

DRAFT

STORMWATER MANAGEMENT ORDINANCE

ORDINANCE NO. 2011-XX

NEWBERRY TOWNSHIP  
YORK COUNTY, PENNSYLVANIA

Adopted at a Public Meeting Held on

XXX XX, 2011

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## ARTICLE I - GENERAL PROVISIONS

### Section 101. Short Title

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

### Section 102. Statement of Findings

The Board of Supervisors of Newberry Township finds that:

- A. Inadequate management of accelerated runoff of stormwater resulting from development throughout a watershed increases flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of streams and storm sewers, greatly increases the cost of public facilities to carry and control stormwater, undermines flood plain management and flood control efforts in downstream communities, reduces groundwater recharge, threatens public health and safety, and increases non-point source pollution of water resources.
- B. 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 Newberry Township and its watershed by minimizing the harms and maximizing the benefits described in Section 102 of this Ordinance, through provisions designed to:

- A. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code Chapter 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 streambeds.
- G. Provide proper operation and maintenance of all permanent Stormwater Management (SWM) Best Management Practices (BMPs) that are implemented within Newberry Township.
- H. Provide standards to meet NPDES permit requirements.

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

- A. Newberry Township is empowered to regulate these activities by the authority of the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, et seq., as amended, the “Storm Water Management Act” and the by the authority of the Second Class Township Code, Sections 2701 thru 2704, 53 P.S. 67701 thru 67704 and the provisions of the Pennsylvania Municipalities Planning Code.

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

All Regulated Activities and all activities that may affect stormwater runoff, including Land Development and Earth Disturbance Activity, are subject to regulation by this Ordinance.

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

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provision(s) or regulation of Newberry Township inconsistent with any of the provisions of this Ordinance is hereby repealed to give this ordinance full force and effect to the extent of the inconsistency only.

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

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

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

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

#### **Section 109. Interpretation**

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

- A. Words used in the present tense also imply the future tense.

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

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

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

## ARTICLE II - DEFINITIONS

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

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

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

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

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

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

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

**County** - York County Pennsylvania

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

**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.

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

**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.

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

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

**Disconnected Impervious Area (DIA)** - An impervious or impermeable surface which 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.

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

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

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

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

**Existing Condition** - The dominant land cover during the five (5) year period immediately preceding a proposed Regulated Activity.

**FEMA** - Federal Emergency Management Agency.

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

comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania DEP Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by PADEP).

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

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

**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 HSG's (A, B, C, and D) according to their minimum infiltration rate, which is obtained for bare soil after prolonged wetting. The NRCS defines the four groups and provides a list of most of the soils in the United States and their group classification. The soils in the area of the development site may be identified from a soil survey report that can be obtained from local NRCS offices or conservation district offices. Soils become less pervious as the HSG varies from A to D (NRCS<sup>3,4</sup>).

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

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

**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 is formed on carbonate rocks, such as limestone or dolomite.

**Land Development (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** - Newberry Township, 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.

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

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

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

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

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

**Regulated Earth Disturbance Activity** - Activity involving Earth Disturbance subject to regulation under 25 Pa. Code Chapter 92, 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 Pennsylvania Code Title 25 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** - The Newberry Township Stormwater Management Plan for managing stormwater runoff adopted by the County of York as required by 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 Stormwater Management 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.

**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 the Commonwealth.

**Wetland** - Areas that are inundated or saturated by surface or ground water 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 Newberry Township issues written approval of an SWM Site Plan, which demonstrates compliance with the requirements of this Ordinance.
- B. SWM Site Plans approved by Newberry Township, in accordance with Section 406, shall be on site throughout the duration of the Regulated Activity.
- C. Newberry Township may, after consultation with DEP, approve measures for meeting the State Water Quality Requirements other than those in this Ordinance, provided that they meet the minimum requirements of, and do not conflict with, State law including but not limited to the Clean Streams Law.
- D. For all Regulated Earth Disturbance Activities, erosion and sediment control BMPs shall be designed, implemented, operated, and maintained during the Regulated Earth Disturbance Activities (e.g., during construction) to meet the purposes and requirements of this Ordinance and to meet all requirements under the Pennsylvania Code Title 25 and the Clean Streams Law. Various BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual* (E&S Manual)<sup>2</sup>, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-2134-008 (2000), as amended and updated.
- E. For all Regulated Activities, implementation of the Volume Controls in Section 303 is required, unless specifically exempted under Section 301.C., or exempted by an approved modification request as specified in Section 403.B of this ordinance.
- F. Impervious Areas:
  - 1. The measurement of impervious areas shall include all of the impervious areas in the total proposed development even if development is to take place in stages.
  - 2. For development taking place in stages, the entire development plan must be used in determining conformance with this Ordinance.
  - 3. For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this ordinance; except that the volume controls in Section 303 and the peak rate controls of Section 304 do not need to be retrofitted to existing impervious areas that are not being altered by the proposed regulated activity.

- G. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written permission of the adjacent property owner(s). Such stormwater flows shall be subject to the requirements of this Ordinance.
- H. All regulated activities shall include such measures as necessary to:
1. Protect health, safety, and property;
  2. Meet the water quality goals of this Ordinance, as stated in Section 103. Purpose, by implementing measures to:
    - a. Minimize disturbance to floodplains, wetlands, wooded areas, and existing vegetation.
    - b. Preserve and maintain trees and woodlands. Maintain or extend riparian buffers and protect existing forested buffer. Provide trees and woodlands adjacent to impervious areas whenever feasible.
    - c. Avoid erosive flow conditions in natural flow pathways.
    - d. Minimize thermal impacts to waters of this Commonwealth.
    - e. Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible.
    - f. Minimize soil disturbance and compaction. Topsoil, if removed, shall be replaced to a minimum depth equal to its depth prior to removal or four (4) inches, whichever is greater. (Additional topsoil may be needed for vegetation other than sod.)
  3. To the maximum extent practicable, incorporate the techniques for Low Impact Development Practices described in “The Pennsylvania Stormwater Best Management Practices Manual” (BMP Manual).
- I. The design of all facilities in areas of carbonate geology or karst topography shall include an evaluation of measures to minimize adverse effects, including hydro-geologic studies if required by the municipality.
- J. Infiltration BMPs should be spread out, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other requirements of this Ordinance. 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 less than 24 hours and not more than 72 hours from the end of the design storm. 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. 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 Pennsylvania Code Title 25, the Clean Streams Law, and the Storm Water Management Act.
- N. Various BMPs and their design standards are listed in the BMP Manual.

### **Section 302. Exemptions**

Any Regulated Activity that meets the following exemption criteria is exempt from the part(s) of this Ordinance as specified herein. However, the requirements of the Ordinance shall otherwise remain in effect. The criteria for exemption in this Section apply to the total development proposed, including instances in which the development is proposed to take place in phases. The date of enactment of this Ordinance shall be the starting point from which future development and the respective proposed impervious surface computations shall be cumulatively considered and regulated. Exemption shall not relieve an applicant from implementing such measures as necessary to meet the intent of this Ordinance, or compliance with any NPDES Permit requirements.

- A. Regulated activities that create DIAs equal to or less than 1,000 square feet are exempt from the peak rate control and the SWM Site Plan preparation requirements of this Ordinance.
- B. Regulated activities that create DIAs greater than 1,000 square feet and equal to or less than 5,000 square feet are exempt only from the peak rate control requirement of this Ordinance.
- C. Agricultural activity is exempt from the rate control and SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 Pa. Code 102.
- D. Forest management and timber operations are exempt from the rate control and SWM Site Plan preparation requirements of this Ordinance provided the activities are performed according to the requirements of 25 PA Code 102.
- E. Domestic gardening and landscaping are exempt from specific approval and permitting under this Ordinance so long as those activities are associated with one, and only one, dwelling unit and the activities comply with all other applicable ordinances and statutes.
- F. Exemptions from certain provisions of this Ordinance shall not relieve the applicant from the

requirements in Sections 301.D. through L. of this Ordinance.

- G. The Municipality may deny or revoke any exemption pursuant to this Section at any time for any project that the Municipality determines poses a threat to public health, safety, property or the environment.

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

The low impact development practices provided in the BMP Manual shall be utilized for all Regulated Activities to the maximum extent practicable.

Water volume controls shall be implemented using the *Design Storm Method* in Subsection 1 or the *Simplified Method* in Subsection 2 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.

1. *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.
  - a. Do not increase the post-development total runoff volume for all storms equal to or less than the 2-year 24-hour duration precipitation.
  - b. For modeling purposes:
    - i. Existing (pre-development) non-forested pervious areas must be considered meadow or its equivalent.
    - ii. Twenty (20) percent of existing impervious area, when present, shall be considered meadow in the model for existing conditions.
2. *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:

- a. Stormwater facilities shall capture at least the first two inches (2") of runoff from all new impervious surfaces.
- b. At least the first one inch (1.0") of runoff from new impervious surfaces shall be permanently removed from the runoff flow -- i.e. it shall not be released into the surface waters of this Commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.

- c. Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases at least the first one-half inch (0.5”) of the permanently removed runoff should be infiltrated.
- d. This method is exempt from the requirements of Section 304, Rate Controls.

**Section 303. Rate Controls**

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

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

For the purposes of the Act 167 Stormwater Management (Plan) elements, contained within the York County Integrated Water Resources Plan, and this Ordinance, design policy pertaining to 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 Resources (DEP). As stated in DM-2.13.7.D (Act 167 and Municipal Ordinances), PennDOT and PTC roadways and associated facilities shall be consistent with Act 167 Plans. Dm-2.13.7.B (Policy on Antidegradation and Post Construction Stormwater Management) was developed as a cooperative effort between PennDOT and DEP. DM-2.13.7.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 Chapter 102.

**Section 306. Additional Design Requirements**

- A. Collection Facilities

The design of storm water management collection facilities that service drainage areas within the site shall be based upon the peak flow from a twenty-five (25) year storm frequency event. All developments shall include design provisions that allow for the overland conveyance of the post-development one hundred (100) year peak flows through the site without damage to any private or public property.

Method of Calculations. Runoff calculations for on-site storm water conveyance facilities shall be based upon the Rational Method or an acceptable engineering design method, subject to Township approval.

Criteria, Methodology and Assumptions. Appropriate values for runoff coefficients, time of concentration, and rainfall intensity shall be from the latest edition of the Commonwealth of Pennsylvania, Department of Transportation *Design Manual, Part 2, Highway Design, Chapter 10*. Use of other criteria, methodology, assumptions, references, calculation methods and/or computer modeling may be accepted, provided detailed design information and programming with references are submitted and approved by the Township.

B. Storm Water Basins.

The peak discharges and volumes of runoff may be determined by using the rational method for watersheds less than fifteen (15) acres, and for larger watersheds, the latest version of Technical Release No. 55, Urban Hydrology for Small Watersheds, or an acceptable engineering method, subject to Township approval.

Retention basins and detention basins shall be designed with a minimum one (1) foot freeboard above the design elevation of the one hundred (100) year water surface at the emergency spillway. Additionally, basins shall be designed to safely discharge the full 100-year peak discharge of a post-development storm event through an emergency spillway in a manner which will not damage the integrity of the basin. Basins shall not be located over any existing or proposed utility line.

The Modified Plus Method of Calculating routing or an acceptable engineering design method, subject to Township approval, shall be used for detention basins.

Storm water basins located in known sinkhole-prone areas are required to be lined to prevent infiltration into the ground.

Basins shall be constructed and maintained to insure the design capacity after sedimentation has taken place.

Basin discharge outlets shall be designed to release runoff in a condition which reflects pre-development characteristics.

Basins which are not designed to release all storm water shall be specifically identified as

retention basins or permanent pond basins. All other basins shall have provisions for de-watering, particularly the bottom, and shall not create swampy and/or unmaintainable conditions. Low flow channels shall be used to de-water the bottom of a basin. A minimum slope of two percent (2%) or a paved low flow channel of at least one percent (1%) shall be provided. Discharge structures shall be designed to eliminate the possibility of blockage during operation.

Basins which are located in or adjacent to a residential zone and viewed by the Township as a potential hazard to the public safety shall be completely surrounded by a fence or wall of not less than four (4) feet in height. The fence or wall shall not have an opening or gap larger than two (2) inches and be provided with a self-closing and self-latching gate.

Earth Fill Dams. Basins which are designed with earth fill dams shall be designed by a registered professional engineer with experience in earth-filled dams and shall incorporate the following minimum standards:

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

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

## H. Capacities.

The capacity of pipes, gutters, inlets, culverts, outlet structures and swales shall consider all possible hydraulic conditions. The following are minimum design standards.

- (1) Grass swales and roadside gutters shall consider both the channel velocity and stability.
- (2) The “n” factors to be used for paved or rip-rap swales or gutters shall be based on the latest edition of the Pennsylvania Department of Transportation *Design Manual, Part 2, Highway Design*, Chapter 10.
- (3) The “n” factors for corrugated metal pipe shall be based upon the manufacturer's standard.
- (4) The velocity to be used in the design of any piped storm water conveyance system shall be a minimum of two and one-half (2½) feet per second.
- (5) Inlets, culverts, and basin discharge systems shall be designed for the worst case condition. Inlet capacity shall be based on design standards provided by the latest edition of the Pennsylvania Department of Transportation's *Design Manual, Part 2, Highway Design*, Chapter 10. If acceptable information is not available, inlets in non-ponding areas shall be designed for a maximum capacity of five (5) cubic feet per second. Where ponding occurs, inlet capacity shall be based on accepted engineering design practices. Culvert design shall consider either inlet/outlet control or a combination of hydraulic losses through the system, whichever is greater. Basin discharge systems shall be designed to the same standards as culverts. If it cannot be readily determined which hydraulic condition controls, the basin discharge rate shall be based on the highest possible discharge rating curve, with the basin capacity sized to store the excessive storm runoff, based on the lowest possible discharge rating curve.

I. Storm Water Flow Along Streets and Access Drives. Inlets shall be along the curb line and are not permitted along the curb radius at an intersection. When possible, inlets shall be located away from the side lot property line to avoid conflicts with driveways. For the purpose of inlet placement, curb, gutter, or roadside swale, flow depths for a ten (10) year storm frequency with a five (5) minute duration shall not exceed three (3) inches in a swale condition, two (2) inches in a gutter condition, and one-half (½) inch across intersections and travel lanes. In no case shall inlets be spaced more than six hundred (600) feet apart and function at less than sixty-five percent (65%) efficiency based on the criteria in the *PennDOT Design Manual*.

J. Manhole Locations. Manholes shall not be spaced more than five hundred (500) feet apart. Additionally, manholes shall be placed at points of changes in the horizontal or vertical direction of storm sewers. Inlets may be substituted for manholes where they will serve a useful purpose.

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

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

Degree of Bend	Velocity
0 to 30	1.50
30 to 60	1.75

60 to 90	2.00
90 and over	2.50

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

- (7) Where the velocity of storm water runoff exceeds the allowable velocity, erosion protection must be provided. The method of erosion protection proposed must be supported by the appropriate design information and/or references.
- (8) Sump Pump discharges and roof drains will be directed to lawn areas away from residences, into areas that will surface drain to conveyance structures (e.g., swales and storm sewer collection systems).

O. Erosion and Sedimentation.

All land disturbance facilities shall conform to the requirements of the York County Conservation District and the Pennsylvania Department of Environmental Protection, and with the following provisions:

- (1) No Regulated Earth Disturbance activities within the Township shall commence until it has approved an Erosion and Sediment Control Plan for construction activities.
- (2) Any earth disturbance activity of 5,000 square feet or more shall require an Erosion and Sediment Control Plan submitted and approved in accordance with the Pennsylvania Department of Environmental Protection as set forth in 25 Pa. Code § 102.4(b) and any other pertinent regulations.
- (3) A Pennsylvania Department of Environmental Protection “NPDES Construction Activities” permit in compliance with 25 Pa. Code Chapter 92 is required for any earth disturbance of one acre regardless of the planned runoff (hereinafter collectively referred to as “Regulated Earth Disturbance Activities”). This includes earth disturbance on any portion of, part of, or during any stage of, a larger common plan of development.
- (4) Evidence of any necessary permit(s) for Regulated Earth Disturbance activities from the appropriate DEP regional office or County Conservation District must be provided to the Township. The issuance of an NPDES Construction Permit (or permit coverage under the statewide General Permit (PAG-2)) satisfies the requirements of subparagraph 1 of this Paragraph Q.
- (5) A copy of the Erosion and Sediment Control plan and any required permit, as required by DEP regulations, shall be available at the project site at all times.

(6) The following principles shall be applied to the design plan and construction schedule to minimize soil erosion and sedimentation: a) Stripping of vegetation, grading, or other soil disturbance shall be done in a manner which will minimize soil erosion. b) Whenever feasible, natural vegetation shall be retained and protected. c) The extent of the disturbed area and the duration of its exposure shall be kept to a minimum, within practical limits. d) Either temporary seeding, mulching, or other suitable stabilization measures shall be used to protect exposed critical areas during construction. e) Drainage provisions shall accommodate the storm water runoff both during and after construction. f) Soil erosion and sedimentation facilities shall be installed prior to any on-site grading. g) The design plan and construction schedule shall incorporate measures to minimize soil erosion and sedimentation. h) Retention and/or detention basins and water carrying facilities shall be stabilized in accordance with current engineering and Soil Conservation Service practices.

P. Floodplain. All storm water management plans shall conform with the Floodplain Standards specified in Ordinance No 538 dated September 25, 2009 or as amended.

Q. Easements. When considered appropriate, easements shall be provided where storm water or surface water drainage facilities are existing or proposed, whether located within or beyond the boundaries of the property. Easements for maintenance of pipes and culverts shall run from outlet to inlet. Normal lot grading will not require easements. Swales which receive runoff from more than one other lot must be provided with an easement. Easements shall have a minimum width of twenty (20) feet and shall be adequately designed to provide area for (a) the collection and discharge of water, (b) the maintenance, repair, and reconstruction of the drainage facilities, and (c) the passage of machinery for such work. When considered appropriate, easements shall include a description of an ownership and maintenance program, in a recordable form, that clearly sets forth responsibility for all temporary and permanent storm water management facilities.

R. Ownership and Maintenance of Storm Water Management Facilities. The intent of these regulations is to provide private ownership and maintenance of storm water management facilities, erosion and sedimentation control facilities and floodplain control facilities. Under no circumstances does the Township intend to accept dedication of erosion control and sedimentation basins. The Township does not encourage the dedication of storm water management facilities that are located outside public street rights-of-way. Where the Storm Water Management Plan proposes that the Township own or maintain a storm water management facility, a description of the methods, procedures, and the extent of maintenance shall be described in such an offer.

Maintenance of all storm water management facilities during development shall be the sole responsibility of the developer and shall include, but not be limited to:

- (1) Removal of silt from all basins, traps or other structures or measures when thirty percent (30%) of capacity is filled with silt;
- (2) Periodic maintenance of temporary control facilities as described in the soil erosion and sedimentation control plan such as replacement of silt fencing, straw filters or similar measures;
- (3) Establishment or re-establishment of vegetation by seeding and mulching or sodding of

scoured areas or areas where vegetation has not successfully been established;

- (4) Installation of necessary controls to correct unforeseen problems caused by storm events within designed frequencies;
- (5) Removal of all temporary measures and installation of permanent measures upon completion of the project; and
- (6) Requirements of the Pennsylvania Department of Environmental Protection, Chapter 102 Regulations.

Ownership of all storm water management facilities after construction shall be the sole responsibility of the developer or the private landowner as set forth in the plan. The only storm water management facilities which are to be controlled by the Township shall be those facilities which have been offered for dedication and accepted for dedication by the Township. Future offers for dedication can only be made for facilities which meet current Township specifications.

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

### Section 401. Permit Procedures and Plan Requirements

#### A. General; Structural Prohibition.

A Land Disturbance Activity, as defined in this Part, shall not be initiated until a Storm Water Management Permit has been issued. No structure shall be permitted, and no permit shall be issued, for the laying, placing, erecting, constructing or locating of any structure in any storm water management facility or drainage easement area, whether such area was created by plan, express easement, easement by implication, easement in fact, or easement by operation of law. This prohibition shall not apply to structures comprising component parts of an approved storm water management facility.

#### B. Application Procedure

All applications for a Storm Water Management Permit, the activity for which also constitutes a subdivision or land development, shall be submitted concurrently with the subdivision and/or land development plan filed pursuant to the Subdivision and Land Development Ordinance. Action on the Storm Water Management Permit will be made in conjunction with the preliminary plan under the Subdivision and Land Development Ordinance.

All applications for a Storm Water Management Permit, the activity for which does not constitute a subdivision or land development, shall conform with the following procedures. An Application for a Storm Water Management Permit shall be submitted to the Township-designated representative who has been authorized to receive applications at the Township of Newberry Building, on any business day.

The Township shall forward the application to the Township Engineer for review.

The Township-designated representative shall, within sixty (60) days from the municipal receipt of an application, issue a permit (see Appendix ) or disapprove the application and transmit the decision in writing to the applicant and the Township of Newberry Board of Supervisors. Failure of the Township Engineer to render a decision and communicate it as prescribed above shall not be deemed an approval. A notice of disapproval shall cite the reasons for disapproval.

#### C. Application Requirements.

- (1) One (1) completed copy of the Application for a Storm Water Management Permit (see Appendix C).
- (2) Four (4) copies of the Storm Water Management Plan
  - a. One (1) copy to Newberry Township.
  - b. One (1) copy to the Township Engineer.

- c. One (1) copy to the County Conservation District.
  - d. One (1) copy to the County Planning Commission/Office.
- (3) Filing fee in the amount specified in the fee schedule as established by resolution or ordinance of the Township Board of Supervisors.
- (4) Performance bond, when applicable.
- (5) Liability insurance, when applicable.

D. Storm Water Management Plan Contents

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

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

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

identified along with a statement that the Township is not responsible for the maintenance of any area not dedicated to and accepted for public use.

- h. Certificate, signed and sealed by an individual registered in the Commonwealth of Pennsylvania and qualified to perform such duties, indicating compliance with the provisions of this Part (see Appendix D).

## 2. Existing Features

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

## 3. Proposed Features

- a. Proposed land use, total number of lots and dwelling units, and extent of commercial, industrial or other non-residential uses

- b. Locations and dimensions of all proposed streets, sidewalks, lot lines, building locations, parking compounds, impervious and semi-impervious surfaces, sanitary sewer facilities, water facilities, storm water management facilities, utilities, and other significant features. This information shall be provided to the detail necessary to construct the facilities.
  - c. Proposed changes to land surface and vegetative cover including areas to be cut or filled.
  - d. Proposed Topographical Data. This information shall be provided by contour lines indicating the existing and proposed grades of the site. Contour lines shall be provided at one (1) foot vertical intervals for slopes of ten percent (10%) or less, and at vertical intervals of five (5) feet for more steeply sloping land.
  - e. Plans and profiles of proposed storm water management facilities including horizontal and vertical location. Additionally, a detail with all pertinent construction requirements shall be provided for outlet structures. This information shall be of the quality required for the construction of all facilities.
  - f. The size, slope, capacity, material, elevation, and condition of the proposed storm water management system and other facility that may be used to convey storm flows. This information shall include invert elevations and top of grate elevations.
  - g. Plans and profiles of all erosion and sedimentation control measures, temporary as well as permanent.
  - h. Designation of the location of on-site sub-watersheds.
  - i. Designation of the location of the time of concentration for the on-site sub-watersheds.
4. Written Report and Calculations
- a. Calculations, assumptions, criteria, methodology, and references used in the design of storm water management facilities, the establishment of capacities, and the pre-development and post-development peak discharge. This information shall include data on all sub-watersheds.
  - b. For all basins, a plotting or tabulation of the storage volumes and discharge curves with corresponding water surface elevations, inflow hydrographs and outflow hydrographs.

- c. Soil structures and characteristics shall be provided for all proposed groundwater recharge systems, and detention or retention basins which (a) hold two (2) acre feet or more of water, or (b) have an embankment that is six (6) feet or more in height. Plans and data prepared by a registered professional experienced and educated in soil mechanics shall be submitted. This data shall provide design solutions for frost heave potential, spring-swell potential, soil bearing strength, water infiltration, soil settling characteristics, fill and back-filling procedures and soil treatment techniques as required to protect the improvements or structures. The following requirements apply to all proposed groundwater recharge methods of storm water management, such as seepage pits, beds, trenches, leaching wells, and cisterns:
- 1) Representative percolation tests must be made throughout the proposed area. At least one percolation test must be included in each soil group and at least one percolation test must be conducted for each five lots proposed for development. Testing, in general, should follow the same guidelines as though testing for an on-lot septic system.
  - 2) Seepage pits, beds or trenches shall not be permitted for any development of more than five lots, without prior approval of the Township.
- d. Description of all erosion and sedimentation control measures, temporary as well as permanent, including the staging of land moving activities, sufficient in detail to clearly indicate their function. All erosion and sedimentation control measures shall conform to the requirements of the Pennsylvania Department of Environmental Protection, *Soil Erosion and Sedimentation Control Manual*.
- e. Description of an ownership and maintenance program, in a recordable form, that clearly sets forth the ownership and maintenance responsibilities for all temporary and permanent storm water management facilities which shall include the following:
- 1) Description of the method and extent of the maintenance requirements.
  - 2) Identification of an individual, corporation, association or other entity responsible for ownership and maintenance.
  - 3) When maintained by a private entity, a copy of the legally binding document which provides that the Township shall have the right to:
    - (i) Inspect the facilities at any time.
    - (ii) Require the private entity to take corrective measures and assign the private entity reasonable time periods for any necessary action.
    - (iii) Authorize maintenance to be done by the Township or an agent or contractor of the Township and the liening of the cost of the work against the properties of the private entity responsible for the maintenance.
  - 4) Establishment of suitable easements for access to storm water management facilities.

- 5) When an assignment of responsibility is made to the Township, it must include an acknowledgment of its formal acceptance of the responsibility. This document shall be recorded in the Office of the Recorder of Deeds in and for York County, Pennsylvania upon issuance of a permit. In all cases, the document shall be recorded prior to the initiation of construction and be fully effective at the post-construction period.
- f. A Pennsylvania Department of Transportation Highway Occupancy Permit for any storm water management facility proposed within the right-of-way of any State road.
- g. Acknowledgment that an NPDES, DEP permit or other soil erosion and sediment pollution control approval is not required by law, or if such approval is required by law, then a true and correct copy of such approval shall be provided to the Township.
- h. Notification of approval from the applicable State and Federal agencies for any proposed encroachment into a regulated floodway or wetland area.
- i. A schedule for installation of the control measures and devices. In all cases, the proposed storm water management devices must be completed prior to the construction of additional impervious areas.

#### **Section 402. Plan Review**

- A. The SWM Site Plan shall be reviewed by a Qualified Professional for Newberry Township for consistency with the provisions of this ordinance. After review, the Qualified Professional shall provide a written recommendation for Newberry Township to approve or disapprove the SWM Site Plan. If it is recommended to disapprove the SWM Site Plan, the Qualified Professional shall state the reasons for the disapproval in writing. The Qualified Professional also may recommend approval of the SWM Site Plan with conditions and, if so, shall provide the acceptable conditions for approval in writing. The SWM Site Plan review and recommendations shall be completed within the time allowed by the Newberry Township Subdivision and Land development Ordinance for reviewing subdivision plans.
- B. Newberry Township shall notify the applicant in writing within 60 calendar days whether the SWM Site Plan is approved or disapproved. If a longer notification period is provided by other statute, regulation, or ordinance, the applicant will be so notified by Newberry Township. If Newberry Township disapproves the SWM Plan, Newberry Township shall cite the reasons for disapproval in writing.

#### **Section 403. Waiver Procedure.**

The provisions of this Part are intended as minimum standards for the protection of the public health, safety and welfare. The Township Board of Supervisors may waive any mandatory provision of these regulations to the benefit of the applicant provided that the Township Board of Supervisors determines that the waiver: 1) Is consistent with the purpose of this Part as described in Section 103; 2) Will

remove or reduce an unreasonable standard or undue hardship as it applies to the particular property, which is grossly disproportionate to any benefit derived from the standard, or when an alternative standard provides equal or better results; and 3) Provides for reasonable utilization of the property while securing the public interest. It shall be the burden of the applicant to demonstrate compliance with the above conditions.

- A. Waiver Application. Notwithstanding the ability of the Township Board of Supervisors to independently consider a waiver, all requests for waivers which are desired by the applicant shall be submitted to the designated Township representative, at the Township building, on any business day. A waiver request shall include twelve (12) copies of all applicable plans, reports and supplementary data and one (1) application form.
- B. Distribution. One (1) copy of the waiver request will be distributed to the Township Manager, Township Planning Commission, Township Zoning Officer, Township Engineer, Township Board of Supervisors and, if necessary, other officials.
- C. Review of the Waiver. The waiver is reviewed by the Township staff and Planning Commission. Recommendations are forwarded to the Township Board of Supervisors.
- D. Ruling on the Waiver. The Township Board of Supervisors shall have the authority to approve or disapprove the waiver. In granting any waiver, the Township Board of Supervisors may impose such conditions as will, in its judgment, secure substantially the objectives of the standards and requirements of this Part. Action on the waiver shall be entered in the minutes of the Township Board of Supervisors and forwarded to the applicant. Failure of the Township Board of Supervisors to render a decision and communicate it to the applicant as described herein shall not be a deemed approval of the waiver.

#### **Section 404 Schedule of Inspections.**

Inspections shall be required prior to the start of construction, during installation of materials and structures, and upon the completion of all improvements. Prior to the initiation of construction, the developer shall arrange a pre-construction meeting with the Township Engineer so that an inspection schedule can be coordinated with the construction schedule. The Township Engineer shall be notified two (2) working days in advance of any intended date of construction. The provisions stated herein shall not be construed as mandating periodic inspections and the undertaking of periodic inspections shall not be construed as an acceptance of the work during construction or as a final inspection of the construction. The Township shall inspect all phases of the Land Disturbance Activity including, but not limited to, the following:

- A. Prior to the start of any Land Disturbance Activity.
- B. During construction of the permanent storm water management facilities at such times as specified by the Township.
- C. Upon installation of permanent storm water management facilities.

- D. Upon completion of any final grading, vegetative control measures or other site restoration work done in accordance with the permit. No work shall begin on a subsequent phase until the preceding phase has been inspected and approval has been noted on the permit. Any portion of the work which does not comply with the approved plan must be corrected by the applicant. No work may proceed on any subsequent phase until the required corrections have been made.

**Section 405. Performance Guarantee.**

The Township may, prior to issuing a Storm Water Management Permit, require a Performance Guarantee for storm water detention and/or retention basin, erosion control facility, and other drainage facilities which may adversely affect adjacent properties, streets or other public improvements.

Where required, the developer shall file with the Township Board of Supervisors, financial security in an amount sufficient to cover the costs of the storm water management facilities. The administration of the financial security shall comply with the financial security provisions of Subdivision and Land Development Ordinance

**Section 406. Liability.**

Neither issuance of the Permit nor compliance with the provisions hereto or any conditions imposed by the Township shall relieve any person from any responsibility for damage otherwise imposed by law, nor impose any liability upon the Township or its officers, appointed professionals, or employees for damages to persons or property.

**Section 407 Maintenance Guarantee.**

The Township may, prior to issuing a storm water management permit, require the applicant to submit a maintenance guarantee for the structural integrity as well as function of any storm water management facility for a term not to exceed eighteen (18) months from the date of acceptance of dedication by the Township Board of Supervisors. Said guarantee shall not exceed fifteen (15) percent of the actual cost of installation of said improvements and be of the same type of financial security as required in this Part.

**Section 408. Modification of Plans**

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

**Section 409. Resubmission of Disapproved Storm Water Management Site Plans**

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

#### **Section 410. Authorization to Construct and Term of Validity**

Newberry Township's approval of an SWM Site Plan authorizes the Regulated Activities contained in the SWM Site Plan for a maximum term of validity of five years following the date of approval. Newberry Township may specify a term of validity shorter than five years in the approval for any specific SWM Site Plan. Terms of validity shall commence on the date Newberry Township signs the approval for an SWM Site Plan. If an approved SWM Site Plan is not completed according to Section 405 within the term of validity, then Newberry Township may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by Newberry Township shall be resubmitted in accordance with Section 409 of this Ordinance.

#### **Section 411. 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 Newberry Township.
- B. The as-built submission shall include a certification of completion signed by a Qualified Professional verifying that all permanent SWM BMPs have been constructed according to the approved plans and specifications. If any licensed Qualified Professionals contributed to the construction plans, then a licensed Qualified Professional must sign the completion certificate.
- C. After receipt of the completion certification by Newberry Township, Newberry Township may conduct a final inspection.

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

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

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

**Section 502. Operation and Maintenance Agreements**

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

**Section 503. Performance Guarantee**

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

**ARTICLE VI - FEES AND EXPENSES**

**Section 601. General**

Newberry Township may include all costs incurred in the review fee charged to an applicant.

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

- A. Administrative/clerical processing.
- B. Review of the SWM Site Plan.

C. Attendance at meetings.

D. Inspections.

## ARTICLE VII - PROHIBITIONS

### Section 701. Prohibited Discharges and Connections

- A. Any drain or conveyance, whether on the surface or subsurface, which 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 surface 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 fire fighting 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	- Dechlorinated 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 Newberry Township or DEP determines that any of the discharges identified in Subsection C, significantly contribute to pollution of the waters of this Commonwealth, Newberry Township or DEP will notify the responsible person(s) to cease the discharge.

### Section 702. Roof Drains

Roof drains and sump pumps shall discharge to infiltration or vegetative BMPs and to the maximum extent practicable satisfy the criteria for Disconnected Impervious Areas.

### **Section 703. Alteration of SWM BMPs**

No person shall modify, remove, fill, landscape, or alter any SWM BMPs, facilities, areas, or structures, without the written approval of Newberry Township.

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

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

Upon presentation of proper credentials, Newberry Township may enter at reasonable times upon any property within Newberry Township to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Ordinance. Acceptance of a permit shall constitute irrevocable consent to the Township, its officials, employees, Engineer, consultants and contractors, to enter the premises to perform any act necessary to insure compliance with this Chapter, including, but not limited to, inspections, completion of required work, remediation of work, maintenance, etc. Nothing herein shall be construed to place a duty, obligation or requirement on the Township to do or perform any of the foregoing.

### **Section 802. Inspection**

SWM BMPs should be inspected by the landowner, or the owner's designee, according to the following list of minimum frequencies:

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

### **Section 803. Enforcement**

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

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

Any person, partnership or corporation, who being the owner of land on which a Land Disturbance Activity, as defined in this Part, has occurred or is engaged, or any person, partnership or corporation, who has or is engaged in performing, causing or conducting a Land Disturbance Activity, shall comply with the provision of this Part and the Storm Water Management Permit. Any Land Disturbance conducted in violation of this Part or the Storm Water Management Permit is hereby declared a public nuisance.

In the event of a violation, and in addition to all other lawful remedies, the Township may initiate the following actions:

- A. Suspension of a Storm Water Management Permit. Any permit issued under this Part may be suspended by the Township based upon:
  - (1) The noncompliance with or failure to implement any provision of the Storm Water Management Plan, or
  - (2) A violation of any provision of this Part relating to the project, or
  - (3) The creation of any condition or the commission of any act during construction which constitutes or creates a hazard or nuisance or which endangers the life or property of others.
  - (4) Proceeding with Work. Under the suspension of a permit, only such work as the Township so authorized may proceed. This work shall be limited to that which is necessary to correct the violation. A suspended permit shall be reinstated by the Township when:
    - (i) The Township has inspected and approved the corrections to the storm water management facilities or the elimination of the hazard or nuisance, and
    - (ii) The Township is satisfied that the violation of the Part has been corrected. A permit will not expire while under suspension or noncompliance exists with the permit.
  
- B. Revoke a Storm Water Management Permit. Based upon a report from the Township Engineer that the existing site condition or further construction is likely to endanger property or create hazardous conditions, the Township may:
  - (1) Revoke a permit.
  - (2) Require protective measures to be taken and assign a reasonable time period for the necessary action.
  - (3) Authorize protective measures to be done and lien all cost of the work against the property on which work is required.

A permit which has been revoked cannot be reinstated. The applicant may apply for a new permit in accordance with the processing procedures in Subtitle C of this part.

- C. Notification of Suspension or Revocation of a Storm Water Management Permit. In the event of a suspension or revocation of a Storm Water Management Permit, the Township shall provide written notification of the violation to the landowner and/or applicant and to any person who has or is engaged in performing, causing or conducting a Land Disturbance Activity at their last known addresses. Such notification shall:
  - (1) Cite the specific violation, describe the requirements which have not been met, and cite the provisions of the Part relied upon.
  
- C. Identify the specific protective measures to be taken.
  - (3) Assign a reasonable time period necessary for action or in the case of revocation, identify if

the Township has authorized protective measures to be performed at cost to the landowner.

- (4) Identify the right to request a hearing before the Township Board of Supervisors if aggrieved by the suspension or revocation.

D. Civil Remedies. Suits to restrain, prevent, or abate a violation of this Part may be instituted in equity or at law by the Township. Such proceedings in equity or law may be initiated before any court of competent jurisdiction. In cases of emergency where, in the opinion of the court, the circumstances of the case require immediate abatement of the unlawful conduct, the court may, in its decree, fix a reasonable time during which the person responsible for the unlawful conduct shall correct or abate the same. The expense of such proceedings shall be recoverable from the violator in such manner as may now or hereafter be provided by law.

E. A suspended approval may be reinstated by Newberry Township when:

1. Newberry Township has inspected and approved the corrections to the violations that caused the suspension.
2. Newberry Township is satisfied that the violation has been corrected.

F. If a violation causes no immediate danger to life, public health, or property, at its sole discretion, Newberry Township may provide a limited time period for the owner to correct the violation. In these cases, Newberry Township will provide the owner, or the owner's designee, with a written notice of the violation and the time period allowed for the owner to correct the violation. If the owner does not correct the violation within the allowed time period, Newberry Township 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 or corporation who or which has violated the provisions of this Ordinance shall, upon being found liable therefor in a civil enforcement proceeding commenced by Newberry Township, pay a judgement of not more than \$1000. No judgement shall commence or be imposed, levied or payable until the date of the determination of a violation by the district justice. If the defendant neither pays nor timely appeals the judgement, Newberry Township may enforce the judgement pursuant to the applicable rules of civil procedure. Each day that a violation continues shall constitute a separate violation, unless the district justice determining that there has been a violation further determines that there has been a good faith basis for the person, partnership or corporation 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. The court of common pleas, upon petition, may grant an order of stay, upon cause shown, tolling the per diem judgement pending a final adjudication of the violation and judgement.

B. In addition, Newberry Township, may institute injunctive, mandamus or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, mandamus or other appropriate forms of remedy or relief.

## Section 806. Appeals

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

## ARTICLE IX - REFERENCES

1. Pennsylvania Department of Environmental Protection (DEP). No. 363-0300-002 (2006), as amended and updated. *Pennsylvania Stormwater Best Management Practices Manual*. Harrisburg, PA.
2. The Pennsylvania Department of Environmental Protection (DEP). 363-2134-008 (2000), as amended and updated. *Erosion and Sediment Pollution Control Program Manual*. Harrisburg, PA.
3. United States Department of Agriculture (USDA), National Resources Conservation Service (NRCS). *National Engineering Handbook*. Part 630: Hydrology, 1969-2001. Originally published as the *National Engineering Handbook*, Section 4: Hydrology. Available online at: <http://www.wcc.nrcs.usda.gov/hydro/hydro-techref-neh-630.html>.
4. United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 1986. *Technical Release 55: Urban Hydrology for Small Watersheds*, 2nd Edition. Washington, D.C.
5. US Department of Commerce (USDC), National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS), Hydrometeorological Design Studies Center. 2004-2006. *Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2*, Silver Spring, Maryland, 20910. Internet address: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.

\_\_\_\_\_  
(Ordinance Name)

\_\_\_\_\_  
(Ordinance Number)

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

\_\_\_\_\_

on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

This Ordinance shall take effect immediately.

\_\_\_\_\_  
(Name) (Title)

\_\_\_\_\_  
(Name) (Title)

\_\_\_\_\_  
(Name) (Title)

ATTEST:

\_\_\_\_\_  
Secretary

**APPENDIX A**

**OPERATION AND MAINTENANCE AGREEMENT  
STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES (SWM BMPs)**

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

**WITNESSETH**

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

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

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

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

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

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

1. The Landowner shall construct the BMPs in accordance with the plans and specifications identified in the SWM Site Plan.
2. The Landowner shall operate and maintain the BMPs as shown on the Plan in good working order in accordance with the specific maintenance requirements noted on the approved O&M Plan.
3. The Landowner hereby grants permission to Newberry Township, 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, Newberry Township 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, Newberry Township 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 Newberry

Township 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 Newberry Township.

5. In the event Newberry Township, 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 Newberry Township for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from Newberry Township.
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 Newberry Township 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 Newberry Township.
8. Newberry Township shall inspect the BMPs at a minimum of once every three years to ensure their continued functioning. Optionally, at its sole discretion, the Municipality may inspect the BMPs at more or less frequent intervals.

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

ATTEST:

WITNESS the following signatures and seals:

(SEAL)

For Newberry Township:

\_\_\_\_\_

For the Landowner:

\_\_\_\_\_

ATTEST:

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

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

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

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

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

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

## APPENDIX B

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

#### B.1. Rooftop Disconnection

When rooftop downspouts are directed to a pervious area that allows for infiltration, filtration, and increased time of concentration, the rooftop may qualify as completely or partially Disconnected Impervious Area (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 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.

<b>Table B.1: Partial Rooftop Disconnection</b>	
<b>Length of Pervious Flow Path *</b>	<b>Roof Area Treated as Disconnected</b>
(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.

#### B.2. Pavement Disconnection

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

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

- The contributing flow path over impervious area is not more than 75 feet, and
- The length of overland flow is greater than or equal to the contributing length, and

- The soil is not designated as hydrologic soil group “D” or equivalent, and
- The slope of the contributing impervious area is 5% or less, and
- The slope of the overland flow path is 5% or less.

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

#### REFERENCE

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

**NEWBERRY TOWNSHIP**

1915 Old Trail Road  
Etters, PA 17319  
(717) 938-6992

**APPLICATION FOR A STORM WATER MANAGEMENT PERMIT**

Application is hereby made to Newberry Township for the issuance of a Storm Water Management Permit pursuant to the specifications herewith submitted.

**1. Name of Property Owner(s):**

**Address:**

**Phone No.**

**2. Name of Applicant (if other than owner):**

**Address:**

**Phone No.**

**3. Project Location:**

**4. Type of Earth Disturbance Activity:**

A. New impervious or semi-impervious surface \_\_\_\_\_ (sq. ft. /ac.)

B. Diversion or piping of natural or man-made watercourse \_\_\_\_\_ (linear ft.)

C. Installation of the following:

Culvert \_\_\_\_\_ Retention Basin \_\_\_\_\_

Detention Basin \_\_\_\_\_ Sediment Basin \_\_\_\_\_

D. Removal of ground cover, grading, filling, or excavation \_\_\_\_\_ (sq. ft. /ac.)

**5. If the property is the subject of a subdivision or land development, provide plan book record or Township identification number. \_\_\_\_\_**

**6. Storm Water Management Plan Prepared By: \_\_\_\_\_**

**Address:**

**Phone No:**

**Fax No:**

The undersigned hereby represents that, to the best of their knowledge and belief, all information listed above is true, correct, and complete.

Date:

Signature of Applicant **X**

**For Township Use Only**

Files No:

Date of Receipt/Filing:

(See Section 303.02)

APPENDIX D

STORMWATER MANAGEMENT PLAN CERTIFICATE

I hereby certify that, to the best of my knowledge and information, the storm water management facilities shown and described hereon are designed in conformance with the Newberry Township Storm Water Management Ordinance.

---

Date

---

Signature and Seal of the Registered  
Professional Responsible for the  
Preparation of the Plan

APPENDIX E

STORM WATER MANAGEMENT PERMIT  
LAND DISTURBANCE ACTIVITY

Newberry Township  
York County, Pennsylvania

PERMIT NO. \_\_\_\_\_

The property of \_\_\_\_\_  
located at \_\_\_\_\_  
has received approval of the storm water management plans dated \_\_\_\_\_, last  
revised \_\_\_\_\_, in accordance with the Newberry Township  
Storm Water Management Ordinance.

Approved By: \_\_\_\_\_  
Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

SCHEDULE OF INSPECTIONS

Approved

Date

During Construction of the following specific storm water  
management facilities:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Upon Installation of all permanent storm water management  
facilities.

Final grading, vegetative control measures, or other site  
restoration work.

(See Section 404)