATE CONTROL STANDARDS IN THE BRANDYWINE CREEK WATERSHEDS**

| Proposed Condition Design Storm | Reduce to | Existing Condition Design Storm |
|---|---|---|
| 2 - year | | 1 – year |
| 5 - year | | 50 % of the pre 5 - year |
| 10 - year | | 50 % of the pre 10 - year |
| 25 - year | | 50 % of the pre 25 - year |
| 50 – Year | | 50 % of the pre 50 - year |
| 100 - year | | 50 % of the pre 100 - year |

**Post-development Peak Discharge for all Design Storms must be no greater than 50% of the pre-development Peak Discharges.**

E. 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.

F. 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.

G. Downstream hydraulic capacity analysis. Downstream hydraulic capacity analysis conducted at the direction of Chadds Ford Township shall use the following criteria for determining adequacy for accepting 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 Township.
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 § 105-306 must be met.
5. Post-construction peak rates shall not exceed the existing peak rates for the respective Subarea.
6. Meet the full requirements specified by Tables 308.1 and 308.2 and § 105-308A through G.

**§ 105-309. Calculation Methodology**

A. Stormwater Runoff from all Development Sites with a drainage area of greater than 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 5 acres shall be permitted only upon approval of the Township Engineer.

**TABLE 309.1**

**ACCEPTABLE COMPUTATION METHODOLOGIES FOR SWM SITE PLAN**

| METHOD | DEVELOPED BY | APPLICABILITY |
|---|---|---|
| TR-20 (or commercial computer package based on TR-20) | USDA NRCS | Applicable where use of full hydrology computer model is desirable or necessary. |
| Applicable where use of full 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 5 acres, or as approved by the Township and/or Township Engineer. |
| Other Methods | Varies | Other computation methodologies approved by the Township and/or Township 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 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 6 inches or greater per 1,500 square feet shall be considered wooded where such trees existed within 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 CN or Rational "c" value (e.g., Woods) as listed in Tables F-1 or F-2 in Appendix F of this chapter.

2. For Redevelopment sites, the ground cover used in determining the Existing Conditions flow rates for the developed portion of the site shall be based upon the following:

   a. For areas that are Woods (as defined in Article II of this chapter), Predevelopment calculations shall assume ground cover of "Woods in good condition".
   b. For areas that are not Woods or not Impervious Surfaces, Predevelopment calculations shall assume ground cover of "meadow".
   c. For areas that are Impervious Surfaces, Predevelopment calculations shall assume at least 20% of the existing Impervious Surface area to be disturbed as "meadow" ground cover.

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 of this chapter.

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 of this chapter.

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 of the chapter.

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 Township 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.

**§ 105-310. 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/) or the Penn State Cooperative Extension Office (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 2.0 feet 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 25 Pa Code Chapter 105, the facility shall be designed in accordance with and meet the regulations of PADEP Chapter 105 concerning Dam safety. PADEP Chapter 105 may require the passing of storms larger than 100-year event.

C. Any drainage Conveyance facility and/or Channel not governed by PADEP Chapter 105 regulations must be able to convey, without damage to the drainage structure or roadway, Runoff from the 25-year storm event. Runoff from larger 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 (e.g., Detention Basins) shall be designed to convey the 100-year storm.

E. Roadway crossings or other structures located within designated Floodplain areas must be able to convey Runoff from a 100-year 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.

**§ 105-311 Riparian Buffers**

If an Intermittent Stream passes through, or a water body (e.g., lake, pond, and Wetland) is present on the site, the Applicant shall create a Riparian Buffer extending a minimum of 50 feet to either side of the Top of Bank of the channel, lake, or Wetland. If a Perennial Stream passes through the site, the Applicant shall create a Riparian Buffer extending a minimum of 100 feet to either side of the Top of Bank of the Stream. 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).

A. The following provisions also apply to Riparian Buffers on Lots in existence at the time of adoption of this chapter:

1. If the applicable rear or side yard setback is less than the required Riparian Buffer, the Buffer width may be reduced to 25% of the setback or 25 feet, whichever is greater.

2. If a Stream traverses a site in a manner that significantly reduces the use of the site, the Buffer may be either be reduced to 25 feet on either side subject to the approval of the Township Engineer.

B. Permitted uses within the Buffer include the following, subject to Township approval and provided that they comply with all federal, state, and local regulations:

1. Recreational trails. See Appendix H, Riparian Buffer Trail Guidelines.

2. Utility rights-of-way

3. Bridges

C. In order to protect and improve water quality, a Riparian Buffer shall be created and set forth on the Record Drawing as part of any Subdivision or Land Development that encompasses a Riparian Buffer.

D. Minimum Management Requirements for Riparian Buffers.

1. Existing native vegetation shall be protected and maintained within the Riparian Buffer.

2. Whenever practicable, invasive vegetation shall be removed and the Riparian Buffer shall be planted with native trees, shrubs and other vegetation to create a diverse native plant community appropriate to the intended ecological context of the site.

E. All allowable activities within the Riparian Buffer shall be carried out in a way that preserves the current extent of the 100-year Floodplain, enhances or sustains Stream stability, and conserves the ecological function of the Floodplain.

F. The following conditions shall apply when public and/or private recreation trails are permitted within Riparian Buffers:

1. Trails shall be for non-motorized use only.

2. Trails shall be designed to minimize the impact on native plant species and other sensitive environmental features.

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

**§ 105-312. Design Criteria for Stormwater Management**

A. Detention/Retention Basins.

1. All Outlet control structures shall be constructed of galvanized steel, aluminum or concrete, properly anchored to prevent flotation, and equipped with childproof, nonclogging 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, plywood stand-boxes, silt fences, and the like.

3. Emergency Spillways. Whenever possible, the Emergency Spillway for basins shall be constructed on undisturbed ground. Emergency Spillways shall be constructed of reinforced concrete, vegetated earth, concrete rubble, and the like. All Emergency Spillways shall be constructed so that the basin berm is protected against Erosion. The minimum capacity of all Emergency Spillways shall be such that the combined capacity of the Emergency Spillway and the principal from the 100-year Storm after development.

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 Erosion.

4. 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 2 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.

5. Basin Outlets. Energy dissipating devices (rip-rap, 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 end-walls shall be placed at all basin Outlets. All basin Outlet Pipes 12 inches in diameter or greater shall be equipped with childproof devices.

6. Slope of Detention Basin embankment. The maximum slope of earthen basin embankments shall be three 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 30 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.

7. Width of berm. The minimum top width of Detention Basin berms shall be 10 feet.

8. Construction specifications. The plans shall indicate the construction specifications and compaction requirements for all Detention/Retention Basins.

9. Slope of basin bottom. In order to ensure proper drainage of Detention Basins, a minimum Grade of 2% shall be maintained for all Sheet Flow. A minimum Grade of 1.0% shall be maintained for all Channel flow.

10. Cut-off trench. A cut-off trench shall be excavated along the center line of Dam on earth fill embankments. The minimum depth shall be 3 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 one to one. The trench shall be kept free from standing water during the backfilling operations.

11. 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 10-year peak flow rates.

B. Grading and landscaping of basins.

1. Cuts and fills. No excavation or fill shall be made with a cut or fill slope steeper than three horizontal to one vertical, except where the excavation or fill is sufficiently stable to prevent sliding or Erosion and will not result in property damage or personal injury. A written statement shall be required from a civil engineer licensed by the Commonwealth of Pennsylvania 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 of Pennsylvania 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 above.

2. Retention/Detention Basins shall be designed to utilize the natural contours of the land whenever possible. When such design is impracticable, the construction of basin shall utilize slopes as shallow as possible to blend the structures into the terrain.

3. A minimum of 6 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).

4. All earthen basins shall be stabilized with temporary and permanent grasses or other approved ground covers within 15 days after initial construction.

5. Fencing and/or a suitable vegetation screening shall be provided around all Detention/Retention Basins unless the Board of Supervisors determines that such screening is not necessary.

6. Basins shall be installed prior to any earthmoving or land disturbances that they will serve.

C. Subsurface disposal of Stormwater.

1. The design and construction of all subsurface facilities shall provide proper procedures to prevent silt from clogging the aggregate backfill.

2. 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.

f. A positive Outlet Pipe placed at or near the bottom of the Seepage Bed and/or Trench, or like facility, shall be provided.

g. 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.

D. Storm Sewer system design.

1. Design flow rate. The Storm Sewer system shall be designed to carry a fifty-year peak flow rate, with a 100-year peak flow rate at all low points. The peak flow rate into each Inlet shall be indicated on the Stormwater drainage Stormwater Management Plan. The design flow rate shall be determined by the Rational Formula: Q=ciA.

2. Pipe material and gage thickness. All Storm Sewers shall be either reinforced cement concrete, corrugated aluminum, corrugated galvanized steel Pipe or high density polyethylene Pipe (HDPE). Storm Sewers shall be of the proper class and thickness to support the above fill material. Pipe class and gage or thickness shall be noted on the plans.

3. Allowable headwater depth. At all Inlets or manholes, the maximum allowable headwater depth shall be 1 foot below the top of the Inlet grate or the manhole cover.

4. Horizontal Pipe deflections. A manhole or Inlet shall be provided at all horizontal deflections in the storm Pipe system exceeding 5°.

5. Minimum and maximum cover. A minimum of 18 inches of cover shall be maintained over all storm drain Pipes. 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.

6. Storm Sewer system Outlets. Storm Sewer system Outlet Pipes shall extend to proposed Stormwater Management Facilities, natural Watercourses, and the like. A concrete endwall shall be required on all Storm Sewer system Outlet Pipes.

7. Roof Drains. Stormwater Roof Drains shall not Discharge water directly over a sidewalk, into any sanitary sewer line, or into a street or paved area without a straight curbed gutter.

8. The Storm Sewer system shall be designed to the more restrictive of the following: to collect Stormwater at any point where 3 to 5 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.

9. Inlets, manholes, grates, covers, frames, and the like shall conform to the Pennsylvania Department of Transportation Roadway Construction Standards (Publication No. 72) and Form 408 Specifications, and all amendments, revisions or updates thereto.

10. All drainage Channels shall be designed to carry a flow rate equal to a 100-year, 24-hour storm.

11. All drainage Channels shall be designed to prevent the Erosion of the bed and bank areas. The flow velocity in all vegetated drainage Channels shall not exceed the maximum permissible velocity to prevent Erosion. Suitable bank stabilization shall be provided where required to prevent 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 rip-rap, masonry, and/or concrete walls. The stabilization shall be designed to prevent Erosion and frost heave under and behind the stabilizing media.

12. Any vegetated drainage Channel requiring mowing of the vegetation shall have a maximum slope of three horizontal to one vertical on those areas to be mowed.

13. Inlet capacity. All Inlets must be designed to accommodate the 10-year peak flow rate except at low points where they shall accommodate the 25-year peak flow rate.

14. Straight Pipe sections. Wherever possible, all Storm Sewers shall be designed to follow straight courses. No angular deflections of Storm Sewer Pipe sections in excess of 5° shall be permitted. No vertical curves shall be permitted in the Storm Sewer system.

15. Minimum Grade and size. All storm drain Pipes shall be designed to maintain a minimum Grade of 1.0%. All Storm Sewer Pipes shall have a minimum inside diameter of 15 inches.

16. Pipe arches. Where headroom is restricted, equivalent Pipe arches may be used in lieu of circular Pipes.

**§ 105-313. Grading Requirements**

A. Cut and fill slopes shall not be greater than 3 horizontal to 1 vertical without approval from the Township Engineer. The Township Engineer may require the use of retaining walls or other measures necessary to stabilize slopes which exceed 3:1.

B. Excavation shall not extend below the angle of repose or natural slope of the soil under the nearest point of any footing or foundation of any structure unless such footing or foundation is properly underpinned or protected against settlement.

C. Final grading shall provide a downward slope away from all buildings with a minimum slope of 6 inches within the first 10 feet measured from the foundation wall.

1. In any construction in the Township, no construction trash, trees or parts of tress or any foreign material shall be buried on the site. Each contractor shall maintain a facility wherein all trash shall be deposited and thereafter removed from the site to an approved landfill. In the case of placement of fill, all fill must be approved by the Code Enforcement Officer prior to placement of the same. Any contractor desiring to place fill other than the natural earth on the site shall notify the Code Enforcement Officer and request an inspection.

    a. Whenever fill other than clean soil or earth is utilized, clean soil shall be placed over the top of the fill to a depth sufficient as determined by the Township to conceal all materials other than clean soil or earth;

    b. All wooden materials shall be excluded from Clean Fill;

    c. If anything other than clean soil or earth is identified in the Clean Fill material, prior to delivery onto the construction site, the Developer must document and certify the following information to the Township:

        [1] Origin of the material, location and prior use of Clean Fill material;

        [2] Name, address, phone contact of hauler/supplier of Clean Fill material;

        [3] Date and location of delivery of Clean Fill material;

        [4] Statement of compliance with DEP criteria for non-contamination of Clean Fill material, signed, dated, and notarized;

        [5] All pieces of concrete and/or used asphalt to be broken into pieces no larger than 4-inch to 6-inch pieces, and mixed with clean granular material. Asphalt and concrete must be free of all construction debris (including steel, wood, insulation, etc.) or other questionable materials as determined by the Township; and

        [6] A California Bearing Ratio (CBR) of 95% to 98% must be achieved, and 6-inch to 8-inch lifts must be adhered to during compaction of the “Clean Fill”. Compaction reports are required for all structural fill.

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

### § 105-401. 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 shall not proceed until the property owner, Applicant, or his/her agent has received written approval of a SWM Site Plan from the Township and an adequate Erosion and Sediment Control Plan review by the Conservation District unless the project qualifies for an exemption in § 105-106.

### § 105-402. SWM Site Plan Contents

The SWM Site Plan shall consist of a general description of the project including sequencing items described in § 105-304, 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 Township 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 § 105-304.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. A justification must be included in the SWM Site Plan if BMPs other than Green Infrastructure methods and LID practices are proposed to achieve the volume, rate, and water quality controls under this chapter. [OPTIONAL] “I think this could be onerous for small projects but may want to discuss with PC” (MWS)

7. The SWM Site Plan Application and completed fee schedule form and associated fee.

8. The SWM Site Plan Checklist (Appendix C).

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 2 feet. In areas of slopes greater than 15%, 5-foot contour intervals may be used.

3. Existing Streams, lakes, ponds, or other Waters of the Commonwealth within the project area.

4. Other physical features including Flood hazard boundaries, Riparian 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 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 Surface that would be added.

8. Proposed structures, roads, paved areas, and buildings.

9. Final contours at intervals of 2 feet. In areas of steep slopes (greater than 15%), 5-foot contour intervals may be used.

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 1 inch equals no more than 50 feet; for tracts of 20 acres or more, the scale shall be 1 inch equals no more than 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 Township, 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 Chadds Ford Township Stormwater Management Ordinance."

24. The following signature block for the Township:

"On behalf of Chadds Ford Township, Township 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 Chadds Ford Township Stormwater Management Ordinance."

C. Supplemental information to be submitted to the Township:

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 § 105-304.

    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 proposed.

f. An operations and maintenance plan in accordance with § 105-702.

2. An Erosion and Sediment Control Plan.

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 delineated 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.

**§ 105-403. Plan Submission**

The Township shall require receipt of a Grading Permit and 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 Township SALDO review process.

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 § 105-301, General Requirements.

E. Five copies of the SWM Site Plan shall be submitted by the Applicant for review in accordance with established criteria and procedures:

1. Two copies to the Township accompanied by the requisite Township review fee, as specified in this chapter.

2. Two copies to the County Conservation District.

3. One copy to the Township 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.

**§ 105-404. Stormwater Management (SWM) Site Plan Review**

A. SWM plans shall be submitted to the Township for review by the Township Engineer for consistency with this chapter and Act 167 Stormwater Management. Any plan deemed incomplete may not be accepted for review and may be returned to the Applicant. The Township Engineer will review the SWM Site Plan for any Subdivision or Land Development to ensure compliance with the Township's SALDO provisions, except where superseded by regulations in 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 Township.

C. For activities regulated by this Chapter (105) the Township Engineer will notify the Applicant and the Township in writing, with a copy to the Building Permit Officer, whether the SWM Site Plan is consistent with the Stormwater Management Plan.

1. If the Township Engineer determines that the SWM Site Plan is consistent with the Stormwater Management Ordinance, the Township Engineer will forward a letter of consistency to the Township, who will then forward a copy to the Applicant.

2. If the Township Engineer determines that the SWM Site Plan is inconsistent or noncompliant with the Stormwater Management Ordinance, the Township Engineer will forward a letter to the Township, with a copy to the Applicant citing the reason(s) and specific ordinance 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 Township 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 Township Engineer's review comments in determining whether to issue a permit.

E. The Township 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 Township 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 Township if the SWM Site Plan has been found to be inconsistent with the Stormwater Management Ordinance, as determined by the Township Engineer and Conservation District, or without considering the comments of the Township 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 Township Engineer for final approval. In no case will the Township approve the Record Drawings until the Township 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 Township's approval of a SWM Site Plan shall be valid for a period not to exceed 5 years commencing on the date that the Township 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 Township 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 Township shall be resubmitted in accordance with § 406 of this chapter.

I. For any SWM Site Plan that proposes to use any BMPs other than Green Infrastructure and LID practices to achieve the volume and rate controls required under this chapter, the Township will not approve the SWM Site Plan unless it determines that Green Infrastructure and LID practices are not practicable. [OPTIONAL] "I think this could be onerous for small projects but may want to discuss with PC" (MWS)

**§ 105-405. Revision of Plans**

A. A revision to a submitted SWM Site Plan under review by the Township for a Development Site that involves the following shall require a resubmission to the Township of a revised SWM Site Plan consistent with § 105-403 of this chapter and be subject to review as specified in § 105-404:

   1. Change in Stormwater Management Facilities or techniques,

   2. Relocation or redesign of Stormwater Management Facilities, or

   3. Soil or other conditions are not as stated on the SWM Site Plan as determined by the Township Engineer.

B. A revision to an already approved or inconsistent or noncompliant SWM Site Plan shall be submitted to the Township, accompanied by the applicable Township review and inspection fee. A revision to a SWM Site Plan for which a formal action has not been taken by the Township shall be submitted to the Township accompanied by the applicable Township review and inspection fee.

**§ 105-406. Resubmission of Inconsistent or Noncompliant SWM Site Plans**

An inconsistent or noncompliant SWM Site Plan may be resubmitted with the revisions addressing the Township Engineer's concerns documented in writing. It must be addressed to the Township in accordance with § 105-403 of this chapter, distributed accordingly, and be subject to review as specified in § 105-404. The applicable Township review and inspection fee must accompany a resubmission of an inconsistent or noncompliant SWM Site Plan.

# ARTICLE V – INSPECTIONS

## § 105-501. Inspections

A. The Township Engineer or his or her Designee shall inspect all phases of the installation of the permanent BMPs and/or Stormwater Management Facilities as deemed appropriate by the Township Engineer.

B. During any stage of the work, if the Township Engineer or his or her Designee determines that the permanent BMPs and/or Stormwater Management Facilities are not being installed in accordance with the approved Stormwater Management Plan, the Township 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 Township Engineer or his Designee to confirm compliance with the approved SWM Site Plan prior to the issuance of any occupancy permit.

## § 105-502. 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 and for earth disturbances 4,000 sq. ft. or greater. The As-Built Plans and all explanation of any discrepancies with the construction plans shall be submitted to the Township within 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 Plans.

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 Township 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 Township, the Township 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 Township.

# ARTICLE VI – FEES AND EXPENSES

## § 105-601. Township SWM Site Plan Review and Inspection Fee

Fees have been established by the Township to defray plan review and construction inspection costs incurred by the Township. 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 of the Board of Supervisors based on the size of the Regulated Activity and based on the Township's costs for reviewing SWM Site Plans and conducting inspections pursuant to § 501. The Township shall periodically update the review and inspection fee schedule to ensure that review costs are adequately reimbursed.

## § 105-602. 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 Township and the Township 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 ensure proper completion of stipulated remedial actions.

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

## § 105-701. Performance Guarantee

A. For all activities requiring submittal of a SWM Site Plan, the Applicant shall provide a financial guarantee to the Township for the timely installation and proper construction of all Stormwater Management Facilities:

   1. For projects not included as part of a SALDO Application, in an amount equal to the full construction cost of the facilities required by the approved SWM plan; or

   2. For projects part of a SALDO Application, the facilities shall be included in the schedule of values for public and quasi-public improvements, and the Applicant shall secure timely installation and proper construction accordingly.

B. For other Regulated Activities, the Township may require a financial guarantee from the Applicant.

## § 105-702. 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 (i.e., Post-construction) Stormwater controls and BMPs will be properly operated, inspected, and maintained.

B. Establish access easements to provide ingress and egress to all significant stormwater controls, Conveyances and BMPs, along with a 15-foot perimeter area around each of these features.

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 are not 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 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 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 Surface that would be added,

h. Proposed final structures, roads, paved areas, and buildings, and

i. Access easement boundaries

2. A description of how each permanent Stormwater Control and BMP will be operated and maintained,

3. The identity and contact information associated with the Person(s) responsible for operations and maintenance,

4. 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

5. 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 Township.

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 Township, Stormwater controls and BMPs may, at the Township's discretion, also be dedicated to and maintained by the Township;

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 Township will make the final determination on the continuing operations and maintenance responsibilities. The Township reserves the right to accept or reject the operations and maintenance responsibility for any or all of the Stormwater controls and BMPs.

## § 105-703. Township Review of a Stormwater Control and BMP Operations and Maintenance Plan

A. The Township will review the Stormwater Control and BMP operations and maintenance plan for consistency with this chapter and any permits issued by PADEP.

B. The Township will notify the Applicant in writing whether or not the Stormwater Control and BMP operations and maintenance plan is approved.

C. The Township will require an As-Built Plan per § 105-502 showing all constructed Stormwater controls and BMPs and an explanation of any discrepancies with the approved operations and maintenance plan.

## § 105-704. 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.

## § 105-705. Operations and Maintenance Agreement for Privately Owned Stormwater Controls and BMPs

A. Prior to final approval of the SWM Plan (including plans for private facilities constructed under the simplified method), the Applicant shall sign and record an operations and maintenance agreement with the Township covering all Stormwater controls and BMPs that are to be privately owned (refer to Appendix I). The maintenance agreement shall be binding on successors and assigns of the Applicant's interest in the Lot in perpetuity. The agreement shall be substantially the same as the agreement in Appendix I of this chapter.

B. Other items may be included in the agreement if deemed 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 Township.

## § 105-706. 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 Township.

B. Stormwater management easements shall be provided to the Township 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 § 105-705.

**§ 105-707. 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 Delaware County, within 15 days of approval of the Stormwater Control and BMP operations and maintenance plan by the Township:

1. The operations and maintenance plan, or a summary thereof,

2. Operations and maintenance agreements under § 105-705, and

3. Easements under § 105-706.

B. The Township 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.

**§ 105-708. Municipal Stormwater Control and BMP Operation and Maintenance Fund and Inspection and BMP Operations and Maintenance Requirements**

A. The Township shall inspect SWM BMPs, facilities and/or structures installed under this chapter according to the following frequencies, at a minimum, to ensure the BMPs, facilities and /or structures continue to function as intended. Persons installing Stormwater controls or BMPs shall be required to pay a specified amount to the Chadds Ford Township Stormwater O&M Fund to help cover the costs of periodic inspections and maintenance expenses. This is to be paid in a manner specified by the Township. The amount of the deposit shall be determined as follows:

1. If the BMP or Conveyance 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 25 years, at the following minimum frequencies:

   a) Annually for the first 5 years.

   b) Once every 3 years thereafter

   c) During or immediately after the cessation of a 25-year or greater storm, as determined by the Township Engineer.

2. If the BMP or Conveyance is to be owned and maintained by the Township, the deposit shall cover the estimated costs for maintenance and inspections for 25 years. The Township will establish the estimated costs utilizing information submitted by the Applicant. Inspections shall be conducted at the minimum frequencies listed in above referenced section.

3. The above referenced inspections shall be conducted during or immediately following precipitation events or in dry weather conditions if the BMP design parameters include

dewatering with a specified period of time. A written inspection report shall be created to document each inspection. The inspection report shall contain the date and time of the inspection, the individual(s) who completed the inspection, the location of the BMP, Stormwater Management Facility or structure inspected, observations on performance, and recommendations for improving performance, if applicable.

4. 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 Governing Body.

B. If a BMP or Conveyance 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 BMP or Conveyance (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 a BMP or Conveyance is accepted by the Township for dedication, the Township may require Persons installing the BMP or Conveyance to pay a specified amount to the Municipal Stormwater Control and BMP Operation and Maintenance Fund to help cover the 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 25 years, as determined by the Township, and

2. The amount shall then be converted to present worth of the annual series values.

E. The Township may require Applicants to pay a fee to the Municipal Stormwater Control and BMP Operation and Maintenance Fund to cover:

1. Inspections

2. Long-term maintenance of BMP(s) or Conveyance(s), and

3. Stormwater-related problems which may arise from the Land Development and Earth Disturbance.

## ARTICLE VIII – PROHIBITIONS

### § 105-801. Prohibited Discharges

A. Any drain or Conveyance, whether on the surface or subsurface, that allows any Nonstormwater Discharge including sewage, process wastewater, and wash water to enter the Township's Separate Storm Sewers, Riparian Buffers, Wetlands, or other Waters of the Commonwealth is prohibited.

B. No Person shall allow, or cause to allow, Stormwater Discharges into the Township'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 fire fighting 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 no contain detectable concentrations of TRC;
14. Diverted Stream flows.

D. In the event that the Township determines that any of the discharges identified in § 105-801.C significantly contribute to pollution of Waters of the Commonwealth, or is so notified by PADEP, the Township will notify the responsible Person to cease the discharge.

E. Upon notice provided by the Township under § 105-801.D, the discharger will have a reasonable time, as determined by the Township, 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.

**§ 105-802. Prohibited Connections**

A. The following connections are prohibited, except as provided in § 105-801.C above:

1. Any drain or Conveyance, whether on the surface or subsurface, which allows any Nonstormwater Discharge including sewage, process wastewater, and wash water to enter the Separate Storm Sewer System, and any connections to the storm drain system from indoor drains and sinks. Any drain or Conveyance that delivers Nonstormwater Discharges directly into Wetlands, Riparian Buffers, or other Waters of the Commonwealth is prohibited.

2. Any drain or Conveyance connected from a commercial or industrial land use to the Separate Storm Sewer System which has not been documented in plans, maps, or equivalent records, and approved by the Township.

B. This prohibition expressly includes, without limitation, connections made in the past, regardless of whether the connection, drain or Conveyance was previously allowed, permitted, or approved by a government agency, or otherwise permissible under law or practices applicable or prevailing at the time of connection.

**§ 105-803. 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 Township.

C. Roof Drains and sump pumps shall Discharge to Infiltration areas or vegetative BMPs to the maximum extent practicable where advantageous to do so.

**§ 105-804. 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 Township.

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 Township.

# ARTICLE IX – ENFORCEMENT AND PENALTIES

## § 105-901. Right-of-Entry

A. Upon presentation of proper credentials, duly authorized representatives of the Township may enter at reasonable times upon any property within the Township 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 Township shall have the right to temporarily locate on or in any Stormwater Control or BMP in the Township 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 Township within 24 hours of notification, it will be a violation of this chapter.

## § 105-902. 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.

## § 105-903. Enforcement Generally

A. Whenever the Township finds that a Person has violated a prohibition or failed to meet a requirement of this chapter, the Township 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 Township 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 Township from pursuing any and all other remedies available in law or equity.

**§ 105-904. Suspension and Revocation of Permits and Approvals**

A. Any building, Land Development, or other permit or approval issued by the Township may be suspended or revoked by the Township 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 Township when:

1. The Township 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 Township is satisfied that the violation has been corrected.

D. A permit or approval that has been revoked by the Township cannot be reinstated. The Applicant may apply for a new permit in accordance with this chapter.

**§ 105-905. Penalties**

A. Any Person violating the provisions of this chapter shall be subject to a fine as established by the Township 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 Township 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.

**§ 105-906. 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 Township chooses to pursue enforcement action, the Township 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 Township 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.

**§ 105-907. Enforcement**

The Board of Supervisors is hereby authorized and directed to enforce all of the provisions of this chapter. All inspections regarding compliance with the SWM Site Plan shall be the responsibility of the Township or its Designee.

A. A set of design plans approved by the Township 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 Township or its Designee during construction.

B. It shall be unlawful for any Person, firm, or corporation to undertake any Regulated Activity under § 105-105 on any property except as provided for in the approved SWM Site Plan and pursuant to the requirements of this chapter. It shall be unlawful to alter or remove any control structure required by the SWM Site Plan pursuant to this chapter 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 Plans per § 105-502.

D After receipt of the certification by the Township, a final inspection shall be conducted by the Township or its Designee to certify compliance with this chapter.

E An occupancy permit will not be issued unless the certification of completion pursuant to § 105-907.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 Township.

**§ 105-908. Appeals**

A. Any Person aggrieved by any action of Chadds Ford Township or its Designee relevant to the provision of this chapter may appeal to the Board of Supervisors within 30 days of that action.

B. Any Person aggrieved by any decision of the Board of Supervisors relevant to the provision of this chapter may appeal to the County Court of Common Pleas in the County where the activity has taken place within 30 days of the Township decision.

**§ 105-910. Repealer**

All ordinances, or parts of ordinances, conflicting with any provision of this chapter are hereby repealed insofar as the same affect this chapter.

**§ 105-911. When Effective**

This chapter shall become effective 5 days after enactment as provided by law.

**ENACTED and ORDAINED** at a regular meeting of the _____ _____ on the _____ of _____, 20__. This chapter shall take effect immediately.

_____
[Name]

_____
[Title]

_____
[Name]

_____
[Title]

_____
[Name]

_____
[Title]

_____
[Name]

_____
[Title]

_____
[Name]

_____
[Title]

ATTEST:

_____
Secretary

I hereby certify that the foregoing ordinance was advertised in the _____ on _____, 20__, a newspaper of general circulation in the Township and was duly enacted and approved as set forth at a regular meeting of the Township's Board of Supervisors held on _____, 20__.

_____

Secretary

## ARTICLE I – GENERAL PROVISIONS



## ARTICLE II – DEFINITIONS



## ARTICLE III – STORMWATER MANAGEMENT



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



## ARTICLE V – INSPECTIONS

## ARTICLE VI – FEES AND EXPENSES

**§ 601. Township SWM Site Plan Review and Inspection Fee**
**§ 602. Expenses Covered by Fees**

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

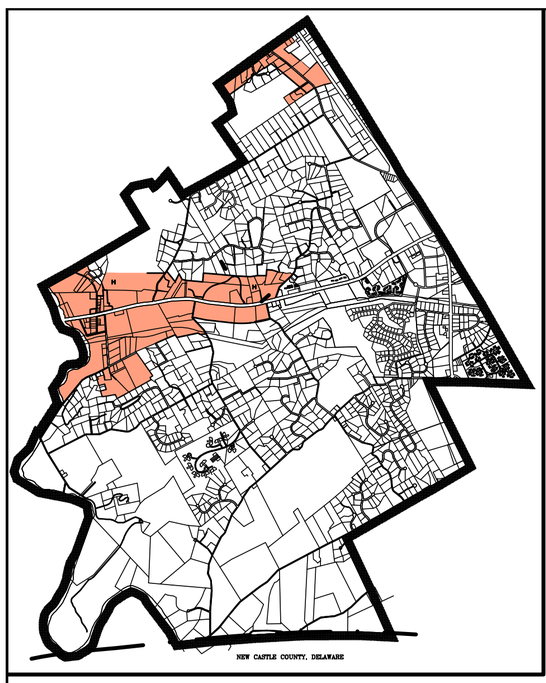
**§ 701. Performance Guarantee**
**§ 702. Responsibilities for Operations & Maintenance (O&M) of SWM Controls and BMPs**
**§ 703. Township Review of a SWM Control and BMP Operations and Maintenance Plan**
**§ 704. Adherence to an Approved WM Control & BMP Operations and Maintenance Plan**
**§ 705. Operations & Maintenance Agreement for Privately Owned SWM Controls & BMPs**
**§ 706. Stormwater Management Easements**
**§ 707. Recording of an Approved SWM Control & BMP Operations & Maintenance Plan and Related Agreements**
**§ 708. Municipal Stormwater Control and BMP Operation and Maintenance Fund and Inspection and BMP Operations and Maintenance Requirements**

### ARTICLE VIII – PROHIBITIONS

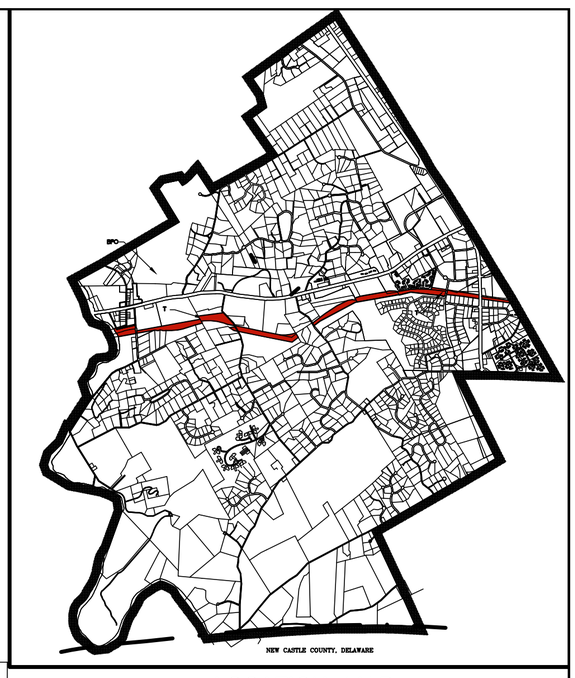
**§ 801. Prohibited Discharges**
**§ 802. Prohibited Connections**
**§ 803. Roof Drains and Sump Pumps**
**§ 804. Alteration of BMPs**

## ARTICLE IX – ENFORCEMENT AND PENALTIES

**§ 901. Right-of-Entry**
**§ 902. Public Nuisance**
**§ 903. Enforcement Generally**
**§ 904. Suspension and Revocation of Permits and Approvals**
**§ 905. Penalties**
**§ 906. Notification**
**§ 907. Enforcement**
**§ 908. Appeals**
**§ 910. Repealer**
**§ 911. When Effective**




**LOCATION MAP**
**HISTORIC ZONING DISTRICT OVERLAY**
SCALE: 1" = 4,000'




**LOCATION MAP**
**TOWERS & CELLULAR & WIRELESS TOWERS**
**ZONING DISTRICT OVERLAY**
SCALE: 1" = 4,000'

# ZONING MAP

**FOR**

## Chadds Ford Township

**Delaware County**
**Pennsylvania**

September 2, 1998
PREPARED BY: KELLY ENGINEERS
REVISED: PENNONI ASSOCIATES INC.

Pennoni Associates Inc.
Engineers • Surveyors • Planners
Landscape Architects

One South Church Street, 2nd Floor • West Chester, PA 19382
T 610.429.8907 • F 610.429.8918

NOTE:
THE PURPOSE OF THIS MAP IS FOR GENERAL REFERENCE ONLY. ALL INFORMATION PROVIDED SHALL BE CONSIDERED APPROXIMATE IN NATURE. IT IS THE USER'S RESPONSIBILITY TO VERIFY ALL INFORMATION. ANY ERRORS, OMISSIONS OR DISCREPANCIES ARE TO BE REPORTED TO PENNONI ASSOC.

NOTES:
(1) SEE TOWNSHIP ZONING ORDINANCE FOR SPECIFIC REQUIREMENTS OR SPECIAL EXCEPTIONS NOT LISTED IN ABOVE CHART.
(2) FOR EXISTING PRD'S SHOWN ON PLAN, CHECK APPROVED SUBDIVISION / LAND DEVELOPMENT PLANS FOR THE BULK AND AREA DIMENSIONS.
(3) FLOOD PLAIN BOUNDARY SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. REFER TO THE MOST RESENT FEMA FLOOD INSURANCE RATE MAPS (FIRM).

GRAPHIC SCALE
1000 0 500 1000 2000 4000
( IN FEET )
1 inch = 1000 ft.

## ZONING DISTRICTS SUMMARY

| Symbol | Designation | Description | Min. Lot Area | Front Yd. | Rear Yd. | Side Yd. | Side Yd. Agg. |
|---|---|---|---|---|---|---|---|
| | B | Business (1) | 1 acre | 75 ft. (Rt 202 & 1) 55 ft. (other roads) | 60 ft. | 30 ft. | 75 ft. |
| | B-1 | Business (1) | acre | ft. (Rt 202 & 1) ft. (other roads) | ft. | ft. | ft. |
| | BPO | BALTIMORE PIKE (OVERLAY) | – | – | – | – | – |
| | CC | Cultural Campus (1) | – | – | – | – | – |
| | LI | Light Industrial (1) | 3 acres | 100 ft. | 75 ft. | 75 ft. | 150 ft. |
| | LI-1 | Light Industrial – 1 (1) | – | – | – | – | – |
| | MC | Municipal Conservation (1) | – | – | – | – | – |
| | PBC | Planned Business Center (1) | 4 acres | 85 ft. (Rt 202 & 1) 65 ft. (other roads) | 75 ft. (resid.) 55 ft. (non-res) | 75 ft (resid.) 55 ft. (non-res) | 150 ft (resid.) 110 ft. (non-res) |
| | PBC-1 | | acres | ft. (Rt 202 & 1) ft. (other roads) | ft (resid.) ft. (non-res) | ft (resid.) ft. (non-res) | ft (resid.) ft. (non-res) |
| | POC | Planned Office Center (1) | 4 acres | 85 ft. (Rt 202 & 1) 65 ft. (other roads) | 75 ft (resid.) 55 ft. (non-res) | 75 ft (resid.) 55 ft. (non-res) | 150 ft (resid.) 110 ft. (non-res) |
| | R-1 | Residence (1) | 2 acres | 100 ft. | 50 ft. | 50 ft. | 100 ft. |
| | R-2 | Residence (1) | 1 acre | 75 ft. | 50 ft. | 40 ft. | 80 ft. |
| | R-MA | Residence-Multi-Family/ Apartments (1) | – | – | – | – | – |
| | F-P | Flood Plain (overlay) (1) (2) (3) | – | – | – | – | – |
| | H | Historic (overlay) (1) | – | – | – | – | – |
| | PRD | Planned Residential Devel. (1) (2) (overlay) | – | – | – | – | – |
| | T | Towers & Cellular & Wireless Towers (overlay) (1) | – | – | – | – | |
| | | Township Owned Property | | | | | |
| | | Church or Parish | | | | | |
| | | Township Boundary | | | | | |
| | | Private Road | | | | | |
| | | Road Right-of-Way | | | | | |
| | | Railroad Tracks | | | | | |
| | | Utility Easement | | | | | |
| | | Stream or Body of Water | | | | | |

**REVISION:**

| DATE | ORDINANCE No. | DESCRIPTION |
|---|---|---|
| 08/20/99 | All past ord. to #95 (dated 8/6/97) & all past zoning ord. to #643(dated 4/17/98) | Verified all past zoning & ordinances changes and updated zoning map to reflect said changes |
| 03/16/01 | Ordinance #64(M) | Added Ordinance #64(M) to map & minor street revisions |
| 5/12/14 | Ordinance #127 | Changed Folio Nos. 04-00-00353-99 and 04-00-00354-06 from B (Business) District to B-1 (Business-1) District |
| 6/28/17 | | Updated the FEMA Floodplain Overlay and Road Names |
| 09/28/18 | Ordinance #156 | Added Village District (RETRACTED) |
| 0/0/0 | Ordinance # | 126 Ridge Road: R-1 to R-2 |
| 0/0/0 | Ordinance # | 1540 Wilmington Pike: B to B-1 |
| 10/09/23 | Ordinance # | Added the R-MA, LI-1, and MC Districts |

# PLANNING COMMISSION 2023 ANNUAL REPORT

**Planning Commission Members:** Craig Huffman, Valerie Hoxter, Timotha Trigg, Kathleen Goodier, and Thomas Bradley.
**Planning Commission Professionals/Administrators:** Michael Maddren, Esq., Planning Commission Solicitor; Michael Schneider, PE, Township Engineer; Thomas Comitta, AICP, CNU-A, RLA, Township Land Planner; Erin Gross, ACIP, RLA, Township Land Planner; Samantha Reiner, Board of Supervisors Liaison; Matt Baumann, Township Manager; and Emily Pisano, Assistant Township Manager.
**Election of Officers:** Craig Huffman was elected as the Chair, Valerie Hoxter was elected as the Vice Chair, and Emily Pisano was appointed as Planning Commission Secretary for 2023.
**Meetings:** February 8, 2023; March 8, 2023; April 12, 2023; May 10, 2023; June 14, 2023; July 12, 2023; July 25, 2023; August 9, 2023; September 13, 2023; October 11, 2023; November 18, 2023; and December 13, 2023.

# SUMMARY OF ACTION ITEMS & AGENDA ITEMS:

## Zoning Map Amendments:

**1540 & 1550 Wilmington Pike, VMDT Partnership, Zoning Map Amendment**
**PC Meetings:** March 8, 2023 & April 12, 2023

- VMDT Partnership submitted an application for a Zoning Map Amendment of 1540 Wilmington Pike from its current B designation to B-1 to build an auto dealership.

**This item was recommended for approval at the April 12, 2023, Planning Commission meeting.**

## Sketch Plans:

**1386 Baltimore Pike, Chadds Ford One LLC, 2-Lot Subdivision Application**
**PC Meetings:** June 14, 2023

- Chadds Ford One LLC, submitted a sketch plan to subdivide 1386 Baltimore Pike into two (2) single-family residentials lots. The site is zoned in the R-2 Residential Zoning District.

**No action was taken.**

## Conditional Use Applications:

**1540 & 1550 Wilmington Pike, VMDT Partnership, Conditional Use Application**
**PC Meetings:** March 8, 2023 & April 12, 2023

- VMDT Partnership applied for Conditional Use under Zoning Ordinance Section 135-52.C.(3) Sales and/or Service of motor vehicles for new automotive dealerships and service centers located at 1540 Wilmington Pike and 1546 & 1550 Wilmington Pike.

**This item was recommended for approval with conditions at the April 12, 2023, Planning Commission meeting, and was subsequently approved with conditions at the December 6, 2023, Board of Supervisors meeting.**

**1281 Baltimore Pike, Celestyn Napolitan & Sandra Pietrusza, Conditional Use Application**
**PC Meetings:** June 14, 2023 & September 13, 2023

- Celestyn Napolitan & Sandra Pietrusza applied for Conditional Use under Zoning Ordinance Section 135-144.6.A(2) & 135-144.6.B(3) for construction of a single-family residence located at 1281 Baltimore Pike.

**This item was recommended for approval with conditions at the September 13, 2023 Planning Commission meeting, and was subsequently approved with conditions at the November 29, 2023, Board of Supervisors meeting.**

**4 Pheasant Lane, Hugh Donaghue, Conditional Use Application**
**PC Meeting:** October 11, 2023

- Hugh Donaghue applied for Conditional use under Zoning Ordinance Section 135-144.6.B(3)(g) for installation of an in-ground swimming pool and decking/patio in areas of steep slope located a 4 Pheasant Lane.

**This item was recommended for approval with conditions at the October 11, 2023 Planning Commission meeting, and was subsequently approved at the November 1, 2023 Board of Supervisors meeting.**

## Subdivision and Land Development Applications:

**1540 & 1550 Wilmington Pike, VMDT Partnerships, Preliminary/Final Subdivision & Land Development Application**
**PC Meetings:** September 13, 2023

- VMDT Partnerships submitted a Preliminary/Final Subdivision & Land Development application for the properties located at 1540 & 1550 Wilmington Pike. The applicant is seeking to consolidate folio 354-00 and folio 353-99 into one (1) lot for car sales and service and to construct two additional buildings.

**This item was recommended for approval with conditions at the September 13, 2023, Planning Commission meeting and was subsequently approved with conditions at the December 6, 2023, Board of Supervisors meeting.**

## Ordinance Reviews & Recommendations:

**Ordinance #173 0f 2023, Zoning Map Amendment**
**PC Meetings:** June 14, 2023

- VMDT Partnership submitted an application for a Zoning Map Amendment of 1540 Wilmington Pike from its current B designation to B-1 to build an auto dealership.

**This item was recommended for approval at the June 14, 2023, Planning Commission meeting, and was subsequently approved at the November 1, 2023, Board of Supervisors meeting.**

**Zoning Ordinance Amendments**
**PC Meetings:** February 8, 2023, July 12, 2023, August 9, 2023, & September 13, 2023

- The Planning Commission discussed updates to the Township Zoning Ordinance throughout 2022. At the February 8th meeting the Planning Commission recommended for approval the Zoning Ordinance to the Board of Supervisors. The Planning Commission then discussed changes to Outdoor Dining. Discussions included changes to the definition of "outdoor dining," the addition of a definition for "outdoor dining space," changes to Article XXIV Off-Street Parking, continuation of outdoor dining falling under Conditional Use or requiring a variance for applicants who cannot provide a determined number of parking spaces, and creation of a definition for "valet parking."

**This item was recommended for approval at the September 13, 2023, Planning Commission meeting. This item is ongoing before the Board of Supervisors.**

**Subdivision and Land Development Amendments**

**PC Meetings:** May 10, 2023, June 14, 2023, July 25, 2023, August 9, 2023, & September 13, 2023

- The Planning Commission discussed updates to the Township's Subdivision and Land Development Ordinance. Discussions included definitions, financial security agreement, right-of-way requirements, and street trees.

**This item was recommended for approval at the September 13, 2023, Planning Commission meeting. This item is ongoing before the Board of Supervisors.**

**CC-Cultural Campus District**

**PC Meetings:** July 12, 2023, September 13, 2023, October 11, 2023, & November 8, 2023

- The Brandywine Conservancy and Museum of Art drafted the CC-Cultural Campus District, which would include their campus in Chadds Ford Township and property on both sides of Baltimore Pike.

**This item was recommended for approval at the November 8, 2023, Planning Commission meeting. This item is ongoing before the Board of Supervisors.**

**Stormwater Management Ordinance**

**PC Meetings:** November 8, 2023 & December 13, 2023

- The Planning Commission discussed updates to the Township's Stormwater Management Ordinance based off the model provided by Delaware County. The updated Model Ordinance is designed to comply with the regulatory requirements of Pennsylvania Department of Environmental Protections' (PA DEP) National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) program. Discussions included pet waste, definitions, riparian buffers, and if pools should be considered pervious or impervious.

**This item is ongoing before the Planning Commission.**

## Miscellaneous Discussions/Action Items:

**VRBO/Short-Term Rentals**

**PC Meetings:** October 11, 2023 & November 8, 2023

- The Planning Commission discussed the pros and cons of regulating such activity in the Township and if there was a need to do so.

**No action was taken by the Planning Commission.**

**Sewer Module Component 4a, 280 Ridge Road, Dambro Subdivision**
**PC Meeting**: February 8, 2023

- The Dambro subdivision is a nine (9)-lot development. The Department of Environmental Protection requires a Sewage Facilities Planning Module, which requires approval by the Planning Commission, particularly component 4a.

**This item was recommended for approval at the February 8, 2023, Planning Commission, and was subsequently approved at the February 8, 2023, Board of Supervisors and Planning Commission Joint meeting.**

**Sewer Module Component 4a, Wayne Megill, 1597 Baltimore Pike – Camp Property**
**PC Meeting**: March 8, 2023

- 1597 Baltimore Pike is a 6.89 acres property containing a single-family home. The Department of Environmental Protection requires a Sewage Facilities Planning Module, which requires approval by the Planning Commission, particularly component 4a.

**This item was recommended for approval at the February 8, 2023, Planning Commission. This item did not appear before the Board of Supervisors.**