

**SPRINGFIELD TOWNSHIP,  
YORK COUNTY, PENNSYLVANIA**

**ORDINANCE NO. 2012-05**

**SPRINGFIELD TOWNSHIP STORMWATER MANAGEMENT ORDINANCE**

**Adopted**

OCTOBER 8, 2012

**As Amended:**

ORDINANCE 2014-01 – MARCH 10, 2014

ORDINANCE 2017-04 – OCTOBER 9, 2017

ORDINANCE 2018-05 – DECEMBER 3, 2018

(amendment, restatement and reenactment of Springfield Township Ordinance No. 2011-07)

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## ARTICLE I - GENERAL PROVISIONS

### Section 101. Short Title

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

### Section 102. Statement of Findings

The governing body of Springfield Township finds that:

- A. Inadequate management of accelerated runoff of stormwater resulting from development throughout a watershed increases flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of streams and storm sewers, greatly increases the cost of public facilities to carry and control stormwater, undermines flood plain management and flood control efforts in downstream communities, reduces groundwater recharge, threatens public health and safety, and increases non-point source pollution of water resources.
- B. Inadequate maintenance of stormwater best management practices (BMPs) causes loss of water quality, flooding and other problems.
- C. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated runoff, is fundamental to the public health, safety, and welfare and the protection of people of the Commonwealth, their resources, and the environment.
- D. Stormwater is an important water resource, which provides groundwater recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.
- E. Federal and state regulations require certain municipalities to implement a program of stormwater controls. These municipalities are required to obtain a permit for stormwater discharges from their separate storm sewer systems under the National Pollutant Discharge Elimination System (NPDES).

### Section 103. Purpose

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

- A. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code 93 to protect, maintain, reclaim, and restore the existing and designated uses of the waters of this Commonwealth.
- B. Preserve the natural drainage systems as much as possible.

- C. Manage stormwater runoff close to the source.
- D. Provide procedures and performance standards for stormwater planning and management.
- E. Maintain groundwater recharge to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
- F. Prevent scour and erosion of stream banks and stream beds.
- G. Provide proper operation and maintenance of all SWM BMPs that are implemented within the Township.
- H. Meet NPDES MS4 permit requirements and state water quality requirements.

**Section 104. Statutory Authority**

A. Primary Authority:

The Township is empowered to regulate land use activities that affect stormwater impacts by the authority of the Second Class Township Code, Act of May 1, 1933, P.L. 103, No. 69, re-enacted and amended July 10, 1947, P.L. 1481, No. 567, 53 P.S. §§ 65101 *et seq.*, as subsequently amended ("Second Class Township Code"), and the Pennsylvania Stormwater Management Act, Act of October 4, 1978, P.L. 864, No. 167, 32 P.S. §§ 680.1 *et seq.*, as amended ("Stormwater Management Act" or "Act 167")

B. Secondary Authority:

The Township is also empowered to regulate land use activities that affect runoff by the authority of the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, re-enacted and amended by Act 170 of 1988, 53 P.S. §§ 10101 *et seq.*, as amended ("MPC")•

**Section 105. Applicability**

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

**Section 106. Repealer**

Any other ordinance provision or regulation of the Township inconsistent with any of the provisions of this Ordinance is hereby repealed to give this Ordinance full force and effect to the extent of the inconsistency only.

**Section 107. Severability**

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

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

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

### **Section 109. Interpretation**

Unless otherwise expressly stated, the succeeding shall, for the purposes of this Ordinance, be interpreted in the following manner:

- A. Words used in the present tense also imply the future tense.
- B. Words used in the singular imply the plural, and vice versa.
- C. Words of masculine gender include feminine gender, and vice versa.
- D. The words and abbreviation "includes," "including," "shall include," "such as," and "e.g." are not limited to the specific example(s) given but are intended to extend the word's or words' meaning(s) to all other instances of like kind and character.
- E. The words "person", "applicant", or "developer" include a partnership, corporation, or other legal entity, as well as an individual.
- F. The words "shall", "required", or "must" are mandatory; the words "may" and "should" are permissive.

### **Section 110. Erroneous Permit**

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

## **ARTICLE II - DEFINITIONS**

**Accelerated Erosion** - The removal of the surface of the land through the combined action of man's activities and natural processes at a rate greater than would occur because of the natural processes alone.

**Act 167** — As defined in Section 104.A.

**Agricultural Activity** - Activities associated with agriculture such as, but not limited to, agricultural cultivation, agricultural operations, and animal heavy use areas. This includes the work of producing crops including tillage, land clearing, plowing, disking, harrowing, planting,

harvesting crops or pasturing and raising of livestock and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

*Amended Soils* – Soil that is processed or manufactured to improve disturbed soils and low organic soils by restoring soil porosity and/or adding a soil amendment such as compost for the long term purpose reestablishing the soil's long term capacity for infiltration and pollution removal.

*Article II as amended by Springfield Township Ordinance 2017-04 – October 9, 2017.*

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

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

**BMP Manual** - Pennsylvania Stormwater Best Management Practices Manual, as amended and updated.

**Board** - The Board of Supervisors of Springfield Township.

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

**Clean Streams Law** — The Pennsylvania Clean Streams Law, 35 P.S. §§ 691.1 et seq., as amended.

**Clean Water Act** —The Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq., as amended.

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

**County** - York County Pennsylvania

**Culvert** - A structure with appurtenant works which carries surface water through an obstruction.

**Dam** - An impoundment structure regulated by the Pennsylvania DEP Chapter 105. regulations.

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

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

**Detention Basin** - A structure designed to retard stormwater runoff by temporarily storing and releasing the runoff at a predetermined rate.

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

**Developer** - Any person, partnership, association, corporation or other entity, or any responsible person therein or agent thereof, that undertakes any Regulated Activity.

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

**Disconnected Impervious Area (DIA)** - An impervious or impermeable surface that is disconnected from any stormwater drainage or conveyance system and is redirected or directed to a pervious area, which allows for infiltration, filtration, and increased time of concentration as specified in Appendix B. Disconnected Impervious Area of this Ordinance.

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

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

**Drainage Conveyance Facility** - An SWM facility designed to transmit stormwater runoff and shall include streams, channels, swales, pipes, conduits, culverts, storm sewers, etc.

**Drainage Easement** - A right granted by a land owner to a grantee, allowing the use of private land for stormwater management purposes.

**Drainage Permit** - A permit issued by the Municipal governing body after the Drainage Plan has been approved. Said permit is issued prior to or with the final Municipal approval.

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

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

**E & S Manual** - Erosion and Sediment Pollution Control Manual, as amended and updated.

**Erosion and Sediment Control Plan** - A site specific plan consisting of both drawings and a narrative that identifies BMPs to minimize accelerated erosion and sedimentation before, during and after earth disturbance activity.

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

**FEMA** - Federal Emergency Management Agency.

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

**Floodplain** - Any land area susceptible to inundation by water from any natural source as delineated by applicable FEMA maps and studies as being a special flood hazard area.

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

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

**Groundwater Recharge** - Replenishment of existing natural underground water supplies.

**Hydrologic Soil Group (HSG)** - Infiltration rates of soils vary widely and are affected by subsurface permeability as well as surface intake rates. Soils are classified into four HSGs (A, B, C, and D) according to their minimum infiltration rate, which is obtained for bare soil after prolonged wetting. The NRCS defines the four groups and provides a list of most of the soils in the United States and their group classification. The soils in the area of the development site may be identified from a soil survey report that can be obtained from local NRCS offices or conservation district offices. Soils become less pervious as the HSG varies from A to D (NRCS 3, 4).

**Infiltration Structures** - A structure designed to direct runoff into the ground, (e.g., french drains, seepage pits, seepage trench).

**IWRP** - The York County Integrated Water Resources Plan, which Plan includes Act 167 Plan elements and requirements.

**Impervious Surface (Impervious Area)** - A surface that prevents the infiltration of water into the ground. Impervious surfaces and areas shall include, but not be limited to, roofs, additional indoor living spaces, patios, garages, storage sheds and similar structures, and any new streets and sidewalks. However, any surface or area designed, constructed and maintained to permit infiltration as specified herein shall be considered pervious, not impervious. For the purposes of this Ordinance, a surface or area shall not be considered impervious if such surface or area does not diminish the capacity for infiltration of stormwater for storms up to, and including, a two (2)-year 24-hour storm event.

**Infiltration** - The entrance of surface water into the soil, usually at the soil-air interface.

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

**Land Development** - Shall include any of the following activities:

- A. The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:
  - 1. a group of two (2) or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
  - 2. the division or allocation of land or space between or among two (2) or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features.
- B. A subdivision of land.
- C. Development in accordance with Section 503(1.1) of the Pennsylvania Municipalities Planning Code.

**Land Disturbance** - Any activity involving alteration, construction, mining, timber, harvesting, grubbing, grading, filling, digging or filling of ground, or stripping of vegetation, or any other activity which causes land to be exposed to the danger of Erosion.

**MPC** - As defined in Section 104.B.

**NPDES** - National Pollution Discharge Elimination System.

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

**O & M** - Operation and Maintenance

**O & M Plan** - Operation and Maintenance Plan

**PCSWMP** - Post-Construction Stormwater Management Plan

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

**Percolation** - The downward movement, under the influence of gravity, of water under hydrostatic pressure through interstices of the soil or rock.

**Person** - An individual, partnership, public or private association or corporation, limited liability company, 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. Whenever used in any section prescribing or imposing a penalty, the term "person" shall include the members of a partnership, the officers, members, managers, servants and agents of an association or limited liability company, officers, agents and servants of a corporation, and the officers of a municipality or county, but shall exclude any department, board, bureau or agency of the Commonwealth of Pennsylvania.

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

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

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

**Regulated Activities** - Any earth disturbance activities or any activities that involve the alteration or development of land in a manner that may affect stormwater runoff. This term shall also include activities that directly alter or affect the characteristics of runoff (stormwater, groundwater, potable water, etc.) over, across and/or discharging from a site.

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

**Retention Basin** - An impoundment in which stormwater is stored and not released during a storm event. Stored water may be released from the basin at some time after the end of a storm.

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

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

**Riparian Buffer** - A Best Management Practice that is an area of permanent vegetation along surface waters. (Such areas serve as natural vegetative filters between upland landscapes and waterways.)

**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.

**Rooftop Detention** - Temporary ponding and gradual release of stormwater falling directly onto flat roof surfaces by incorporating control-flow roof drains into building designs.

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

**Second Class Township Code** As defined in Section 104.A.

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

**Sediment Basin** - A barrier, dam, retention or detention basin designed to retain sediment.

**Seepage Pit/Seepage Trench** - An area of excavated earth filled with loose stone or similar materials and into which surface water is directed for infiltration into the ground.

**Semi-Pervious Surface** - A surface such as stone, rock concrete or other materials which permits some vertical transmission of water.

**Sheet Flow** - Water flow with a relatively thin and uniform depth.

**Soil-Cover Complex Method** - A method of runoff computation developed by SCS, and found in its publication "Urban Hydrology for Small Watersheds", Technical Release No. 55, SCS, January 1975.

**Spillway** - A depression in the embankment of a pond or basin which is used to pass peak discharge greater than the maximum design storm controlled by the pond or basin.

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

**Storm Frequency** - The number of times that a given storm event occurs on average in a stated period of years.

**Storm Sewer** - A pipe or conduit, or a system of pipes or conduits, which intercepts and carries surface stormwater runoff, but excludes sewage, industrial wastes and similar discharges.

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

**Stormwater Management Facility** - Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater management facilities include, but are not limited to, detention and retention basins, open channels; storm sewers, pipes, infiltration facilities and other SWM BMPs. Stormwater Management facilities will be designated as SWM facilities throughout this Ordinance.

**Stormwater Management Plan** - Parts and/or elements of the York County Integrated Water Resources Plan which incorporate the requirements of the Act of October 4, 1978, P.L. 864, (Act 167), as amended, and known as the "Storm Water Management Act."

**Stormwater Management Best Management Practices** - Is abbreviated as BMPs or SWM BMPs throughout this Ordinance.

**Stormwater Management Site Plan** - The plan prepared by the developer or his representative indicating how stormwater runoff will be managed at the development site in accordance with this Ordinance. Stormwater Management Site Plan will be designated as SWM Site Plan throughout this Ordinance. For all NPDES permitted sites, the SWM Site Plan shall include, and be consistent with, the Erosion and Sediment Control Plan as submitted to the York County Conservation District (YCCD) and/or DEP.

**Stream Enclosure** - A bridge, culvert or other structure in excess of 100 feet in length upstream to downstream which encloses a regulated water of this Commonwealth.

**Subdivision** - The division or re-division of a lot, tract or parcel of land by any means into two or more lots, tracts or 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 ten acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

**Subdivision Ordinance** — The Springfield Township Subdivision and Land Development Ordinance, as amended or reenacted.

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

**SWM** - Stormwater Management.

**Time-of-Concentration (Tc)** - The time 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.

**Township** - The Township of Springfield, a Township of the Second Class located in York County, Pennsylvania.

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

**Watercourse** - A stream of water; river, brook, creek, or a channel or ditch for water, whether natural or man-made.

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

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

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

**YCCD** - York County Conservation District

**Zoning Ordinance** - The Springfield Township Zoning Ordinance, as amended or reenacted.

### **ARTICLE III - STORMWATER MANAGEMENT STANDARDS**

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

- A. For all regulated activities, unless preparation of an SWM Site Plan is specifically exempted in Section 302:
  - 1. Preparation and implementation of an approved SWM Site Plan is required.
  - 2. No regulated activities shall commence until the Township issues written approval of an SWM Site Plan which demonstrates compliance with the requirements of this Ordinance.
- B. SWM Site Plans approved by the Township, in accordance with Section 406, shall be on site throughout the duration of the regulated activity.
- C. The Township may, after consultation with DEP, approve measures for meeting the state water quality requirements other than those in this Ordinance, provided that they meet the minimum requirements of, and do not conflict with, State law including, but not limited to, the Clean Streams Law. The Township shall maintain a record of consultations with DEP pursuant to this paragraph.
- D. For all regulated earth disturbance activities, erosion and sediment control BMPs shall be designed, implemented, operated, and maintained during the regulated earth disturbance activities, i.e., during construction, to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law. Various BMPs and their design standards are listed in the Erosion and Sediment Pollution Control Program Manual (E&S Manual) 2, No. 363-2134-008 (April 15, 2000), as amended and updated.
- E. For all regulated activities, implementation of the volume controls in Section 303. is required, unless specifically exempted under Section 301.C., or exempted by an approved modification request as specified in Section 403.B. of this Ordinance.
- F. Impervious areas:

1. The measurement of impervious areas shall include all of the impervious areas in the total proposed development even if development is to take place in phases.
  2. For development taking place in phases, the entire development plan must be used in determining conformance with this Ordinance.
  3. For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this Ordinance; except that the volume controls in Section 303 and the peak rate controls of Section 304 do not need to be retrofitted to existing impervious areas that are not being altered by the proposed regulated activity.
- G. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification of the adjacent property owner(s). Such stormwater flows shall be subject to the requirements of this Ordinance.
- H. All regulated activities shall include such measures as necessary to:
1. Protect health, safety, and property;
  2. Meet the water quality goals of this Ordinance, as stated in Section 103. Purpose, by implementing measures to:
    - a. Minimize disturbance to floodplains, wetlands, wooded areas, and existing vegetation.
    - b. Maintain or extend riparian buffers.
    - c. Avoid erosive flow conditions in natural flow pathways.
    - d. Minimize thermal impacts to waters of this Commonwealth.
    - e. Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible.
    - f. Minimize soil disturbance and compaction. Topsoil, if removed, shall be replaced to a minimum depth equal to its depth prior to removal or four (4) inches, whichever is greater. (Additional topsoil may be needed for vegetation other than sod.)
  3. To the maximum extent practicable, incorporate the techniques for Low Impact Development Practices described in the Pennsylvania Stormwater Best Management Practices Manual (BMP Manual).
- I. The design of all facilities in areas of carbonate geology or karst topography shall include an evaluation of measures to minimize adverse effects, including hydro-geologic studies if required by the Township.
- J. Infiltration BMPs shall be spread out, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other

requirements of this Ordinance. In addition, infiltration BMPs shall include pre-treatment BMPs where appropriate.

- K. All natural streams, channels, swales, drainage systems and/or areas of surface water concentration shall be maintained in their existing condition unless an alteration is approved by the Township. All encroachment activities shall comply with the requirements of 25 Pa. Code Chapter 105 (Water Obstructions and Encroachments). Any approvals or permits issued do not relieve compliance as referenced in Section 108.
- L. All SWM facilities (excluding individual residential underground infiltration structures) are considered structures and must comply with building setback requirements. The outside toe of slope of the embankment in a fill condition or the top of embankment in a cut condition shall be considered as the point that must meet the setback requirements. Individual residential underground infiltration structures shall be a minimum of ten (10) feet from the property line. Discharge of controlled flows can be no closer to an adjacent property than two (2) times the length of the required discharge rip-rap apron. This requirement applies to discharge aprons that do not outlet to a defined waterway or an existing storm sewer. Minimum distance is ten (10) feet.
- M. All storage facilities shall completely drain both the volume control and rate control capacities over a period of time not less than twenty-four (24) hours and not more than seventy-two (72) hours from the end of the design storm. However, any designed infiltration at such facilities is exempt from the minimum twenty-four (24) hour standard, i.e., may infiltrate in a shorter period of time, so long as none of the stormwater flowing into the infiltration facility is discharged directly into the surface waters of the Commonwealth. Inordinately rapid infiltration rates may indicate the presence of large fractures or other conditions for which an additional soil buffer may be required.
- N. The design storm volumes and precipitation intensities to be used in the analysis of discharge or runoff shall be obtained from the Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, Version 3.0, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Spring, Maryland. NOAA's Atlas 14 can be accessed at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
- O. For all regulated activities, SWM BMPs shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Storm Water Management Act.
- P. All work shall be in accordance with the Township's construction and material specifications then in effect.
- Q. Various BMPs and their design standards are listed in the BMP Manual.

## Section 302. Exemptions

Any Regulated Activity that meets the following exemption criteria is exempt from the part(s) of this Ordinance as specified herein. However, the requirements of the Ordinance shall otherwise remain in effect. The criteria for exemption in this Section apply to the total development

proposed, including instances in which the development is proposed to take place in phases. The date of enactment of this Ordinance shall be the starting point from which future development and the respective proposed impervious surface computations shall be cumulatively considered and regulated. Exemption shall not relieve an applicant from implementing such measures as necessary to meet the intent of this Ordinance, or compliance with any NPDES Permit requirements.

- A. Regulated activities that create impervious areas equal to or less than 1,000 square feet calculated on a cumulative basis from the date of enactment of this Ordinance are exempt from the peak rate control and the stormwater management site plan preparation requirements of this Ordinance. Upon exceeding this cumulative exemption, the impervious areas created from the date of exceedance forward shall not be exempted from the requirements of this Ordinance, except as set forth in this Ordinance. The Township may deny this exemption in situations where the location of impervious area will discharge any concentrated stormwater runoff onto a downslope property or directly into the waters of the Commonwealth.
- C. Regulated activities that create DIAs equal to or less than 1,000 square feet are exempt from the peak rate control and the stormwater management site plan preparation requirements of this Ordinance. This exemption shall be applied on a project basis and not a cumulative basis. The Township may deny this exemption in situations where the location of DIA may cause discharge of concentrated stormwater runoff onto a downslope property or directly into the waters of the Commonwealth.
- D. Regulated activities that create DIAs greater than 1,000 square feet and equal to or less than 5,000 square feet are exempt only from the peak rate control requirement of this Ordinance. This exemption from peak rate controls shall be applied on a project basis and not a cumulative basis. The Township may deny this exemption from peak rate controls in situations where the location of DIA may cause discharge of concentrated stormwater runoff onto a downslope property or directly into the waters of the Commonwealth.
- C. Agricultural activity is exempt from the rate control and SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa. Code 102.
- D. Forest management and timber operations are exempt from the rate control and SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 PA Code 102.

- E. Domestic gardening and landscaping are exempt from specific approval and permitting under this Ordinance so long as those activities are associated with one, and only one, dwelling unit and the activities comply with all other applicable ordinances and statutes.
- F. 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 Township within twenty-four (24) hours of the commencement of the activity. If the Township determines the work is not an emergency, then the work shall cease immediately and the requirements of this Ordinance shall be addressed as applicable.
- G. Any maintenance to an existing SWM facility made in accordance with plans and specifications approved as part of an O&M Plan or by the Township engineer.
- H. Regulated activities exempted from SWM Site Plan requirements are not subject to review and approval for volume control requirements of this Ordinance. It shall be the landowner's responsibility to assure compliance with the volume control requirements. The Township may at its discretion require drawings and calculations in sufficient detail to show proposed volume controls of this Ordinance are met.
- I. The Township may deny or revoke any exemption pursuant to this Section at any time for any project that the Township determines poses a threat to public health, safety, property or the environment.

### **Section 303. Volume Controls**

The low impact development practices provided in the BMP Manual shall be utilized for all regulated activities to the maximum extent practicable. Water volume controls shall be implemented using the Design Storm Method in Subsection A or the Simplified Method in Subsection B below. For regulated activity areas equal or less than one (1) acre that do not require hydrologic routing to design the stormwater facilities, this Ordinance establishes no preference for either methodology; therefore, the applicant may select either methodology with Township concurrence.

- A. The Design Storm Method (CG-1 in the BMP Manual) is applicable to any size of regulated activity. This method requires detailed modeling based on site conditions.
  - 1. Do not increase the post-development total runoff volume for all storms equal to or less than the two (2)-year 24-hour duration precipitation.
  - 2. For modeling purposes:
    - a. Existing (pre-development) non-forested pervious areas must be considered meadow.
    - b. For computation of pre-development runoff volume, twenty percent (20%) of existing impervious area, when present, shall be considered meadow.

- B. The Simplified Method (CG-2 in the BMP Manual) provided below is independent of site conditions and should be used if the Design Storm Method is not followed. This method is not applicable to regulated activities greater than one (1) acre.

For new impervious surfaces:

1. Stormwater facilities shall capture at least the first two (2) inches of runoff from all new impervious surfaces.
2. At least the first one (1) inch of runoff from new impervious surfaces shall be permanently removed from the runoff flow, i.e., it shall not be released into the surface waters of this Commonwealth. Removal options for the first one (1) inch of runoff include reuse, evaporation, transpiration, and infiltration.
3. Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases at least the first 0.5 inch of the permanently removed stormwater runoff shall be infiltrated.

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

- A. For computation of pre-development peak discharge rates, twenty percent (20%) of the existing impervious area of a project site, when present, shall be considered meadow.
- B. Post-development discharge rates shall not exceed the pre-development discharge rates for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year 24-hour storms. If it is shown that the peak rates of discharge indicated by the post-development analysis are less than or equal to the peak rates of discharge indicated by the pre-development analysis for 1-, 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storms, then the requirements of this section have been met. Otherwise, the applicant shall provide additional controls as necessary to satisfy the peak rate of discharge requirement.

#### **Section 305. Stormwater Management Facilities for Pennsylvania Department of Transportation and Pennsylvania Turnpike Commission Roadways and Associated Facilities**

For the purposes of the Act 167 Stormwater Management (Plan) elements, contained within the York County Integrated Water Resources Plan, and this Ordinance, design policy pertaining to SWM facilities for Pennsylvania Department of Transportation (PennDOT) and Pennsylvania Turnpike Commission (PTC) roadways and associated facilities is provided in Section 13.7 (Antidegradation and Post Construction Stormwater Management Policy) of PennDOT Publication No. 13M, Design Manual Part 2 (August 2009), as developed, updated, and amended in consultation with the Pennsylvania Department of Environmental Resources (DEP). As stated in DM-2.13.7.D (Act 167 and Municipal Ordinances), PennDOT and PTC roadways and associated facilities shall be consistent with Act 167 Plans. Dm-2.13.7.B (Policy on Antidegradation and Post Construction Stormwater Management) was developed as a cooperative effort between PennDOT and DEP. DM-2.13.7.0 (Project Categories) discusses the anticipated impact on the quality, volume, and rate of stormwater runoff.

Where standards in the Act 167 elements of the IWRP and this Ordinance are impractical, PennDOT or the PTC may request assistance from DEP, in consultation with the County and Township, to develop an alternative strategy for meeting State water quality requirements and the goals and objectives of the Act 167 elements within the IWRP.

For the purposes of the Act 167 elements in the IWRP and this Ordinance, road maintenance activities are regulated under 25 PA Code Chapter 102.

### **Section 306. Design Criteria**

- A. Post-development rates of runoff from any regulated activity shall not exceed the peak release rates of runoff specified in Section 304, of the Ordinance.
- B. If it is shown, by applications of water quality and ground water recharge requirements pursuant to Section 303, that the post-development hydrographs are equal to the pre-development hydrographs to assure the rate and volume of runoff leaving the site is unchanged for 1-, 2-, 5-, 10-, 25-, 50-, and 100-year frequency storms, then the requirements of this section will be considered met. If an extended detention or a permanent pool type facility is selected for the treatment of water quality volume, the outlet shall be designed such that one year 24 hour post-development runoff volume is released over a 24 hour period. This will also help channel protection. The release of water begins 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 consider and minimize the chances of clogging and sedimentation potential. Orifices smaller than 3 inches diameter are not recommended. However, if the Design Engineer can provide proof that the smaller orifices are protected from clogging by use of trash racks, etc., smaller orifices may be permitted.
- C. Off-Site Areas - Off-site areas which drain through a proposed development site are not subject to release rate criteria when determining allowable peak runoff rates. However, on-site drainage facilities shall be designed to safely convey off-site flows through the development site.
- D. Site Areas - Where the site area to be impacted by a proposed regulated activity differs significantly from the total site area, only the proposed impact area requiring stormwater management measures shall be subject to this Ordinance. Undisturbed areas shall be considered as existing conditions. In other words, unimpacted areas bypassing the SWM facilities would not be subject to the Ordinance.
- E. "Downstream Hydraulic Capacity Analysis" - Any downstream capacity hydraulic analysis conducted in accordance with this Ordinance shall use the following criteria for determining adequacy for accepting increased peak flow rates:
  - 1. Natural or man-made channels or swales must be able to convey the increased runoff associated with a 25-year return period event within their banks at velocities consistent with protection of the channels from erosion. Acceptable velocities shall be based upon criteria included in the PA DEP *Erosion and Sediment Pollution Control Program Manual*.

2. Natural or man-made channels or swales must be able to convey increased 50-year return period runoff without creating any hazard to persons or property.
  3. Culverts, bridges, storm sewers or any other facilities which must pass or convey flows from the tributary area must be designed in accordance with PA DEP Chapter 105 and PennDOT regulations (if applicable) and, at minimum, pass the increased 25-year return period runoff.
- F. Regional Detention Alternatives - For certain areas within the study area, it may be more cost-effective to provide one control facility for more than one development site than to provide an individual control facility for each development site. The initiative and funding for any regional runoff control alternatives are the responsibility of prospective Developers. The design of any regional control basins must incorporate reasonable development of the entire upstream watershed. The peak outflow of a regional basin would be determined on a case-by-case basis using the hydrologic model of the watershed consistent with protection of the downstream watershed areas. "Hydrologic model" refers to the calibrated model as developed for the Stormwater Management Plan. Any regional management plan must be a covenant or restriction running with the land that shall be set forth in a recorded agreement approved by the Township.
- G. Capacity Improvements - In certain instances, primarily within the provisional no detention areas, local drainage conditions may dictate more stringent levels of runoff control than those based upon protection of the entire watershed. In these instances, if the Developer could prove that it would be feasible to provide capacity improvements to relieve the capacity deficiency in the local drainage network, then the capacity improvements could be provided by the Developer in lieu of runoff controls on the development site. Any capacity improvements would be designed based upon development of all areas tributary to the proposed improvement. In addition, all new development upstream of a proposed capacity improvement shall be assumed to implement the applicable runoff controls consistent with this Ordinance except that all new development within the entire subarea(s) within which the proposed development site is located shall be assumed to implement the Developer's proposed discharge control, if any. Capacity improvements may also be provided as necessary to implement any regional or sub-regional detention alternatives. Capacity improvements that are not consistent with the BMP manual will require submission and approval of a modification request in accordance with this Ordinance.
- H. Industrial Sites - Where the potential for groundwater and/or surface water contamination exists, based on the proposed use of the Regulated Activity, safeguards shall be incorporated into the site.
1. For industrial or commercial sites where it is possible that toxic or hazardous substances may come into contact with stormwater runoff, pretreatment of the first-flush (first 1/2 inch) runoff over areas where industrial and commercial operations take place shall be
  2. provided. Pretreatment shall include means for separating light and heavy toxic and hazardous substances from the stormwater before the stormwater is conveyed to the general SWM facility(ies).

3. Infiltration systems may be used to handle runoff from commercial or industrial working or parking areas only after the first-flush stormwater from these areas has been pretreated for removal of toxic and hazardous substances.
- I. The Developer may, subject to approval of the Township engineer, use the stormwater credits described in the BMP manual to meet the obligations of Sections 303 and 304.

### **Section 307. Regulation Governing Stormwater Management Facilities**

- A. Any stormwater facility located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PennDOT).
- B. Any SWM facility (i.e., detention basin) designed to store runoff and requiring a berm or earthen embankment required or regulated by this Ordinance shall be designed to provide an emergency spillway to handle flow up to and including the 100-year, 24 hour design storm at post-development conditions, assuming the principal outlet structure to be clogged. The height of embankment must be set as to provide a minimum 1 foot of freeboard above the maximum elevation computed for the clogged orifice condition. Should any SWM facility require a dam safety permit under 25 Pa. Code Chapter 105, the facility shall be designed in accordance with 25 Pa. Code Chapter 105 and meet the regulations of 25 Pa. Code Chapter 105 concerning dam safety which may be required to pass storms larger than 100-year event.
- C. Any SWM facilities regulated by this Ordinance that would be located in or adjacent to waters of the Commonwealth or wetlands shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, the General Permit process. When there is a question whether wetlands may be involved, it is the responsibility of the Developer or his agent to show that the land in question cannot be classified as wetlands, otherwise approval to work in the area must be obtained from PA DEP.
- D. Any drainage conveyance facility and/or channel that does not fall under Chapter 105 Regulations, must be able to convey, without damage to the drainage structure or roadway, runoff from the 25-year design storm. Conveyance facilities to or exiting from SWM facilities (i.e., detention basins) shall be designed to convey the design flow to or from that structure. Roadway crossings located within designated floodplain areas must be able to convey runoff from a 100-year design storm. Any facility located within a PennDOT right-of-way must meet PennDOT minimum design standards and permit submission requirements.
- E. Storm sewers must be able to convey post-development runoff from a 10-year design storm without surcharging inlets, where appropriate. Any post-development drainage area that does not naturally convey stormwater runoff to a management facility shall incorporate a storm sewer system capable of collecting and conveying the stormwater runoff during a 100-year storm to said facilities. A combination of aboveground and overland conveyance will be accepted without creation of hazardous conditions to any person or property.
- F. All earthmoving activities must be reviewed and approved by the York County Conservation District prior to commencing work.

- G. The design of all SWM facilities shall incorporate good engineering principles and practices. The Township shall reserve the right to disapprove any design that would result in the occupancy or continuation of adverse hydrologic or hydraulic conditions within the watershed.
- H. The existing points of concentrated drainage that discharge onto adjacent property shall not be altered without permission of the adjacent property owner(s) and shall be subject to any applicable discharge criteria specified in this Ordinance. The volume of stormwater runoff may not be increased onto downstream properties unless an analysis is completed that shows adequate facilities are in place to adequately convey post-development flows. The owner's signature must be included on the stormwater plan granting approval to alter the concentrated drainage. Adequate downstream conveyance facilities are hereby defined as existing natural conveyance channels, manmade conveyance channels or pipe conveyance systems. Discharge of stormwater to areas without existing defined conveyance facilities must be prevented. Should the owner refuse to accept the altered stormwater discharge, the Developer must modify the post-development stormwater plan in a manner that will not increase the drainage area or volume of discharge.
- I. Areas of existing diffused drainage discharge shall be subject to any applicable discharge criteria in the general direction of existing discharge, whether proposed to be concentrated or maintained as diffused drainage areas, except as otherwise provided by this Ordinance. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the Developer must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding or other harm will result from the concentrated discharge. The affected adjacent property owner's signature must be provided on the stormwater plan granting approval of the altered discharge. Adequate downstream conveyance facilities are hereby defined as existing natural conveyance channels, manmade conveyance channels or pipe conveyance systems. Discharge of stormwater to areas without existing defined conveyance facilities must be prevented. Should the owner refuse to accept the altered stormwater discharge, the Developer must modify the post-development stormwater plan in a manner that will not increase the drainage area or volume of discharge.
- J. Where a development site is traversed by watercourses drainage easements shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations that may adversely affect the flow of stormwater within any portion of the easement. Also, maintenance, including mowing of vegetation within the easement shall be required, except as approved by the appropriate governing authority.
- K. When it can be shown that, due to topographic conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, through the General Permit process.
- L. Roof drains must not be connected to streets, sanitary or storm sewers or roadside ditches to promote overland flow and infiltration/percolation of stormwater where advantageous to do

so. When it is more advantageous to connect directly to streets or storm sewers, then it shall be permitted on a case by case basis by the Township in accordance with the modification request procedures of Section 403.B. In no case shall roof drains be positioned in a manner that promotes drainage to adjacent structures or onto adjacent properties.

- M. Special requirements for areas falling within defined Exceptional Value and High Quality Sub-watersheds: The temperature and quality of water and streams that have been declared as exceptional value and high quality is to be maintained as defined in Chapter 93, Water Quality Standards, Title 25 of Pennsylvania Department of Environmental Protection Rules and Regulations. Temperature sensitive BMP's and stormwater conveyance systems are to be used and designed with storage pool areas and supply outflow channels and should be shaded with trees. This will require modification of berms for permanent ponds and the relaxation of restrictions on planting vegetation within the facilities, provided that capacity for volumes and rate control is maintained. At a minimum, the southern half on pond shorelines shall be planted with shade or canopy trees within ten (10) feet of the pond shoreline. In conjunction with this requirement, the maximum slope allowed on the berm area to be planted is 10 to 1. This will lessen the destabilization of berm soils due to root growth. A long term maintenance schedule and management plan for the thermal control BMP's is to be established and recorded for all development sites within defined Exceptional Value and/or High Quality Sub-watersheds.
- N. Outlet Control Structures - Outlet control shall be accomplished utilizing (6" diameter or 6" width maximum) perforations arranged vertically to provide for positive control of stormwater runoff. Outlet controls shall also provide for modification of the orifice to a smaller diameter through the use of removable plates.
- O. Discharge Dispersion - Discharges from piping outlets of management facilities shall be provided with a concrete "level spreader" to convert point discharge back to simulated sheet flow. The length of the level spreader shall be equal to 10 times the outlet pipe diameter (e.g., an 18" discharge pipe would require a 15' wide level spreader).
- P. Minimum Bottom Slope - All detention basins shall have a minimum bottom slope of 2% unless infiltration facilities are provided.
- Q. Maximum Depth - The permitted depth for detention or retention basins shall be six (6) feet, measured from the bottom of the emergency spillway to the lowest point in the basin.
- R. Side Slopes - The maximum permitted side slopes for detention or retention basins shall be 4 horizontal to 1 vertical.
- S. Embankments - A cutoff trench of impervious material shall be provided within all basin embankments. Where a basin embankment is constructed using fill on an existing 15% or greater slope, the basin must be keyed into the existing grade.
- T. Fencing - Any stormwater detention/retention facility that is designed so that it retains water at a depth of three (3) feet or more on a permanent basis located in or adjacent to a Residential Zone shall be subject to the following fencing requirements:

1. Stormwater facility must be completely surrounded by a fence or wall of not less than four (4) feet in height, which shall be so constructed as not to have openings, holes or gaps larger than two (2) inches in any dimension (including the distance between horizontal or vertical pickets in a picket fence).
2. All gates or doors opening through such enclosure shall be equipped with a self-closing and self-latching device for keeping the gate or door securely closed at all times.

U. No SWM facilities shall be installed over existing utility mains or services.

V. Easement - Plans showing outlet control structures shall contain an easement dedication in a note on a recorded plan or by specific reference in a recorded O&M Agreement as follows: "An easement is hereby granted to Springfield Township to access and modify the basin outlet control device at the expense of the Developer or owner so as to function within design parameters."

W. Inlet Placement - In general, inlets shall be spaced such that, based upon the Rational Method, Time-of-Concentration (Tc) = 5 minutes and 10-year rainfall intensity, the area

contributing to the inlet shall not produce a peak runoff of greater than four (4) cubic feet per second (cfs). Also, inlets shall be spaced so that their efficiency, based upon efficiency curves published by the Pennsylvania Department of Transportation, is not less than 65%.

Additional inlets shall be placed at the upper side of driveway/street intersections to prevent stormwater from discharging onto the roadway. Other devices such as high efficiency grates or perforated pipe may be required if conditions warrant. All inlets at low points along the roadway shall have a 10" curb reveal and shall be equipped with pavement base drain extending 50 feet in either direction, parallel to the centerline of the roadway.

X. Culverts - In all cases where drainage is picked up by means of a head wall, and inlet or outlet conditions control, the pipe shall be designed as a culvert. The minimum diameter of culvert shall be eighteen (18) inches. The procedure contained in Hydraulic Engineer Circulars No. 5 and No. 13, as prepared by the U. S. Department of Transportation, Federal Highway Administration, Washington, D.C., shall be used for the design of culverts.

When a pipe or culvert is intended to convey the discharge from a SWM facility, its required capacity shall be computed by the Rational Method and compared to the peak outflow from the SWM facility for the 50-year storm. The greater flow shall govern the design of the pipe or culvert.

Y. *Use of Amended Soils shall be only permitted when used as a secondary component of an approved and permitted stormwater facility or SWM plan, such as a rain garden or retention basin, and where the boundaries of the amended soil area are clearly delineated in a primary component of a SWM Plan. Amended soils shall be prohibited for use as a standalone or primary SWM plan.*

*Section 307 amended by Springfield Township Ordinance 2017-04 – October 9, 2017.*

### Section 308. Calculation Methodology

Stormwater runoff from all development sites shall be calculated using either the Rational Method or a Soil Cover Complex methodology.

- A. Any stormwater runoff calculations involving drainage areas greater than 200 acres, including on- and off-site areas, shall use generally accepted calculation technique that is based on the

NRCS Soil Cover Complex method. It is assumed that all methods will be selected by the design professional based on the individual limitations and suitability of each method for a particular site.

The Township may allow the use of the Rational Method to estimate peak discharges from drainage areas that contain less than 200 acres.

- B. The design storm volumes and precipitation intensities to be used in the analysis of discharge or runoff shall be obtained from the Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, Version 3.0, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Spring, Maryland. NOAA's Atlas 14 can be accessed at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.

- C. For the purposes of pre-development flow rate determination, undeveloped land, including disturbed areas, shall be considered as "meadow" in good condition, unless the natural ground cover generates a lower curve number or Rational "C" value (i.e., forest), as listed in Table 61 and Table 6-2, respectively.

- D. Peak discharge computed using the Rational Method should follow the formula,  $Q = CIA$  where:

Q = Peak discharge in cubic feet per second

C = Runoff factor expressed as a percent of the total rainfall

I = Rainfall intensity in inches per hour

A = The drainage area expressed in acres

- E. Times-of-concentration for overland flow shall be calculated using the methodology presented in Chapter 3 of Urban Hydrology for Small Watersheds, NRCS, TR-55 (as amended or replaced from time to time by NRCS). Time-of-concentration for channel and pipe flow shall be computed using Manning's equation.
- F. Runoff Curve Numbers (CN) for both existing and proposed conditions to be used in the Soil Cover Complex method shall be obtained from Table 6-1.
- G. Runoff coefficients (c) for both existing and proposed conditions for use in the Rational Method shall be obtained from Table 6-2.

- H. Where uniform flow is anticipated, the Manning equation shall be used for hydraulic computations such as the capacity of open channels, pipes, and storm sewers. Values for Manning's roughness coefficient (n) shall be consistent with Table 6-3.
- I. Outlet structures for SWM facilities shall be designed to meet the performance standards of this Ordinance using any generally accepted hydraulic analysis technique or method.
- J. The design of any stormwater detention facilities intended to meet the performance standards of this Ordinance shall be verified by routing the design storm hydrograph through these facilities.

**Section 309. Erosion and Sedimentation Requirements**

- A. As required in Section 307.F, whenever the vegetation and topography are to be disturbed, such activity must be in conformance with Chapter 102, Title 25, Rules and Regulations, Part I, Commonwealth of Pennsylvania, Department of Environmental Protection, Subpart C, protection of natural Resources, Article II, Water Resources, Chapter 102, "Erosion Control", and in accordance with the York County Conservation District.
- B. It is extremely important that strict erosion and sedimentation control measures be applied surrounding infiltration structure during installation to prevent the infiltrative surfaces from becoming clogged. Additional erosion and sedimentation control design standards and criteria that must be or are recommended to be applied where infiltration BMPs are proposed shall include the following:
  - 1. Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase, so as to maintain their maximum infiltration capacity.
  - 2. Infiltration BMPs shall not be constructed nor receive runoff until the entire contributory drainage area to the infiltration BMP has received final stabilization.
- C. Fencing for sedimentation basins or traps must comply with Section 307.T.
- D. The developer shall demonstrate that the post-development hydrograph flows during erosion and sedimentation control phase are less than or equal to the pre-development hydrograph flows to assure the rate and volume of runoff leaving the site is controlled for the 2-, 5-, and 10-year frequency storms. All calculation methodology shall be in accordance with Section 303 through Section 308.

**Section 310. Carbonate Geology**

- A. In areas of carbonate geology, a geologist shall certify to the following:
  - 1. No SWM facility will be placed in, over, or immediately adjacent to the following features:
    - a. closer than 100 feet from sinkholes

- b. closer than 100 feet from closed depressions
  - c. closer than 100 feet from caverns, intermittent lakes, or ephemeral streams
  - d. closer than 50 feet from lineaments in carbonate areas
  - e. closer than 50 feet from fracture traces
  - f. closer than 25 feet from bedrock pinnacles (surface or subsurface)
2. Stormwater resulting from regulated activities shall not be discharged into sinkholes.
  3. If the developer can prove through analysis that the project site is an area underlain by carbonate geology, and such geologic conditions may result in sinkhole formations, then the project site is exempt from recharge requirements as described in Section 303, Volume Control. However, the project site shall still be required to meet all other standards found in this Ordinance.
  4. It shall be the developer's responsibility to verify if the project site is underlain by carbonate geology. The following note shall be attached to all SWM Site Plans and signed and sealed by the developer's geologist:
 

"I, \_\_\_\_\_, certify that the proposed stormwater management facility (circle one) is / is not underlain by carbonate geology."
  5. Whenever a SWM facility will be located in an area underlain by carbonate geology, a geological evaluation of the proposed location by a geologist shall be conducted to determine susceptibility to sinkhole formation. The evaluation may include the use of impermeable liners to reduce or eliminate the separation distances listed in the BMP Manual. Additionally, the evaluation shall at a minimum, address soil permeability, depth to bedrock, seasonally high groundwater table, susceptibility for sinkhole formation, suitability of SWM facilities, subgrade stability and maximum infiltration capacity in depth of water per unit area.
  6. A detailed soils evaluation of the project site shall be performed to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified professional, and at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation, and subgrade stability. The general process for designing the infiltration BMP shall be:
    - a. Site evaluation to determine general areas of suitability for infiltration practices.
    - b. Provide field test throughout the area proposed for development to determine appropriate percolation rate and/or hydraulic conductivity. At least one (1) infiltration test must be included in each soil group and at least one (1) infiltration test must be conducted for each five (5) lots proposed for development.  
Infiltration tests must be taken at the location and depth of all proposed infiltration structures.
    - c. Design infiltration structure for required storm volume based on all available data.

Extreme caution shall be exercised where infiltration is proposed in geologically susceptible areas such as strip mine or limestone areas. It is also extremely important that the design

professional evaluate the possibility of groundwater contamination from the proposed infiltration/recharge facility and recommend a hydrogeologic justification study be performed if necessary. Whenever a basin will be located in an area underlain by limestone, a geological evaluation of the proposed location shall be conducted to determine susceptibility to sinkhole formations. The design of all facilities over carbonate formations shall include measures to prevent ground water contamination and, where necessary, sinkhole formation. The infiltration requirement in the High Quality/Exceptional Waters shall be subject to the DEP's Chapter 93 and Anti-degradation Regulations. A detailed hydrogeologic investigation may be required by the Borough and where appropriate, the Borough may require the installation of an impermeable liner in detention basins.

#### **ARTICLE IV - STORMWATER MANAGEMENT (SWM) SITE PLAN REQUIREMENTS**

##### **Section 401. Plan Requirements**

Although not a requirement of this Ordinance, prior to proceeding with SWM Site Plan preparation and submission, the applicant is encouraged to request a pre-application meeting with the Township staff, Township Engineer and a staff member of the York County Conservation District to discuss the plan concept and responsibility for submission of required documents and information.

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

- A. Appropriate sections of the Township's Subdivision Ordinance, and other applicable ordinances of the Township regarding subdivision and land development plan preparation and applicable plan requirements shall be followed in preparing all SWM Site Plans, regardless of whether or not a SWM Site Plan involves a subdivision and/or land development plan.
- B. The Township shall not approve any SWM Site Plan that is deficient in meeting the requirements of this Ordinance. At its sole discretion, and in accordance with this Article, when a SWM Site Plan is found to be deficient, the Township may either disapprove the submission, or, in the case of minor deficiencies, the Township may accept the submission of a revised SWM Site Plan as noted in Section 404. of this Ordinance.
- C. Provisions for permanent access or maintenance easements for all physical SWM BMPs, such as ponds and infiltration structures, as necessary to implement the Operation and Maintenance (O&M) Plan discussed in Item E.9 below.
- D. The following signature block for the Township:

"The *[Name of Qualified Person reviewing plan for Township]*, on this date *(date)*, has reviewed and hereby certifies that to the best of his/her/their knowledge the Stormwater Management Site Plan meets all design standards and criteria of the Municipal Ordinance No. 2012-05.

E. If not required by the Township or York County Subdivision and Land Development Ordinance, as specified in Section 401.A. of this Ordinance, the SWM Site Plan shall also provide the following information where applicable:

1. The overall stormwater management concept for the project, including any additional information required for a PCSWMP as applicable.
2. A determination of site conditions in accordance with the BMP Manual. A detailed site evaluation shall be completed for projects proposed in areas of carbonate geology or karst topography, as well as for other environmentally sensitive areas, whether natural or manmade, including floodplains, streams, lakes, ponds, hydric soils, wetlands, brownfields and wellhead protection zones.
3. Stormwater runoff design computations, and documentation as specified in this Ordinance, or as otherwise necessary to demonstrate that the maximum practicable measures have been taken to meet the requirements of this Ordinance, including the recommendations and general requirements in Section 301.
4. Expected project time schedule, including a schedule with specific timelines for installation of improvements shown on the SWM Site Plan.
5. A soil erosion and sediment control plan, where applicable, as prepared for, reviewed, and approved by the York County Conservation District.
6. The effect of the project in terms of runoff volumes, water quality, and peak flows on surrounding properties and aquatic features, and on any existing stormwater conveyance system that may be affected by the project
7. Plan and profile drawings of all SWM BMPs, including drainage structures, pipes, open channels, and swales.
8. The SWM Site Plan shall show the locations of existing and proposed on-lot wastewater facilities and water supply wells.
9. The SWM Site Plan shall include an Operation and Maintenance (O&M) Plan for all existing and proposed physical SWM facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities.
10. A description of permanent stormwater management techniques, including the construction specifications of the materials to be used for SWM facilities.
11. A notarized signature of the owner of the parcel for which the SWM Site Plan is proposed indicating that they are aware of and will be responsible for operation and maintenance of the facilities.
12. Existing and proposed land uses.

13. The location of the proposed regulated activity relative to streets, municipal boundaries, and other significant manmade features.
14. Significant physical features and associated boundary limits including flood hazard areas, sinkholes, existing drainage courses, and areas of natural vegetation.
15. The location of existing and proposed utilities, stormwater facilities, sanitary sewers, and water lines on the parcel and within 50 feet of property lines.
16. Proposed changes to the land surface and vegetative cover, and the type and amount of existing and proposed impervious area.
17. Existing and proposed structures, buildings, streets, driveways, access drives, and parking areas.
18. Preferred contour intervals of two (2) feet 'in moderately sloped areas, and contours at intervals of five (5) feet for slopes in excess of 15%. Dependent upon site conditions, alternative contour intervals proposed by an applicant or his designee may be accepted by the Township.
19. The name of the development, the name and address of the owner of the property, and the name and address of the individual or firm preparing the Plan. Also to be included are the name, address, signature and seal of any registered surveyor (attesting the accuracy of the boundary survey), professional engineer, landscape architect, or professional geologist (for geomorphological assessments) contributing to and/or with a responsibility for any aspect of the Plan where applicable.
20. Preferred graphic and written scale of one (1) inch equals no more than 50 feet. For parcels of 20 acres or more, the preferred scale is one (1) inch equals no more than 100 feet. Dependent upon site conditions, an alternative scale proposed by the applicant or his designee may be accepted by the Township.
21. North point (arrow).
22. A map showing all existing manmade features beyond the subject parcel's boundary lines that will be affected by the proposed regulated activities.
23. Horizontal and vertical profiles of all open channels, including hydraulic capacity.
24. A note on the plan indicating the location, and responsibility for maintenance of, SWM facilities and/or easements that would be located on adjoining properties as a result of proposed regulated activities, and the location of such facilities and/or easements.
25. A hydrogeologic assessment of the effects of stormwater runoff on sinkholes where present.

26. The effect of the proposed regulated activity in terms of runoff volumes and peak flows on adjacent properties and/or any existing municipal stormwater collection system that may receive runoff from the project site.
27. Drainage flow pathways.

#### **Section 402. Plan Submission**

- A. Three (3) copies of the SWM Site Plan shall be submitted as follows:
  1. Two (2) copies to the Township.
  2. One (1) copy to the York County Planning Commission when a SWM Site Plan accompanies a subdivision/land development plan application.
- B. Additional copies shall be submitted as requested by the Township or DEP.
- C. The Township may establish a fee schedule for the review of SWM Plans, the amount of which shall be set by resolution of the Township's governing body.

#### **Section 403. Plan Review and Approval Procedure**

- A. SWM Site Plans shall be reviewed by the Township for consistency with the provisions of this Ordinance and the IWRP. Approval of a SWM Site Plan and modification requests submitted with an application for subdivision and/or land development shall be granted or denied by the Board following the recommendation of the Township engineer. Approval of SWM Site Plans and modification requests submitted where an application for subdivision and/or land development is not required shall be granted or denied by the Township engineer.
- B. Modification Requests:
  1. When reviewing a SWM Site Plan, whether or not the SWM Site Plan is included in a subdivision and/or land development plan application, the Township Board or engineer, as applicable, may, after consulting with DEP as noted in Section 301.C. of this Ordinance for any modification of requirements in Sections 301 (General Requirements), 303 (Volume Controls) or 304 (Rate Controls), grant a modification of the requirements of one or more provisions of this Ordinance if the literal enforcement will enact undue hardship because of peculiar conditions pertaining to the land in question, provided that such modification will not be contrary to the public interest and that the purpose and intent of the Ordinance is observed.
  2. All modification requests shall be in writing and shall accompany and be a part of the application for approval of a SWM Site Plan and/or a subdivision or land development plan as applicable. The request shall state in full the grounds and facts of unreasonableness or hardship on which the request is based, the provision or provisions of the Ordinance involved and the minimum modification necessary.

3. The Township shall keep a written record of all action on requests for modifications. The response of any consultation and/or review by DEP shall be included as an original report if available or otherwise documented in the required written record.
4. In granting a modification request, the Township may attach reasonable conditions and safeguards as it may deem necessary to implement the purposes of the Act 167 Plan and this Ordinance.

C. SWM Site Plan Review and Approval Procedure:

1. If the regulated activities do not involve an application for subdivision and/or land development, the review of the SWM Site Plan, recommendations, approval, approval with conditions, or disapproval, i.e., the review and decision period, shall occur within forty-five (45) days from the date of submission of an administratively complete application to the Township. However, the Township, in its sole discretion, may extend the review and all application fees and decision period another forty-five (45) days due to the nature of the application and/or site conditions. If an extension of another forty five (45) days is imposed or granted by the Township beyond the first forty-five (45) day review and decision period designated by this paragraph, the Township shall notify the applicant in writing and deliver such notice to said applicant within fifteen (15) days of the decision to extend the review and decision period by the Township.
2. If the regulated activities involve a subdivision and/or land development plan, the period of time from the submission to the Township of the subdivision and/or land development plan application which includes the SWM Site Plan and the approval, approval with conditions, or disapproval, i.e., review and decision period, shall be in accordance with  
  
the procedure for approval of plats in Section 508 of the Pennsylvania Municipalities Planning Code. The subdivision and/or land development plan shall not be finally approved until final approval of the SWM Site Plan.
3. When a SWM Site Plan is required, no application for a building, zoning or other permit for any regulated activity shall be administratively complete for purposes of calculating approval times until the SWM Site Plan has been approved. In the case of a conditional approval, the permits may be issued by the Township at its discretion upon acceptance in writing by the applicant of the conditions to approval.

D. Decision Notification Procedure:

In all cases, the decision of the Township to approve or disapprove the SWM Site Plan shall be delivered to the applicant in writing no later than 15 days following the decision. If the SWM Site Plan is approved with conditions, the applicant shall accept or reject the conditions in writing within 30 days following the date of decision. Failure by an applicant to accept or reject the conditions of approval in writing within 30 days shall automatically rescind the approval.

#### **Section 404. Revision of Plans**

A revision to a previously submitted SWM Site Plan that involves a change in SWM BMPs, SWM facilities, or changes in analytical techniques, or that involves the relocation or redesign of SWM BMPs, or that is necessary because soil or other conditions are not as stated on the SWM Site Plan, as determined by the Township, shall require a re-submission of the revised SWM Site Plan in accordance with this Article, including applicable fees. For NPDES permitted sites, any revised SWM Site Plan shall also be re-submitted to the York County Conservation District for review. In the case of a SWM Site Plan which contains minor deficiencies, such as a missing label, omission of a required note or minor construction detail, as determined by the Township, the Township may accept a re-submission of such SWM Site Plan without the requirement of a review fee, or for a lesser fee as provided for in the Municipalities fee schedule.

#### **Section 405. Re-submission of Disapproved SWM Site Plans**

A disapproved SWM Site Plan may be resubmitted, with the revisions addressing the Township's concerns as stated regarding the original submission, to the Township in accordance with this

Article. The applicable review fee must accompany the submission of a revised SWM Site Plan, unless such fee is waived by the Township. (See Section 404.) A resubmitted plan following disapproval shall be subject to the requirements of this Ordinance as amended through the date of resubmission.

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

##### **A. SWM Site Plans Independent of Subdivision and Land Development Plans**

The Township's approval of a SWM Site Plan, when such Plan is submitted independent of a subdivision and/or land development plan, authorizes the regulated activities contained in the

SWM Site Plan for a maximum term of validity of five (5) years following the date of approval. The Township may, in its sole discretion, specify a term of validity shorter than five (5) years in the approval for any specific SWM Site Plan, particularly if the nature of the proposed SWM facilities require more frequent maintenance and/or short-term replacement of certain components. Terms of validity shall commence on the date the Township signs the approval for an SWM Site Plan. If an approved SWM Site Plan is not completed according to Section 407 within the term of validity, then the Township may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by the Township may be resubmitted in accordance with Section 405 of this Ordinance.

##### **B. SWM Site Plans Included in a Subdivision and/or Land Development Plan**

The Township's approval of a SWM Site Plan, which is a part of a subdivision and/or land development plan, authorizes that plan and the regulated activities therein so that no subsequent change or amendment in this Ordinance or other governing ordinances or plans shall be applied to affect adversely the right of the applicant to commence and to complete any aspect of the approved development in accordance with the terms of such approval within

five years from such approval, as specified in Section 508. (4) (ii) - (vii) of the Pennsylvania Municipalities Planning Code.

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

- A. *The developer shall be responsible for providing as-built plans of all SWM BMPs, structural and non-structural, included in the approved SWM Site Plan with calculations demonstrating that each BMP meets the Stormwater Maintenance Ordinance as constructed. The as-built plans, BMP calculations and an explanation of any discrepancies with the construction plans shall be submitted to the Township.*
- B. *The as-built submission shall include a certification of completion signed by a qualified person verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications and the BMP calculations required by subsection 407 A above are accurate. If any licensed qualified person contributed to the construction plans, then a licensed qualified person shall sign the completion certificate.*
- C. *After receipt of the completion certification by the Township, the Township may conduct a final inspection to verify compliance with, and accuracy of, the as-built plans.*
- D. *The Township shall hold adequate financial surety for the completion of the required as-built plans for SWM BMPs until final submission and acceptance of such as-built plans.*

*Section 407 as amended by Springfield Township Ordinance 2018-05 – December 3, 2018*

### **ARTICLE V - OPERATION AND MAINTENANCE**

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

- A. The Developer shall be responsible to insure the Township engineer or appropriate Township staff are on site to review and inspect all stormwater facilities at the time of construction. No SWM BMP shall be covered until a final inspection has been conducted by the Township engineer or Township staff to assure adequate construction and structural integrity of any portion of the BMP to be covered.
- B. The Township shall make the final determination on the continuing maintenance responsibilities prior to final approval of the SWM Site Plan. The Township may require a dedication of such facilities as part of the requirements for approval of the SWM Site Plan. Such a requirement is not an indication that the Township will accept the facilities. The Township reserves the right to accept or reject the ownership, maintenance, and operating responsibility for any portion of the SWM facilities and controls.
- C. Facilities, areas, or structures included in the SWM Site Plan as SWM BMPs shall be enumerated as permanent real estate appurtenances and recorded in the York County Recorder of Deeds Office as deed restrictions/protective covenants or easements that run with the land. This obligation will be met by the recording of a subdivision and/or land development plan identifying the BMPs and referencing in a note the recorded O&M Agreement for the plan. Where individual on-lot SWM facilities are proposed, the subdivision

and/or land development plan shall contain a note in a form satisfactory to the Township solicitor designating the entity responsible for operation and maintenance of the on-lot facilities consistent with an approved O&M Plan and, in the event the responsible person fails to do so, granting to the Township the right but not the duty to enter upon the premises to repair or restore said facilities, to charge and assess the costs thereof to the owner and to enforce said charges and assessments by lien upon the property.

- D. The Operation and Maintenance (O&M) Plan shall be recorded as a restrictive deed covenant that runs with the land. The restrictive deed covenant may be satisfied by recording an O&M Agreement as required in Section 502 and placing a note on the corresponding subdivision and/or land development plan with a reference to the O&M Agreement.
- E. The Township may take enforcement actions against an owner for any failure to satisfy the provisions of this Article.

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

- A. Prior to final approval of the SWM Site Plan, the property owner shall sign and record an Operation and Maintenance (O&M) Agreement covering all stormwater control facilities which are to be privately owned. The O&M agreement shall, at a minimum provide as follows as to the owners, his or their heirs, executors, successors and/or assigns:
  - 1. The Owner shall maintain all facilities in accordance with the approved maintenance schedule in the O&M Plan, which schedule and plan shall be incorporated in and made a part of the O&M Agreement,
  - 2. The owner shall convey to the Township easements to assure access for periodic inspections by the Township and maintenance, as necessary.
  - 3. The owner shall not modify, alter or relocate any stormwater facilities without the approval of the Township.
  - 4. The owner shall indemnify the Township from any and all claims arising from the operation and maintenance of the stormwater facilities. The Township may include provisions requiring the owner to maintain general liability insurance coverage in appropriate amounts to fund this indemnity.
  - 5. The owner shall be responsible for all costs of inspection, operation and maintenance.
  - 6. The owner shall pay all costs of enforcement or abatement by the Township, including an express statement granting authority to the Township to collect such costs by municipal lien on the property.
  - 7. The agreement shall be recorded in the York County Recorder of Deeds Office and shall thereafter be a covenant running with the land and a deed restriction for the benefit of the Township and its citizens.

8. Any modifications or amendments to the O&M Plan or the O&M Agreement must be approved in writing by the Township.
- B. The owner shall keep on file with the Township the name, address, and telephone number of the person or company responsible for maintenance activities; in the event of a change, new information shall be submitted by the owner to the Township within ten (10) working days of the change.
- C. O&M Agreements are not required for projects that do not require a SWM Site Plan. The owner is responsible for operation and maintenance (O&M) of any SWM BMPs, regardless of whether a SWM Site Plan is required. If the owner fails to operate and maintain any SWM BMP or fails to adhere to the O&M Agreement, the Township may perform the services required and charge the owner appropriate fees. Nonpayment of fees may result in a municipal lien against the property.
- D. The Township is exempt from the requirement to sign and record an O&M Agreement for municipal-owned and operated stormwater facilities.

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

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

### **Section 504. Maintenance Guarantee**

The applicant shall provide a financial guarantee to the Township for the maintenance of all stormwater management controls that are dedicated to and accepted by the Township as required by the approved SWM Site Plan and this Ordinance in accordance with the provisions of Sections 509, 510, and 511 of the Pennsylvania Municipalities Planning Code.

### **Section 505. Municipal Stormwater Maintenance Fund**

*Persons installing stormwater storage facilities shall be required to pay a specified amount to the Stormwater Maintenance Fund to help defray the costs of periodic inspections and maintenance expenses. The amount to be paid into said Fund shall be established by Resolution of the Board of Supervisors from time to time.*

*Section 505 as amended by Springfield Township Ordinance No. 2014-01*

## **ARTICLE VI - FEES AND EXPENSES**

### **Section 601. General**

- A. The applicant shall reimburse the Township for all legal and engineering fees incurred in the review of the SWM Site Plan application and supporting documents, review of agreements for

maintenance of SWM Facilities, review of Easement agreements, inspection of SWM Facilities, and any additional costs for enforcement of this Ordinance. The Township shall establish by resolution the rates for all such fees and a deposit requirement at the time of application towards payment of the fees.

- B. In the event the applicant disputes the amount of such review fees, the applicant shall, within ten (10) days of the filing date, notify the Township that such fees are disputed, in which case the Township shall not delay or disapprove a SWM Site Plan application due to the applicant's request over disputed fees.
- C. In the event the Township and the applicant cannot agree on the amount of review and/or inspection fees which are reasonable, then the applicant and the Township shall follow the procedure for dispute resolution set forth in the MPC.
- D. Any review fees not paid from escrow shall be paid to the Township within thirty (30) days from the date of invoice to the applicant. After thirty (30) days any amounts unpaid will collect interest at the rate of 1% per month until paid in full. The Township shall be entitled to costs of enforcement, including reasonable attorney fees, when suit is commenced to collect delinquent fees. No SWM Site Plan will be finally approved until payment of all review fees.

## **ARTICLE VII - PROHIBITIONS**

### **Section 701. Prohibited Discharges and Connections**

- A. The detection and elimination of illicit discharges to the municipal separate storm sewer system of the Township is hereby declared to be an integral part of stormwater management in the Township.
- B. Any person who violates the Township's Illicit Discharge Detection and Elimination Ordinance shall be deemed to also be in violation of this Ordinance for such conduct.

### **Section 702. Alteration of SWM BMPs**

No person shall modify, remove, fill, landscape, or alter any SWM BMPs, facilities, areas, or structures in a manner without the written approval of the Township, with the exception of necessary maintenance activities such as mowing.

### ***Section 703. Amended Soils Prohibited***

*Amended Soils are prohibited as a standalone or primary SWM Plan but can be used only in a clearly delineated primary SWM Plan facility.*

*Section 703 as amended by Springfield Township Ordinance 2017-04 – October 9, 2017.*

## **ARTICLE VIII - ENFORCEMENT AND PENALTIES**

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

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

### **Section 802. Inspection**

SWM BMPs included in the approved SWM Site Plan shall be inspected by the landowner, or the owner's designee, including the Township for dedicated and owned facilities, according to the following list of minimum frequencies:

- A. Annually for the first ten (10) years.
- B. Once every three (3) years thereafter.
- C. During or immediately after the cessation of a ten (10)-year or greater storm, i.e., a storm of an estimated frequency of recurrence of ten (10) years or greater interval of time.

A report of all inspections shall be submitted to the Township annually for the first ten years and then once every three years thereafter. All inspection records shall be maintained by the landowner and shall be made available to the Township on request.

### **Section 803. Enforcement**

It shall be a violation of this Ordinance to commit or permit any other person to commit any of the following acts:

- A. To commence Regulated Activities prior to obtaining unconditional approval of a SWM Site Plan or in violation of the terms or conditions of a SWM Site Plan approved under this Ordinance.
- B. To install, repair, modify or alter SWM facilities prior to obtaining approvals under this Ordinance when required, or, in a manner which violates the terms and conditions of any approval issued under this Ordinance.
- C. To misuse or fail to maintain any SWM facility installed upon a property.
- D. To construct any improvements upon, grade, fill or take any other action which will impair the proper functioning of any SWM facility.
- E. To place false information on, or, omit relevant information from an application for approval under this Ordinance.
- F. To fail to comply with any other provisions of this Ordinance.

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

- A. Suspension and revocation of SWM Site Plan approvals shall be in accordance with the following:
1. Any approval issued under this Ordinance may be suspended or revoked by the Township for:
    - a. Non-compliance with or failure to implement any provision of the SWM Site Plan.
    - b. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule or regulation relating to the project.
    - c. The creation of any condition or the commission of any act during construction or development which constitutes or creates a hazard or nuisance, pollution or which endangers the life or property of others.
  2. A suspended SWM Site Plan shall be reinstated by the Township when:
    - a. The Township engineer or his designee has inspected and approved the corrections to the SWM Facilities and/or E&S control measure(s), or the elimination of the hazard or nuisance; and
    - b. The Township is satisfied that the violation of the Ordinance, law, or rule and regulation has been corrected.
  3. A SWM Site Plan approval which has been revoked by the Township cannot be reinstated. The applicant may apply for a new permit under the procedures outlined in this Ordinance.
- B. No building or occupancy permits shall be issued for any structure or improvement on any lot or lots within a project during the pendency of any enforcement action under this Ordinance commenced against the project or the developer of the project.

## **Section 805. Penalties**

- A. The violation of any provision of this ordinance is hereby deemed a public nuisance. The Township is hereby authorized to enter upon private property and take all measures necessary to abate a deemed public nuisance under this Ordinance. It shall be unlawful for any person, owner, agent or person in possession of any premises to refuse to allow the Township or designated contractor to enter upon the premises for the purposes set forth above. The costs incurred by the Township to abate a public nuisance, including attorney fees, shall be a special assessment against the property and shall constitute a municipal lien on the property for the amount of the assessment plus a penalty of 10% of the assessment.
- B. Any person who violates any provision of this chapter shall commit a summary offense, and shall, upon being found guilty by a Magisterial District Judge, after hearing pay a fine not to exceed \$1,000, together with all attorneys' fees and court costs as permitted by law. In default of payment thereof, the defendant may be sentenced to imprisonment for a term not

exceeding 90 days. Each day or portion thereof of violation, and each section of this chapter which is violated, shall constitute a separate offense, which shall be subject to prosecution as such. For purposes of this section, the Board of Supervisors of Springfield Township hereby appoints the Township Secretary, Public Works Director, Secretary, Zoning Officer, Building Code Official, Permit Officer or Codes Enforcement Officer as authorized representatives, any one of whom may commence and pursue enforcement proceedings pursuant to this section. The Township Solicitor shall assume charge of prosecution of any such enforcement proceedings.

- C. The Township may also institute any other actions, suits or remedies available at law or in equity to restrain, prevent, or abate a violation of this Ordinance. Such proceedings may be initiated before any court of competent jurisdiction. In cases of emergency where, in the opinion of the court, the circumstances of the case require immediate abatement of the unlawful conduct, the court may, in its decree, fix a reasonable time during which the person responsible for the unlawful conduct shall correct or abate the same. The expense of such proceedings, including attorney fees, shall be recoverable from the violator in such manner as may now or hereafter be provided by law.

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

- A. Appeals from the decision of the Board of Supervisors on a SWM Site Plan governed by this Ordinance or the decision on a request for waiver from the requirements of this

Ordinance insofar as the same relates to an application for Subdivision and/or Land Development governed by the Subdivision Ordinance shall be made in accordance with Article X-A of the MPC.

- B. Appeals from the determination of the zoning officer, Township engineer or other Township agent in the administration of this Ordinance insofar as the same relates to an application for Subdivision and/or Land Development governed by the Subdivision Ordinance shall be made in writing to the Board of Supervisors. The appeal shall be subject to the time limitations of Section 914.1 of the MPC. All appeals shall be accompanied by the appeal fee established by resolution of the Board of Supervisors.

1. The written appeal shall specify the precise action from which the appeal is taken and shall set forth in concise terms the reason for the appeal and any legal authorities supporting the appeal.
2. If the appellant desires a hearing before the Board of Supervisors, the appellant must request a hearing in the written appeal. The appellant shall pay the cost of the stenographer for any such hearing and the cost to transcribe the proceeds of the hearing.
3. If a hearing is requested in writing, the Board of Supervisors shall conduct the hearing at a regular or special public meeting which occurs not less than sixty (60) days after receipt of the written appeal. The hearing shall be conducted in accordance with the provisions of the Local Agency Law, 2 Pa. CS. §551 et seq.

4. The Board of Supervisors shall render a decision on the appeal in accordance with the provisions of the Local Agency Law.
- C. Appeals from all other determinations of the zoning officer, Township Engineer or other Township agent in the administration and enforcement of this Ordinance shall be made in writing to the Township's zoning hearing board in accordance with the provisions of Article IX of the MPC. The written appeal shall specify the precise action from which the appeal is taken and shall set forth in concise terms the reason for the appeal and any legal authorities supporting the appeal. The appeal shall be subject to the time limitations of Section 914.1 of the MPC. All appeals filed under this subsection shall be subject to the applicable fees then in effect for zoning hearings.
- D. Appeals from enforcement actions brought pursuant to Section 805.B. shall be in accordance with the Pennsylvania Rules of Criminal Procedure.
- E. The Township and Developer and/or Owner may voluntarily agree to use mediation as an aid in resolving any appeals arising under subsections (A) — (C) of this section. Any such mediation shall be governed by Section 908.1 of the MPC with the costs of mediation being shared equally by the parties.

This ordinance repeals and replaces Springfield Township Ordinance No. 2011-07 on its effective date and this Ordinance shall be effective five (5) days after enactment in accordance with the provisions of the Second Class Township Code of the Commonwealth of Pennsylvania.

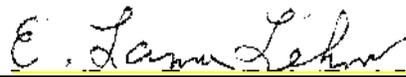
ORDAINED AND ENACTED this 8<sup>th</sup> day of October, 2012.

ATTEST:

SPRINGFIELD TOWNSHIP  
BOARD OF SUPERVISORS

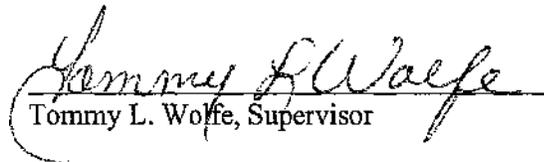


Barbara E. Sweitzer, Secretary



E. Lamar Lehman, Chairman

\_\_\_\_\_  
A. Carville Foster, Jr., Vice-Chairman



Tommy L. Wolfe, Supervisor

## APPENDIX A

### **DISCONNECTED IMPERVIOUS AREA (DIA)**

#### **B.1. Rooftop Disconnection**

When rooftop down spouts are directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, the rooftop may qualify as completely or partially DIA and a portion of the impervious rooftop area may be excluded from the calculation of total impervious area.

A rooftop is considered to be completely or partially disconnected if it meets the requirements listed below:

- The contributing area of rooftop to each disconnected discharge is 500 square feet or less, and
- The soil, in proximity of the roof water discharge area, is not designated as hydrologic soil group "D" or equivalent, and
- The overland flow path from roof water discharge area has a positive slope of five percent (5%) or less; and
- The length of pervious flow path from roof water discharge is 75 feet or more.\*

Flow path cannot include impervious surfaces and must be at least 15 feet from any impervious surfaces.

#### **B.2. Pavement Disconnection**

When pavement runoff is directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, the contributing pavement area may qualify as a DIA that may be excluded from the calculation of total impervious area. This applies generally only to small or narrow pavement structures such as driveways and narrow pathways through otherwise pervious areas, e.g., a walkway or bike path through a park.

Pavement is disconnected if the pavement, or area adjacent to the pavement, meets the requirements below:

- The contributing flow path over impervious area is not more than 75 feet, and
- The length of overland flow is greater than or equal to the contributing length, and
- The soil is not designated as hydrologic soil group "D" or equivalent, and
- The slope of the contributing impervious area is five percent (5%) or less, and
- The slope of the overland flow path is five percent (5%) or less.

If the discharge is concentrated at one or more discrete points, no more than 1,000 square feet may discharge to any one point. In addition, a gravel strip or other spreading device is required for concentrated discharges. For non-concentrated discharges along the edge of the pavement, this requirement is waived; however, there must be a provision for the establishment of vegetation along the pavement edge and temporary stabilization of the area until vegetation becomes stabilized.

### B.3. Other Disconnections

The Township may classify other impervious areas as DIA by evaluating the following criteria to satisfactorily determine that the water quality standards of this Ordinance are being achieved:

- Size and type of impervious area;
- Flow path, concentration and collection of stormwater runoff over the impervious area;
- Length, slope, soil type and vegetative characteristics of overland flow path;
- Lot size and zoning district;
- Proximity of stormwater runoff to downslope property lines, other stormwater management facilities, watercourses or waters of the Commonwealth.

An impervious area will not be classified as DIA if the stormwater runoff from that impervious surface negatively impacts downslope property or waters of the Commonwealth. The general purpose of this provision is to provide the Township with flexibility to determine that an impervious area qualifies as a DIA where the impervious area and overland flow path are so disconnected from any storm sewer, stormwater management facility, property line or waters of the Commonwealth that natural infiltration of the stormwater runoff will meet water quality criteria of this Ordinance.

**TABLE 6-1**  
**Runoff Curve Numbers**  
**[From NRCS (SCS) TR-551]**

| LAND USE DESCRIPTION  |                  | HYDROLOGIC SOIL GROUP |     |    |    |
|---|------------------|-----------------------|-----|----|----|
|   |                  | A                     | BCD |    |    |
| Open Space  |                  | 44                    | 65  | 77 | 82 |
| Meadow  |                  | 30**                  | 58  | 71 | 78 |
| Agricultural  |                  | 59                    | 71  | 79 | 83 |
| Forest  |                  | 36**                  | 60  | 73 | 79 |
| Commercial  | (85% Impervious) | 89                    | 92  | 94 | 95 |
| Industrial  | (72% Impervious) | 81                    | 88  | 91 | 93 |
| Institutional   | (50% Impervious) | 71                    | 82  | 88 | 90 |
| Residential   |                  |                       |     |    |    |
| Average Lot Size  | % impervious     |                       |     |    |    |
| 1/8 acre or less*65   |                  | 77                    | 85  | 90 | 92 |
| 1/8 - 1/3 acre  | 34               | 59                    | 74  | 82 | 87 |
| 1/3 - 1 acre  | 23               | 53                    | 69  | 80 | 85 |
| 1 - 4 acres   | 12               | 46                    | 66  | 78 | 82 |
| Farmstead   |                  | 59                    | 74  | 82 | 86 |
| Smooth Surfaces (Concrete, Asphalt,<br>Gravel or Bare Compacted Soil) |                  | 98                    | 98  | 98 | 98 |
| Water   |                  | 98                    | 98  | 98 | 98 |
| Newly Graded Areas<br>(Pervious Areas Only)                           |                  | 77                    | 86  | 91 | 94 |

Includes Multi-Family Housing unless justified lower density can be provided.

\*\* Caution - CN values under 40 may produce erroneous modeling results.

NOTE: Site conditions of bare earth or fallow shall be considered as meadow when choosing a CN value for existing undeveloped conditions.

**TABLE 2**  
**RATIONAL RUNOFF COEFFICIENTS**  
**By Hydrologic Soils Group and Overland Slope (%)**

| Land Use                         | A                                      |              |              | 0-2%         | 2-6%         | 6%+          | 0-2%         | 2-6%         | 6%+          | 0-2%         | 2-6%         | 6%+          |
|----------------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|                                  | 0-2%                                   | 2-6%         | 6%+          |              |              |              |              |              |              |              |              |              |
| *Cultivated Land                 | 0.33 <sup>a</sup><br>0.37 <sup>b</sup> | 0.37<br>0.43 | 0.42<br>0.48 | 0.40<br>0.44 | 0.43<br>0.49 | 0.49<br>0.55 | 0.45<br>0.51 | 0.49<br>0.55 | 0.55<br>0.63 | 0.48<br>0.54 | 0.53<br>0.59 | 0.59<br>0.69 |
| Pasture                          | 0.12<br>0.15                           | 0.20<br>0.25 | 0.30<br>0.37 | 0.18<br>0.23 | 0.28<br>0.34 | 0.37<br>0.45 | 0.24<br>0.30 | 0.34<br>0.42 | 0.44<br>0.52 | 0.30<br>0.37 | 0.40<br>0.50 | 0.50<br>0.62 |
| Meadow                           | 0.10<br>0.14                           | 0.16<br>0.22 | 0.25<br>0.30 | 0.14<br>0.20 | 0.22<br>0.28 | 0.30<br>0.37 | 0.20<br>0.26 | 0.28<br>0.35 | 0.36<br>0.44 | 0.24<br>0.30 | 0.30<br>0.40 | 0.40<br>0.50 |
| Forest                           | 0.05<br>0.08                           | 0.08<br>0.11 | 0.11<br>0.14 | 0.08<br>0.10 | 0.11<br>0.14 | 0.14<br>0.18 | 0.10<br>0.12 | 0.13<br>0.16 | 0.16<br>0.20 | 0.12<br>0.15 | 0.16<br>0.20 | 0.20<br>0.25 |
| Residential<br>Lot Size 1/8 Acre | 0.25<br>0.33                           | 0.28<br>0.37 | 0.31<br>0.40 | 0.27<br>0.35 | 0.30<br>0.39 | 0.25<br>0.44 | 0.30<br>0.38 | 0.33<br>0.42 | 0.38<br>0.49 | 0.33<br>0.41 | 0.36<br>0.45 | 0.42<br>0.54 |
| Lot Size V., Acre                | 0.22<br>0.30                           | 0.26<br>0.34 | 0.29<br>0.37 | 0.24<br>0.33 | 0.29<br>0.37 | 0.33<br>0.42 | 0.27<br>0.36 | 0.31<br>0.40 | 0.36<br>0.47 | 0.30<br>0.38 | 0.34<br>0.42 | 0.40<br>0.52 |
| Lot Size 1/3 Acre                | 0.19<br>0.28                           | 0.23<br>0.32 | 0.26<br>0.35 | 0.22<br>0.30 | 0.26<br>0.35 | 0.30<br>0.39 | 0.25<br>0.33 | 0.29<br>0.38 | 0.34<br>0.45 | 0.28<br>0.36 | 0.32<br>0.40 | 0.39<br>0.50 |
| Lot Size V, Acre                 | 0.16<br>0.25                           | 0.20<br>0.29 | 0.24<br>0.32 | 0.19<br>0.28 | 0.23<br>0.32 | 0.28<br>0.36 | 0.22<br>0.31 | 0.27<br>0.35 | 0.32<br>0.42 | 0.26<br>0.34 | 0.30<br>0.38 | 0.37<br>0.48 |
| Lot Size 1 Acre                  | 0.14<br>0.22                           | 0.19<br>0.26 | 0.22<br>0.29 | 0.17<br>0.24 | 0.21<br>0.28 | 0.26<br>0.34 | 0.20<br>0.28 | 0.25<br>0.32 | 0.31<br>0.40 | 0.24<br>0.31 | 0.29<br>0.35 | 0.35<br>0.46 |
| Industrial                       | 0.67<br>0.85                           | 0.68<br>0.85 | 0.68<br>0.86 | 0.68<br>0.85 | 0.68<br>0.86 | 0.69<br>0.86 | 0.68<br>0.86 | 0.69<br>0.86 | 0.69<br>0.87 | 0.69<br>0.86 | 0.69<br>0.86 | 0.70<br>0.88 |
| Commercial                       | 0.71<br>0.88                           | 0.71<br>0.88 | 0.72<br>0.89 | 0.71<br>0.89 | 0.72<br>0.89 | 0.72<br>0.89 | 0.72<br>0.89 | 0.72<br>0.89 | 0.72<br>0.90 | 0.72<br>0.89 | 0.72<br>0.89 | 0.72<br>0.90 |
| Streets                          | 0.70<br>0.76                           | 0.71<br>0.77 | 0.71<br>0.79 | 0.71<br>0.80 | 0.72<br>0.82 | 0.74<br>0.84 | 0.72<br>0.84 | 0.73<br>0.85 | 0.76<br>0.89 | 0.73<br>0.89 | 0.75<br>0.91 | 0.78<br>0.95 |
| Open Space                       | 0.05<br>0.11                           | 0.10<br>0.16 | 0.14<br>0.20 | 0.08<br>0.14 | 0.13<br>0.19 | 0.19<br>0.26 | 0.12<br>0.18 | 0.17<br>0.23 | 0.24<br>0.32 | 0.16<br>0.22 | 0.21<br>0.27 | 0.28<br>0.39 |
| Parking                          | 0.85<br>0.95                           | 0.86<br>0.96 | 0.87<br>0.97 | 0.85<br>0.95 | 0.86<br>0.96 | 0.87<br>0.97 | 0.85<br>0.95 | 0.86<br>0.96 | 0.87<br>0.97 | 0.85<br>0.95 | 0.86<br>0.96 | 0.87<br>0.97 |

<sup>a</sup> Runoff coefficients for storm recurrence intervals less than 25 years.

<sup>b</sup> Runoff coefficients for storm recurrence intervals 25 years or more.

Source: Rawls, W.J., S.L. Wong and R.H. McCuen, 1981, "Comparison of Urban Flood Frequency Procedures", Preliminary Draft, U. S. Department of Agriculture, Soil Conservation Service, Baltimore, MD.

\*Cultivated land "C" coefficients were compiled using other sources to reflect varying conditions of the ground cover due to tilling, plant growth, harvesting, maintenance, land management and similar factors.

**TABLE 6-3**

**Roughness Coefficients (Manning's "n") for Overland Flow  
(U.S. Army Corps Of Engineers, HEC-1 Users Manual)**

| <u>Surface Description</u>                                     |             |
|--|-------------|
| Dense Growth   | 0.4 - 0.5   |
| Pasture  | 0.3 - 0.4   |
| Lawns  | 0.2 - 0.3   |
| Bluegrass Sod  | 0.2 - 0.5   |
| Short Grass Prairie  | 0.1 - 0.2   |
| Sparse Vegetation  | 0.05 - 0.13 |
| Bare Clay-Loam Soil (eroded)                                   | 0.01 - 0.03 |
| Concrete/Asphalt - very shallow depths<br>(less than 1/4 inch) | 0.10 - 0.15 |
| - small depths<br>(1/4 inch to several inches)                 | 0.05 - 0.10 |

**Roughness Coefficients (Manning's "n") for Sheet Flow  
(U.S. Soil Conservation Service Technical Release 55)**

| <u>Surface Description</u>                                | <u>n</u> |
|---|----------|
| Smooth Surfaces (concrete, asphalt, gravel, or bare soil) | 0.011    |
| Fallow (no residue)                                       | 0.05     |
| Cultivated Soils:   |          |
| Residue Cover Less Than or 20%                            | 0.06     |
| Residue Cover Greater Than 20%                            | 0.17     |
| Grass:  |          |
| Short Grass Prairie                                       | 0.15     |
| Dense Grasses   | 0.24     |
| Bermuda Grass   | 0.41     |
| Range (natural)   | 0.13     |
| Woods:  |          |
| Light Underbrush  | 0.40     |
| Dense Underbrush  | 0.80     |