

CHAPTER 26

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PART 1

GENERAL STORMWATER MANAGEMENT

A. General Provisions

§26-101. Short Title.

This Part 1 shall be known and may be cited as the "Mechanicsburg Borough Stormwater Management Ordinance."

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-102. Statement of Findings.

The Borough Council 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 floodplain 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 the 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 and 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).

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

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§26-103. Purpose.

The purpose of this Part 1 is to promote health, safety, and welfare within the Borough and its watershed by minimizing the harms and maximizing the benefits described in §26-102 of this Part 1 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. Encourage and maintain groundwater recharge, to prevent degradation of surface water 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 the Borough.
- H. Provide standards to meet NPDES permit requirements.
- I. Meet general water quality and soil disturbance goals by implementing measures to:
 - (1) Minimize disturbance to floodplains, wetlands, natural slopes over 15%, and existing native vegetation.
 - (2) Preserve and maintain trees and woodlands; to maintain or extend riparian buffers and protect existing forested buffer; and to provide trees and woodlands adjacent to impervious areas whenever feasible.
 - (3) Establish and maintain nonerosive flow conditions in natural flow pathways.
 - (4) Minimize soil disturbance and soil compaction; over disturbed areas, to replace topsoil to a minimum depth equal to the original depth or four inches, whichever is greater; and to use tracked equipment for grading when feasible.

- (5) Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible.
- (6) Incorporate the techniques for low-impact development practices described in the most current version of the Pennsylvania Stormwater Best Management Practices Manual (SWM Manual).¹
- (7) Minimize thermal impacts to waters of the commonwealth.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-104. Statutory Authority.

1. Primary Authority.

- A. The Borough is empowered to regulate these activities by the authority of the Stormwater Management Act, Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. §680.1 et seq., as amended, Article XXII and Section 1202(74) of the Pennsylvania Borough Code, 53 P.S. §47201 et seq., and 53 P. S. §46202(74).
- B. Hereafter, all earth disturbance activities and land development within this Borough, including, without limitation, the location, design and construction within the watershed of stormwater management systems, obstructions, flood control projects, subdivisions and major land developments, highways and transportation facilities, facilities for the provision of public utility services and facilities owned or financed in whole or in part by funds from the commonwealth, shall be in full compliance with the requirements of the Cumberland County Stormwater Management Plan and shall be conducted in a manner consistent therewith. Any violation of the Cumberland County Stormwater Management Plan shall be considered a violation of this Part 1.

2. Secondary Authority.

- A. The Borough is also empowered to regulate land use activities that affect runoff by the authority of the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, as amended, 53 P.S. §10101 et seq., as amended.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

¹ Note: Pennsylvania Department of Environmental Protection (DEP) No. 363-0300-002 (2006), as amended and updated, Pennsylvania Stormwater Best Management Practices Manual, Harrisburg, PA.

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§26-105. Applicability; Minimum Requirements.

1. All regulated activities and all activities that may affect stormwater runoff, including land development and earth disturbance activity, are subject to regulation by this Part 1 as is reasonably necessary to prevent injury to health, safety or other property. The following activities are encompassed by the definition of "regulated activities" (see §26-112) and shall be subject to the provisions of this Part 1 unless otherwise exempted by §26-122:
 - A. Land development and/or redevelopment.
 - B. Subdivision.
 - C. Construction of new or additional impervious or semipervious surfaces (streets, driveways, parking lots, etc.).
 - D. Construction of structures or additions to existing structures, as determined by the Borough.
 - E. Diversion or piping of any natural or man-made stream channel.
 - F. Installation of stormwater management facilities or appurtenances thereto.
 - G. Forest management/timber operations that include logging road construction and timber harvesting.
2. In interpreting and applying the provisions of this Part 1, they shall be held to be the minimum requirements for the promotion of public health, safety, and general welfare. Where provisions of this Part 1 impose greater restrictions than those of Chapter 8, Floodplains, of this Code, Chapter 22, Subdivision and Land Development, of this Code, or of any statute, other ordinance, restriction or regulation, the provisions of this Part 1 shall be controlling. Where the provisions of Chapter 8, Chapter 22 or of any statute, other ordinance, resolution or regulation impose greater restrictions than this Part 1, the provisions of such statute, resolution, ordinance or regulation shall be controlling. This Part 1 shall be interpreted whenever possible to achieve a result consistent with the provisions of Chapter 8 and Chapter 22.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-106. Repealer.

Any other chapter or ordinance provision(s) or regulations of the Borough inconsistent with any of the provisions of this Part 1 are hereby repealed to the extent of the inconsistency only.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-107. Severability.

In the event that a court of competent jurisdiction declares any section or provision of this Part 1 invalid, such decision shall not affect the validity of any of the remaining provisions of this Part 1.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-108. Compatibility With Other Requirements.

Approvals issued and actions taken under this Part 1 do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other code, law, regulation, chapter or ordinance.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-109. Waiver Procedure.

The provisions of this Part 1 are intended as minimum standards for the protection of the public health, safety and welfare. The Borough Council may waive any mandatory provision of these regulations to the benefit of the applicant, provided that the waiver is consistent with the purpose of this Part 1 as described in §26-103; 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 provides for reasonable utilization of the property while securing the public interest.

- A. Waiver Application. Notwithstanding the ability of the Borough Council to independently consider a waiver, all requests for waivers which are desired by the applicant shall be submitted to the designated Borough representative, at the Borough Building, on any business day. A waiver request shall include 12 copies of all applicable plans, reports and supplementary data and one application form.
- B. Distribution. One copy of the waiver request will be distributed to the Borough Manager, Borough Planning Commission, Borough Zoning Officer, Borough Engineer, Borough Council and, if necessary, other officials.

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- C. Review of the Waiver. The waiver is reviewed by the Borough staff and Planning Commission. Recommendations are forwarded to the Borough Council.
- D. Ruling on the Waiver. The Borough Council shall have the authority to approve or disapprove the waiver. In granting any waiver, the Borough Council may impose such conditions as will, in its judgment, secure substantially the objectives of the standards and requirements of this Part 1. Action on the waiver shall be entered in the minutes of the Borough Council and forwarded to the applicant. Failure of the Borough Council to render a decision and communicate it to the applicant as described herein shall not be deemed an approval of the waiver.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-110. (Reserved)

B. Definitions

§26-111. Word Usage.

For the purposes of this Part 1, 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.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-112. Definitions.

- 1. In addition to the following terms, the words and phrases which are used in this Part and not defined below shall have the meanings assigned by Chapter 22, Subdivision and Land Development, of this Code.

2. As used in this Part 1, the following terms shall have the meanings indicated:

AGRICULTURAL ACTIVITY — the work of producing crops, including tillage, land clearing, plowing, discing, harrowing, planting, harvesting crops, 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, subdivider, developer or other person who has filed an application to the Borough for approval to engage in any regulated activity at a project site in the Borough.

BEST MANAGEMENT PRACTICES (BMPs) — 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 Part 1. Stormwater BMPs are commonly grouped into one of two broad categories or measures: "structural" or "nonstructural." In this Part 1, nonstructural BMPs or measures refer to operational and/or behavior-related practices that attempt to minimize the contact of pollutants with stormwater runoff, whereas structural BMPs or measures are those that consist of a physical device or practice that is installed to capture and treat stormwater runoff. Structural BMPs include but are not limited to a wide variety of practices and devices, from large-scale retention ponds and constructed wetlands to small-scale underground treatment systems, infiltration facilities, filter strips, low-impact design, bioretention, wet ponds, permeable paving, grassed swales, riparian or forested buffers, sand filters, detention basins, and manufactured devices. Structural stormwater BMPs are permanent appurtenances to the project site.

BOROUGH — the Borough of Mechanicsburg, Cumberland County, Pennsylvania; Mechanicsburg Borough.

BOROUGH COUNCIL — the governing body of the Borough of Mechanicsburg, Cumberland County, Pennsylvania.

BOROUGH ENGINEER — an engineer or representative of an engineering firm duly registered in Pennsylvania and designated by the Borough Council as the Engineer of or for the Borough of Mechanicsburg.

CHANNEL — a natural or artificial watercourse with a definite bed and banks which confine and conduct continuously or periodically flowing water.

CODE — the Code of Ordinances of the Borough of Mechanicsburg.

CONSERVATION DISTRICT — a conservation district, as defined in Section 3(c) of the Conservation District Law [3 P. S. §851(c)], which has the authority under a delegation agreement executed with the DEP to administer and enforce all or a portion of the erosion and sediment control program in this commonwealth.

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CULVERT — a structure with appurtenant works which carries a watercourse under or through an embankment of fill.

DEDICATION — the deliberate appropriation of property by its owner for general public use.

DEP — the Pennsylvania Department of Environmental Protection.

DESIGN STORM — the magnitude and temporal distribution of precipitation from a storm event, measured in probability of occurrence (e.g., a five-year-storm) and duration (e.g., 24 hours), used in the design and evaluation of stormwater management systems. Also see "return period."

DETENTION BASIN — a reservoir which temporarily contains stormwater runoff and releases it gradually into a watercourse or stormwater drainage system.

DETENTION VOLUME — the volume of runoff that is captured and then infiltrated, evaporated, reused, or released into the waters of this commonwealth at a controlled rate.

DEVELOPER — any person who undertakes land disturbance activities as defined in this Part.

DEVELOPMENT SITE (SITE) — see "project site."

DISCONNECTED IMPERVIOUS AREA (DIA) — an impervious or impermeable surface which has its stormwater runoff 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.²

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

DRAINAGE EASEMENT — a right granted in perpetuity by a landowner to a grantee, allowing the use of private land for stormwater management purposes.

EARTH DISTURBANCE ACTIVITY — a construction or other human activity which disturbs or exposes the underlying soil, including but not limited to clearing and grubbing; grading; excavations; embankments; road maintenance; building construction; and the moving, depositing, stockpiling, or storing of soil, rock or earth materials. The term includes but is not limited to major and minor land disturbance activities.

EROSION — the natural process by which the surface of the land is worn away by water, wind or chemical action.

² Editor's Note: Appendix B is included at the end of this chapter.

EXISTING CONDITION — the initial condition of a project site prior to the proposed construction or earth disturbance.

FEMA — the Federal Emergency Management Agency.

FLOODPLAIN — the lowland and relatively flat areas adjoining inland and coastal waters, including, at a minimum, that area subject to a one-percent or greater chance of flooding in any given year.

FLOODWAY — the channel of the watercourse and those portions of the adjoining floodplains that are reasonably required to carry and discharge the one-hundred-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 one-hundred-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) — refers to soils grouped according to their runoff-producing characteristics. The chief consideration is the inherent capacity of soil bare of vegetation to permit infiltration. 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 (NRCS³).

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 used to cover indoor living spaces, patios, garages, storage sheds and similar structures, parking areas or lots, driveways and any new streets or sidewalks. Decks, parking areas, and driveway areas are not counted as impervious areas if they allow for infiltration.

³ Note: 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/hydrotechref-neh-630.html>; United States Department of Agriculture (USDA), National Resources Conservation Service (NRCS), 1986, Technical Release 55: Urban Hydrology for Small Watersheds, 2nd Edition, Washington, D.C.

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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) — inclusive of any of the following activities:

- (1) The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:
 - (a) A group of two or more buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
 - (b) The division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features;
- (2) Any subdivision of land as defined in the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, 53 P.S. §10107;
- (3) Development in accordance with Section 503(1.1) of the Pennsylvania Municipalities Planning Code.

LAND DISTURBANCE ACTIVITY —

- A. An earth disturbance activity which involves the use of land for the following categories:
 - (1) **MAJOR LAND DISTURBANCE** – the use of land involving:
 - (a) Installation of new impervious or semi-impervious surface that is either in excess of 4,000 square feet or 1/2 of the total lot area;
 - (b) Diversion or piping of any natural or man-made watercourse; or
 - (c) Removal of ground cover, grading, filling, or other excavation in excess of one acre, except for the agricultural use of land when operated in accordance with a farm conservation plan approved by the Cumberland County Conservation District.
 - (2) **MINOR LAND DISTURBANCE** – the use of land involving:
 - (a) The installation of new impervious or semi-impervious surface between 1,000 and 4,000 square feet; or

- (b) Removal of ground cover, grading, filling or excavation between 4,000 square feet and one acre, except for the agricultural use of land when operated in accordance with a farm conservation plan approved by the Cumberland County Conservation District.

B. For the purpose of defining minor and major land disturbances, area calculations are cumulative.

NRCS — the USDA Natural Resources Conservation Service (previously SCS).

PEAK DISCHARGE — the maximum rate of stormwater runoff from a specific storm event.

PERSON — any individual, group of individuals, unincorporated association, partnership, corporation, limited liability partnership, limited liability company and any other form of entity.

PERVIOUS AREA — any area neither defined as impervious nor semi-impervious.

PROJECT SITE — the specific area of land where any regulated activities in the Borough are planned, conducted or maintained.

QUALIFIED PROFESSIONAL — any person licensed by the Pennsylvania Department of State or otherwise qualified by law to perform the work required by this Part 1.

REGULATED ACTIVITIES — shall include but not be limited to any earth disturbance activities, any activities that involve the alteration or development of land or land development in a manner that may affect stormwater runoff as specified in §26-105.

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 — a reservoir designed to retain stormwater runoff, with its primary release of water being through the infiltration of said water into the ground.

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 twenty-five-year return period rainfall would be expected to occur on average once every

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25 years; or stated in another way, the probability of a twenty-five-year storm occurring in any one year is 0.04 (i.e., a four-percent chance).

RUNOFF — any part of precipitation that flows over the land.

SEDIMENT — soils or other materials transported by surface water as a product of erosion.

SEDIMENTATION BASIN — a reservoir designed to retain sediment.

SEMI-IMPERVIOUS SURFACE — a surface such as stone, rock or other material which prevents some percolation of water into the ground.

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 SEWER — a system of pipes, conduits, swales or other similar structures, including appurtenant works, which carries intercepted runoff and other drainage but excludes domestic sewage and industrial waste.

STORMWATER — drainage runoff from the surface of the land resulting from precipitation or snow or ice melt.

STORMWATER MANAGEMENT — a program of controls and measures designed to regulate the quantity and quality of stormwater runoff from a development while promoting the protection and conservation of groundwater and groundwater recharge.

STORMWATER MANAGEMENT ACT — the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. §680.1 et seq., as amended.

STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES — abbreviated as "BMPs" or "SWM BMPs" throughout this Part 1.

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 Cumberland County Stormwater Management Plan for managing stormwater runoff, adopted by the County of Cumberland as required by the Storm Water Management Act, the Act of October 4, 1978, P.L. 864 (Act 167), as amended.

STORMWATER MANAGEMENT SITE PLAN — the plan prepared by the developer, Borough, or other entity indicating how stormwater runoff will be managed

at the development site in accordance with this Part 1. Stormwater management site plan will be designated as "SWM site plan" throughout this Part 1.

STRUCTURE — any man-made object having an ascertainable stationary location on or in land or water, whether or not affixed to the land.

SUBDIVISION — as defined in the Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, 53 P.S. §10107.

USDA — the United States Department of Agriculture.

WATERCOURSE — a permanent or intermittent stream, river, brook, creek, run, channel, swale, pond, lake, or other body of water, whether natural or man-made, for gathering or carrying surface water.

WATERSHED — a region or area drained by a river, watercourse or other surface water of the commonwealth.

WATERS OF THIS COMMONWEALTH — rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs and 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.

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

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-113. through §26-120. (Reserved)

C. Stormwater Management Standards

§26-121. General Requirements.

1. For all regulated activities, unless preparation of a SWM site plan is specifically exempted in §26-122:
 - A. Preparation and implementation of an approved SWM site plan is required, as defined in §26-131.

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- B. No regulated activities shall commence until the Borough issues written approval of an SWM site plan, which demonstrates compliance with the requirements of this Part 1.
2. SWM site plans approved by the Borough, in accordance with §26-132, shall be on site throughout the duration of the regulated activity.
3. The Borough, after consultation with the DEP, may approve measures for meeting the state water quality requirements other than those in this Part 1, provided that they meet the minimum requirements of, and do not conflict with, state law, including but not limited to the Clean Streams Law.
4. 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 Part 1 and to meet all requirements under 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)⁴ Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-2134-008 (2000), as amended and updated.
5. For all regulated activities not exempted by §26-122, implementation of the volume and rate controls in §§26-123 and 26-124 is required.
6. For all new development sites, 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. Similarly, for new development projects taking place in stages, the entire proposed new development plan must be used in determining conformance with this Part 1.
7. Stormwater flows/direct discharges onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification to the adjacent property owner(s). Such stormwater flows shall be subject to the requirements of this Part 1.
8. The design of all facilities over Karst topography shall include an evaluation of measures to minimize adverse effects in accordance with the procedures outlined Part 3, Sinkholes, of this Chapter and in Section 7.4 (Special Management Areas – Karst Areas) of the most current version of the SWM Manual.⁵
9. Storage facilities should completely drain both the volume control and rate control capacities within 72 hours from the end of the design storm, subject to site conditions.

⁴ Note: The Pennsylvania Department of Environmental Protection (DEP), 363-2134-008 (2000), as amended and updated, Erosion and Sediment Pollution Control Program Manual, Harrisburg, PA.

⁵ Note: Pennsylvania Department of Environmental Protection (DEP), No. 363-0300-002 (2006), as amended and updated, Pennsylvania Stormwater Best Management Practices Manual, Harrisburg, PA.

10. The design storm precipitation depth estimates to be used in the analysis of peak rates of discharge should be obtained from the Precipitation-Frequency Atlas of the United States, Atlas 14, Volume 2, United States Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Spring, Maryland, 20910. NOAA's Atlas 14⁶ can be accessed at internet address: <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
11. For all regulated activities, SWM BMPs shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this Part 1 and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Storm Water Management Act.
12. In the interest of reducing the total area of impervious surface, preserving existing features which are critical to stormwater management, and reducing the concentration of stormwater flow, the designer should consider imaginative design concepts and the flexibility provided by the waiver process.
13. Maximum use should be made of the existing on-site natural and man-made stormwater management facilities.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-122. Exemptions.

1. Regulated activities resulting in less than or equal to 1,000 square feet of new impervious surface are exempt from Subpart D, Stormwater Management (SWM) Site Plan Requirements, including §§26-123 and 26-124 of this Part 1. Regulated activities greater than 1,000 square feet and less than or equal to 4,000 square feet of new impervious area may be exempt from the SWM site plan preparation requirements, including §§26-123 and 26-124 of this Part 1, when justification is provided that stormwater impact is minimal.*
2. Regulated activities that create new disconnected impervious areas greater than 1,000 square feet and less than or equal to 4,000 square feet that are proven to meet the seventy-five-foot minimum pervious flow path requirement outlined in Appendix B⁷ are exempt from the SWM site plan preparation requirements, including §§26-123 and 26-124 of this Part 1.*
3. Regulated activities meeting the following parcel size and square footage requirements are exempt from the peak rate control requirements but not the vol-

⁶ Note: United States 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/>.

⁷ Editor's Note: Appendix B is included at the end of this chapter.

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ume control or SWM site plan preparation requirements of this Part 1. These criteria shall apply to the total proposed development even if development is to take place in phases. The effective date of this Part 1 shall be the starting point from which to consider tracts as "parent tracts" in which future subdivisions and respective impervious area computations shall be cumulatively considered.*

New Impervious Area Exemption Criteria for Peak Rate Control

Total Parcel Size (acres)	Total Parcel Size (square feet)	New Impervious Area Exemption (square feet)
<0.25	<10,890	1,500
0.25 — 0.5	10,890 - 21,780	2,500
>0.5	>21,780	5,000

4. Agricultural plowing and tilling are exempt from the SWM site plan requirements, including §§26-123 and 26-124 of this Part 1 provided that the activities are performed according to the requirements of 25 Pa. Code Chapter 102.
5. Forest management and timber operations are exempt from the rate control and SWM site plan preparation requirements of this Part 1, provided that the activities are performed according to the requirements of 25 Pa. Code Chapter 102.

*** NOTE:** The Borough has, at its discretion, the ability to deny exemption from any requirements of this Part 1. Exemption from any requirements of this Part 1 does not convey exemption from any requirements of any other applicable local codes or ordinances (i.e., local building permit requirements).

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-123. Volume Controls.

Water volume controls shall be implemented using the Design Storm Method in Subsection A or the Simplified Method in Subsection B below for all regulated activities not otherwise exempted by §26-122. For regulated activity areas equal to or less than one acre that do not require hydrologic routing to design the stormwater facilities, this Part 1 establishes no preference for either methodology; therefore, the applicant may select either methodology on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology, and other factors.

- A. The Design Storm Method (see Section 8.7 of the most current version of the SWM Manual⁸) is applicable to any size of regulated activity. This method requires detailed modeling based on site conditions.
- (1) Do not increase the post-development total runoff volume for all storms equal to or less than the two-year, twenty-four-hour duration precipitation.
 - (2) For modeling purposes:
 - (a) Existing (predevelopment) nonforested pervious areas must be considered meadow or its equivalent.
 - (b) One hundred percent of existing impervious area, when present, shall be considered meadow in the model for existing conditions.
- B. The Simplified Method (see Section 8.7 of the most current version of the SWM Manual⁹) 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 acre or for projects that require design of stormwater detention or rate control facilities. For new impervious surfaces:
- (1) Stormwater facilities shall be sized to capture at least the first two inches of runoff from all new impervious surfaces.
 - (2) At least the first one inch of runoff from new impervious surfaces shall be permanently removed from the runoff flow, i.e., it shall not be released into the surface waters of this commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.
 - (3) Infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases, at least the first 1/2 inch of the permanently removed runoff should be infiltrated.
 - (4) The second one inch of runoff from new impervious surfaces should be detained using structural and nonstructural BMPs (as outlined in the most current version of the SWM Manual) and released at a controlled rate.
 - (5) Regulated activities eligible under this method are exempt from the requirements of §26-124, Rate Controls.

⁸ Note: Pennsylvania Department of Environmental Protection (DEP), No. 363-0300-002 (2006), as amended and updated, Pennsylvania Stormwater Best Management Practices Manual, Harrisburg, PA.

⁹ Note: Pennsylvania Department of Environmental Protection (DEP), No. 363-0300-002 (2006), as amended and updated, Pennsylvania Stormwater Best Management Practices Manual, Harrisburg, PA.

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(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-124. Rate Controls. (See Section 8.3 of the most current version of the SWM Manual.¹⁰)

1. Areas not covered by a Release Rate Map from an approved Act 167 Stormwater Management Plan:
 - A. Post-development discharge rates shall not exceed the predevelopment discharge rates for the one-, two-, five-, ten-, twenty-five-, fifty-, and one hundred-year 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 predevelopment analysis for one-, two-, five-, ten-, twenty-five-, fifty-, and one hundred-year, twenty-four-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.
2. Areas covered by Release Rate Maps from an approved Act 167 Stormwater Management Plan (see Appendix C):¹¹
 - A. For the one-, two-, five-, ten-, twenty-five-, fifty-, and one hundred-year storms, the post-development peak discharge rates will follow the applicable approved Release Rate Maps (see Appendix C). For any areas not shown on the Release Rate Maps, the post-development discharge rates shall not exceed the predevelopment discharge rates.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-125. Additional SWM and Drainage Requirements.

1. Design Storm for Collection Facilities. The design of stormwater management collection facilities that service drainage areas within the site shall be based upon the peak flow from a twenty-five-year storm frequency event. All developments shall include design provisions that allow for the overland conveyance of the post-development one-hundred-year peak flows through the site without damage to any private or public property.
2. Method of Calculations. Runoff calculations for on-site stormwater conveyance facilities shall be based upon the Rational Method or an acceptable engineering design method, subject to Borough approval.

¹⁰ Note: Pennsylvania Department of Environmental Protection (DEP), No. 363-0300-002 (2006), as amended and updated, Pennsylvania Stormwater Best Management Practices Manual, Harrisburg, PA.

¹¹ Editor's Note: Appendix C is included at the end of this chapter.

3. 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, and the PennDOT Drainage Manual (Publication 584), latest edition. Use of other criteria, methodology, assumptions, references, calculation methods and/or computer modeling may be accepted, provided that detailed design information and programming with references are submitted and approved by the Borough.
4. Coordination with Adjacent Lands. Consideration shall be given to the relationship of the subject property to the drainage pattern of the watershed. The proposed stormwater discharge at the perimeter of the site shall not be beyond the capacity of any existing, immediately contiguous stormwater management facility into which it flows, unless the existing flow at the perimeter of the site already exceeds the capacity of the existing facilities into which it flows and the discharge does not alter the calculated predevelopment discharge characteristics.
 - A. Stormwater shall not be transferred from one watershed to another, unless:
 - (1) The watersheds are subwatersheds of a common watershed which join together within the perimeter of the property;
 - (2) The effect of the transfer does not alter the peak discharge onto adjacent lands; or
 - (3) Easements from the affected downstream landowners are provided.
 - B. Stormwater runoff from the subject property shall flow directly into a natural watercourse or into an existing storm sewer system, or onto adjacent properties in a manner similar to the runoff characteristics of the predevelopment flow.
5. Stormwater Basins. Retention basins and detention basins shall be designed with a minimum one foot of freeboard above the design elevation of the one-hundred-year water surface at the emergency spillway. Additionally, basins shall be designed to safely discharge the full one-hundred-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.
 - A. Stormwater basins located in known sinkhole-prone areas are required to be lined to prevent infiltration into the ground.
 - B. The Modified PULS Method of calculating routing or an acceptable engineering design method, subject to Borough approval, shall be used for detention basins.

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- C. Basins shall be constructed and maintained to ensure the design capacity after sedimentation has taken place.
 - D. Basin discharge outlets shall be designed to release runoff in a condition which reflects predevelopment characteristics.
 - E. Basins which are not designed to release all stormwater shall be specifically identified as retention basins or permanent pond basins. All other basins shall have provisions for dewatering, particularly the bottom, and shall not create swampy and/or nonmaintainable conditions. Low-flow channels shall be used to dewater the bottom of a basin. A minimum slope of 2% or a paved low-flow channel of at least 1% shall be provided. Discharge structures shall be designed to eliminate the possibility of blockage during operation.
 - F. Basins which are located in or adjacent to a residential zone and viewed by the Borough as a potential hazard to the public safety shall be completely surrounded by a fence or wall not less than four feet in height. The fence or wall shall not have an opening or gap larger than two inches and shall be provided with a self-closing and self-latching gate.
6. Groundwater Recharge System. The use of groundwater recharge systems as a primary rate control method will only be permitted in cases where the applicant has demonstrated that alternative facilities are not possible and the area is not a known sinkhole-prone location. Recharge systems are encouraged for volume control applications.
7. 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:
- A. The maximum water depth (measured from the base to the crest of the emergency spillway) shall not exceed six feet, unless approved by waiver of the Borough.
 - B. The minimum top width of all dams shall be five feet, unless approved by waiver of the Borough.
 - C. The side slopes of earth-fill dams shall not be steeper than three horizontal to one vertical (3:1) on both sides of the embankment.
 - D. Basins without restricted access shall have impoundment areas with side slopes no greater than five horizontal to one vertical (5:1).
 - E. A cutoff trench of impervious material shall be provided under all dams.
 - F. All pipes and culverts through dams shall be reinforced concrete and shall have properly spaced concrete cutoff collars.

- G. All riser pipes shall be reinforced concrete.
 - H. 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 feet above the one-hundred-year water surface and/or one foot above the five-hundred-year water surface. If basement or underground facilities are proposed, detailed calculations addressing the effects of stormwater ponding on the structure and waterproofing and/or floodproofing design information shall be submitted for approval. The Borough may, upon recommendation of the Borough Engineer, impose additional requirements on earth-fill dams for the safety and welfare of the Borough.
8. Capacities. The capacities of the pipes, gutters, inlets, culverts, outlet structures, and swales shall consider all possible hydraulic conditions. The following are minimum design standards:
- A. Grass swales and roadside gutters shall consider both the channel velocity and stability.
 - B. 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, and the PennDOT Drainage Manual (Publication 584), latest edition.
 - C. The "n" factors for corrugated metal pipe shall be based upon the manufacturer's standard.
 - D. The velocity to be used in the design of any piped stormwater conveyance system shall be a minimum of 2 1/2 feet per second.
 - E. 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, and the PennDOT Drainage Manual (Publication 584), latest edition. If acceptable information is not available, inlets in nonponding areas shall be designed for a maximum capacity of five 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.

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9. Stormwater Flow Along Streets and Access Drives. Inlets shall be along the curblines 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-year storm frequency with a five-minute duration shall not exceed three inches in a swale condition, two inches in a gutter condition, and one-half inch across intersections and travel lanes. In no case shall inlets be spaced more than 600 feet apart and function at less than 65% efficiency based on the criteria in the PennDOT Design Manual.
10. Manhole Locations. Manholes shall not be spaced more than 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.
11. Alignment Requirements. If less than a forty-eight-inch diameter, curves in pipes or box culverts without an inlet or manhole are prohibited. T-joints, elbows, and wyes are always prohibited.
12. Minimum Pipe Size. Stormwater management pipe collection and conveyance systems shall have a minimum diameter of 15 inches.
13. Material Specifications. All materials and installations must be approved for use by the Borough Engineer and comply with Pennsylvania Department of Transportation Publication 408, latest edition.
14. Surface Flow Characteristics. The maximum swale, gutter, or curb velocity of stormwater 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:
 - A. It neither aggrades or degrades beyond tolerable limits.
 - B. The channel banks do not erode to the extent that the channel cross section is changed appreciably.
 - C. Sediment bars do not develop.
 - D. Erosion does not occur around culverts and bridges or elsewhere.
 - E. Gullies do not form or enlarge due to the entry of uncontrolled stormwater runoff.
 - F. Grass-Lined Channels.
 - (1) Grass-lined channels shall be considered stable if the calculated velocity does not exceed the allowable velocities shown below:

- (a) Three feet per second where only sparse vegetation can be established and maintained because of shade or soil conditions.
- (b) Four feet per second where normal growing conditions exist and vegetation is to be established by seeding.
- (c) Five 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.
- (d) Six feet per second where there exists a well-established sod of good quality.

(2) 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

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

G. Where the velocity of stormwater 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.

H. 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).

15. Phasing Plans. When applications are submitted in phases, and if temporary facilities are required for construction of a phase, such facilities shall be included in the submitted plans. All phases of development must comply with the provisions of this Part 1. In the event that temporary measures cannot adequately handle the stormwater runoff, the main outfall line shall be included as part of the construction of the proposed phase.

16. Erosion and Sedimentation. All land disturbance facilities shall conform to the requirements of the Cumberland County Soil Conservation District and the Pennsylvania Department of Environmental Protection and with the following provisions:

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- A. No regulated earth disturbance activities within the Borough shall commence until it has approved an erosion and sediment control plan for construction activities.
- B. 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.
- C. 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 or more (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.
- D. 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 Borough. The issuance of an NPDES construction permit [or permit coverage under the statewide general permit (PAG-2)] satisfies the requirements of Subsection 16A.
- E. 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.
- F. The following principles shall be applied to the design plan and construction schedule to minimize soil erosion and sedimentation:
 - (1) Stripping of vegetation, grading or other soil disturbance shall be done in a manner which will minimize soil erosion.
 - (2) Whenever feasible, natural vegetation shall be retained and protected.
 - (3) The extent of the disturbed area and the duration of its exposure shall be kept to a minimum, within practical limits.
 - (4) Either temporary seeding, mulching or other suitable stabilization measures shall be used to protect exposed critical areas during construction.
 - (5) Drainage provisions shall accommodate the stormwater runoff both during and after construction.
 - (6) Soil erosion and sedimentation facilities shall be installed prior to any on-site grading.

- (7) The design plan and construction schedule shall incorporate measures to minimize soil erosion and sedimentation.
 - (8) Retention and/or detention basins and water-carrying facilities shall be stabilized in accordance with current engineering and Soil Conservation Service practices.
- 17. Floodplains. All stormwater management plans shall conform with the floodplain standards specified in Chapter 8 of this Code (Floodplains).
- 18. Easements. When considered appropriate, easements shall be provided where stormwater 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 20 feet and shall be adequately designed to provide area for the collection and discharge of water; the maintenance, repair, and reconstruction of the drainage facilities; and 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 stormwater management facilities.
- 19. Ownership and Maintenance of Stormwater Management Facilities. The intent of these regulations is to provide private ownership and maintenance of stormwater management facilities, erosion and sedimentation control facilities and floodplain control facilities. Under no circumstances does the Borough intend to accept dedication of erosion control and sedimentation basins. The Borough does not encourage the dedication of stormwater management facilities that are located outside public street rights-of-way. Where the stormwater management plan proposes that the Borough own or maintain a stormwater management facility, a description of the methods, procedures and the extent of maintenance shall be described in such an offer. Maintenance of all stormwater management facilities during development shall be the sole responsibility of the developer and shall include but not be limited to:
 - A. Removal of silt from all basins, traps or other structures or measures when 30% of capacity is filled with silt;
 - B. 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;
 - C. Establishment or reestablishment of vegetation by seeding and mulching or sodding of scoured areas or areas where vegetation has not successfully been established;

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- D. Installation of necessary controls to correct unforeseen problems caused by storm events within designed frequencies;
 - E. Removal of all temporary measures and installation of permanent measures upon completion of the project; and
 - F. Requirements of the Pennsylvania Department of Environmental Protection, Chapter 102 regulations. Ownership of all stormwater management facilities after construction shall be the sole responsibility of the developer or the private landowner as set forth in the plan. The only stormwater management facilities which are to be controlled by the Borough shall be those facilities which have been offered for dedication and accepted for dedication by the Borough. Future offers for dedication can only be made for facilities which meet current Borough specifications.
20. Post-construction Stormwater Runoff Controls for New Development and Redevelopment, Including Operations and Maintenance of Stormwater BMPs. All activities shall comply with the following post-construction runoff control requirements:
- A. No regulated earth disturbance activities within the Borough shall commence until it has approved a plan which demonstrates compliance with state water quality requirements after construction is complete.
 - B. The BMPs must be designed to protect and maintain existing uses (e.g., drinking water use, cold water fishery use) and maintain the level of water quality necessary to protect those uses in all streams, and to protect and maintain water quality in special-protection streams, as required by statewide regulations at 25 Pa. Code Chapter 93 (collectively referred to herein as "state water quality requirements").
 - C. To control post-construction stormwater impacts from regulated earth disturbance activities, state water quality requirements can be met by BMPs, including site design, which provide for replication of preconstruction stormwater infiltration and runoff conditions, so that post-construction stormwater discharges do not degrade the physical, chemical or biological characteristics of the receiving waters. As described in the DEP Comprehensive Stormwater Management Policy (No. 392-0300-002, September 28, 2002), this may be achieved by the following:
 - (1) Infiltration: replication of preconstruction stormwater infiltration conditions;
 - (2) Treatment: use of water quality treatment BMPs to ensure filtering out of chemical and physical pollutants from the stormwater runoff; and

- (3) Stream bank and streambed protection: management of volume and rate of post-construction stormwater discharges to prevent physical degradation of receiving waters (e.g., from scouring and erosion).
- D. The DEP has regulations that require municipalities to ensure design, implementation and maintenance of BMPs that control runoff from new development and redevelopment (hereinafter, "development") after regulated earth disturbance activities are complete. These requirements include the need to implement post-construction stormwater BMPs with assurance of long-term operations and maintenance of those BMPs.
- E. 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 Borough. The issuance of an NPDES construction permit [or permit coverage under the statewide general permit (PAG-2)] satisfies this requirement.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

D. Stormwater Management (SWM) Site Plan Requirements

§26-131. Plan Requirements.

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

- A. General; Structural Prohibition. A land disturbance activity, as defined in this Part 1, shall not be initiated until a stormwater 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 stormwater 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 stormwater management facility.
- B. Application Procedure.
 - (1) All applications for a stormwater 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 Chapter 22, Subdivision and Land Development, of this Code. Action on the stormwater management permit will be made in conjunction with the preliminary plan under Chapter 22.
 - (2) All applications for a stormwater management permit, the activity for which does not constitute a subdivision or land development, shall

conform with the following procedures. An application for a stormwater management permit shall be submitted to the Borough-designated representative who has been authorized to receive applications, at the Borough of Mechanicsburg Building, on any business day.

- (3) The Borough shall forward the application to the Borough Engineer for review.
- (4) The Borough Engineer shall, within 60 days from the municipal receipt of an application, issue a permit (see Appendix D)¹² or disapprove the application and transmit the decision, in writing, to the applicant and the Mechanicsburg Borough Council. Failure of the Borough-designated representative to render a decision and communicate it as prescribed above shall not be deemed an approval.
- (5) A notice of disapproval shall cite the reasons for disapproval.

C. Application Requirements.

- (1) **Minor Land Disturbance.** An application for a stormwater management permit for a minor land disturbance, as defined in this Part 1, shall include one completed copy of the application for a minor land disturbance (see Appendix D) and a filing fee in the amount specified in the fee schedule as established by resolution or ordinance of the Borough Council.
- (2) **Major Land Disturbance.** An application for a stormwater management permit for a land disturbance activity, as defined in this Part 1, shall include the following items:
 - (a) One completed copy of the application for a Stormwater Management permit (see Appendix D).
 - (b) Four copies of the stormwater management plan and associated narrative or report:
 - [1] One copy to the Borough of Mechanicsburg.
 - [2] One copy to the Borough Engineer.
 - [3] One copy to the County Conservation District.
 - [4] One copy to the County Planning Commission/Office.
 - (c) A filing fee in the amount specified in the fee schedule as established by resolution or ordinance of the Borough Council.

¹² Editor's Note: Appendix D is included at the end of this chapter.

- (d) A performance bond, when applicable.
 - (e) Liability insurance, when applicable.
- D. Stormwater Management Plan Contents. Stormwater 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 10 feet, 20 feet, 30 feet, 40 feet, 50 feet, or 100 feet to the inch. Profile plans shall maintain a ratio of one to 10 (1:10) vertical to horizontal.
 - (b) The sheet size shall be a maximum of 36 x 24 inches. If the plan is prepared in two or more sections, a key map showing the location of the sections shall be placed on each sheet. If more than one sheet is necessary, each sheet shall be numbered to show the relationship to the total number of sheets in the plan (e.g., sheet one of five).
 - (c) Plans shall be legible in every detail.
 - (d) The name and address of the landowner, applicant, and individual who prepared the plan.
 - (e) The plan date and the date of latest revision to the plan, North point, graphic scale and written scale.
 - (f) A location map, drawn to scale, relating the property to at least two intersections of existing road center lines, including the approximate distance to the intersection of the center lines of the nearest existing street intersection.
 - (g) A note on the plan indicating any area that is proposed to be offered for dedication to the Borough. Any area that is subjected to an easement and not to be offered for dedication shall be identified, along with a statement that the Borough is not responsible for the maintenance of any area not dedicated to and accepted for public use.
 - (h) A 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 1 (see Appendix E).¹³

- (2) Existing Features.
 - (a) Tract boundaries, showing distances, bearings and curve data, as located by field survey or deed plotting, the total acreage of the tract, and the total acreage of the project if less than the entire tract.
 - (b) Existing contours, at a minimum vertical interval of two feet for land with an average natural slope of 4% or less and at a minimum vertical interval of five 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) The names of all owners of all immediately adjacent land, the names of all proposed or existing developments immediately adjacent, and the locations and dimensions of any streets or easements shown thereon.
 - (d) The 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 200 feet from the property.
 - (e) The size, slope capacity, material, elevation and condition of the existing stormwater management system and any other facility that may be used to convey storm flows.
 - (f) Soil types as designated by the United States Department of Agriculture, Soil Conservation Service, Soil Survey of Cumberland County.
 - (g) Designation of the location of on-site and off-site subwatersheds.
 - (h) Designation of the location of the time of concentration for the on-site and off-site subwatersheds.
- (3) Proposed Features.

¹³ Editor's Note: Appendix E is included at the end of this chapter.

- (a) The proposed land use, total number of lots and dwelling units, and extent of commercial, industrial or other nonresidential 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, stormwater management facilities, utilities, and other significant features. This information shall be provided to the detail necessary to construct the facilities.
 - (c) Proposed changes to the 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 foot vertical intervals for slopes of 10% or less and at vertical intervals of five feet for more-steeply sloping land.
 - (e) Plans and profiles of proposed stormwater 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 stormwater management system and any 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 subwatersheds.
 - (i) Designation of the location of the time of concentration for the on-site subwatersheds.
- (4) Written Report and Calculations.
- (a) Calculations, assumptions, criteria, methodology and references used in the design of stormwater management facilities, the establishment of capacities, and the predevelopment and post-development peak discharge.

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- (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 for detention or retention basins which hold two acre-feet or more of water or which have an embankment that is six 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 backfilling procedures and soil treatment techniques as required to protect the improvements or structures. The following requirements apply to all proposed groundwater recharge methods of rate and volume control, such as seepage pits, beds, trenches, bioretention areas and subsurface infiltration:
 - [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.
- (d) A 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) A 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 stormwater management facilities, which shall include the following:
 - [1] A 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 Borough shall have the right to:
 - [a] Inspect the facilities at any time.
 - [b] Require the private entity to take corrective measures and assign the private entity reasonable time periods for any necessary action.
 - [c] Authorize maintenance to be done by the Borough or an agent or contractor of the Borough and the lien-ing 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 Bor-ough, it must include an acknowledgment of its formal ac-ceptance of the responsibility.
- [6] This document shall be recorded in the office of the Re-corder of Deeds for Cumberland County 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 occu-pancy permit for any stormwater management facility proposed within the right-of-way of any state road.
- (g) Acknowledgment that an NPDES DEP permit or other soil ero-sion and sediment pollution control approval is not required by law, or, if such approval is required by law, then a true and cor-rect copy of such approval shall be provided to the Borough.
- (h) Notification of approval from the applicable state and federal agencies for any proposed encroachment into a regulated flood-way or wetland area.
- (i) A schedule for installation of the control measures and devices. In all cases, the proposed stormwater management devices must be completed prior to the construction of additional impervious areas.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-132. Plan Review.

1. The SWM site plan shall be reviewed by the Borough Engineer for the Borough for consistency with the provisions of this Part 1. After review, the Borough Engineer shall approve or disapprove the SWM site plan. If it is recommended to disapprove the SWM site plan, the Borough Engineer shall state the reasons for the disapproval in writing. The Borough Engineer also may approve the SWM site plan with conditions and, if so, shall provide the acceptable conditions for approval in writing. The SWM site plan review shall be completed within the time allowed by the Municipalities Planning Code for reviewing subdivision plans.
2. For SWM site plans that do not require subdivision and land development approval, the Borough Engineer shall notify the applicant, in writing, within 60 calendar days whether the SWM site plan is approved or disapproved. If the SWM site plan involves a subdivision and land development plan, the notification period is 90 days. If a longer notification period is provided by other statute, regulation, or ordinance, the applicant will be so notified by the Borough Engineer. If the Borough Engineer disapproves the SWM site plan, the Borough shall cite the reasons for disapproval in writing.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-133. Schedule of Inspections.

1. 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 Borough Engineer so that an inspection schedule can be coordinated with the construction schedule. The Borough Engineer shall be notified two 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 Borough 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 stormwater management facilities at such times as specified by the Borough.
 - C. Upon installation of permanent stormwater management facilities.

- D. Upon completion of any final grading, vegetative control measures or other site restoration work done in accordance with the permit.
2. 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.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-134. Performance Guaranty.

1. The Borough may, prior to issuing a stormwater management permit, require a performance guaranty for stormwater detention and/or retention basins, erosion control facilities, and other drainage facilities which may adversely affect adjacent properties, streets or other public improvements.
2. Where required, the developer shall file with the Borough Council financial security in an amount sufficient to cover the costs of the stormwater management facilities. The administration of the financial security shall comply with the financial security provisions of Chapter 22, Subdivision and Land Development, of this Code.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-135. Liability.

The degree of stormwater management sought by the provisions of this Part 1 is considered reasonable for regulatory purposes. The issuance of permits by the Borough, its officers, or employees shall not be deemed to relieve the developer of responsibility, if any such responsibility exists, to those adversely affected by the drainage of water. Further, the Borough, through the issuance of a permit, assumes no responsibility to either the developer or the adjoining property owner affected by the drainage of water. Additionally, neither issuance of the permit nor compliance with the provisions hereto shall constitute a representation, guaranty or warranty of any kind by the Borough of Mechanicsburg or by any official or employee thereof and shall create no liability, nor shall any conditions imposed by the Borough relieve any person from any responsibility for damage otherwise imposed by law nor impose any liability upon the Borough or its officers, appointed professionals, or employees for damages to persons or property.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

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§26-136. Maintenance Guaranty.

The Borough may, prior to issuing a stormwater management permit, require the applicant to submit a maintenance guaranty for the structural integrity as well as function of any stormwater management facility for a term not to exceed 18 months from the date of acceptance of dedication by the Borough Council. Said guaranty shall not exceed 15% of the actual cost of installation of said improvements and shall be of the same type of financial security as required in this Part 1.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-137. 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 the Borough, shall require a new permit; except that the Borough Engineer may authorize modification, provided that such modifications do not:

- A. Alter the stormwater management facilities in a manner which significantly affects the discharge of stormwater to an adjacent property; or
- B. Significantly relocate a major stormwater management facility within the project.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-138. Resubmission of Disapproved Stormwater Management Site Plans.

A disapproved SWM site plan may be resubmitted, with the revisions addressing the Borough Engineer's concerns, in accordance with this Subpart D. The applicable review fee must accompany a resubmission of a disapproved SWM site plan.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-139. Authorization to Construct and Term of Validity.

In circumstances where no subdivision or land development plan is required, the Borough Engineer's approval of an SWM site plan authorizes completion of the regulated activities contained in the SWM site plan for a maximum term of validity of five years following the date of approval. Terms of validity shall commence on the date the Bor-

ough Engineer signs the approval for an SWM site plan. In the case of a required subdivision or land development plan, the maximum term of validity shall be five years following the date of preliminary plan approval by the Borough Council. If an approved SWM site plan is not completed according to §26-140 within the term of validity, then the Borough may consider the SWM site plan disapproved and may revoke any and all permits issued by the Borough. SWM site plans that are considered disapproved by the Borough shall be resubmitted in accordance with §26-131 of this Part 1.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-140. As-Built Plans, Completion Certificate and Final Inspection.

1. The applicant shall be responsible for providing as-built plans of all SWM BMPs included in the approved SWM site plan. The as-built plans and an explanation of any discrepancies with the construction plans shall be submitted to the Borough within 30 calendar days of project completion or, in the case of dedicated public improvements, prior to acceptance of the improvements by the Borough Council.
2. 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.
3. After receipt of the as-built plan, the Borough may conduct a final inspection.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

E. Operation and Maintenance

§26-141. Responsibilities of Developers and Landowners.

1. The Borough Engineer shall make the final determination on the continuing maintenance and inspection responsibilities prior to final approval of the SWM site plan. The Borough Engineer may require dedication of such facilities as part of the requirements for approval of the SWM site plan. Such requirement is not an indication that the Borough will accept the facilities. The Borough reserves the right to accept or reject the ownership and operating responsibility for any portion of the stormwater management controls. Prior to acceptance by the Borough, all newly installed storm sewer mains and lines shall be inspected by the Borough Engineer, and the person offering dedication shall pay the fee established in the amount and according to the formula set forth in the applicable ordinance or resolution.

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2. 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.
3. The operation and maintenance plan shall be recorded as a restrictive deed covenant that runs with the land.
4. The Borough may take enforcement actions against an owner for any failure to satisfy the provisions of this Subpart E.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-142. Operation and Maintenance Agreements.

The owner is responsible for operation and maintenance of the SWM BMPs. If the owner fails to adhere to the operation and maintenance agreement (see the sample operations and maintenance agreement in Appendix A),¹⁴ the Borough may perform the services required and charge the owner appropriate fees. Nothing herein shall be construed to place a duty or obligation upon the Borough to perform any services or repairs. Non-payment of fees may result in a lien against the property or other judicial action.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

F. Fees and Expenses

§26-151. Fees and Expenses.

The Borough may include all costs incurred in the review fee charged to an applicant.

- A. The review fee may include but not be limited to costs for the following:
 - (1) Administrative/clerical processing.
 - (2) Review of the SWM site plan and reports by Borough consultants.
 - (3) Attendance at meetings.
 - (4) Inspections.
- B. Payments in Lieu of Stormwater Management Facilities.

¹⁴ Editor's Note: Appendix A is included at the end of this chapter.

- (1) Where the application of the standards and requirements of this Part 1 would result in unique and undue hardship to a particular person or particular site, or where the Borough and Borough Engineer determine that the intent of this Part 1 would better be accomplished, the Borough may, in its sole discretion, require the payment of a fee in lieu of compliance with the provisions of this Part 1. In determining whether a fee may be imposed by the Borough in lieu of compliance with the provisions of this Part 1, the Borough shall consider, where relevant, the following criteria:
 - (a) The amount of impervious area to be added to the site.
 - (b) The relationship of such impervious areas to property lines.
 - (c) The area available for on-lot stormwater management facilities.
 - (d) The capacity and condition of receiving channels.
 - (e) The location of existing or proposed stormwater management facilities which would affect, or be affected by, development of the site.
 - (f) Such other information as the person proposing development or the Borough may deem relevant.
 - (g) Where it has been determined by the Borough that a fee may be paid in lieu of compliance with the provisions of this Part 1, the following procedures shall be followed:
 - [1] The amount of the fee, as established by resolution of the Borough Council, shall be for each square foot of impervious material to be added to the site.
 - [2] The fee must be paid to the Borough prior to issuance of any permits.
 - [3] All money paid to the Borough in this manner shall be kept in a capital reserve fund. Money in such capital reserve fund must be used only for the acquisition of land, construction of facilities, or maintenance of facilities for stormwater management purposes.
 - [4] Funds collected pursuant to this section shall be designated as collected from the watershed district in which the proposed development is to occur and shall be expended solely for stormwater management facilities in that district. Thereafter, monies expended from the fund for

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stormwater management facilities in any one district may not exceed monies collected from that district.

- [5] The provisions of these regulations governing the setting and collection of fees in lieu of construction of facilities shall not be utilized until the Borough has established a capital reserve fund.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

G. Prohibitions

§26-161. Prohibited Discharges and Connections.

1. Any drain or conveyance, whether on the surface or subsurface, which allows any nonstormwater discharge, including but not limited to sewage, process wastewater, washwater, ammonia, chlorine, petroleum products (gasoline, fuel oil, etc.), pesticides, pollutants and other hazardous materials, to enter the waters of the commonwealth is prohibited.
2. Handling and disposal of all materials and wastes shall comply with all federal and state requirements. Structural and nonstructural BMPs, in accordance with Chapters 5 and 6 of the most current version of the SWM Manual, shall be implemented where necessary to preserve the quality of stormwater runoff.
3. Discharges to waters of the commonwealth which are not composed entirely of stormwater shall be prohibited, except:
 - A. As provided in Subsection 5 below; and
 - B. Discharges allowed under a state or federal permit.
4. No person shall allow, facilitate or cause to allow any stormwater discharge into the Borough's separate storm sewer system which is not composed entirely of stormwater, except:
 - A. As provided in §26-151; or
 - B. Discharges allowed under a state or federal permit.
5. The following discharges are authorized unless they are determined to be significant contributors to pollution of the waters of this commonwealth:
 - A. Discharges from fire-fighting activities.
 - B. Potable water sources, including waterlines.

- C. Irrigation drainage.
 - D. Air-conditioning condensate.
 - E. Springs.
 - F. Water from crawl space pumps.
 - G. Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used.
 - H. Flows from riparian habitats and wetlands.
 - I. Uncontaminated water from foundations or from footing drains.
 - J. Lawn watering.
 - K. Dechlorinated swimming pool discharges.
 - L. Uncontaminated groundwater.
 - M. Water from individual residential car washing.
 - N. Routine external building washdown (which does not use detergents or other compounds).
6. In the event that the Borough Engineer or DEP determines that any of the discharges identified in Subsection 5, significantly contribute to pollution of the waters of this commonwealth, the Borough or DEP will notify the responsible person(s) to cease the discharge.
7. Cessation of Discharge. Upon notice provided by the Borough under §26-174, the discharger will have a reasonable time, as determined by the Borough, in its sole discretion, to cease the discharge consistent with the degree of pollution caused by the discharge.
8. Discharge Liability to Remain Unaffected. Notwithstanding the provisions of Subpart F, nothing in this Part 1 shall be construed to absolve, abrogate, discharge or release any liability of a discharger under any local, state or federal law or any regulation promulgated thereunder.
9. Connection Not Permitted. No person shall allow, facilitate or cause to allow any stormwater discharge into the Borough's separate storm sewer system which is not composed entirely of stormwater, except:
- A. As provided in this section; or

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B. Discharges allowed under a state or federal permit.

10. Commercial or Industrial Connections Prohibited. No drain or conveyance shall be connected from a commercial or industrial land use to the separate storm sewer system unless upon prior approval by the Borough and upon the further condition that such connection shall be documented in plans, maps or equivalent records placed on file with the Borough.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-162. Roof Drains and Sump Pumps.

Roof drains and sump pumps shall not discharge to any impervious area, if site conditions permit.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-163. 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 the Borough.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

H. Enforcement and Penalties

§26-171. Right of Entry.

Acceptance of a permit shall constitute irrevocable consent to the Borough, its officials, employees, Engineer, consultants and contractors, to enter the premises to perform any act necessary to ensure compliance with this Part 1, 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 Borough to do or perform any of the foregoing.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-172. Inspections.

1. Upon presentation of proper credentials, duly authorized representatives of the Borough may enter at reasonable times upon any property within the municipality to investigate or ascertain the condition of the subject property in regard to any aspect regulated by this Part 1, Acceptance of a permit shall constitute irrevocable consent to the Borough, its officials, employees, Engineer, consultants and contractors, to enter the premises to perform any act necessary to ensure compliance with this Part 1, 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 Borough to do or perform any of the foregoing.
2. SWM BMPs must be inspected by the landowner, or the owner's designee (including the Borough Engineer for dedicated and owned facilities), according to the following list of minimum frequencies or as otherwise specified by the Borough. All inspection reports shall be submitted to the Borough Engineer within 30 days of the inspection.
 - A. Annually for the first five years.
 - B. Once every three years thereafter.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-173. Enforcement.

1. 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 §26-122.
2. Inspections regarding compliance with the SWM site plan during project construction are a responsibility of the Borough.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-174. Suspension and Revocation.

Any person, partnership or corporation, being the owner of land on which a land disturbance activity, as defined in this Part 1, has occurred or is engaged, or any person, partnership or corporation who or which has or is engaged in performing, causing or conducting a land disturbance activity, shall comply with the provision of this Part 1 and the stormwater management permit. Any land disturbance conducted in violation of this Part 1 or the stormwater management permit is hereby declared a public nui-

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

- A. Suspension of a stormwater management permit.
 - (1) Any permit issued under this Part 1 may be suspended by the Borough based upon:
 - (a) The noncompliance with or failure to implement any provision of the stormwater management plan;
 - (b) A violation of any provision of this Part 1 relating to the project; or
 - (c) 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.
 - (2) Proceeding With Work. Under the suspension of a permit, only such work as the Borough 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 Borough when:
 - (a) The Borough has inspected and approved the corrections to the stormwater management facilities or the elimination of the hazard or nuisance; and
 - (b) The Borough is satisfied that the violation of this Part 1 has been corrected.
 - (3) A permit will not expire while under suspension or while noncompliance exists with the permit.
- B. Revoke a stormwater management permit.
 - (1) Based upon a report from the Borough Engineer that the existing site condition or further construction is likely to endanger property or create hazardous conditions, the Borough may:
 - (a) Revoke a permit.
 - (b) Require protective measures to be taken and assign a reasonable time period for the necessary action.
 - (c) Authorize protective measures to be done and lien all costs of the work against the property on which work is required.

- (2) A permit which has been revoked cannot be reinstated. The applicant may apply for a new permit in accordance with the processing procedures in §26-138.
- C. Notification of Suspension or Revocation of a stormwater management permit. In the event of a suspension or revocation of a stormwater management permit, the Borough 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 this Part 1 relied upon.
 - (2) 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 Borough has authorized protective measures to be performed at cost to the landowner.
 - (4) Identify the right to request a hearing before the Borough Council if aggrieved by the suspension or revocation.
- D. Civil Remedies. Suits to restrain, prevent or abate a violation of this Part 1 may be instituted in equity or at law by the Borough. 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.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-175. Penalties.

1. Any person who shall violate any of the provisions of this Part 1 or who shall fail to comply with any written notice from Borough of Mechanicsburg which describes a condition of noncompliance shall be guilty of a summary offense and, upon conviction thereof, shall be subject to a fine, payable to Borough of Mechanicsburg, of not more than \$1,000 for each violation, recoverable with costs. In default of payment of the fine, such person shall be liable to imprisonment for not more than 30 days. After receipt of the written notice, each day's violation of any provision of this Part 1 shall constitute a separate violation.

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2. In addition, the Borough may institute injunctive or any other appropriate action or proceeding of law or in equity for the enforcement of this Part 1, including actions for the abatement of any public nuisance. Any court of competent jurisdiction shall have the right to issue restraining orders, temporary or permanent injunctions, writs or other appropriate forms of remedy or relief.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

§26-176. Appeals.

1. Any person aggrieved by any action of the Borough Engineer or his designee relevant to the provisions of this Part 1 may appeal to the Borough Council, which shall hold a hearing pursuant to the Local Agency Law, 2 P.S. §551 et seq., within 30 days of that action.
2. Any person aggrieved by any decision of the Borough Council relevant to the above appeal of this Part 1 may appeal to the Cumberland County Court of Common Pleas within 30 days of the Borough Council's decision.

(Ord. 1056, 4/20/2004; as amended by Ord. 1106, 1/20/2009; and by Ord. 1121, 3/15/2011)

PART 2

[RESERVED]¹⁵

¹⁵ Editor's Note: Former Part 2, Cedar Run Stormwater Management Plan, adopted by Ord. 1050, 5/21/2003, was repealed by Ord. 1121, 3/15/2011.

PART 3
SINKHOLES

§26-301. Title.

This Part shall be known and may be cited as the "Borough of Mechanicsburg Sinkhole Ordinance."

(Ord. 1087, 10/17/2006)

§26-302. Purpose.

Borough of Mechanicsburg topography may be defined as karst due to the presence of carbonate rock that generally consists of dolomite and limestone. The limestone and dolomite are divided into formations. These formations are susceptible to the development of solution cavities and sinkhole development. Anyone considering developing property or conducting land disturbance activities within the Borough should be aware of the potential geological hazards. The regulations contained herein are intended to minimize the risk of sinkhole occurrence in areas of new development and on lands adjacent to those developments.

(Ord. 1087, 10/17/2006)

§26-303. Governance.

The regulations established by this Part shall apply to all zoning permits, building permits, land disturbance activities, land development and/or subdivision applications pertaining to all uses, (except those owned by Mechanicsburg Borough).

(Ord. 1087, 10/17/2006)

§26-304. Exemptions.

Minor land disturbance activities on a single lot existing on the date of enactment of this Part shall be exempt from the preparation of a carbonate assessment report; however, such applications shall be governed by the regulations established in this Part. This exemption shall be subject to the submission of a letter of certification prepared by a licensed professional that no visible features are present on the land that would indicate a high risk of karst activity that would negatively impact existing structures or proposed structures, roads, utilities, and other features on the tract and within 100 feet of the subject tract. If visible features are present, a carbonate assessment report shall be submitted.

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(Ord. 1087, 10/17/2006)

§26-305. Definitions.

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

CARBONATE ROCK — rock types that are affected by dissolution weathering process caused by slightly acidic groundwater. The most common types of rock that are categorized as carbonate rock are limestone (calcium carbonate) and dolomite (calcium magnesium carbonate).

CAVERN — interconnected solution features within the bedrock surface.

CLAY LINER — fine-grained soil that is used in the construction of a liner that limits the rate of surface water intrusion into the subsurface.

CLOSED DEPRESSION — a bowl-shaped depression in the land surface characterized by internal drainage. A ghost lake is a closed depression which has visible standing water after a heavy rainfall event.

FAULT — a fracture in bedrock along which movement has taken place.

FINE-GRAINED SOIL — materials that predominantly consist of silt and clay-size particles.

HAZARDOUS MATERIALS (CHEMICAL OR BIOHAZARD) — as defined and regulated by the PA DEP or U.S. EPA.

IMPERMEABLE LINERS — a liner system that prohibits the infiltration of surface water into the subsurface.

KARST — the terrain that results from the dissolution of carbonate rock.

KARST ACTIVITY — the dissolution of carbonate rock by slightly acidic groundwater; dissolution weathering, the removal of soluble materials from intact carbonate rock by slightly acidic groundwater.

LAND DISTURBANCE ACTIVITY — the use of land for activities in the following categories: (1) installation of new impervious or semi-impervious surface in excess of 1,000 square feet; or (2) diversion or piping of any natural or man-made watercourse; or (3) removal or disturbance of an area in excess of 4,000 square feet for purposes of ground cover, grading, filling, or other excavation, except for the agricultural use of land when operated in accordance with a farm conservation plan approved by the Cumberland County Conservation District.

LICENSED PROFESSIONAL — a professional civil engineer with expertise in geotechnical engineering or a professional geologist being licensed in their field of expertise by the Commonwealth of Pennsylvania.

LINEAMENTS — aligned topographic features that locate faults and fractures.

MINOR LAND DISTURBANCE ACTIVITIES — the use of land involving:

- A. The installation of new impervious or semi-impervious surface between 1,000 and 4,000 square feet; or
- B. Removal of ground cover, grading, filling or excavation between 4,000 square feet and one acre, except for the agricultural use of land when operated in accordance with a farm conservation plan approved by the Cumberland County Conservation District.

RESIDUAL SOIL — soils derived from the in-place weathering of the underlying bedrock.

SINKHOLE — localized land surface subsidence or collapse due to karst activity. Sinkholes are categorized as solution sinkholes, collapse sinkholes and subsidence sinkholes.

SPRING — where water flows naturally out of the bedrock or the overlying soil mantle on the land surface.

TOXIC AND/OR BIOLOGICAL OR CHEMICAL HAZARDOUS MATERIALS — biological species or chemical compounds which are deemed to be toxic or hazardous by the Pennsylvania Department of Environmental Protection and United States Environmental Protection Agency.

(Ord. 1087, 10/17/2006)

§26-306. Specific Regulations.

- 1. All of the following specific requirements shall apply to all permits, applications and activities described in §26-303, Governance:
 - A. No land disturbance activities shall be conducted and no buildings, structures, road, utilities or stormwater conveyance or management facilities shall be placed in or over sinkholes, closed depressions, lineaments, or faults if unremediated in accordance with the terms of this Part.
 - B. No land disturbance activities shall be conducted and no building, structures, roads, utilities, stormwater management basins and infiltration facilities (where permitted) shall be located no closer than 100 feet from the rim

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of unremediated sinkholes, and no closer than 50 feet from lineaments, faults, or closed depressions.

- C. Outflow from a stormwater management basin and/or post-development stormwater flows shall not be directed to any of the following carbonate features: sinkholes, closed depressions, lineaments, or caverns.
 - D. Lagoons containing substances defined as toxic and/or hazardous by the Pennsylvania Department of Environmental Protection are not permitted.
 - E. Storage and handling areas for hazardous materials must have impermeable surfaces designed to contain materials stored/handled and from which they shall be directed to a predetermined collection point.
 - F. The land application of hazardous materials is not permitted.
 - G. The underground storage of any hazardous materials, except gasoline and diesel fuel, shall be prohibited.
 - H. Groundwater monitoring devices approved by the Borough are required for all facilities handling hazardous materials.
2. Borough Council shall not entertain requests for waivers from the requirements listed above until a carbonate assessment report, as required by this Part, has been supplied to the Planning Commission and the Borough Engineer for their review and comment.

(Ord. 1087, 10/17/2006)

§26-307. Carbonate Assessment Report.

- 1. All applications covered by this Part shall be evaluated by a licensed professional. A list of the licensed professional's qualifications shall be submitted to the Borough prior to the commencement of the site's evaluation. The Borough reserves the right to reject any report that, in its opinion, was authored by an individual or firm which does not possess the background to properly assess the site conditions as they relate to this Part. Further, the carbonate assessment report submitted to the Borough must be signed and sealed by the preparing licensed professional. The Borough may reject any report prepared by a licensed professional whose qualifications have not been approved by the Borough.
- 2. The format and content of the carbonate assessment report shall include but not be limited to the following:
 - A. Statement of purpose. This section shall indicate those specific sink-hole/carbonate regulations being addressed in the report and whether the

applicant is attempting to demonstrate compliance or justify noncompliance with those specific sinkhole/carbonate regulations.

- B. Description of existing conditions. This section shall present a description of existing characteristics of the property with respect to geology, topography, ground and surface water hydrology, soils, vegetation, and existing improvements and uses of property.
 - C. A map, at a scale no smaller than one inch equals 100 feet and a contour interval of two feet, indicating the location of the property and all proposed improvements.
 - D. Description and mapping information for on-site and adjacent properties within 200 feet of the subject tract, indicating the presence of any of the following carbonate features: depressions, fissures, lineaments, faults, ghost lakes, bedrock outcrops, sinkholes, seasonal high-water levels, soil mottling, springs, surface drainage entering the ground, disappearing lakes or streams and caverns.
 - E. A recommended plan for the repair or remediation of surface or subsurface features that may impact the proposed development or land disturbance activity as well as the adjacent improved or unimproved properties within 200 feet of the subject tract.
 - F. The information requested above shall be based upon newly obtained or previously published data and field surveys which may include test borings, excavation of test pits, air-track probes, and geophysical methods.
 - G. A plan indicating the existing and proposed drainage conditions, locations of all proposed private sewage disposal and public sewerage systems, and the location of existing private and public water supplies on adjoining properties (within 100 feet of applicant's property).
 - H. Type, location and phasing of proposed site disturbance and construction, as well as proposed future ownership, utilization and maintenance of the property and the proposed improvements.
 - I. Proposed measures to control potential adverse environmental impacts on groundwater quality and stormwater management resulting from the land disturbance activities or the development and utilization of the property.
 - J. Plans describing the design and construction of the proposed stormwater management facilities proposed for the project. A description of the minimum requirements is outlined below.
3. Stormwater Management.

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- A. All regulated activities must include a stormwater management plan where required and prepared in accordance with Part 1 of this chapter, limiting water runoff and the intrusion of concentrated flow of surface water into the subsurface. Facilities that are required as part of the stormwater management plan include the collection of all runoff from buildings or structures for all uses, other than one single-family detached or one- two-family detached dwelling, into storm drains by watertight gasketed joint conduits or adequately lined drainage swales and the collection of surface water flow on pavements into inlets connected to a watertight gasketed joint stormwater conduit or adequate lined drainage swales. The stormwater conduit must discharge into detention basins or designed infiltration areas.
- B. Approved stormwater conduits include HDPE, PVC, concrete, steel and cast-iron pipe all with watertight rubber gaskets at each joint. The use of corrugated metal pipe is not permitted. Construction of the piping system must follow all other applicable ordinances. Where rock is encountered at or above the planned conduit design grade, the rock shall be undercut and over-excavated a minimum of one foot and backfilled with a compacted fine-grained soil.
- C. All detention basins in areas of sinkhole-prone soil shall be lined, unless specifically identified as an infiltration recharge area. The liner used in a detention basin may consist of a clay liner, a composite synthetic and soil liner or a synthetic liner. The type of liner required shall depend on the condition of the detention basin bottom and the probability of sinkhole occurrence resulting from the construction of the detention basin. The use of a low-flow channel may also be required, depending on the duration and frequency of stormwater discharge into the detention basin. Subsurface detention systems must be in leak proof tanks or piping which follows the same standards as in Subsection 3B. The Borough Engineer shall make the final determination as to what is an acceptable form of liner for the proposed detention basins.
- D. Additional items that must be included in the stormwater management plan include details with regard to the sealing of all pavement curbs and gutters, manholes and inlets.
- E. Infiltration facilities will be permitted only where required by the PADEP as part of the NPDES permit process for construction runoff associated with construction activities. All infiltration facilities shall be engineered by a licensed professional with experience in the field of infiltration in karst areas.

(Ord. 1087, 10/17/2006)

§26-308. Review Process.

1. The carbonate assessment report must be received by the Borough when a plan is submitted for permit application or at the time of preliminary land development or subdivision approval and/or before any land disturbance activities commence. The report may also be submitted at the time of sketch plan review. Three copies of the report shall be submitted to the Borough. The report shall be reviewed by the Borough Engineer and other consultants as designated by the Borough. Based on the review, the Borough may require additional information to be submitted if the Borough concluded that such information would be instrumental in assessing the proposed development as it relates to the sinkhole/carbonate regulations.
2. Approvals Required.
 - A. Where compliance with this section is required before land disturbance activities commence or as part of an application for subdivision or land development approval, the Borough's decision on whether compliance has been achieved shall be made as part of its review of the land disturbance activities, permit, subdivision or land development application.
 - B. Where the application is part of a request for a building or zoning permit, the Zoning/Code Officer shall not issue a permit until he/she receives adequate written substantiation from the appropriate licensed professionals that the terms of this Part and any conditions imposed upon the use of the property at the time of land disturbance activities, subdivision or land development approval are satisfied. In carbonate areas, alteration and development of land may be hazardous with respect to foundation safety of structures, the creation of unstable land as a result of changes in drainage, and the contamination of groundwaters and surface waters. Within the limitations of the information available at the time of the review of individual applications, the Borough shall attempt to make reasonable judgments as to the applicant's compliance with the sinkhole/carbonate regulations. Under no circumstances shall the Borough of Mechanicsburg or any officer or employee of the Borough or consultant to the Borough assume any liability for any damages that may result from an applicant's or any interested party's reliance upon the regulations of the sinkhole/carbonate regulations or any decisions made by the Borough in the administration of such regulations by an applicant, developer, and/or any interested party.

(Ord. 1087, 10/17/2006)

§26-309. Remediation and Record Plans.

1. During the construction process, all encountered sinkholes shall be remediated in accordance with the recommendations of a licensed professional.

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2. Record plans of the remediation work shall be provided to the Borough after completion of the remediation.

(Ord. 1087, 10/17/2006)

§26-310. Enforcement Remedies.

When there is or appears to be a violation of the provisions of this Part, the Borough Zoning or Code Enforcement Officer or his designated representative, in addition to any other remedies, may institute in the name of the Borough any appropriate action at law or in equity to prevent, restrain, correct or abate such violation.

(Ord. 1087, 10/17/2006)

§26-311. Violations and Penalties.

Any person, including any association, partnership, corporation or other entity, who shall violate any provision of this Part or shall fail to comply with any requirements thereof shall be guilty of a summary offense and shall, upon conviction thereof, be sentenced to pay a fine of not more than \$1,000, plus costs of prosecution; in default of payment of said fine and costs not caused by indigency, said person may be subject to imprisonment of up to 30 days. Each day that a violation exists shall constitute a separate offense. All fines collected shall be paid over to the Borough.

(Ord. 1087, 10/17/2006)