

STORMWATER MANAGEMENT ORDINANCE

ORDINANCE NO. 2013-03

MUNICIPALITY OF SHREWSBURY BOROUGH

YORK COUNTY, PENNSYLVANIA

Adopted

November 13, 2013

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ARTICLE I - GENERAL PROVISIONS

Section 101. Short Title.

This Ordinance shall be known and may be cited as the "Shrewsbury Borough Stormwater Management Ordinance."

Section 102. Statement of Findings.

The Governing Body of Shrewsbury Borough 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. 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.
- C. 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.
- D. 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 Borough 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 Borough.
- H. Provide standards to meet NPDES permit requirements.

Section 104. Statutory Authority.

The Borough is empowered to regulate land use activities that affect stormwater impacts by the authority of the Pennsylvania Borough Code, 53 P.A. Section 45101 et seq., as amended, the Act of February 1, 1966, P.L. 1656, and the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, et seq., as amended, the "Stormwater Management Act."

Section 105. Applicability.

All Regulated Activities and all activities that may affect stormwater runoff, including but not limited to land development and earth disturbance activity, are subject to regulation by this Ordinance.

Section 106. Repealer.

Any other ordinance provision or regulation of the Borough 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, subsections, 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. If more stringent requirements or additional requirements concerning regulation of Stormwater or Erosion and Sedimentation Control are applicable and contained in another code, rule, act, regulation, or ordinance, the more stringent requirement shall apply.

Section 109. Interpretation.

Unless otherwise expressly stated, the succeeding shall, for the purposes of this Ordinance, be interpreted in the following manner, unless the context clearly requires literal usage:

- A. Words used in the present tense also include the future tense.
- B. Words used in the singular include 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 words 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 Borough purporting to validate such a violation.

Section 111. Obligations of Property Owners

Each property owner is responsible for managing stormwater runoff in a manner consistent with the provisions of this ordinance so as not to create an adverse impact on other properties or cause erosion. The requirements set forth in this Ordinance, if followed, are intended to, but not guaranteed to, enable property owners to properly manage stormwater on their property. In the event Stormwater Management Designs and facilities are approved by the Borough and installed in accordance with approved design but still fail to manage stormwater flows so that such flows do not adversely affect other properties or cause erosion, the property owner shall install such additional facilities or take other remedial measures as are necessary to properly manage stormwater runoff so that such runoff does not adversely affect other properties or cause erosion.

ARTICLE II - DEFINITIONS

Section 201. Terms Defined

As used in this Ordinance, the following terms shall have the following meanings:

Act 167 - Act of October 4, 1978, P.L.864, (Act 167), as amended, and known as the "Stormwater Management Act".

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.

Applicant - A landowner, developer, or other person who has filed an application to the Borough for approval to engage in any Regulated Activity at a project site in the Borough.

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.

Borough - The Borough of Shrewsbury, York County, Pennsylvania

Community SWM BMPS; Community Facilities - Any Stormwater Management Facility, including but not limited to detention or retention basins, which is designed to serve a community, a subdivision, consisting of more than one (1) lot or tract, or a land development consisting of more than one (1) entity or end user.

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 Chapter 102.

County - York County, Pennsylvania.

Dam - An impoundment structure regulated by the Pennsylvania DEP promulgated under 25 Pa. Code Chapter 105.

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.

Designee - An agent of the Borough appointed by the Governing Body for the purpose of administration, review or enforcement of any provisions of this Ordinance.

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 unstabilized land area where an earth disturbance activity is occurring or has occurred.

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

Equivalent DIA (Disconnected Impervious Area) - An impervious or impermeable surface that is disconnected from any Stormwater Management Facility or Drainage Conveyance Facility and is redirected or directed to a Stormwater Management BMP Facility as is approved by the Borough, but does not meet the requirements of a Disconnected Impervious Area (DIA). Equivalent DIAs shall be permitted only for Regulated Activities of less than 5,000 square feet. Examples of SWM BMPs that may be used in conjunction with Equivalent DIAs are represented in the Stormwater Permit Application.

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

E & S Manual DEP's Erosion and Sediment Pollution Control Manual, as amended and updated.

Erosion and Sediment Control Plan - A site specific plan consisting of drawings, calculations, 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.

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.

Governing Body - The Shrewsbury Borough Council.

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).

IWRP - The York County Integrated Water Resources Plan, which Plan includes Act 167 Plan elements and requirements, and as may be amended in the future.

Illicit Connection - Any physical connection to a separate Stormwater Drainage System that conveys illicit discharges into the Borough's Stormwater Management System and/or is not authorized or permitted by the Borough.

Illicit Discharge - Any discharge (or seepage) to a Municipal Separate Storm Sewer that is not composed entirely of stormwater. This does not refer to discharges authorized under an NPDES permit (other than the NPDES permit for discharges from the regulated small MS4); certain allowable non-stormwater discharges described in the EPA regulations, NPDES MS4 permit or the MS4's ordinance; and discharges resulting from fire fighting activities. Examples of illicit discharges include dumping of motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, animal wastes, or unauthorized discharges of sewage, industrial waste, restaurant wastes, or any other non-stormwater waste into a Separate Stormwater Drainage System. Illicit discharges can be accidental or intentional.

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.

Municipality – The Borough of Shrewsbury, York County, Pennsylvania.

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, limited liability company, corporation, firm, trust, estate, homeowners association, condominium unit owners association, Borough, governmental unit, public utility, or any other legal entity. “Person” when used herein shall also include the successors, heirs and assigns of such Person, the members of a partnership, the officers, agents and servants of a corporation of limited liability company and the officers of a local government unit.

Pervious Area - Any area not defined as impervious.

Private SWM BMP's; Private Facilities – Any Stormwater Management Facility, including but not limited to Stormwater Drainage Pits, which is designed to serve only an individual lot.

Project Site - The specific area of land where any Regulated Activities in the Borough are planned, conducted, or maintained. Areas of the same tract within five hundred (500) feet of the proposed impervious surface shall be considered part of the project site. In the event new impervious surface is proposed within an easement or right-of-way, the project site shall be considered to include all areas within the easement or right-of-way that are within five hundred (500) feet of the proposed impervious surface.

Qualified Person - Any person licensed by the State of Pennsylvania or otherwise qualified by law to perform the work required by this Ordinance; which, under certain circumstances, may include the landowner.

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

Regulated Earth Disturbance Activity - Activity involving earth disturbance subject to regulation under 25 Pa. Code Chapter 92, 25 Pa. Code Chapter 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.)

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

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

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

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, and infiltration facilities.

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.

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.

SWM - Stormwater Management.

USDA - United States Department of Agriculture.

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

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

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

YCCD - York County Conservation District.

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 Borough issues written approval of an SWM Site Plan which demonstrates compliance with the requirements of this Ordinance.
- B. SWM Site Plans approved by the Borough, in accordance with Section 406, shall be on site throughout the duration of the Regulated Activity.
- C. The Borough may, after consultation with DEP and receipt of a favorable response, subject to the below stated limitation, 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 Borough shall maintain a record of correspondence with DEP pursuant to this paragraph. If after 45 days of notification there is no response from DEP, the Borough may issue approval with the acknowledgment that DEP has not responded and that the property owner may proceed at their own risk.
- 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 Section 302.A 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. An existing impervious area is considered to be altered when it is physically changed by the proposed Regulated Activity except that maintenance work of an existing impervious surface (i.e. repaving, reroofing, etc.) shall not be considered alteration.

- G. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification to the adjacent property owner(s). A copy of such notice shall be provided to the Borough prior to issuance of the Stormwater Management Permit. 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, 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 a four (4) inch minimum depth, whichever is greater. The applicant is not required to install greater than 8 inches of topsoil unless required by the design and/or plant material.
 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 Borough.
- 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. Normally dry, open-top storage facilities, designed as such, shall completely drain both the

volume control and rate control capacities over a period of time not more than 96 hours from the end of the design storm. Infiltration facilities shall be designed to infiltrate in not less than 24 hours, however, any designed infiltration at such facilities is exempt from the minimum 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.)

- L. 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, in effect at the time of application. NOAA's Atlas 14 can be accessed at: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
- M. 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.
- N. Various BMPs and their design standards are listed in the BMP Manual, and new or improved practices not contained therein may be considered.
- O. For any new development or redevelopment, to the maximum extent practicable, Stormwater BMP's shall be utilized to reduce the discharge of nitrogen, phosphorus and sediment.

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. New impervious surface creation shall be based on impervious surfaces being created by past and present owners on the project site. New impervious surface created by owners of easements and rights-of-way located on the project site shall not be considered in the property owners impervious surface calculation to determine exemption status.
- B. Regulated Activities that create impervious areas equal to or less than those set forth on Table 1 (cumulative) shall be exempt from the SWM Site Plan preparation requirements of this Ordinance, provided the activity will not adversely affect downstream property owners and will not cause erosion. The Borough reserves the right to have its Designee

make the determination of adverse effect after review of the Stormwater Permit Application and review of the proposed site.

- (1) Subject to the Requirements of Section 111, and notwithstanding the provisions of this subsection B and Table 1, activities that would otherwise be Regulated Activities pursuant to this Ordinance but are 150 square feet or less shall be exempt from the Stormwater Management Site Plan preparation, volume control, peak rate control and Borough review and approval provisions of this Ordinance provided that the Regulated Activity does not adversely affect adjoining properties or cause erosion. A Stormwater Permit Application must be submitted for record purposes. All new impervious surfaces shall be considered in the cumulative totals in determining exemption status.
- C. Regulated Activities that create impervious areas less than or equal to 5,000 square feet (cumulative) but do not qualify for an exemption from SWM Site Plan Preparation requirements per Section 302B may qualify for submission of a Simplified SWM Site Plan per Section 401.D. The Borough's Designee shall determine if a Simplified SWM Site Plan may be submitted in lieu of a full SWM Site Plan (per Section 401) after review of the Stormwater Management Permit Application and review of the proposed site. The Simplified SWM Site Plan must demonstrate that the proposed activity will not adversely affect adjoining property owners or cause erosion.
- D. Regulated Activities that do not receive an exemption from SWM Site Plan Preparation requirements per Section 302.B or Section 302.C (cumulative) may qualify for submission of a Simplified SWM Site Plan per Section 401.D. The Borough's Designee shall determine if a Simplified SWM Site Plan may be submitted in lieu of a full SWM Site Plan (per Section 401) after review of the Stormwater Management Permit Application and review of the proposed site. The Simplified SWM Site Plan must demonstrate that the proposed activity will not adversely affect adjoining property owners or cause erosion.
- E. Agricultural activity is exempt from the SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa.Code Chapter 102 and no adverse impacts to adjoining property owners will occur because of stormwater runoff.
- F. Forest management and timber operations may be exempt from the SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 PA Code Chapter 102 and no adverse impacts to adjoining property owners will occur because of stormwater runoff.
- G. 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.
- H. Exemptions from certain provisions of this Ordinance shall not relieve the applicant from the requirements in Sections 301.D through M of this Ordinance.
- I. The Borough may deny or revoke any exemption pursuant to this Section at any time for any project that poses a threat to public health, safety, property or the environment.

TABLE 1	
Existing Lot Size	Maximum New Impervious Area Cumulative per Section 302B
0 to 0.25 acres	250 square feet
Greater Than 0.25 to 0.50 acres	500 square feet
Greater Than 0.50 to 0.75 acres	750 square feet
Greater Than .75 acres	1000 square feet

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 on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology, and other factors.

- A. The Design Storm Method (CG-1 in the BMP Manual) is applicable to any size of Regulated Activity. This method requires detailed modeling based on site conditions.
 - 1. No plan shall increase the post-development total runoff volume for all storms equal to or less than the two (2)-year 24-hour duration precipitation to more than the pre-development total runoff volume.
 - 2. For modeling purposes:
 - a. Existing (pre-development) non-forested pervious areas must be considered meadow.

- b. Twenty percent (20%) of the existing impervious area of a project site, when present, shall be considered meadow in the model for existing conditions, if the existing impervious area is being altered by the proposed Regulated Activity.
- 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 or for projects that require design of Stormwater Storage Facilities.

For new impervious surfaces:

1. Stormwater facilities shall capture at least the first two (2) inches of runoff from all new impervious surfaces.
2. At least the first one (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, if the existing impervious area is being altered by the proposed Regulated Activity.
- 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 Stormwater Management 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 Protection (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.C (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, 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 Ordinance Chapter 102.

Section 306. Design Criteria.

A. Stormwater Collection System.

The Stormwater Collection System shall be designed and approved based upon the following criteria:

Peak discharge shall be computed using the Rational Formula:

$$Q = CIA$$

where: Q = Peak discharge in cubic feet per second.

C = Runoff factor expressed as a percent of the total water falling on an area.

I = The rate of rainfall for the time of concentration of the drainage area in inches per hour for a given storm frequency (Rainfall Intensity).

A = The drainage area expressed in acres.

The runoff factor "C" is a percentage factor which represents the proportion of the total quantity of water falling on the area that remains as runoff.

The runoff factors for various types of drainage areas, as presented in the following table, shall be used for design.

RUNOFF FACTORS FOR THE RATIONAL EQUATION

TYPE OF DRAINAGE AREA OR SURFACE RUNOFF FACTOR "C"

Impervious surfaces such as but not limited to roof surface, pavement, concrete or bituminous concrete, gravel	0.95
Cultivated field	0.40
Lawn	0.25
Meadow	0.20
Wooded	0.15

NOTES

1. Consideration should be given to future land use changes in the drainage area in selecting the "C" factor.
2. For drainage area containing several different types of ground cover, a weighted value of "C" factor must be used.
3. In special situations where sinkholes, stripped abandoned mines, etc. exist, careful evaluation shall be given to the selection of a suitable runoff factor with consideration given to possible reclamation of the land in the future.

Rainfall Intensity "I" shall be per Section 301.L according to the following:

1. Storm frequency:
 - a. The following storm frequency shall be used for design:
 - i. Local streets - 10 Year, see storm duration
 - ii. Culvert cross drains - 25 Year Rural, 50 Year Suburban, 100 Year Urban
 - iii. Swales - 100 Year
 - b. When a pipe or culvert is intended to convey the discharge from a Stormwater Management Facility, its required capacity shall be computed by the Rational Method and compared to the peak outflow from the Stormwater Management Facility for the 100-year storm. The greater flow shall govern the design of the pipe or culvert.
 - c. A 100-year design storm frequency may be required for design of the Stormwater Collection System to insure that the resultant stormwater runoff from the post-development design storm is directed into the Stormwater Management Facility.
 - d. In all cases where drainage is collected by means of a head wall or pipe end, the pipe shall be designed as a culvert. The minimum diameter of the culvert shall be 18 inches. The minimum diameter of storm sewer shall be 15 inches, when located in a public right-of-way or easement.

- e. Where the collection system may be under inlet or outlet control, the Borough Engineer may request additional calculations, such as but not limited to hydraulic grade lines.

2. Storm Duration:

- a. A five (5) minute storm duration shall be used if this duration does not result in a maximum expected discharge that exceeds the capacity of a 30-inch pipe.
- b. If a five (5) minute storm duration results in a pipe size exceeding 30 inches, the time of concentration approach shall be used in determining storm duration.

3. Inlet Placement:

In general, catch basins shall be placed as required by hydraulic capacity. For design purposes, a capture ratio (intercepted flow / design flow) of 70% or greater is required. However, the width of flow in a street cannot exceed one-half (1/2) of the travel lane. In any event, the maximum distance between conveyed inlets shall not exceed 400 feet.

4. Pipe and Swale Capacity:

Manning's equation shall be used for the design of all storm sewer pipes and for open channel design:

$$V = \frac{1.486 R^{2/3} S^{1/2}}{n}$$

where:

V = Velocity of the water in feet per second.

R = Hydraulic radius which is equal to the net effective areas (A) divided by the wetted perimeter (W.P.):

$$R = \frac{A}{W.P.}$$

The wetted perimeter is the lineal feet of the drainage facility cross-section which is wetted by the water.

S = Slope of the hydraulic gradient (for approximation, use the water surface slope in a wetted stream and the stream bed slope in dry stream or the pipe slope).

n = The roughness coefficient. Roughness coefficients are as follows:

Value of Manning's Roughness Coefficient - *n*

Rip-rap	0.040
Grass-lined channel	0.035
Bare earth channel	0.020
Paved Bituminous channel	0.016
Concrete	0.012
Turf Reinforcement Matting (TRM)	Per manufacturer's recommendation

The maximum permitted velocity in a lined or unlined swale shall be in accordance with the USDA Engineering Field Manual, PA DEP, applicable PA codes and state law, whichever is less.

The maximum permitted velocity in storm sewer pipe is 20 FPS. If 20 FPS is exceeded, the pipe must be anchored in accordance with the following table:

Velocity of Flow (FPS)	Anchor Spacing (FT)
20-24.99	20'
25-30	10'

Under no circumstances shall flow velocity exceed 30 FPS.

B. Stormwater Management Facilities

The plan shall be designed and approved based upon the following criteria:

1. General - For drainage areas 320 acres or larger the peak discharge and runoff shall be computed using the soil-cover complex method contained in "Urban Hydrology for Small Water Sheds", Technical Release No. 55 published by the Engineering Division, Soil Conservation Services, United States Department of Agriculture, dated June, 1986 or latest revision, except as modified herein. For drainage areas less than 320 acres the Modified Rational Method may be utilized. Alternate methods of analysis may be considered if approved by the Borough Engineer.
2. Outflow determination. The maximum permitted stormwater discharge, in cubic feet per second, from any site shall not exceed the calculated peak discharge from the site at pre-development ground cover and soil conditions for all design storms specified in Section 304.B. For the purpose of this ordinance, pre-development ground cover conditions shall be assumed to be "meadow" for all non-forested pervious areas as defined in "Urban Hydrology for Small Water Sheds", Technical Release No. 55 published by Engineering Division, Soil Conservation Service, United States Department of Agriculture, dated June, 1986 or latest revision or if using the Modified Rational Method a "C" factor of

0.20 shall be used for meadow conditions for all non-forested pervious areas. For existing impervious surfaces see section 304.A. The maximum permitted stormwater discharge shall be calculated using the SCS method or alternative method approved by the Borough Engineer for rainfalls having recurrence intervals of 1, 2, 5, 10, 25, 50 and 100 years. Time of Concentration (Tc) should be calculated using the SCS segmental approach in accordance with the current recommendations by SCS. For the purpose of this Ordinance, the rainfall depths shall be per Section 301.L.

Rainfall intensity shall be per Section 301.L for design if using the Modified Rational Method.

If alternate methods of analysis are utilized, the design storms recurrence interval in years shall be the same as used in the SCS TR-55 Method.

3. Minimum required detention storage. The minimum required detention storage, shall be determined by routing the approved post-development hydrographs through the Stormwater Management Facility, using either manual methods or computerized routing. Routing shall be based upon the modified PULS method; other routing methodologies shall be subject to the approval of the Borough Engineer.
4. Emergency spillway. Emergency spillways or overflow structures shall be designed to pass the peak flow resulting from a one hundred (100) year recurrence interval design storm computed at post-development conditions, assuming that the principal outlet structure is non-functional. All retention basins and detention basins shall provide an emergency spillway. Emergency spillways shall be located in cut where feasible, if not, adequate permanent stabilization is required. All emergency spillways shall be permanently stabilized for the design peak flow rate and velocity.
5. Minimum bottom slope. All detention basins shall have a minimum bottom slope of 2 percent, if not being utilized for infiltration purposes.
6. Side slopes. The maximum side slopes for detention or retention basins shall be 3 horizontal to 1 vertical in cut and 4 horizontal to 1 vertical in fill.
7. Freeboard. The Stormwater Management Facility shall have a minimum one-half (1/2) foot of freeboard determined after routing the 100-year recurrence interval design storm per section 306.B.4 or a minimum of one (1) foot of freeboard above the normal 100-year storm routing elevation, whichever is greater.
8. Seepage Trench. All Stormwater Management Detention Basins shall provide as a minimum a 2' wide by 10' long by 6' deep seepage trench in the bottom of the basin near the outlet control structure in accordance with the Stormwater Permit Application, unless field conditions deem the seepage trench non-functional and concurred by the Borough Engineer. This seepage trench is not required if the basin is being utilized for infiltration purposes.

9. Fencing, trash racks and installation of child proof facilities may be required by the Borough.

**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 Borough 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.

Appropriate sections of the Borough's Subdivision and Land Development Ordinance, and other applicable ordinances of the Borough 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. If the Borough has not adopted a Subdivision and Land Development Ordinance, the content of SWM Site Plans shall follow the plan preparation and applicable plan requirements of the York County Subdivision and Land Development Ordinance.

The Borough 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 Borough may either disapprove the submission, or, in the case of minor deficiencies, the Borough may accept the submission of a revised SWM Site Plan as noted in Section 404 of this Ordinance.

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

- A. Provisions for permanent access and/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 C.9, below.
- B. The following signature blocks for the Borough and design engineer:

“***(Borough engineer)***, on this date (***date of signature***), has reviewed the SWM Site Plan and finds it to be consistent with the design standards and criteria of the Shrewsbury Borough Stormwater Management Ordinance, Ordinance No. (____).”

“***(Design engineer)***, on this date (***date of signature***), hereby certifies that the SWM Site Plan meets all design standards and criteria of the Shrewsbury Borough Stormwater Management Ordinance, Ordinance No. (____).”

- C. If not required by the Borough's 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 Post-Construction Stormwater Management Plan (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 but not limited to 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.
5. A Soil Erosion and Sediment Control Plan in accordance with the following:
 - a. Earth disturbance, 0 to 5000 SQ-FT, implement Erosion and Sediment Control Measures on site, a written Erosion and Sediment Control Plan and York County Conservation District approval is not required unless required by state and/or federal permit(s) or is deemed necessary by the Borough. If earth disturbance is in a high quality or exceptional value watershed then a written Erosion and Sediment Control Plan and YCCD approval is required.
 - b. Earth disturbance, 5001 SQ-FT to less than one (1) acre, a written Erosion and Sediment Control Plan and implementation of plan on site is required. YCCD approval may be required by the Borough or state and/or federal permit(s). If earth disturbance is in a high quality or exceptional value watershed than YCCD approval is required.
 - c. Earth disturbance, one (1) acre or greater, a written Erosion and Sediment Control Plan, YCCD approval and implementation of plan on site is required.
 - d. In addition, under 25 Pa. Code Chapter 92, an Individual or General, as applicable, DEP "NPDES Construction Activities" permit is required for Regulated Earth Disturbance Activities of one (1) acre or greater.
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 but not limited to 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 Stormwater Management Facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities. This (O&M) Plan may be part of the SWM Site Plan or may be a separate recorded document.
10. A description of permanent Stormwater Management techniques, including the construction specifications of the materials to be used for Stormwater Management Facilities.
11. A notarized signature of the owner of the parcel for which the SWM Site Plan is proposed.
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 features, such as; structures, buildings, streets, driveways, access drives, and parking areas.
18. Contour intervals of two (2) feet or less. Dependent upon site conditions, alternative contour intervals proposed by an applicant or his Designee may be accepted by the Borough.
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. Dependent upon site conditions, an alternative scale proposed by the applicant or his Designee may be accepted by the Borough.
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 cross-sections 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.
28. Infiltration testing performed in accordance with the BMP Manual shall be completed and the test results provided for any proposed infiltration BMPs.

D. Simplified SWM Site Plan

1. The Simplified SWM Site Plan shall require a drawing showing:
 - a) The approximate location and dimensions of the proposed new impervious surface, property lines, significant natural and manmade features within the project site.
 - b) The approximate location and dimensions of all other impervious surfaces within the project site identifying those placed after the date of the enactment of this ordinance.
 - c) The location of all wells and sewage disposal systems located within the project site
 - d) The direction of stormwater flow from the existing impervious surfaces within the project site. The direction of stormwater flow from the proposed impervious surfaces within the project site. The general flow patterns across the project site.
2. The Simplified SWM Site Plan shall demonstrate management of the stormwater flow from the proposed impervious surfaces. The proposal should involve as necessary and as would be determined by the Borough Designee:

- a) The maintenance of a pervious flow area constructed consistent with the requirements of a DIA as set forth in Appendix B of this ordinance, or if the requirements of Appendix B cannot be met, then an equivalent DIA, may be authorized by the Borough.
- b) The construction and maintenance of:
 - i) Stormwater Pits to receive roof water. If the proposed structure exceeds 2,500 square feet in size, storm water pit(s) shall be sized after the analysis of probe hole(s) and infiltration tests to establish the size of the pit(s) necessary to achieve compliance with this ordinance. If the proposed structure is less than 2,500 square feet, the Borough may require probe hole(s) and infiltration tests on a case by case basis. Tests shall be performed by the Borough Designee or Authorized Agent at the depth and location of the proposed pits. Infiltration tests shall be performed per Section 401.C.28; or
 - ii) A detention basin approved by the Borough's Engineer as designed and sized to manage proposed increases in storm water flow from the project site brought about by the proposed impervious surface. If the detention basin is being utilized for infiltration, prior to approval, there must be analysis of probe hole(s) and infiltration tests to establish the size of basin(s) necessary to achieve compliance with this ordinance. Tests shall be performed by the Borough's Designee or Authorized Agent at the depth and location of the proposed basin. Infiltration tests shall be performed per Section 401.C.28; or
 - iii) Any other proposal approved by the Borough Engineer or the Borough Enforcement Officer as sufficient to manage the increase in stormwater runoff brought about by the Regulated Activity.

Section 402. Plan Submission.

- A. Three (3) copies of the SWM Site Plan and supporting information shall be submitted as follows:
 - 1. Two (2) copies to the Borough. (one (1) for the Borough and one (1) for the Borough Engineer).
 - 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 Borough or DEP.
- C. The Borough may establish a fee schedule for the review of SWM Site Plans, the amount of which shall be set by resolution of the Borough Council.

Section 403. Plan Review and Approval Procedure.

A. SWM Site Plans and supporting information shall be reviewed by the Borough for consistency with the provisions of this Ordinance.

B. Modification Requests:

1. When reviewing a SWM Site Plan and supporting information, whether or not the SWM Site Plan is included in a subdivision and/or land development plan application, the Borough may, after consulting with DEP as noted in Section 301.C. of this Ordinance, 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 requests for modifications from an applicant 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(s) of the Ordinance involved and the minimum modification(s) necessary.
3. The Borough 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.

C. SWM Site Plan Review and Approval Procedure:

1. If a SWM Site Plan and supporting information does not involve a 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 of submission to the Borough. However, the Borough, in its sole discretion, may extend the review 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 Borough beyond the first forty five (45) day review and decision period designated by this paragraph, the Borough 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 Borough. If no extension is imposed or granted by the Borough beyond the first forty five (45) day review and decision period, and no decision has been rendered by the Borough within that period, the SWM Site Plan shall be deemed approved. Similarly, if after a forty five (45) day extension of the review and decision period has been imposed or granted by the Borough, and no decision has been rendered by the Borough within that period, the SWM Site Plan shall be deemed approved.

2. If a SWM Site Plan involves a subdivision and/or land development plan, the period of time from the submission to the Borough 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.
3. From the time an application for approval of a plat involving a subdivision or land development plan, whether preliminary or final, which includes a SWM Site Plan, is duly filed with the Borough, no change or amendment of this Ordinance or other governing ordinance or plan shall affect the decision on such application in accordance with the provisions of the governing ordinances or plans as they stood at the time the application was duly filed, as specified in Section 508(4)(I) of the Pennsylvania Municipalities Planning Code.

D. Decision Notification Procedure:

In all cases, the decision of the Borough to approve or disapprove the SWM Site Plan shall be in writing and shall be delivered to the applicant no later than 15 days following the decision. If the SWM Site Plan is disapproved, the written decision by the Borough shall specify the defects in the application, describe the requirements which were not met, and shall cite the provisions of the Ordinance relied upon. If the SWM Site Plan is approved with conditions, the notification to the applicant shall state the acceptable conditions for approval and the time limit for satisfying such conditions. The time limit for satisfying conditions of approval shall be the time limit prescribed for conditional approval of subdivision and land development plans as stated in the York County Subdivision and Land Development Ordinance.

- E. Once the SWM Site Plan and supporting documents are finalized and approved, digital copies shall be provided to the Borough and its Engineer.

Section 404. Revision, Modification of Plans.

A revision to a previously submitted or approved SWM Site Plan that involves a change in SWM BMPs, Stormwater Management 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 Borough, 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 Borough, the Borough 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 Borough's fee schedule.

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

A disapproved SWM Site Plan may be resubmitted, with the revisions addressing the Borough's concerns as stated regarding the original submission, to the Borough in accordance with this Article IV. The applicable review fee must accompany the submission of a revised SWM Site Plan, unless such fee is waived by the Borough. (See Section 404)

Section 406. Authorization to Construct and Term of Validity.

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

The Borough'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 Borough 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 Borough signs the approval for a SWM Site Plan. If an approved SWM Site Plan is not completed according to Section 407 within the term of validity, then the Borough may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by the Borough 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 Borough'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 included in the approved SWM Site Plan. The as-built plans and an explanation of any discrepancies with the construction plans shall be submitted to the Borough.

B. The as-built submission shall include a certification of completion signed by the Borough Designee or other qualified person approved by the Borough, on a case by case basis, verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications. If any licensed qualified person contributed to the construction plans, then a licensed qualified person must sign the completion certificate.

- C. After receipt of the completion certification by the Borough, the Borough may conduct a final inspection to verify compliance with, and accuracy of, the as-built plans.
- D. Once the as-built plans are approved by the Borough, digital copies of the as-built plans and executed certification of completion shall be provided to the Borough and the Borough Engineer. This shall be in addition to the digital copies of the plan required by Section 403.E, above.

Section 408. Performance Guarantee.

The applicant shall provide financial security to the Borough prior to approval of a SWM Site Plan to guarantee installation and construction of all Stormwater Management Facilities depicted on the approved SWM Site Plan (including associated Erosion and Sedimentation Facilities) in the amount of 110% of the total estimated construction cost. Financial security shall be provided in a form that is acceptable to the Borough's legal counsel. The financial security shall comply with the requirements of Section 509 of the Pennsylvania Municipalities Planning Code, except that the financial security shall only be released upon submittal and approval of an as-built plan and professional certification as required by Section 407. All remedies available to the Borough pursuant to Sections 509, 510, and 511 of the Pennsylvania Municipalities Planning Code shall be available pursuant to this Ordinance.

ARTICLE V - OPERATION AND MAINTENANCE

Section 501. Operation and Maintenance Program.

- A. The Borough shall make the final determination as to the adequacy of Ownership Operation and Maintenance provisions prior to final approval of the SWM Site Plan.
- B. The Operation and Maintenance Plan shall be recorded as a restrictive covenant that runs with the land in perpetuity, unless termination is approved by the Borough, and a reference to the Plan, all easements (see Section 502), and all Operation and Maintenance Agreements (see Section 503), including at a minimum the place, book, and page where each is recorded, shall also be included on each deed.
- C. Each SWM Site Plan shall contain provisions, which clearly set forth ownership, operation and maintenance responsibilities for all permanent Stormwater Management Facilities. At a minimum, the provisions shall include:
 1. A description of the routine and periodical operation and maintenance activities that are necessary to ensure proper operation and function of the Stormwater Management Facilities such as is required to meet the intent of the approved SWM Site Plan.
 2. Establishment of suitable easements as specified in Section 502. The Borough, its agents and employees shall have the right to enter easement areas where Stormwater Management and Erosion and Sediment Control Facilities are located for the purpose of inspecting said facilities.
 3. Identification of the responsible party or entity for ownership and maintenance of Community permanent Stormwater Management Facilities. In meeting this requirement, the following priority for ownership is herein established:
 - (1st) As a first priority, ownership and maintenance of Stormwater Management Facilities shall be the responsibility of a Homeowner's Association. The Borough shall have complete discretion in determining whether or not the first priority can be achieved. The stated responsibilities of the Homeowner's Association in terms of owning and maintaining the Stormwater Management Facilities shall be submitted with final plans for determination of their adequacy and, upon their approval, shall be recorded with the approved subdivision and/or land development plan with the Recorder of Deeds of York County, Pennsylvania. In addition, the approved subdivision and/or land development plan and any deed written from said plan for a lot or lots shown therein shall contain a condition that it shall be mandatory for the owner or owners of said lot to be members of said Homeowner's

Association. As part of this ownership priority, in the event that both the owner of the property on which the facility is located and the Homeowner's Association to pay such costs in full, the owners of each lot in the subdivision shall be responsible for their proportionate share of the operation and maintenance costs, which share shall be determined by the percentage each lot bears to the total number of lots in the subdivision. This priority shall not apply to minor subdivisions as defined in the SALDO, which shall be addressed pursuant to the terms of the second priority, below.

- (2nd) As a second priority, in the event that the first priority cannot be achieved, or for minor subdivisions, the Stormwater Management Facilities shall be incorporated within individual lots so that respective lot owners will own and be responsible for maintenance in accordance with this section and the recorded deed restrictions, agreements, and other related documents. In addition, a nonrefundable deposit in an amount to be set by the Borough shall be made by the developer for each Stormwater Management Facility that is intended for ownership by the lot owner to cover the cost of inspections and necessary maintenance and repairs, except that the Borough can waive this deposit, and require that the developer create covenants to permit the Borough to place a lien on the residual tract of the subdivision as well as the lot on which the facility is located, in the event that a lot owner's failure to maintain or repair the facility requires the Borough to maintain or repair it.
- (3rd) Borough ownership. The Borough reserves the right to accept or reject the ownership, operation and maintenance responsibility for any or all of the Stormwater Management Facilities.

Section 502. Easements.

Easements provided in compliance with this Section shall be depicted graphically on all subdivision, land development and SWM Site Plans. The provisions in subsections C through F of this section shall be stated in note form on all subdivision, land development and SWM Site Plans.

- A. Where a development site is traversed by Federal or State Regulated Natural Watercourses, Drainage Easements shall be provided conforming to the alignment of the watercourse and the physical limits of any associated features that are regulated. If the physical limits of the regulated features are not known, then the width of the easement shall be equal to the top width of the maximum anticipated flow in the watercourse during a 100-year design storm event, or 20 feet, whichever is greater.

- B. Access easements shall be provided around all Stormwater Management Facilities are required to provide ingress to and egress from a public right-of-way. Access easements shall have a minimum width of 20 feet and be centered on the facility (i.e. pipe, swale) to which access is being provided. For storage, retention and infiltration facilities easements shall be provided conforming substantially to the size, shape and configuration of each facility.
- C. Where individual on-lot controls are proposed, the Borough shall be granted access to inspect on-lot facilities in the event of a malfunction.
- D. No person shall place any obstruction or encroachment in an easement associated with a Federal or State Regulated Resource without prior written authorization by the appropriate Regulatory Authority.
- E. No person shall place any obstruction or encroachment in a Stormwater Facility or Drainage Easement without prior written authorization by the Borough.
- F. The Borough, its agents and employees shall have the right to enter easement areas where Stormwater Management and Erosion and Sediment Control Facilities are located for the purpose of inspecting and, if necessary, maintaining or repairing, said facilities.

Section 503. Operation and Maintenance Agreements.

- A. The applicant shall prepare and execute an Operation and Maintenance Agreement (see sample Agreement in Appendix A).
- B. When ownership will ultimately be the responsibility of a Homeowner's Association an agreement shall be provided to the Borough by the Applicant/Owner/Developer defining the terms and conditions under which ownership and maintenance responsibilities will be transferred to the Homeowner's Association. Other items may be required in the agreement where determined necessary to guarantee satisfactory installation and maintenance of all facilities. The agreement shall be subject to a review and approval by the Borough, shall be recorded with the County Recorder of Deeds, and shall constitute a covenant running with the property and/or equitable servitude and shall be binding on the Landowner, his administrators, executors, assigns, heirs and any other successors in interests in perpetuity. The agreement shall also be included, or specifically referred to (including at a minimum the place, book, and page where it is recorded), in any and all documents relating to the Homeowner's Association, including but not limited to any declarations or restrictive covenants.
- C. If the Landowner fails to comply with the Operation and Maintenance Agreement, the Borough may take any and all appropriate action to enforce the O&M Agreement, and/or may perform the services required and charge the Landowner appropriate fees.

The Borough's exercise of one right does not waive any other concurrent rights the Borough may have.

- D. Payment of any fees, costs, or expenses incurred by the Borough as a result of this Section shall be the responsibility of the Homeowner's Association, the Landowner, or the owners of each lot in the subdivision, as the case may be. Failure by any owners to pay their share, whether all or part, may result in a lien against the property and/or any other action authorized by law or agreement.

Section 504. Municipal Stormwater BMP Operation and Maintenance Fund.

Persons installing Stormwater Management Facilities the purpose of which is to control stormwater runoff for Community uses shall be required to pay a specified amount to the Borough for a Stormwater Maintenance Fund to help defray the Borough's costs of periodic inspections. In addition, the Borough may require other Stormwater Management Facilities to pay a specified amount to the Stormwater Maintenance Fund if, in the discretion of the Borough or its engineer or other designated official, such facility exhibits characteristics that pose a threat of potential threat to public health or safety. The amount of the deposit shall be calculated to cover the cost of periodic inspections performed by the Borough for a minimum of eleven (11) years, as estimated by the Borough's Engineer. The Borough at its discretion may require the amount of the deposit to be calculated for terms exceeding eleven (11) years. After the designated period of time for Borough inspections; inspections shall be performed by the then-current owner of the Stormwater Management Facility at the owner's expense, a copy of these inspection reports are to be sent to the Borough and its Engineer, on the schedule established by Section 802.

ARTICLE VI - FEES AND EXPENSES

Section 601. General.

The Borough may include all costs incurred in the review fee charged to an applicant. The review fee may include, but not be limited to, costs for the following:

- A. Administrative/clerical processing.
- B. Review of the SWM Site Plan and related documents, including Operation Plans and Agreements, easements, declarations, or restrictive covenants, by the Borough Engineer, Qualified Professional, Designee of the Borough, and/or Solicitor of the Borough, as needed.
- C. Attendance at meetings.
- D. Inspections.
- E. Legal fees incurred by the Borough in enforcing this Ordinance.

ARTICLE VII – PROHIBITIONS

Section 701. Prohibited Discharges and Connections

- A. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge including sewage, process wastewater, and wash water to enter the waters of this Commonwealth is prohibited.
- B. No person shall allow, or cause to allow, discharges into waters of this Commonwealth which are not composed entirely of stormwater, except (1) as provided in Subsection C below and (2) discharges allowed under a state or federal permit.
- C. The following discharges are authorized unless they are determined to be significant contributors to pollution to the waters of this Commonwealth:

- Discharges from firefighting activities	- Flows from riparian habitats and wetlands
- Potable water sources including water line flushing	- Uncontaminated water from foundations or from footing drains
- Irrigation drainage	- Lawn watering
- Air conditioning condensate	- De-chlorinated swimming pool discharges
- Springs	- Uncontaminated groundwater
- Water from crawl space pumps	- Water from individual residential car washing
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used	- Routine external building wash-down (which does not use detergents or other compounds)
- Diverted stream flows	- Water discharged in well testing for potable water supplies

- D. In the event that the Borough or DEP determines that any of the discharges identified in Subsection C significantly contribute to pollution of the waters of this Commonwealth, the Borough or DEP will notify the responsible person(s) to cease the discharge.

Section 702. Roof and Driveway Drains and Sump Pump Discharges.

Roof drains, driveway drains and sump pumps shall discharge to infiltration or vegetative BMPs to the maximum extent practicable or satisfy the criteria for DIAs or Equivalent DIA's to the maximum extent practicable.

Section 703. 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 Borough, with the exception of necessary maintenance activities such as mowing.

ARTICLE VIII - ENFORCEMENT AND PENALTIES

Section 801. Right-of-Entry.

Upon presentation of proper credentials, the Designee of the Borough may enter at reasonable times upon any property within the Borough to inspect the condition of the Stormwater Structures and Facilities in regard to any aspect regulated by this Ordinance.

Section 802. Inspection.

The Borough or its Designee may inspect, at the expense of the landowner, all phases of the construction, operation, maintenance and any other implementation of SWM BMPs. A Borough inspection due to a report or information of lack of maintenance, a defect, or failure, of a SWM BMP shall be paid for by the landowner.

SWM BMPs shall be inspected by the landowner, or the landowner's Designee, according to the following list of minimum frequencies:

- A. Annually for the first five (5) 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.

Section 803. Enforcement.

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

Section 804. Suspension and Revocation.

- A. Any approval or permit issued by the Borough pursuant to this Ordinance may be suspended or revoked for:
 1. Non-compliance with or failure to implement any provision of the approved SWM Site Plan or O&M Agreement.
 2. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule, or regulation relating to the Regulated Activity.

3. The creation of any condition or the commission of any act during the Regulated Activity which constitutes or creates a hazard, nuisance, pollution, or endangers the life, safety or property of others.
- B. A suspended approval shall be reinstated by the Borough when:
1. The Borough has inspected and approved the corrections to the violations that caused the suspension.
 2. The Borough is satisfied that the violation has been corrected.
- C. An approval that has been revoked by the Borough cannot be reinstated. The applicant may apply for a new approval under the provisions of this Ordinance.
- D. If a violation causes no immediate danger to life, public health, public safety or property, at its sole discretion, the Borough may provide a limited time period for the landowner or responsible parties to correct the violation. In these cases, the Borough will provide the owner or responsible parties, or their agent, with a written notice of the violation and the time period allowed for the owner to correct the violation. If the owner does not correct the violation within the allowed time period, the Borough may revoke or suspend any, or all, applicable approvals and permits pertaining to any provision of this Ordinance.

Section 805. Penalties.

- A. Any person, partnership, corporation, or other entity who or which has violated the provisions of this Ordinance shall, upon conviction thereof in a summary proceeding before a Magisterial District Judge (formerly District Justice), be sentenced to pay a fine of not more than \$1,000, plus costs, and may be imprisoned for a period not to exceed ninety (90) days. Each day that this ordinance is violated shall constitute a separate and distinct offense, and shall be subject to separate and distinct penalties as set forth in this section, unless the Magisterial District Judge determines that there has been a good faith basis for the person, partnership, corporation or other entity violating the Ordinance to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation.
- B. In addition to the penalties prescribed in subsection A, the Borough may institute civil, injunctive, mandamus, or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

Section 806. Appeals.

- A. Any person aggrieved by any action of the Borough or its Designee, relevant to the provisions of this Ordinance, may appeal to the Borough within 30 days of that action.
- B. Any person aggrieved by any decision of the Borough, relevant to the provisions of this

Ordinance, may appeal to the York County Court of Common Pleas within 30 days of the decision of the Borough.

ARTICLE IX – REFERENCES

1. Pennsylvania Department of Environmental Protection. No. 363-0300-002 (December 2006), as amended and updated. Pennsylvania Stormwater Best Management Practices Manual. Harrisburg, PA.
2. Pennsylvania Department of Environmental Protection. No. 363-2134-008 (April 15, 2000), as amended and updated. Erosion and Sediment Pollution Control Program Manual. Harrisburg, PA.
3. U.S. Department of Agriculture, National Resources Conservation Service (NRCS). National Engineering Handbook. Part 630: Hydrology, 1969-2001. Originally published as the National Engineering Handbook, Section 4: Hydrology. Available from the NRCS online at: <http://www.nrcs.usda.gov/>.
4. U.S. Department of Agriculture, Natural Resources Conservation Service. 1986. Technical Release 55: Urban Hydrology for Small Watersheds, 2nd Edition. Washington, D.C.
5. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Hydrometeorological Design Studies Center. 2004-2006. Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, Version 3.0, Silver Spring, Maryland. Internet address: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
6. Act of July 31, 1968, P.L. 85, No.247, The Pennsylvania Municipalities Planning Code, as amended.

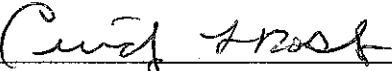
ARTICLE X – ENACTMENT

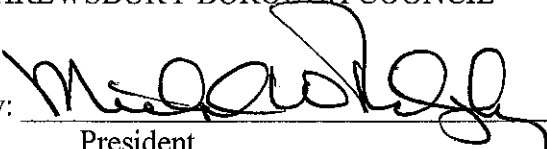
This Ordinance shall take effect five (5) days after enactment.

ORDAINED and ENACTED this 13th day of November, 2013.

ATTEST:

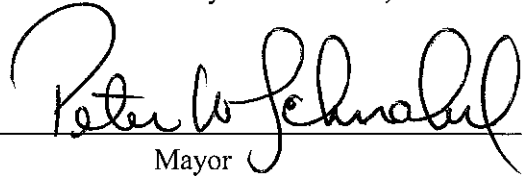
SHREWSBURY BOROUGH COUNCIL


Secretary

By: 
President

(SEAL)

Approved this 13th day of November, 2013.

By: 
Mayor

APPENDIX A

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

THIS AGREEMENT, made and entered into this _____ day of _____, 20__, by and between _____, (hereinafter the "Landowner"), and **SHREWSBURY BOROUGH**, York County, Pennsylvania, (hereinafter "Borough");

WITNESSETH:

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of York County, Pennsylvania, as recorded in the Office of the Recorder of Deeds of York County, Pennsylvania in Land Records/Deed Book _____, Page _____, and also being identified as UPI # _____ in the records of the York County Assessment Office, (hereinafter "Property").

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

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

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

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

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

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM Site Plan.
2. The Landowner shall operate and maintain the BMPs as shown on the SWM Site Plan in good working order in accordance with the specific operation and maintenance requirements noted on the approved O&M Plan.

3. The Landowner hereby grants permission to the Borough, its authorized agents and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the Borough shall notify the Landowner prior to entering the property.
4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2, the Borough or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMP(s). It is expressly understood and agreed that the Borough is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Borough.
5. In the event the Borough, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Borough for all expenses (direct and indirect) incurred within ten (10) days of receipt of invoice from the Borough. Expenses shall include but not be limited to any and all legal, engineering, or other professional expenses incurred in the furtherance of this Agreement or in enforcement of this agreement. If Landowner fails after receiving notice to compensate the Borough for the expenses as indicated herein, the Borough may protect its rights by filing a Municipal Claim with the Court of Common Pleas for all expenses incurred, including but not limited to reasonable attorney's fees and court costs.
6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or effect any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the Borough from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMP(s) by the Landowner or Borough.
8. The Borough may inspect the BMPs at a minimum annually for the first five (5) years of this Agreement, and every three (3) years thereafter to ensure their continued functioning. Optionally, at its sole discretion, the Borough may inspect the BMPs at more or less frequent intervals, and at other times as set out in the Shrewsbury Borough Stormwater Management Ordinance, as amended from time to time.
9. To the extent the ownership of the SWM BMPs will be transferred to a Homeowner's Association or similar entity, this Agreement shall transfer to such new owners, and shall be binding on all of the lots in the subdivision to which this Agreement inures, pursuant to Section 503 of the Shrewsbury Borough Stormwater Management Ordinance (hereinafter the "Ordinance").

10. Landowner further agrees that all deeds for lots to which this Agreement inures shall include a reference to the SWM Site Plan, all easements (per Section 502 of the Ordinance), and all Operation and Maintenance Agreements (per Section 503 of the Ordinance), including at a minimum the place, book, and page where each is recorded, on each deed.

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

WITNESS the following signatures and seals:

ATTEST:

SHREWSBURY BOROUGH COUNCIL

Secretary

By: _____
President (SEAL)

WITNESS:

Landowner (SEAL)

[Print Name]

Landowner (SEAL)

[Print Name]

Landowner (SEAL)

[Print Name]

COMMONWEALTH OF PENNSYLVANIA :
COUNTY OF YORK :

On this the ____ day of _____, 20____, before me, the undersigned officer, personally appeared _____, President of Shrewsbury Borough Council, who executed this document and acknowledged and that as President he/she is authorized to do so, and acknowledged that he/she executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

COMMONWEALTH OF PENNSYLVANIA :
COUNTY OF YORK :

On this the ____ day of _____, 20____, before me, the undersigned officer, personally appeared _____, known to me (or satisfactorily proven) to be the person(s) whose name(s) are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

Notary Public

APPENDIX B

DISCONNECTED IMPERVIOUS AREA (DIA)

B.1. Rooftop Disconnection

Disconnected Impervious Area may be permitted by the Borough upon recommendation by the Borough Engineer.

When rooftop down spouts are directed to a pervious area, on the applicant's property, 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.

For designs that meet these requirements, the portion of the roof that may be considered disconnected depends on the length of the overland path as designated in Table B.1.

Length of Pervious Flow Path *	Roof Area Treated as Disconnected
(ft)	(% of contributing area)
0 – 14	0
15 – 29	20
30 – 44	40
45 – 59	60
60 – 74	80
75 or more	100

* Flow path cannot include impervious surfaces and must be at least 15 feet from any impervious surfaces and be contained on the applicant's property.

REFERENCE

Philadelphia Water Department. 2006. Stormwater Management Guidance Manual. Section 4.2.2: Integrated Site Design. Philadelphia, PA.