

**STORM WATER
MANAGEMENT
ORDINANCE**

ORDINANCE NO. 2006-3

**MILLERSVILLE BOROUGH
LANCASTER COUNTY, PENNSYLVANIA**

2006

BOROUGH OF MILLERSVILLE
Lancaster County, Pennsylvania

ORDINANCE NO. _____

AN ORDINANCE FOR THE MANAGEMENT OF STORM WATER RUNOFF IN THE BOROUGH OF MILLERSVILLE, LANCASTER COUNTY, PENNSYLVANIA, CONTAINING GENERAL PROVISIONS, DEFINING CERTAIN TERMS, ESTABLISHING DESIGN CRITERIA FOR STORM WATER MANAGEMENT FACILITIES, ESTABLISHING DRAINAGE PLAN REQUIREMENTS, PROVIDING FOR INSPECTIONS, FEES AND EXPENSES, AND PROVIDING FOR THE ADMINISTRATION AND ENFORCEMENT OF THIS ORDINANCE, INCLUDING THE IMPOSITION OF PENALTIES

THIS ORDINANCE IS HEREBY ORDAINED AND ENACTED by the Borough Council of the Borough of Millersville, Lancaster County, Pennsylvania, as follows:

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ARTICLE I. GENERAL PROVISIONS

Section 101. Title

This Ordinance shall be known and may be cited as the “Millersville Borough Storm Water Management Ordinance.”

Section 102. Statement of Findings

The Borough Council of Millersville Borough finds that:

- A. Storm water runoff from lands modified by human activities threatens public health and safety by causing decreased infiltration of rain water and increased runoff flows and velocities, which overtax the carrying capacity of existing streams and storm sewers, and greatly increases the cost to the public to manage storm water.
- B. Inadequate planning and management of storm water runoff resulting from development and redevelopment throughout a watershed can also harm surface water resources by changing the natural hydrologic patterns, accelerating stream flows, which increase scour and erosion of streambeds and streambanks, thereby elevating sedimentation, destroying aquatic habitat, and elevating aquatic pollutant concentrations and loadings such as sediments, nutrients, heavy metals and pathogens. Ground water resources are also impacted through loss of recharge.
- C. A comprehensive storm water management program, including reasonable regulation of land development and redevelopment causing loss of natural infiltration, is fundamental to the public health, safety, welfare and protection of the people of Millersville Borough and the people of the Commonwealth, their resources and the environment.
- D. Storm water can be an important water resource by providing ground water recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.
- E. Public education on the control of pollution from storm water is an essential component of successfully addressing storm water.

Section 103. Purpose

The purpose of this Ordinance is to promote health, safety and welfare within Millersville Borough and its watershed by minimizing the harms and maximizing the benefits described in Section 102 of this Ordinance through provisions designed to:

- A. Manage storm water runoff impacts at their source by regulating activities that cause problems.
- B. Provide review procedures, performance standards and design criteria for storm water management and planning.
- C. Utilize and preserve the existing natural drainage systems.

- D. Manage storm water impacts close to the runoff source, which requires a minimum of structures and relies on natural processes.
- E. Focus on infiltration of storm water to maintain ground water recharge, to prevent degradation of surface and ground water quality, and to otherwise protect water resources.
- F. Maintain existing flows and quality of streams and watercourses.
- G. Preserve and restore the flood-carrying capacity of streams.
- H. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code § 93.4(a) to protect and maintain existing uses and maintain the level of water quality to support those uses in all streams, and to protect and maintain water quality in special protection streams.
- I. Prevent scour and erosion of streambanks and streambeds.
- J. Provide for proper operation and maintenance of all permanent storm water management BMPs that are implemented in Millersville Borough.
- K. Provide a mechanism to identify controls necessary to meet NPDES permit requirements.
- L. Implement an illegal discharge detection and elimination program to address non-storm water discharges into Millersville Borough’s municipal separate storm sewer system.

Section 104. Statutory Authority

The Borough Council of Millersville Borough is empowered to regulate land use activities that affect storm water impacts by the authority of the Storm Water Management Act, Act 167 of 1978, P.L. 864 (32 P. S. §§ 680.1—680.17), the Pennsylvania Flood Plain Management Act, Act 166 of 1978, P.L. 851, and pursuant to the express and implied powers granted to the Borough Council under The Borough Code, Act 581 of 1966, P.L. 1656, as amended. The Borough is required to enact this Ordinance to implement the Conestoga River Watershed Storm Water Management Plan by the Storm Water Management Act and the regulations of the Pennsylvania Department of Environmental Protection.

Section 105. Applicability

- A. This Ordinance applies to any regulated activity within Millersville Borough, and all storm water runoff entering the Borough’s municipal separate storm sewer system from lands within the boundaries of the Borough.
- B. Regulated Activities and associated storm water management controls are also regulated under existing state law and implementing regulations. This Ordinance shall operate in coordination with those parallel requirements. The requirements of this Ordinance shall be no less restrictive in meeting the purposes of this Ordinance than State law.
- C. Regulated Activities under this Ordinance shall include the following:
 - Land Development

- Subdivision
 - Construction of new or additional pervious or semi-pervious surfaces.
 - Construction of new buildings or additions to existing buildings.
 - Diversion of piping of any natural or man-made stream channel.
 - Installation of storm water management facilities, BMPs and appurtenances.
- D. The provisions, regulations, limitations, and restrictions of this Ordinance governing maintenance of storm water management facilities shall apply to all storm water management facilities existing on the date of this Ordinance or installed after the date of this Ordinance and shall apply to all persons responsible for maintenance of such storm water management facilities and all persons who own or occupy the land upon such storm water management facilities are located.
- E. The provisions, regulations, limitations, and restrictions of this Ordinance governing grading, erosion and sedimentation control, excavation, and other earth disturbance activities shall apply to all persons performing any such activities within the Borough and to all landowners of lots upon which such activities are performed.
- F. No person shall use or modify any land or watercourse, and no person shall disturb, move, strip or modify the earth, and no person shall build, install or extend any structure or other impervious surface or semi-impervious surface without full compliance with the terms of this Ordinance and other applicable regulations.
- G. It shall be the responsibility of the developer and, if different, the landowner, to insure that all contractors, agents, or other persons comply with all requirements of the Ordinance and with any approved storm water management site plan or storm water management permit.

Section 106. Modification of Ordinance Provisions

The provisions of this Ordinance are intended as minimum standards for the protection of the public health, safety and welfare. The Borough reserves the right to modify or to extend the provisions conditionally in individual cases as may be necessary in the public interest, provided, however, that such variation shall not have the effect of nullifying the intent and purpose of this Ordinance. The list of such modifications and the reasons for them shall be approved by and entered in the minutes of the Borough Council, and a copy of this entry shall be transmitted to the Borough Manager. Modifications shall be clearly defined and entered on the approved Storm Water Management (SWM) Site Plan and signed by the President or Vice-President of the Borough Council.

Section 107. Repealer

Except as otherwise required by law, this Ordinance is intended as a continuation of, and not a repeal of, existing regulations governing the subject matter. To the extent that this Ordinance restates regulations contained in ordinances previously enacted by Council, this Ordinance shall be considered a restatement and not a repeal of such regulations. It is the specific intent of Council that all provisions of this Ordinance shall be considered in full force and effect as of the date such regulations were initially enacted. All ordinances or parts of ordinances inconsistent with the provisions of this Ordinance are hereby repealed. It is expressly provided that the provisions of this Ordinance shall not affect any act done, contract executed or liability incurred prior to its effective date, or affect any suit or prosecution pending or to be instituted to enforce any rights, rule, regulation or ordinance, or part thereof, or to punish

any violation which occurred under any prior zoning regulation or ordinance. In the event any violation has occurred under any prior storm water management regulation or ordinance of Millersville Borough, prosecution may be initiated against the alleged offender pursuant to the provisions of said prior zoning regulation or ordinance, and the provisions and penalties provided in said prior zoning regulation or ordinance shall remain effective as to said violation.

Section 108. Severability

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

Section 109. Compatibility with Other Requirements

Approvals issued and actions taken under this Ordinance do not relieve the Applicant of the responsibility to obtain required permits or approvals for activities regulated by any other code, law, rule, regulation, act or ordinance. Whenever there is a difference between the minimal applicable standards specified herein and those included in other applicable Borough regulations:

- A. Within that portion of the Borough located in a watershed which is part of an approved watershed storm water management plan, the regulations of this Ordinance shall apply.
- B. Within the remainder of the Borough, the more stringent regulation shall apply.

Section 110. Storm Water Management Districts

Millersville Borough shall comply with the applicable provisions of the Conestoga River and Little Conestoga Creek Watershed Act 167 Plans, when enacted by Lancaster County. If the provisions of this Ordinance are sufficient to meet the requirements of the Lancaster County Act 167 Plans, this Ordinance shall be deemed to satisfy the requirement of Section 11(b) of Act 167 without the necessity for reenactment.

Section 111. Borough Liability.

Except as specifically provided by the Pennsylvania Storm Water Management Act, Act of October 4, 1978, P.L. 864, No. 167, as amended, 32 P.S. §680.1 et seq., the making of any administrative decision by the Borough or any of its officials or employees shall not constitute a representation, guarantee or warranty of any kind by the Borough of the practicability or safety of any proposed structure or use with respect to damage from erosion, sedimentation, storm water runoff, flood, or any other matter, and shall create no liability upon or give rise to any cause of action against the Borough and its officials and employees. Council, by enacting and amending this Ordinance, does not waive or limit any immunity granted to the Borough and its officials and employees by the Governmental Immunity Act, 42 Pa. C.S. §8541 et seq., and does not assume any liabilities or obligations.

ARTICLE II. DEFINITIONS

Section 201. General

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

- A. Words used in the present tense include the future tense; the singular includes the plural, and the plural includes the singular; words of masculine gender include the feminine gender; and words of feminine gender include the 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.
- D. The words “used” or “occupied” include the words “intended,” “designed,” “maintained,” or “arranged to be used or occupied.”
- E. The word “person” includes a partnership, firm, association, corporation, organization, trust, estate, company or any other legally recognized entity as well as an individual and the officers of any corporation and the members of any partnership and shall include both singular and plural.
- F. References to codes, Ordinances, resolutions, plans, maps, governmental bodies, commissions or agencies or officials are to codes, Ordinances, resolutions, plans, maps, governmental bodies, commissions or agencies or officials of the Township or the Commonwealth of Pennsylvania as in effect or office from time to time including amendments thereto or revisions or successors thereof, unless the text indicates another reference is intended.

Section 202. Specific Terms.

Accelerated Erosion - The removal of the surface of the land through the combined action of human activities and the natural processes, at a rate greater than would occur because of the natural process alone.

Act 167 Plans - The Plans for managing storm water runoff in the Conestoga River and Little Conestoga Creek watersheds adopted by Berks, Chester and Lancaster County as required under the Storm Water Management Act and known as the Conestoga River Watershed Act 167 Storm Water Management Plan and the Little Conestoga Creek Watershed Act 167 Storm Water Management Plan.

Agricultural Activities - The cultivation of the soil and the raising and harvesting of the products of the soil, including but not limited to, nursery, horticultural, forestry and animal husbandry activities. Construction of new buildings or impervious areas is not considered an agricultural activity.

Alteration - As applied to land, a change in topography as a result of the moving of soil and rock from one location or position to another; the changing of surface conditions by causing the surface to be more or less impervious; or a land disturbance.

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

Best Management Practice (BMP) - Activities, facilities, designs, measures or procedures that control, prevent, remove or reduce pollution and to manage storm water impacts from Regulated Activities to meet State water quality requirements, to promote ground water recharge and to otherwise meet the purposes of this Ordinance. BMPs include, but are not limited to, infiltration, filter strips, low impact design, bioretention, wet ponds, permeable paving, grassed swales, forested buffers, sand filters and detention basins.

Borough - The Borough of Millersville, Lancaster County, Pennsylvania.

Borough Council - The governing body of the Borough of Millersville, Lancaster County, Pennsylvania.

Bridge - An enclosed water carrying structure of one or more barrels having a combined span of eight (8) feet or greater.

Carbonate Geology – Limestone or dolomite bedrock.

Channel - A natural or artificial watercourse with a definite bed and banks which confine and conduct continuously or periodically flowing water.

Channel Erosion - The widening, deepening and headward cutting of small channels and waterways due to erosion caused by moderate to large floods.

Cistern - An underground reservoir or tank for storing rainwater.

Collector - A channel, dike or other conveyance, constructed downslope of an earth disturbance activity for the purpose of collecting runoff from an existing or proposed disturbed area and conveying it to facilities for sediment retention or removal.

Commonwealth - The Commonwealth of Pennsylvania, USA.

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 DEP to administer and enforce all or a portion of the erosion and sediment control program in this Commonwealth. This Ordinance refers specifically to the Lancaster County Conservation District.

Conveyance - The ability of a pipe, culvert, swale or similar facility to carry the peak flow from the design storm.

Coordinated Water Quality Protective Measures -

- A. Legally binding sound land use water quality protective measures coupled with an interest in real estate which expressly provides long-term water quality protection of a watershed corridor.
- B. Sound land use water quality protective measures include: surface or groundwater source protection zones, enhanced storm water management measures, wetland protection zones or other measures which provide extraordinary water quality protection.
- C. Real estate interests include:
 - Fee interests.
 - Conservation easements.

- Government owned riparian parks or natural areas.
- Other interests in land which enhance water quality in a watershed corridor area.

Culvert - A structure with appurtenant works which carries a stream under or through an embankment or fill.

Current - The rate or velocity of flow of water in a stream, floodway or body of water.

Dam - An artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water or another fluid or semifluid, or a refuse bank, fill or structure for highway, railroad or other purposes which does or may impound water or another fluid or semifluid. A dam falls under the requirements of 25 Pa. Code Chapter 105, Dam Safety and Waterway Management if the following is true:

- The contributory drainage area exceeds 100 acres.
- The greatest depth of water measured by the upstream toe of the dam at maximum storage elevation exceeds 15 feet.
- The impounding capacity at maximum storage elevation exceeds 50 acre-feet.

DEP - The Pennsylvania Department of Environmental Protection.

Designated Watershed - A watershed delineated by the DEP and approved by the Environmental Quality Board for which counties are required to develop a watershed storm water management plan.

Design Flood - A specified discharge for which the hydraulic capacity of a structure is designed.

Design Storm - The magnitude and temporal distribution of precipitation from a storm event measured in probability of occurrence (e.g., a 5-year storm) and duration (e.g., 24 hours), used in the design and evaluation of storm water management systems.

Detention - The volume of runoff that is captures and released into the Waters of this Commonwealth at a controlled rate.

Detention Basin - An impoundment structure designed to manage storm water runoff by temporarily storing the runoff and releasing it at a predetermined rate. A detention basin does not fall under the requirements of 25 Pa. Code Chapter 105, Dam Safety and Waterway Management as long as the following provisions are true:

- The contributory drainage area may not exceed 100 acres.
- The greatest depth of water measured by the upstream toe of the dam at maximum storage elevation may not exceed 15 feet.
- The impounding capacity at maximum storage elevation may not exceed 50 acre-feet.

Developer - A person that undertakes any Regulated Activity of this Ordinance.

Development - A construction or other human activity which disturbs the surface of the land, including, but not limited to, clearing and grubbing, grading, excavations, embankments, land development, agricultural plowing and tilling, timber harvesting activities, road maintenance activities, mineral

extraction, and the moving, depositing, stockpiling or storing of soil, rock or earth materials. This term includes redevelopment and is also known as an earth disturbance activity.

Development Site - The parent tract of land where any Regulated Activity in the Borough is planned, conducted or maintained.

Dewatering Zone - The zone within a sediment basin where storm water runoff is held and released in a controlled manner.

Disappearing Stream – A stream in an area underlain by limestone or dolomite which flows underground for a portion of its length.

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

Diversions - A facility, including a channel, terrace or dike constructed upslope of an earth disturbance activity for the purpose of diverting runoff away from an existing or proposed disturbed area.

Downslope Property Line - That portion of the property line of the lot, tract or parcel of land being developed located at the topographically lowest point of the lot, tract or parcel such that some or all overland or pipe flow from the site is directed toward it.

Drainage Conveyance Facility - A storm water management facility designed to transmit storm water runoff, which may include streams, channels, swales, pipes, conduits and storm sewers.

Drainage Easement - A right granted by a landowner to a grantee, allowing the use of private land for storm water management purposes.

Drainage Permit - A permit issued by the Borough after the drainage plan has been approved.

Drainage Plan - The documentation for a storm water management system, if any, to be used for a given development site, the contents of which are established in Section 403 of this Ordinance and which is part of the overall Storm Water Management Site Plan.

Earth Disturbance Activity – See definition for “Development” in this section.

Effective Agricultural Zone – Zoning that allows 1 lot for every 20 or more acres of the parent tract.

Encroachment - A structure or activity which, changes, expands or diminishes the course, current or cross section of a watercourse, floodway or body of water.

Ephemeral Stream – A transient stream, one that flows for a relatively short time.

Erosion - The movement of soil particles by the action of water, wind, glacial ice, other natural forces or chemical action.

Erosion and Sediment Pollution Control Plan - A site-specific plan identifying BMPs to minimize accelerated erosion and sedimentation.

Existing Conditions - The initial condition of a project site prior to proposed construction.

Federal Emergency Management Agency (FEMA) - A federal agency under the Emergency

Preparedness and Response directorate of the U.S. Department of Homeland Security.

Fill - Sand gravel, earth or other material placed or deposited so as to form an embankment or raise the elevation of the land surface.

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

Flood Insurance Rate Map (FIRM) - An official map of a municipality on which FEMA has delineated both the floodplain and the risk premium zones applicable to the municipality.

Floodplain - Any land susceptible to inundation by water from any natural source or as delineated by the Federal Insurance and Mitigation Administration Mapping Hazard Division under FEMA, as being a special flood hazard area and considered to be the 100-year floodway and that maximum area of land that is likely to be flooded by a 100-year flood. It is also the area of inundation which functions as a storage or holding area for floodwater to a width required to contain a base flood of which there is a one percent (1%) chance of occurrence in any given year. The floodplain contains both the floodway and the flood fringe.

Floodplain Management Act – Act of October 4, 1978, P.L. 851, No. 166, as amended at 32 P.S. Section 679.101 et seq., and as may be amended in the future.

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

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

Freeboard - The vertical distance between the water surface elevation experienced during the design flood and the crest elevation of a dam levee, floodwall, tank, basin, diversion ridge or other embankment. The space is required as a safety margin in a pond or basin.

Grade - A slope, usually of a road, channel or natural ground specified in percent and shown on plans as specified in this Ordinance. “To grade” generally means to finish the surface of a roadbed, top of embankment or bottom of excavation.

Grassed Waterway - A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant grasses, used to conduct surface water from cropland.

Ground Water Recharge - Replenishment of existing natural underground water supplies.

Hydrologic Soil Group - A classification of soils by the NRCS into four runoff potential groups, ranging from “A” soils, which are very permeable and produce little runoff, to “D” soils, which are not very permeable and produce much more runoff.

Impervious Surface - A surface that prevents the infiltration of water into the ground. Impervious surfaces include, but are not limited to, structures, buildings, parking areas, driveways, roads, sidewalks and any areas of concrete, asphalt, gravel or crushed stone shall be considered impervious surface. In addition, all other areas as determined by the Borough Engineer to be impervious within the meaning of this definition shall be considered impervious surface.

Impoundment - A retention or detention basin designed to retain storm water runoff and infiltrate it into the ground (in the case of a retention basin) or release it at a controlled rate (in the case of a detention basin).

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

Inlet - A surface connection to a closed drain; a structure at the diversion end of a conduit or the upstream end of any structure through which water may flow.

Intermittent Stream - A body of water flowing in a channel or bed composed primarily of substrates associated with flowing water, which, during periods of the year, is below the local water table and obtains its flow from both surface runoff and groundwater discharges.

Land Development - Any of the following activities:

- A. The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:
 - 1. A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
 - 2. The division or allocation of land or space, 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.
- B. A subdivision of land.
- C. Development in accordance with Section 503 (1.1) of the Municipal Planning Code.

Landowner – The legal or beneficial owner or owners of land including the holder of an option or contract to purchase (whether or not such option or contract is subject to any condition), a lessee if he is authorized under the lease to exercise the rights of the landowner, or other person, having a proprietary interest in land.

Land Disturbance – See definitions for “Development” and “Earth Disturbance Activity” in this section.

Levee - An earth embankment or ridge constructed along a watercourse or body of water to confine water within prescribed limits; the term is also known as a dike.

Lineament - A fracture on the order of tens of kilometers long, usually extending to the basement below sedimentary rock.

Main Stem (Main Channel) - Any stream segment or other runoff conveyance facility used as a reach in

the Conestoga River or Little Conestoga Creek hydrologic model.

Manning Equation or Formula - A method for calculation of velocity of flow, such as feet per second, and flow rate, such as cubic feet per second, in open channels based upon channel shape, roughness, depth of flow and slope. "Open channels" may include closed conduits so long as the flow is not under pressure.

Memorandum of Understanding - An agreement between Millersville Borough and the Lancaster County Conservation District to provide for cooperation between the Conservation District and Millersville Borough officials, to include within its ordinances, and to jointly promote conservation of natural resources within Millersville Borough on lands both public and private, for the purposes of preventing accelerated soil erosion and sedimentation of streams, reducing storm water damage, and promoting the health, safety and general welfare of the residents of Millersville Borough.

Municipal Separate Storm Sewer System (MS4) - A separate storm sewer, including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains, primarily used for collecting and conveying storm water runoff and which includes all of the following:

- A. Owned or operated by a state, city, town, borough, county, district, association or other public body (created by or under State law) having jurisdiction over disposal of sewage, industrial wastes, storm water or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the Federal Act (33 U.S.C.A. § 1288) that discharges to surface waters of this Commonwealth.
- B. Designed or used for collecting or conveying storm water.
- C. Not a combined sewer.
- D. Not part of a POTW.

Municipalities Planning Code (MPC) – The Pennsylvania Municipalities Planning Code, Act of July 1, 1967, P.L. 805, No. 247, as reenacted and amended, 53 P.S. Section 10101 et seq., and as may be amended in the future.

Municipality - Millersville Borough, Lancaster County, Pennsylvania.

National Pollutant Discharge Elimination System (NPDES) - The federal government's system for the issuance of permits under the Clean Water Act, which is delegated to DEP in Pennsylvania.

Natural Drainageway - An existing channel for water runoff that was formed by natural forces.

Natural Resources Conservation Service (NRCS) - The federal agency that provides assistance to private landowners to conserve their soil, water and other natural resources. NRCS works with state, county and local officials to implement their programs.

Nonpoint Source Pollution - A pollution source which is not a point source discharge and which enters a body of water from diffuse origins in the watershed and does not result from discernible, confined or discrete conveyances.

100-Year Frequency Flood - The flood magnitude expected to be equaled or exceeded on the average of once in 100 years; it may also be expressed as the flood having a 1.0% chance of being equaled or exceeded in a given year.

Open Channel - A drainage element in which storm water flows with an open surface and includes, but is not limited to, natural and man-made drainage ways, swales, streams, ditches, canals and pipes flowing partly full.

Outfall - Point source, as described in 40 CFR § 122.2, at the point where the Borough's municipal separate storm sewer system discharges to surface waters of the Commonwealth from a conduit, stream or drain.

Outlet - Points of water disposal from a stream, river, lake, tidewater or artificial drain.

Parent Tract - All contiguous land held in single and separate ownership, regardless of whether such land is divided into one or more lots, parcels, purports or tracts; whether such land was acquired by the landowner at different times or by different deeds, devise, partition or otherwise; or whether such land is bisected by public or private streets or rights-of-way, which was held by the landowner or his predecessor in title on the effective date of this Ordinance.

Parking Lot Storage - Involves the use of impervious parking areas as temporary impoundments with controlled release rates during rainstorms.

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

PennDOT - The Pennsylvania Department of Transportation.

Perennial Stream - A body of water flowing in a channel or bed composed primarily of substrates associated with flowing waters and capable, in the absence of pollution or other man-made stream disturbances, of supporting a benthic macroinvertebrate community which is composed of two or more recognizable taxonomic groups of organisms which are large enough to be seen by the unaided eye and can be retained by a United States Standard No. 30 sieve (28 mesh per inch, 0.595 mm openings) and live at least part of their life cycles within or upon available substrates in a body of water or water transport system.

Permanent Pool - The area within a sediment basin which is designed to be inundated with water at all times.

Permanent Stabilization - Long-term protection of soil and water resources from accelerated erosion.

Pervious Area - Any area not defined as impervious.

Pipe - A culvert, closed conduit or similar structure, including appurtenances, that conveys storm water.

Planning Commission - The planning commission of Millersville Borough, Lancaster County, Pennsylvania.

Pollutant - Any contaminant or other alteration of the physical, chemical, biological or radiological integrity of surface water which causes or has the potential to cause pollution as defined the Clean Streams Law (35 P. S. §§ 691.1—691.1001).

Probable Maximum Flood (PMF) - The flood that may be expected from the most severe combination

of critical meteorologic and hydrologic conditions that are reasonably possible in any area. The PMF is derived from the probable maximum precipitation (PMP) as determined on the basis of data obtained from the National Oceanographic and Atmospheric Administration (NOAA).

Project Site - The specific area of land where any Regulated Activities under this Ordinance located in Millersville 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 the Ordinance.

Rational Formula (Rational Method) - A rainfall-runoff relation used to estimate peak flow.

Record Plan - Where a regulated activity constitutes a subdivision or land development, the Final Subdivision or Land Development Plan is the Record Plan and shall contain information required under this Ordinance. Where a regulated activity does not constitute a subdivision or land development, a Storm Water Management Site Plan is the Record Plan and shall contain information required under this Ordinance and prepared in a form acceptable to the Lancaster County Office of the Recorder of Deeds for recording.

Regulated Activity - Actions or proposed actions that have an impact on storm water runoff and that are specified in Section 105 of this Ordinance as follows:

- Land Development
- Subdivision
- Construction of new or additional pervious or semi-pervious surfaces.
- Construction of new buildings or additions to existing buildings.
- Diversion of piping of any natural or man-made stream channel.
- Installation of storm water management facilities, BMPs and appurtenances.

Replacement - The construction of a new wetland or restoration of a previously destroyed wetland, or both.

Reservoir - A natural or artificial basin, which contains or will contain the water or other fluid or semifluid impounded by a dam.

Restrictive Agricultural Zone – Zoning that allows 1 lot for every 20 acres of the parent tract.

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

Retention Basin - An impoundment in which storm water is stored and not released during the storm event. Stored water may be released from the basin at some time after the end of the storm event through infiltration of said water into the ground.

Return Period - The average interval, in years, within which a storm event of a given magnitude can be expected to recur.

Riser - A vertical pipe extending from the bottom of a pond that is used to control the discharge rate from the pond for a specified design storm.

Rooftop Detention - Temporary ponding and gradual release of storm water falling directly onto flat roof surfaces by incorporating controlled-flow roof drains into building designs.

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

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

Sediment Basin - A barrier, dam, retention or detention basin located and designed to retain rock, sand, gravel, silt or other material transported by water.

Sediment Pollution - The placement, discharge or any other introduction of sediment into the waters of the Commonwealth occurring from the failure to design, construct, implement or maintain control measures and control facilities in accordance with the requirements of this Ordinance.

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

Seepage Pit/Seepage Trench - An area of excavated earth filled with loose stone or similar material, into which storm water runoff is directed for infiltration into the ground.

Semi-Pervious Surface - A surface such as stone, rock or other material which permits some vertical transmission of water into the ground.

Sheet Flow - Runoff that flows over the ground surface as a thin, even layer and not concentrated in a channel.

Skim - To remove the uppermost portion of water within a sediment basin.

Soil-Cover Complex Method - A method of runoff computation developed by the NRCS that is based on relating soil type and land use/cover to a runoff parameter called Curve Number (CN).

Spillway - A depression in the embankment of a pond, basin or dam, which is used to pass a post-development 100-year peak storm flow rate without endangering the structure's safety or integrity.

Stabilization - The proper placing, grading, constructing, reinforcing, lining and covering of soil, rock or earth to insure their resistance to erosion, sliding or other movement.

State Water Quality Requirements - As defined under State regulations found at 25 Pa. Code §§ 93 and 96, protection of *designated* and *existing* uses include the following:

- A. Each stream segment in Pennsylvania has a "designated use," such as "cold water fishery" or "potable water supply," which are listed in Chapter 93. These uses must be protected and maintained.
- B. "Existing uses" are those attained as of November 1975, regardless of whether they have been designated in Chapter 93. Regulated earth disturbance activities must be designed to protect and maintain existing uses 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.
- C. Water quality involves the chemical, biological and physical characteristics of surface water bodies. After regulated earth disturbance activities are complete, these characteristics can be

impacted by addition of pollutants such as sediment, and changes in habitat through increased flow volumes and/or rates as a result of changes in land surface area from those activities. Therefore, permanent discharges to surface waters must be managed to protect the stream bank, streambed and structural integrity of the waterway, to prevent these impacts,

Storage Indication Method - A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage) with outflow defined as a function of storage volume and depth.

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

Storm Sewer - A system of pipes, conduits, swales or other similar structures that convey intercepted runoff and storm water from other sources, but exclude domestic and industrial wastewater.

Storm Water - The runoff reaching the ground surface from precipitation, snow melt runoff and surface runoff and drainage.

Storm Water Management - A program of controls and measures designed to regulate the quantity and quality of storm water runoff from a development while promoting the protection and conservation of surface waters and ground water recharge.

Storm Water Management Act – Act of October 4, 1978, P.L. 864, No. 167, as amended by 32 P.S. Section 680.1 et seq., and as may be amended in the future.

Storm Water Management Facility - Any structure, natural or man-made, that due to its condition, design or construction, conveys, stores or otherwise affects storm water runoff. Such facilities include, but are not limited to, detention and retention basins, open channels, watercourses, road gutters, swales, storm sewers, pipes and infiltration structures.

Storm Water Management Site Plan - The Plan submitted by a developer or his representative that indicates how storm water runoff will be managed at the site of interest, prepared in accordance with Article IV of this Ordinance. Storm Water Management Site Plan will be designated as **SWM Site Plan** throughout this Ordinance.

Stream Enclosure - A bridge, culvert or other structure, in excess of 100 feet in length upstream to downstream that encloses a surface water of the Commonwealth.

Subdivision - The division or redivision of a lot, tract or parcel of land by any means into two (2) or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership, or building or lot development; provided, however, that the division of land for agricultural purposes into parcels of more than ten (10) acres, not involving any new street or easement of access of any residential dwelling, shall be exempted.

Subwatershed Area - The smallest drainage unit of a watershed for which storm water management criteria have been established in an Act 167 Storm Water Management Plan.

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

Time of Concentration (T_c) - The time for surface runoff to travel from the hydraulically most distant

point of the watershed to a point of interest within the watershed. This time is the combined total of overland flow time and flow time in pipes or channels, if any.

TR-20 (calibrated) – The computer-based hydrologic modeling technique adapted to the appropriate watershed for the Act 167 Plan. The model has been “calibrated” to reflect published and observed flow values by adjusting key model input parameters.

Watercourse - A channel or conveyance of surface water, such as a stream or creek, having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

Water Obstruction -

- A. A dike, bridge, culvert, wall, wingwall, fill, pier, wharf, embankment, abutment or other structure located in, along or across or projecting into a watercourse, floodway or body of water.
- B. In the case of ponds, lakes and reservoirs, a water obstruction is considered to be in or along the body of water if, at normal pool elevation, the water obstruction is either in the water or adjacent to and abutting the water’s edge.

Watershed - Region or area drained by a river, watercourse or other body of water, whether natural or artificial.

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

Wetlands - Those areas that are inundated or saturated by surface or ground water at a frequency or 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, ferns and similar areas.

ARTICLE III. DESIGN CRITERIA FOR STORM WATER MANAGEMENT FACILITIES

Section 301. General Requirements

- A. Storm water drainage systems shall be provided to allow unimpeded flow along natural watercourses, except as modified by storm water management facilities or open channels consistent with this Ordinance.
- B. The existing points of concentrated drainage that discharge onto adjacent property shall not be relocated and shall be subject to applicable discharge criteria as contained in this Ordinance.
- C. Where a Development Site is traversed by watercourses other than permanent streams, a drainage easement shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations that may adversely affect the flow of storm water within any portion of the easement. In addition, maintenance and mowing of vegetation within the easement shall be required.
- D. 25 Pa. Code § 105, Dam Safety and Waterway Management, applies to the construction, modification, operation and maintenance of both existing and proposed water obstructions and encroachments throughout the watershed, including work in wetlands.
- E. When it can be shown that, due to topographic conditions, natural drainage ways on the site cannot adequately provide for drainage, open channels may be constructed that conform to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by DEP through the Joint Permit application process, or, where deemed appropriate by DEP, through the General Permit process.
- F. Carbonate Geology - In areas of carbonate geology, a registered professional geologist shall certify the following:
1. No storm water facilities shall be placed in, over or immediately adjacent to the following features:
 - Sinkholes
 - Closed depressions
 - Lineaments in carbonate areas
 - Fracture traces
 - Caverns
 - Intermittent lakes
 - Ephemeral streams
 - Bedrock pinnacles (surface or subsurface)
 2. Storm water management basins shall not be located closer than 100 feet from the rim of sinkholes or closed depressions; nor within 100 feet from disappearing streams; nor shall these basins be located closer than 50 feet from lineaments or fracture traces; nor shall these basins be located closer than 25 feet from surface or identified subsurface pinnacles.
 3. Storm water resulting from land development activities shall not be discharged into

sinkholes.

4. If the developer can prove through analysis that the development site is in an area underlain by carbonate geology, and such geologic conditions may result in sinkhole formations, then the Development Site is exempt from ground water recharge requirements as described in Sections 302 (D) and 304 (G) of this Ordinance. However, the Development Site shall still be required to meet all other hydrologic and water quality management standards as found in this Ordinance.
5. It shall be the developer's responsibility to verify if the Development Site is underlain by carbonate geology. A note certifying such shall be attached to all Storm Water Management (SWM) Site Plans and signed and sealed by the developer's qualified professional as shown in *Appendix 1*.
6. Whenever a storm water facility will be located in an area underlain by carbonate geology, a geological evaluation of the proposed location by a Registered Professional Geologist shall be conducted to determine susceptibility to sinkhole formation. The evaluation may include the use of impermeable liners to reduce or eliminate the separation distances listed in paragraphs (1) and (2) of this section.

Section 302. Storm Water Management Performance Standards

- A. General – The following general standards shall be applied to all development within the Conestoga River and Little Conestoga Creek Watersheds to promote flow attenuation, erosion and sediment control, and flood control:
 1. The developer of any Development Site in the Conestoga River or Little Conestoga Creek Watersheds which does not fall under the exemption criteria in *Appendix 2* shall submit a SWM Site Plan consistent with this Ordinance and the Conestoga River and Little Conestoga Creek Watershed Act 167 Plans to the Borough for review. The exemption criteria in *Appendix 2* shall apply to the total proposed development on a parent tract even if development is to take place in stages.
 2. All storm water management plans shall be designed and certified by individuals registered in the Commonwealth and qualified to perform such duties. All storm water designs, assumptions, methods and data must be presented in a manner acceptable to the Borough.
 3. Where applicable, storm water management facilities shall comply with the requirements of 25 Pa. Code § 105 for water obstructions and encroachments.
 4. Storm water management facilities that involve a state highway are subject to the approval of the PennDOT.
 5. Storm water management facilities located within or affecting the floodplain of any watercourse shall be subject to Section 306 of this Ordinance, the requirements of the Borough Zoning Ordinance, the Borough Subdivision and Land Development Ordinance, or any Ordinance which regulates construction and development within areas of the Borough subject to flooding, and any other applicable requirements under 25 Pa. Code § 106 for floodplain management.

6. Storm water runoff from a Development Site shall flow directly into a natural drainageway, watercourse or into an existing MS4, or onto adjacent properties in a manner similar to the runoff characteristics of the pre-development flow. Maximum use shall be made of the existing onsite natural and man-made storm water management facilities.
 7. Storm water runoff shall not be transferred from one watershed to another unless the watersheds are sub-watersheds of a common watershed which join together within the perimeter of the Development Site, or the effect of the transfer does not alter the peak discharge in conformance with the requirements of the appropriate Act 167 Plan onto adjacent lands, or drainage easements from the affected landowners are provided.
 8. All storm water runoff flowing over a Development Site shall be considered in the design of storm water management facilities.
 9. Runoff from impervious areas shall be drained to pervious areas of the property, where possible.
 10. Temporary facilities shall be included, as required in accordance with 25 Pa. Code § 102, in the submitted plans for a phased section where a regulated activity constitutes a Subdivision or Land Development, where the Final Plan applications are submitted in sections, and where temporary facilities are required for construction of a section.
 11. Roof drains shall not be connected to streets, sanitary or storm sewers, or roadside ditches or swales, unless waived by the Borough in accordance with Section 903 of this Ordinance.
- B. Hydrograph: Developers and/or landowners are encouraged to provide infiltration facilities or utilize other techniques which will allow the post-development hydrograph to match the preexisting hydrograph, along all parts of the hydrograph, for the Development Site. To match the preexisting hydrograph means that it is not to be exceeded at all points in time. This option is most feasible for small subdivisions in areas on non-carbonate geology. Ground water recharge and water quality volumes, as discussed in paragraphs (D) and (E) of this section may be used as part of this option.
- C. Detention/Infiltration Standards:
1. Post-development rates of runoff from any regulated activity shall not exceed a given percentage of the peak rate of runoff prior to development for all design storms unless the preexisting hydrograph is not exceeded at all points in time. The percentage of the predevelopment peak rate which may be released is known as the “release rate.” The areas of the watershed for which specific release rates apply are shown in *Appendix 3*, Subwatershed Boundary Map. The majority of the Millersville Borough is located in the Conestoga River basin 100% release rate area, while a small portion of the Borough drains the Little Conestoga Creek, which is identified as a 50% release rate area. The release rate areas are shown on *Attachment 1*, Storm Sewer Drainage Basins.
 2. Innovative methods for the control of storm water runoff are encouraged and may be used when approved by the Borough. Various combinations of methods should be tailored to suit the particular requirements of the type of development and the topographic features

of the Development Site. The following is a partial listing of detention and control methods which can be utilized in storm water management systems where appropriate.

- Detention basins
- Retention basins
- Rooftop detention
- Parking lot storage
- Seepage pits, seepage trench or other infiltration structures
- Concrete lattice block surfaces
- Grassed channels and vegetated strips
- Cisterns and underground reservoirs
- Routed flow over grass
- Decreased impervious surface coverage
- Bioretention areas (rain gardens)
- Other methods as may be found in the *Pennsylvania Handbook of Best Management Practices for Developing Areas*, the *Pennsylvania Storm Water Best Management Practices Manual* or equivalent.

3. The following principles shall be applied to the Erosion and Sediment Pollution Control Plan and construction schedule to minimize soil erosion and sedimentation:

- (a) Stripping of vegetation, grading or other soil disturbance shall be done in a manner which will minimize soil erosion.
- (b) Whenever feasible, natural vegetation shall be retained and protected.
- (c) The extent of the disturbed area and the duration of its exposure shall be kept to a minimum, within practical limits.
- (d) Temporary seeding, mulching or other suitable stabilization measures shall be used to protect exposed critical areas during construction.
- (e) Drainage provisions shall accommodate the storm water runoff both during and after construction.
- (f) Soil erosion and sedimentation facilities shall be installed prior to any onsite grading.

D. Ground Water Recharge:

Ground Water Recharge requirements are only applicable to those drainage areas included in the Conestoga River drainage basins, as shown on *Attachment 1*. The requirements of Section 302 (D), as well as those of Sections 302 (E) and 302 (F), do not apply to developed areas within the Borough identified on *Attachment 1* as drainage basins to the Little Conestoga Creek.

1. Developed areas shall maintain ground water recharge consistent with pre-development conditions, dependent on hydrologic soil groups and impervious cover unless the developer can prove the inability of the Development Site to achieve recharge based on existing development site conditions. This volume of runoff is termed the "Recharge Volume" and is calculated in accordance with Section 304 (F). The Recharge Volume

must be infiltrated within 48 hours after the end of the design storm. Development Sites where the post-developed impervious area is equal to or less than the pre-developed impervious area shall not be required to provide ground water Recharge Volume.

2. Design of the storm water management facilities shall provide for ground water recharge to compensate for the reduction in the percolation that occurs when the ground surface runoff characteristics have been altered. A detailed geologic evaluation of the Development Site shall be performed to determine the suitability of recharge facilities. The evaluation shall be performed by a Registered Professional Geologist, and shall, at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation and subgrade stability. Where pervious pavement is permitted for parking lots, recreational facilities, non-dedicated streets or other areas, pavement construction specifications shall be noted on the plan.
 3. If the developer can prove through analysis that the Development Site is an area underlain by carbonate geology, and such geologic conditions may result in sinkhole formations, then the Development Site is exempt from recharge requirements. However, the Development Site shall still be required to meet all other hydrologic and water quality management standards as found in this Ordinance.
- E. Water Quality: Developed areas must provide adequate storage and treatment facilities necessary to capture and treat a minimum of the runoff from the first 1.2 inches of rainfall. This volume of storage is the “Water Quality Volume” and is calculated in accordance with Section 304 (G). The Recharge Volume may be a component of the Water Quality Volume. If the Recharge Volume is less than the Water Quality Volume, the remaining Water Quality Volume may be captured and treated by methods other than recharge/infiltration BMPs. The Water Quality Volume must take a minimum of 24 hours to be discharged. Development Sites where the post-developed impervious area is equal to or less than the pre-developed impervious area shall not be required to provide Water Quality Volumes unless required by DEP under a Water Quality Management (WQM) Part II NPDES Construction Permit.
- F. Storm Water Conveyance Corridor Protection (Riparian Corridor Preservation and Vegetation): Runoff from developed areas of the Development Site, including, but not limited to, areas of impervious surface, shall be managed through a series of riparian corridor vegetation facilities whenever possible. This will be accomplished in a manner satisfactory to the Borough, utilizing the *Pennsylvania Handbook of Best Management Practices for Developing Areas* (1998) for riparian forested buffer. The priority goal of the riparian vegetation will be the reduction of thermal impacts on storm water runoff associated with impervious areas, with a secondary goal being the protection of capacity of existing storm water conveyance channels. These goals will be achieved through the use of design criteria found in Section 303 of this Ordinance, and shall be in addition to other ordinance provisions.
- G. Combined Development Site Storage: Runoff may be managed regionally by one or more developers, either onsite or offsite. The design and release rate shall be consistent with the Conestoga River and Little Conestoga Creek Watershed Act 167 Plans. Ground Water Recharge Volume and Water Quality Volume, as described in Sections 302 (C) and (D) of this Ordinance, will be part of this option.
- H. No-Harm Option: This option does not apply to the water quality requirement described in Section 302 (D) of this Ordinance nor to the ground water recharge requirements described in Section 302 (C) of this Ordinance, unless it can be shown that the Development Site is underlain

by carbonate geology and infiltration cannot be safely accomplished. For any proposed development, the developer has the option of using a less restrictive runoff control if he can prove that no-harm is caused by discharging at a higher runoff rate than that specified by the Plan. Proof of no-harm from the Development Site through the remainder of the downstream drainage network needs to be shown until there is no additional flow increase. Proof of no-harm is shown using the capacity criteria in Section 303 (C) if downstream capacity analysis is part of the no-harm justification. Attempts to prove no-harm based upon downstream peak flow versus capacity analysis shall be governed by the following provisions. All no-harm justifications shall be submitted by the developer as part of the SWM Site Plan submission under Section 404 of this Ordinance.

1. The peak flow values to be used for downstream areas for the design return period storms (2-year, 5-year, 10-year, 25-year, 50-year and 100-year) shall be the values from the calibrated TR-20 Model used for the Conestoga River Watershed. These flows are available from Lancaster County by request.
2. At peak flow, any available capacity in the downstream conveyance system, as documented by the developer, may be used only in proportion to the proposed Development Site acreage relative to the total upstream undeveloped acreage. For example, if the Development Site is 10 percent of the upstream undeveloped acreage, the developer may use up to 10 percent of the documented downstream available capacity at peak flow.
3. Developer-proposed runoff controls that generate increased peak flow rates at documented storm water drainage problem sites may be precluded from successful attempts to prove no-harm, except in conjunction with proposed capacity improvements for the problem areas consistent with Section 303 (C) of this Ordinance.

Section 303. Storm Water Management Design Criteria

A. Any storm water management facility designed to store storm water runoff and requiring a berm or earthen embankment shall be designed to provide an emergency spillway to handle the 100-year post-development peak flow rate. The height of the embankment must be set as to provide a minimum 1.0 foot of freeboard above the maximum pool elevation computed when the entire 100-year peak flow passes through the spillway. However, criteria for design and construction of storm water management facilities are not the same criteria that are used in the permitting of dams under 25 Pa. Code § 105. Depending upon the physical characteristics of the dam, a dam permit may be required and the design must be in accordance with requirements contained in 25 Pa. Code § 105. Depending on the physical characteristics of a dam, the design could require anywhere from a 100-year to a Probable Maximum Flood (PMF) storm event be considered. The following minimum design criteria are required:

1. The maximum water depth shall not exceed six (6) feet, unless approved by a Borough waiver.
2. The minimum top width of all dams/embankments/berms shall be five (5) feet.
3. The interior side slopes shall not be steeper than five (5) horizontal to one (1) vertical.
4. All basins shall be structurally sound and shall be constructed of sound and durable

materials. The completed structure and the foundation of all basins shall be stable under all probable conditions of operation. An emergency spillway shall be provided for the basin and shall be capable of discharging the 100-year peak rate of runoff which enters the basin after development, in a manner which will not damage the integrity of the facility and which will not create a downstream hazard. Where practical, the emergency spillway shall be constructed in undisturbed ground. An easement shall be provided from the spillway to a natural or man-made watercourse to allow for inspection and repair when the conveyance structure crosses property boundaries.

5. All basins not including ground water recharge and/or water quality storage shall include an outlet structure to allow for draining the basin to a completely dry position within 24 hours following the end of the design rainfall. All basins that include ground water recharge and/or water quality storage shall include an outlet structure to allow draining the basin to the level of the ground water recharge and/or water quality storage within 24 hours following the end of the design rainfall.
6. A cutoff trench of relatively impervious material shall be provided within all basin embankments.
7. All structures passing through detention basin embankments shall have properly spaced concrete cutoff collars and all piping must be watertight. All structures passing through dam embankments shall have seepage diaphragms and drains.
8. All discharge control devices with appurtenances (except discharge pipes) shall be made of reinforced concrete and stainless steel. Bolts/fasteners shall be stainless steel. Discharge pipes shall also be reinforced concrete pipe.
9. Minimum slope within a basin that does not include ground water recharge and/or water quality storage shall be two percent (2%) positive grade to the low flow channel.
10. Low flow channels shall be provided from each water carrying facility to the outlet structure for all basins that do not include ground water recharge and/or water quality storage. Low flow channels shall be one percent (1%) minimum slope and shall be designed to enable ease of maintenance. All basins that include ground water recharge and/or water quality storage shall not require a low flow channel.
11. Design storms for the computation of detention basin volumes shall be of a sufficient duration to maximize the required volumes, up to a maximum 24-hour storm.
12. Design storms for the computation of retention basin volumes shall be based upon a 24-hour storm with a 100-year return period (a storm with a one percent (1%) change of occurrence each year).
13. The effect on downstream areas if the basin embankment fails shall be considered in the design of all basins. Where possible, the basin shall be designed to minimize the potential damage caused by such failure of the embankment.
14. All structures, including detention basins, cisterns, etc., other than those used for ground water recharge and/or water quality storage, must completely drain within 24 hours after the end of the design storm.

15. Soils used for the construction of basins shall have low erodibility factors (“K” factors).
- B. Minimum floor elevations for all structures that may be affected by a basin, other temporary impoundments or open conveyance systems where ponding may occur shall be two (2) feet above the 100-year water surface. If basement or underground facilities are proposed, detailed calculations addressing the effects of storm water ponding on the structure and waterproofing and/or floodproofing design information shall be submitted for approval.
- C. All storm sewer pipes, culverts and bridges (excluding detention and retention basin outfall structures), gutters and swales conveying water originating only from within the boundaries of the Development Site shall be designed for a 25-year storm event. All storm sewer pipes, culverts and bridges (excluding detention and retention basin outfall structures) conveying water originating from offsite shall be designed for a 50-year storm event. Drainage easements shall be provided to contain and convey the 100-year storm event throughout the Development Site. Easements shall begin at the furthest upstream property line of the proposed Development Site in a watershed.
- D. A concentrated discharge of storm water to an adjacent property shall be within an existing natural drainageway or watercourse, or otherwise an easement shall be required.
- E. Storm sewer pipes other than those used as roof drains, detention basin underdrains and street subbase underdrains, shall have a minimum diameter of fifteen (15) inches and be constructed of reinforced concrete pipe, corrugated galvanized metal pipe, smooth-lined corrugated polyethylene pipe or approved equal. All storm sewer pipes under traveled cartway shall be reinforced concrete pipe. Where installation conditions merit consideration, structural calculations that address the actual design requirements will be required.
- F. Storm sewer pipes and culverts shall be installed on sufficient slopes to provide a minimum velocity of three (3) feet per second when flowing full. Pipes twenty-four (24) inches or less in diameter shall be installed on a minimum slope of one-half percent (0.5%).
- G. All storm sewer pipe and culverts shall be laid to a minimum depth of one (1) foot from finished subgrade to the crown of pipe in paved areas and one (1) foot from finished grade to the crown of pipe in grassed areas.
- H. Curves in pipes or box culverts without an inlet or manhole are prohibited for conveyance systems. Tee joints, elbows and wyes are also prohibited.
- I. All storm sewer pipes, culverts, manholes, inlets, headwalls and endwalls shall conform to the requirements of the PennDOT, Bureau of Design, Publication Numbers 72M (*Standards for Highway Construction*) and 408/2003 (*Construction Specifications*), as amended, in effect at the time the design is submitted, or as otherwise modified by the Borough.
- J. Headwalls and endwalls shall be used where storm water runoff enters or leaves the storm sewer horizontally from a natural or manmade channel. PennDOT Type “DW” headwalls and endwalls shall be used.
- K. Inlets shall be placed on both sides of the street at low spots, at a maximum of 600 feet apart along a storm sewer pipe or culvert, at points of abrupt changes in the horizontal or vertical directions of storm sewers, at points where the flow in gutters exceeds three (3) inches and at points where gutter flow extends into more than 50% of the travel lane of the cartway for the 25-

year storm event. Inlets shall normally be along the curb line at or beyond the curb radius points. For the purpose of inlet location at corners, the depth of flow across the through streets (proposed and existing) shall not exceed one (1) inch for the 25-year storm event. Inlets shall be depressed two (2) inches below the grade of the gutter or ground surface. Manholes may be substituted for inlets at locations where inlets are not required to handle surface runoff.

- L. Storm water roof drains, sump pumps and pipes shall not discharge water directly into a street right-of-way, sanitary sewer or storm sewer but shall discharge into a storm water runoff dispersion and infiltration control device (See Section 903).
- M. All existing and natural watercourses, channels, drainage systems, wetlands and areas of surface water concentration shall be maintained in their existing condition unless an alteration is approved by the Borough and/or other local, state or federal agency with such jurisdiction.
- N. Flow velocities from any storm sewer may not result in erosion of the receiving channel.
- O. Energy dissipators shall be placed at the outlets of all storm sewer pipes, culverts and bridges where flow velocities exceed maximum allowable channel velocities as specified below:
 - 1. Three (3) feet per second where only sparse vegetation can be established and maintained because or shade of soil condition.
 - 2. Four (4) feet per second where normal growing conditions exist and vegetation is to be established by seeding.
 - 3. Five (5) feet per second where a dense, vigorous sod can be quickly established or where water can be temporarily diverted during establishment of vegetation. Netting and mulch or the equivalent methods for establishing vegetation shall be used.
 - 4. Six (6) feet per second where there exists a well established sod of good quality.
- P. Capacities and velocities shall be computed using the Manning equation for all swales. Vegetated swales shall consider the swale stability based upon a low degree of retardance (“n” = .03) and the swale capacity based upon a high degree of retardance (“n” = .05). All vegetated swales shall have a minimum slope of one percent (1%) unless otherwise approved by the Borough. The “n” factors for paved or riprap swales or gutters shall be based upon accepted engineering design practices as approved by the Borough. All swales shall be designed to concentrate low flows to minimize siltation and meandering.
- Q. Manning “n” values used for design of pipes and culverts shall in accordance with *Appendix 4* of this Ordinance.
- R. All storm sewer crossings of streets shall be perpendicular to the street centerline.
- S. Storm facilities not located with in a public right-of-way shall be contained in and centered within an easement. Easements shall follow property boundaries where possible.
- T. Storm Water Conveyance Improvements: If the developer can prove under the no-harm option of Section 302 (H) of this Ordinance and the Act 167 Plan that it is feasible to provide conveyance improvements to relieve existing conveyance deficiencies, as described in Section 303 (C) of this Ordinance and any Local, State or Federal regulations, the conveyance improvements could be

provided by the developer in lieu of storm water management facilities on the Development Site. Any conveyance improvements would be designed based on development of all areas tributary to the improvements and the conveyance criteria specified in this Ordinance. The eventual development of all tributary areas that the developer must consider shall be either based on the current zoning or established by the Borough, whichever results in a greater amount of impervious surface. It shall be assumed that all new development upstream of a proposed conveyance improvement would implement applicable storm water management techniques, consistent with this Ordinance.

- U. Adequate erosion protection shall be provided along all open channels, and at all points of discharge.
- V. All ground water recharge facilities shall be designed to empty in 48 hours subsequent to any storm event. All water quality facilities shall be designed so that water is released slowly for a minimum of 24 hours subsequent to any storm event, unless serving the dual purpose of a ground water recharge facility. All infiltration, detention or retention facilities, the volume of which will be used for storm water management (pre vs. post), shall be designed to empty within 24 hours subsequent to any storm event. Volumes which will not be available within 24 hours subsequent to any storm event shall not be used for storm water management (pre vs. post).

Section 304. Methods of Calculation

- A. Storm water runoff from all Development Sites shall be calculated using either the modified rational method, a soil-cover-complex methodology, or other method acceptable to the Borough or its designee. Any storm water runoff calculations involving drainage areas greater than 200 acres and a time of concentration (Tc) greater than 60 minutes including onsite and offsite areas shall use a generally-accepted calculation technique based on the NRCS Soil-Cover-Complex method. The following table summarizes acceptable computation methods. It is assumed that all methods will be selected by the qualified professional based on the individual limitations and suitability of each method for a particular Development Site.

**Table 1
Acceptable Computation Methodologies for Storm Water Management Plans**

Method	Developed By	Applicability
TR-20 (or commercial computer software based on TR-20)	USDA NRCS	Applicable where use of full hydrology computer model is desirable or necessary.
TR-55 (or commercial computer software based on TR-55)	USDA NRCS	Applicable for land development plans within limitations described in TR-55.
HEC-1 / HEC-HMS	USACE	Applicable where use of full hydrologic computer model is desirable or necessary.
Rational Method (or commercial computer software based on Rational Method)	Emil Kuichling (1889)	For Development Sites <200 acres, Tc < 60 minutes or as approved by Borough

- B. If the Soil-Cover-Complex method is used, storm water runoff shall be based on the following 24-hour storm events published in the most recent *Urban Hydrology for Small Watersheds*, USDA NRCS Engineering Division, also known as Technical Release No. 55 (TR-55). The original source was the U.S. Department of Commerce, Weather Bureau Technical Paper No. 40 (TP-40), *Rainfall Frequency Atlas of the United States*, May 1961. If this method is employed, Antecedent Moisture Condition 1 is to be used in areas of carbonate geology and Antecedent Moisture Condition 2 is to be used in all other areas.

Table 2
24-Hour Storm Events for TR-55 Method

Storm Event	Inches of Rainfall
2 Years	3.1
5 Years	4.1
10 Years	5.0
25 Years	5.5
50 Years	6.2
100 Years	7.0

- C. If the Rational Method is used, the Region 5, PennDOT Storm Intensity - Duration - Frequency Chart (PDT-IDF), dated May 1986, shall be used to determine the rainfall intensity in inches per hour. This chart is included as *Appendix 5* to this Ordinance. The Rational Method is not to be used for the design of dams.
- D. Runoff calculations shall include a hydrologic and hydraulic analysis indicating volume and velocities of flow and the grades, sizes and capacities of water-carrying structures, sediment basins, retention and detention structures and sufficient design information to construct such facilities. Runoff calculations shall also indicate both pre-development and post-development rates for peak discharge of storm water runoff from the Development Site.
- E. For the purpose of calculating pre-development peak discharges, all runoff coefficients, both onsite and offsite, shall be based on actual land use assuming summer or good land conditions. Runoff coefficients for offsite discharges used to design facilities shall be based on actual land use assuming winter or poor land conditions.
- F. Criteria and assumptions to be used in the determination of storm water runoff and design of management facilities are as follows:
1. Runoff coefficients shall be based on the information contained in *Appendices 6* and *7* of this Ordinance if the actual land use is listed in those appendices. If the actual land use is not shown on the appendices, runoff coefficients shall be selected from other published documentation, and a copy of said documentation shall be submitted with the SWM Site Plan report.
 2. Times of concentration (Tc) shall be based on the following design parameters:
 - (a) Sheet Flow: The maximum length for each reach of sheet or overland flow before

shallow concentrated or open channel flow develops is 150 feet. Flow lengths greater than 100 feet shall be justified based on the actual conditions at each Development Site. Sheet flow may be determined using the nomograph in *Appendix 8*, or the Manning’s kinematic solution shown in the Sheet Flow section of Worksheet No. 1 in *Appendix 9*.

- (b) Shallow Concentrated Flow: Travel time for shallow concentrated flow shall be determined using Figure 3-1 from TR-55, *Urban Hydrology for Small Watersheds*, as shown in *Appendix 10*. A sample worksheet for calculating times of concentration is provided in *Appendix 9*.
- (c) Open Channel Flow: At points where sheet flow and shallow concentrated flows concentrate in field depressions, the travel times and downstream end of the Development Site between those design points shall be based upon Manning’s Equation and/or acceptable engineering design standards as determined by the Borough engineer.

G. Ground Water Recharge Requirements: The ground water recharge volume (Re_v) is the volume of storm water runoff from a developed site which shall be required to maintain existing pre-development ground water recharge at Development Sites. This volume may be part of the water quality volume and is calculated on the basis of treatment and recharge by structural storm water management practices as follows:

$$Re_v = [(S) \times (R_v) \times (A)] \div 12$$

Re_v = Recharge Volume in Acre-Feet
 A = Area of Watershed in Acres
 R_v = $0.05 + 0.09(I)$
 I = Net Increase in Impervious Area \div A
 S = Soil Specific Recharge Factor (varies as shown in Table 3)

Table 3
Soil Specific Recharge Factors

Hydrologic Soil Group (HSG)	Soil Specific Recharge Factor (S)
A	0.32
B	0.22
C	0.10
D	0.05

Each specific recharge factor (S) is based on the USDA average annual recharge volume per soil type divided by the annual rainfall in Lancaster County (41 inches per year) and multiplied by 90% (to model a volume which captures 90% of the runoff). This keeps the recharge volume calculation consistent with the water quality volume methodology. The USDA average annual recharge volume per soil type is 18 inches for HSG “A”, 12 inches for HSG “B”, 6 inches for HSG “C” and 3 inches for HSG “D” (Rawls, Brakensiek & Saxton, 1982).

1. If more than one hydrologic soil group (HSG) is present at a Development Site, a

composite recharge volume shall be computed based upon the proportion of total development site area within each HSG.

2. Infiltration BMPs intended to receive runoff from developed areas shall be selected based on suitability of soils and development site conditions and shall be constructed on soils that have a minimum depth of 48 inches between the bottom of the facility and the seasonal high water table and/or bedrock (limiting zones); and an infiltration and/or percolation rate sufficient to accept the additional storm water load and drain completely as determined by field tests conducted by the developer's qualified professional.
3. Infiltration BMPs receiving only roof runoff may be placed in soils having a minimum depth of 24 inches between the bottom of the facility and the limiting zone.
4. The recharge volume provided at the Development Site shall be directed to the most permeable HSG available.
5. Structural storm water management facilities that provide treatment and recharge of the required recharge volume will be designed as part of a storm water management facility which incorporates ground water recharge BMPs as a primary benefit of using that facility, in accordance with design specifications contain in *Pennsylvania Handbook of Best Management Practices for Developing Areas* (1998) or the most recent version thereof.
6. The ground water recharge volume shall be infiltrated within 48 hours after the end of the design storm.
7. Development Sites where the post-developed impervious area is equal to or less than the pre-developed impervious area shall not be required to provide ground water recharge volume.

H. Water Quality Volume Calculation: The water quality volume (WQ_v) is the storage capacity needed to treat storm water runoff equivalent to a minimum of the first 1.2 inches of runoff from the developed areas of the Development Site. The following calculation is used to determine the storage volume in acre-feet of storage:

$$WQ_v = [(1.2) \times (R_v) \times (A)] \div 12$$

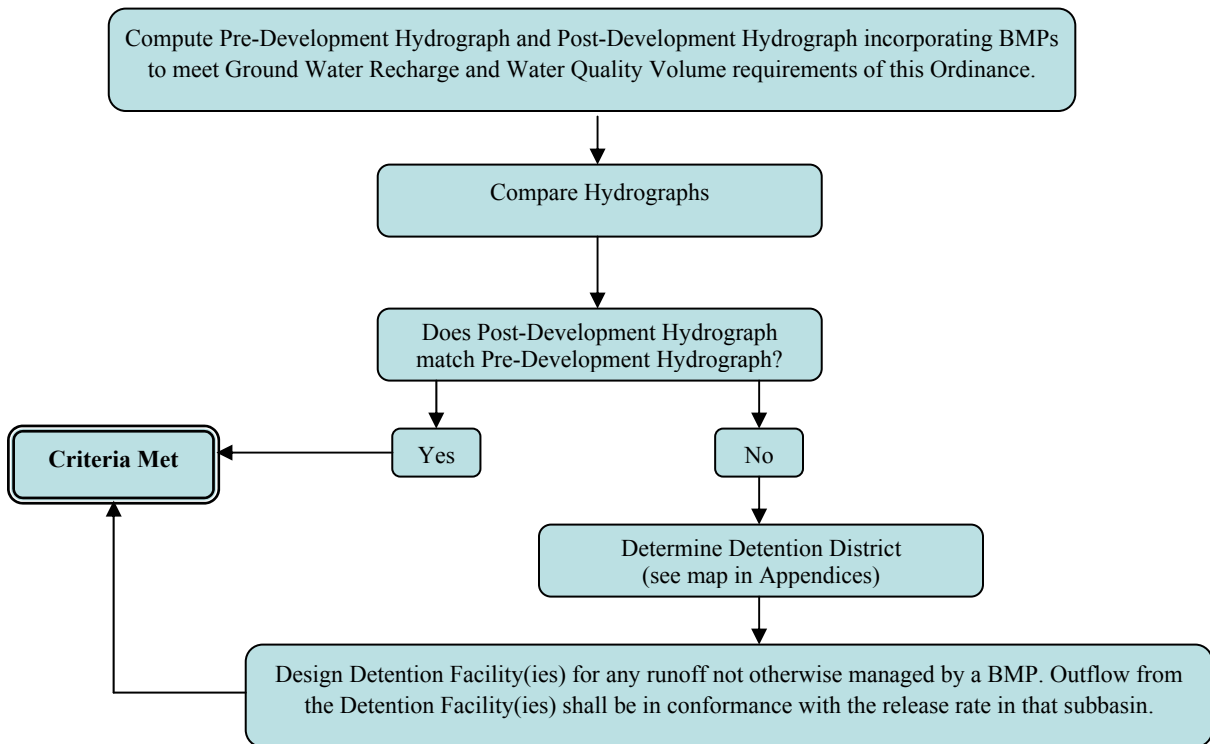
WQ_v = Water Quality Volume in Acre-Feet
 A = Area of Watershed in Acres
 R_v = $0.05 + 0.09(I)$
 I = Net Increase in Impervious Area \div A

WQ_v shall be designed as part of a storm water management facility that incorporates water quality BMPs as a primary benefit of using that facility, in accordance with design specifications contain in *Pennsylvania Handbook of Best Management Practices for Developing Areas* (1998) or the most recent version thereof. The water quality volume shall take a minimum of 24 hours to be discharged from the basin. Development Sites where the post-developed impervious area is equal to or less than the pre-developed impervious area shall not be required to provide water quality volume, unless required by DEP under a Water Quality Management (WQM) Part II NPDES Construction Permit.

Section 305. Use of Performance Standards and Criteria

The methodology for determining required storm water controls for a regulated activity is shown in **Figure 1**. Both the pre-development hydrograph at the Development Site discharge point for the required design storm and the post-development hydrograph at the Development Site discharge point incorporating BMPs must be determined. Hydrographs are available from NRCS methods TR-20 and TR-55, or from the use of “modified” or “unit hydrograph” rational methods. The pre-development and post-development hydrographs must be compared. If the peak rate of runoff and the shape of the hydrographs are nearly identical to the same significant figure, storm water management has been achieved and detention is not required. If detention or retention facilities are required, together with non-detention techniques, post-development peak rates from the Development Site shall not exceed permissible levels for the design storm. Storm water controls are determined according to the chart in **Figure 1**.

Figure 1
Storm Water Control Determination Flow Chart



Section 306. Erosion and Sediment Pollution Control

- A. All earthmoving activities shall be conducted in such a way as to minimize accelerated erosion and resulting sedimentation. Measures to control erosion and sedimentation shall, at a minimum, meet the standards of the Lancaster County Conservation District and state regulations found at 25 Pa. Code § 102.
- B. The approved erosion and sediment pollution control plan must be available at all times at the Development Site. For certain activities, as required under 25 Pa. Code § 102, an erosion and

sediment permit must be obtained before any earth disturbance is initiated.

- C. The erosion and sediment pollution control plan shall be submitted to the Lancaster County Conservation District for review and approval. Approval by the Borough shall not be construed as an indication that the plan complies with the cited rules and regulations.

ARTICLE IV. STORM WATER MANAGEMENT SITE PLAN REQUIREMENTS

Section 401. General Requirements

Prior to the final approval of any subdivision or land development plan, or the issuance of any permit, or the commencement of any development within the jurisdiction of this Ordinance, the developer shall submit a SWM Site Plan to the Borough for approval.

Section 402. Exemptions

- A. Agricultural activities when operated in accordance with a conservation plan or erosion and sediment pollution control plan approved by the Lancaster County Conservation District. Agricultural activities such as growing crops, rotating crops, tilling of soil and grazing animals and other such activities are specifically exempted from the requirements of this Ordinance.
- B. Forest management operations that are operating under an erosion and sediment pollution control plan approved by the Lancaster County Conservation District and which follow BMPs in DEP's *Soil Erosion and Sedimentation Control Guidelines for Forestry*.
- C. Land disturbance activities associated with existing structures may be exempted for an additional 1,000 square feet of impervious surface provided that flows from the site after development leave the site in the same manner as the pre-development condition and there are no adverse effects to adjacent properties.
- D. The exemption criteria in *Appendix 2* shall apply to all existing lots in effective agricultural and conservation zones. The criteria shall apply to the total development even if development occurs in phases. Exemption shall not relieve the developer from providing adequate storm water management controls to meet the purposes of this Ordinance.
- E. Public road improvement projects initiated and/or sponsored by the Borough and/or PennDOT shall be exempt from the SWM Site Plan requirements under the following circumstances:
 - 1. The road improvement project is required as part of a safety improvement project.
 - 2. A general analysis is provided which demonstrates that the proposed improvements will not adversely affect any adjacent property owners or the downstream storm water management facilities. Otherwise, mitigation of potential impacts will be required as part of the proposed improvements.

Section 403. Storm Water Management Site Plan Contents

All activities regulated by Section 105 of this Ordinance and governed by the Act 167 Plans shall prepare a SWM Site Plan, with the exception of those activities identified in Section 402 of this Article. The SWM Site Plan shall consist of all applicable calculations, maps and plans. Notes on the maps shall refer to the associated computations and erosion and sediment pollution control plan by title and date. The cover sheet of the computations and erosion and sediment pollution control plan shall refer to the associated maps by title and date. All SWM Site Plan materials shall be submitted to the Borough or its

designee in a format that is clear, concise, legible, neat and well organized; otherwise, the SWM Site Plan shall be disapproved and returned to the applicant. The following items shall be included as part of the SWM Site Plan:

A. General:

1. General description of Development Site.
2. Name of Development Site, name and address of property owner or developer for Development Site and name of individual or firm preparing the SWM Site Plan.
3. General description of permanent storm water management techniques, including construction specifications of the materials to be used for storm water management facilities and expected project time schedule.
4. Complete hydrologic, hydraulic and structural calculations for all storm water management facilities.
5. Inclusion of a BMP Operation and Maintenance Plan as detailed in Article VII of this Ordinance.

B. Drawings and Maps:

1. All drawings and maps of the project area shall be submitted on 24-inch by 36-inch sheets in conformance with the Borough Subdivision and Land Development Ordinance, and shall be prepared in a form which meets the requirements for recording for the Office of Recorder of Deeds of Lancaster County.
2. Plan date and date of latest revision to the plan, North arrow, and graphic and written scale. All plans shall be at a scale of 10, 20, 40 or 50 feet to the inch and contain certificates for approval by Borough Council, Borough Planning Commission and Borough Engineer, if required by the Borough Council, as shown in *Appendix 1*.
3. Total acreage of the Development Site and the tract of land on which the Development Site is located.
4. A location map, for the purpose of locating the Development Site, at a minimum scale of 2,000 feet to the inch, showing the relation of the tract to adjoining property and to all streets and Borough boundaries existing within 1,000 feet of any part of the tract of land of the Development Site.
5. Tract boundaries showing distances marked to the nearest foot, bearings marked to the nearest degree and curve data, as located by field survey.
6. Names of all adjacent landowners, property boundaries and locations and dimensions of easements as indicated by a boundary survey.
7. Existing contours at vertical intervals of one (1) foot and at vertical intervals of five (5) feet for more steeply sloping land greater than 15 percent slope. Where contours are shown, the location of the benchmark and the datum use shall also be indicated.

8. Existing streams, lakes, ponds or other bodies of water within the Development Site.
9. Other physical features including railroads, streets, floodplain boundaries, wetlands, sinkholes, existing drainage courses and any other significant features within 50 feet of the Development Site, as well as the locations of all buildings, areas of natural vegetation to be preserved and the total extent of the upstream area draining through the Development Site.
10. The locations of all existing and proposed utilities, sanitary sewers and water lines on the Development Site within 50 feet of property lines, including easements and right-of-ways.
11. Soil types and boundaries as designated by the USDA NRCS Soil Survey of Lancaster County.
12. Existing and proposed land use, number of lots and dwelling units and the extent of commercial, industrial or other non-residential uses, including structures and paved areas.
13. Proposed changes to land surface and vegetative cover, including the amount of impervious or semi-pervious area to be added and areas to be cut and/or filled.
14. Proposed streets, parks and other public areas, sanitary sewer, storm sewer and water facilities.
15. Final contours at vertical intervals of one (1) foot and at vertical intervals of five (5) feet for more steeply sloping land greater than 15 percent slope.
16. A key map showing all existing man-made features 200 feet beyond the Development Site boundary that could be affected by the project.

C. Storm Water Management Facilities:

1. Horizontal and vertical profiles of all open channels, including hydraulic capacity.
2. Storm water management facilities shall be located within street rights-of-way of public streets or within the cartway of private streets unless otherwise approved by Borough Council. When easements are required, they shall be a minimum of twenty (20) feet wide and shall, to the fullest extent possible, be centered on or be adjacent to rear or side lot lines. Local utility companies shall be consulted by the developer when locating easements.
3. Where a Development Site is traversed by a watercourse, drainage way, channel or stream, there shall be provided a drainage easement conforming substantially with the line of such watercourse, drainage way, channel or stream and of such width as will be adequate to preserve the unimpeded flow of natural drainage, or for the purpose of widening, deepening, relocating, improving or protecting such drainage facilities or for the purpose of installing storm sewers.
4. All storm sewers along with any proposed connections to existing storm sewer facilities.
5. Plans for ground water recharge facilities, such as seepage pits, beds or trenches must

show the locations of existing and proposed septic tank infiltration areas and wells. A minimum 50 foot separation from on-lot disposal system infiltration areas is required. Infiltration rates shall be based on perk and probe tests conducted at the site of the proposed facility.

6. Other control devices or methods such as rooftop storage, grass swales, parking lot ponding, vegetative strips and detention or retention basins.
7. Plans and profiles of all proposed storm water management facilities including vertical and horizontal alignment, size and type of material.
8. All calculations, assumptions and criteria used for the design of the storm water management facilities must be included for both pre-development and post-development conditions. If multiple facilities are used in conjunction with each other, such as infiltration BMPs with vegetation-based management practices, a summary narrative shall be included which describes the construction sequence and how the facilities are meant to function with each other to manage storm water runoff.
9. The type, location and extent of all erosion and sediment control measures shall be shown on an erosion and sediment pollution control plan that complies with the standards of the Lancaster County Conservation District and state regulations found at 25 Pa. Code § 102.
10. When Development Site plan applications are submitted in whole or in phases, a generalized SWM site plan for the entire Development Site shall be submitted in addition to the detailed SWM site plan for the proposed phase. This generalized plan shall demonstrate how the storm water of the proposed phase will relate to the entire Development Site. The amount and velocity at the discharge point of the Development Site phase shall be included in the data submitted. If temporary facilities are proposed, such facilities shall be included in the submission.
11. A written ownership and maintenance program that clearly sets forth ownership and maintenance responsibility of all temporary and permanent storm water management facilities and erosion and sediment pollution control facilities, including the establishment of suitable easements for access to all facilities. If dedication of the facilities is made to the Borough, as described in Section 705 of this Ordinance, a Storm Water Maintenance Agreement and Declaration of Easement, as included as *Appendix 11* of this Ordinance, must be enacted.
12. A note on the plan indicating any area that is not to be offered for dedication along with a statement that the Borough is not responsible for maintenance of any area not dedicated to and accepted for public use, and that no alteration to swales or basins, or placement of structures shall be permitted within easements.
13. For storm water facilities that are proposed to be located offsite, a note on the plan referencing a recorded Storm Water Maintenance Agreement and Declaration of Easement as included as *Appendix 11* of this Ordinance, which indicates the location and responsibility for maintenance of the offsite facilities. All offsite facilities shall meet the performance standards and design criteria as specified in this Ordinance.
14. A statement, signed by the landowner, acknowledging the storm water management facilities to be a permanent fixture that can be altered or removed only after approval of a

revised Plan by the Borough or its designee.

D. Supplemental Information

1. A SWM Site Plan Application, as included in *Appendix 12* of this Ordinance, shall be included with the SWM Site Plan, along with the appropriate fee.
2. A narrative detailing the erosion and sediment control measures and a copy of the Lancaster County Conservation District approval letter shall be included with the SWM Site Plan submission.
3. In areas of carbonate geology, a geologic assessment of the effects of storm water runoff and infiltration or sinkholes, as specified in this Ordinance.
4. The effect of the project, in terms of runoff volumes and peak flows, on adjacent properties and on any existing MS4 that may receive storm water runoff from the Development Site.
5. A Declaration of Adequacy/Highway Occupancy Permit from the PennDOT District Office when utilization of a PennDOT storm water facility is proposed.

Section 404. Storm Water Management Site Plan Submission

For the purpose of complying with this Ordinance, the steps below shall be followed for SWM Site Plan submissions. For any activities that require a DEP Joint Permit and regulated under 25 Pa Code §§ 105 or 106, a PennDOT Highway Occupancy Permit, or any other permit under applicable state or federal regulations, the permit(s) shall be part of the SWM Site Plan submission.

- A. Any Developer proposing to engage in a Regulated Activity under this Ordinance shall submit seven (7) copies of the SWM Site Plan to the Borough Manager and one (1) copy to the Lancaster County Planning Commission and all other state and federal agencies as required by law.
- B. The Borough Secretary shall distribute the SWM Site Plan and application, as shown in *Appendix 12* as follows:
 1. One (1) copy to the Borough Engineer.
 2. One (1) copy to the Borough Planning Commission.
 3. The remaining copies will be retained in the Borough office for use by Borough Council members and Borough staff.
- C. Provide financial security for completion of storm water management facilities in accordance with Section 303 of the Borough Subdivision and Land Development Ordinance.
- D. Provide a maintenance guarantee in accordance with Section 703 of this Ordinance for operation and maintenance of the storm water management facilities following their completion.
- E. Provide a filing and/or inspection fee in the amount specified on the Borough Fee Schedule, as may be amended from time to time, adopted by resolution of the Borough Council.

Section 405. Storm Water Management Site Plan Review

- A. The Borough or its designee shall review the SWM Site Plan for consistency with the adopted Act 167 Storm Water Management Plan for either the Little Conestoga Creek or the Conestoga River watersheds. The Borough or its designee shall require receipt of a complete plan, as specified in this Ordinance.
- B. In the case of a Subdivision or Land Development, the Borough or its designee shall review the SWM Site Plan for conformance with the Borough Subdivision and Land Development Ordinance for all provisions not superseded by this Ordinance.
- C. For Regulated Activities requiring a DEP Joint Permit, the Borough or its designee shall notify DEP whether the SWM Site Plan is consistent with the appropriate Act 167 Storm Water Management Plan, and forward a copy of the review letter to the Borough and the Developer. DEP may consider the Borough's review comments in its determination on whether to issue a permit to the Developer.
- D. All applications for approval of a plan shall be acted upon by the Borough Council, which shall render its decision and communicate it to the Developer not later than ninety (90) days following the date the application is filed.
 - 1. The decision of the Borough Council shall be in writing and shall be communicated to the Developer personally or mailed to him/her at his/her last known address not later than fifteen (15) days following the decision.
 - 2. When the application is not approved in terms as filed, the decision shall specify the defects found in the application and shall describe the requirements which have not been met and shall, in each case, cite the provisions of the Ordinance relied upon for the decision.
 - 3. Failure of the Borough Council to render a decision and communicate it to the Developer within the time and in the manner required herein shall be deemed an approval of the application in terms as presented, unless the Developer has agreed in writing to an extension of time or change in the prescribed manner of presentation or communication of the decision; in which case, failure to meet the extended time or change in manner of presentation or communication shall have like effect.
- E. Approval of a Storm Water Management Plan by the Borough shall be obtained by a Developer prior to the issuance of a Building Permit by the Borough. Such Building Permit shall be obtained by the Developer in accordance with the Borough Zoning Ordinance and Building Code.
- F. The Developer shall be responsible for completing "Record Drawings" of all storm water management facilities included in the approved SWM Site Plan. The Record Drawings and an explanation of any discrepancies with the design plans shall be submitted to the Borough for final approval. In no case shall the Borough approve the Record Drawings until the Borough receives a copy of an approved Declaration of Adequacy/Highway Occupancy Permit from the PennDOT District Office and any applicable permits from DEP.
- G. Borough approval of a SWM Site Plan shall be valid for a period not to exceed one (1) year

unless a schedule is submitted and approved for a longer period of time as part of the approval process. This one-year period commences on the date that the Borough approves a SWM Site Plan. If storm water management facilities are not constructed or if the Record Drawings of the storm water facilities have not been approved by the Borough within this one-year time period, the Borough may consider the SWM Site Plan disapproved and may recommend that any and all Borough permits be revoked. SWM Site Plans that are considered disapproved shall be resubmitted in accordance with Section 404 of this Ordinance.

Section 406. Storm Water Management Site Plan Modifications

Certain modifications to a SWM Site Plan after submission but before approval shall require a resubmission of the modified SWM Site Plan consistent with Section 404 of this Ordinance and be subject to review, as specified in Section 405 of this Ordinance. The modifications that require resubmission, include, but are not limited to, the following:

- A. A change in storm water management facilities or techniques.
- B. The relocation or redesign of storm water management facilities.
- C. Soil or other site conditions are not as stated in the SWM Site Plan.

ARTICLE V. COMPLETION OF STORM WATER MANAGEMENT FACILITIES

Section 501. Determination and Release of Financial Security

- A. The Developer shall submit proper financial security in accordance with Section 303 of the Borough Subdivision and Land Development Ordinance.
- B. No SWM Site Plan will receive approval by the Borough Council unless assurance is given that the storm water management facilities construction will be completed. This assurance shall be in an acceptable form of financial guarantee equal to one hundred ten percent (110%) of the cost of completing the required facilities as of ninety (90) days after the projected date of completion which the Developer shall designate, and as contained in a Storm Water Maintenance Agreement and Declaration of Easement, included as *Appendix 11* to this Ordinance. The Borough may adjust the amount of financial security by comparing the actual cost of the facilities which have been completed and the estimated cost for completion of the remaining facilities as of the expiration of the 90th day after either the original or rescheduled date of completion. Subsequent to said adjustment, the Borough may require the Developer to post additional security to assure that the financial security equals one hundred ten percent (110%). Any additional security shall be posted by the Developer in accordance with this paragraph.
- C. The amount of financial security shall be based upon an estimate of the cost of completion of the required storm water management facilities, submitted by the Developer and prepared by a professional engineer licensed as such in this Commonwealth and certified by such engineer to be a fair and reasonable estimate of such cost. The Borough, upon recommendation of the Borough engineer, may refuse to accept such estimate for cause. If the Developer and the Borough are unable to agree upon an estimate, then the estimate shall be recalculated and recertified by a third professional engineer licensed as such in this Commonwealth and chosen mutually by the Borough and Developer. The estimate certified by the third engineer shall be presumed fair and reasonable and shall be the final estimate. Fees for the services of the third engineer, if needed, shall be paid equally by the Borough and Developer.
- D. If the Borough Council or Borough Engineer fails to comply with the time limitation provisions in this section, all facilities will be deemed to have been approved; and the Developer shall be released from all liability, pursuant to its performance guaranty bond or other security agreement. If any portion of said facilities is not approved or is rejected by Borough Council, the Developer shall proceed to complete or correct same; and, upon completion, the same procedure of notification outlined herein shall be followed. Nothing herein shall be construed in limitation of the Developer's right to contest or question, by legal proceedings or otherwise, any determination of Borough Council.
- E. In the case where development at a Development Site is projected over a period of years, the Borough may authorize submission of SWM Site Plans by phases of development subject to such requirements and guarantees as to storm water management facilities in future phases of development as it finds essential for the protection of any finally-approved phase of development.

Section 502. Schedule of Inspections

- A. During the construction of the development, the Borough or its designee may inspect the

premises to determine whether work is progressing in compliance with the approved SWM Site Plan and with all applicable Borough laws and ordinances.

- B. The cost of inspection by the Borough or its designee shall be borne by the Developer in accordance with the Borough Fee Schedule, which is adopted, from time to time, by resolution of the Borough Council.
- C. In the event the Borough or its designee discovers that the work is not in compliance with the approved SWM Site Plan or applicable Borough laws and ordinances, the Borough shall suspend any existing building permits related to the Development Site until the work is brought back into compliance. Any portion of the work that is not in compliance with the approved plan shall be corrected by the Developer within ten (10) days of notice. No work may proceed on any subsequent phase of the SWM Site Plan, the subdivision or land development, or the building construction, until the related building permits have been reinstated.
- D. If, during any phase of the work, the Borough or its designee determines that the soil or other site conditions are not as stated or shown in the approved SWM Site Plan, or that the Developer has provided a false statement or misrepresentation, the Borough may refuse to approve further work and revoke existing building permits until a revised plan is submitted and approved, as required under Section 406 of this Ordinance.
- E. When the Developer has completed construction of all required facilities, he shall notify the Borough in writing, by certified or registered mail, and shall provide a copy of such notice to the Borough Engineer. Within ten (10) days of receipt of such notice, the Borough shall authorize the Borough Engineer to inspect the completed facilities. The Borough Engineer shall promptly file a written report with the Borough and shall mail a copy of the written report to the Developer within thirty (30) days after receiving authorization to proceed with the inspection.
- F. Based on the report from the Borough Engineer, the Borough shall indicate approval or rejection of the completed storm water management facilities, either in whole or in part. If not approved, the Borough shall state reasons for the rejection. The Borough shall immediately notify the Developer of its actions in writing. If the Borough or its designees fail to comply with the time limitations described in this paragraph, all storm water management facilities shall be deemed to be approved and the Developer shall be released from all liability, pursuant to its performance guaranty bond or other security agreement. If any portion of such facilities is not approved by the Borough, the Developer shall make the necessary modifications to the storm water management facilities and seek reapproval.

Section 503. Remedies to Effect Completion of Storm Water Management Facilities

- A. In the event storm water management facilities are not constructed as provided in this Ordinance or in accordance with the approved SWM Site Plan, the Borough Council has the power to enforce any corporate bond or other security by appropriate legal and equitable remedies. If proceeds of such bond or other security are not sufficient to pay the cost of installing or making repairs or corrections to the storm water management facilities covered by said security, the Borough Council may, at its option, construct such facilities in all or part of the Development Site and may institute appropriate legal or equitable action to recover the costs necessary to complete the facilities.
- B. All proceeds, whether resulting from the security or from any legal or equitable action brought

against the Developer, or both, shall be used solely for the construction of storm water management facilities covered by such security and not for any other purpose.

Section 504. Right of Entry

Upon presentation of proper credentials, duly authorized representatives of the Borough may enter at reasonable times upon any property within the Borough to investigate or ascertain the condition of the subject property in regard to any aspect of this Ordinance.

ARTICLE VI. FEES AND EXPENSES

Section 601. General

The fees required by this Ordinance include SWM Site Plan filing fees and inspection fees. These fees are established by the Borough under a separate resolution and are necessary to defray review and inspection costs incurred directly or indirectly by the Borough. All fees are paid by the Developer.

Section 602. Expenses Covered By Fees

The fees required by this Ordinance shall at a minimum cover:

- A. The review of SWM Site Plans by the Borough or its designee.
- B. The Development Site inspection.
- C. The inspection of storm water management facilities and drainage improvements during construction.
- D. The final inspection upon completion of the storm water management facilities and drainage improvements as provided in the SWM Site Plan.
- E. Any additional work required to enforce any permit provisions regulated by this Ordinance, to correct violations and to assure proper completion of stipulated remedial actions.
- F. Administration and clerical costs in the administration of the storm water management program under this Ordinance.

ARTICLE VII. BMP OPERATION AND MAINTENANCE PLAN REQUIREMENTS

Section 701. General Requirements

- A. No regulated activity within the Borough shall commence until the Borough has approved the BMP Operation and Maintenance (O&M) Plan, submitted as part of the SWM Site Plan. Such BMP O&M Plan shall describe how the permanent, post-construction storm water BMPs will be properly operated and maintained.
- B. The following items shall be included in the BMP O&M Plan:
 - 1. Clear identification of location and nature of permanent storm water BMPs.
 - 2. A clear description of how each permanent, storm water BMP will be operated and maintained, and the identity of the person(s) responsible for the operation and maintenance.
 - 3. The name of the Development Site, the property owner name and address and the name of the plan preparer.
 - 4. A statement, signed by the landowner, acknowledging that the storm water BMPs are fixtures that can be altered or removed only after approval from the Borough.

Section 702. BMP Operation and Storm Water Management Facilities Maintenance Responsibilities

- A. The BMP O&M Plan for the Development Site shall establish responsibilities for the continuing operation and maintenance of all permanent storm water BMPs and all permanent storm water management facilities as follows:
 - 1. If a Development includes structures or lots which are to be separately owned and in which streets, sewers and other public improvements are to be dedicated to the Borough, storm water BMPs may also be dedicated to and maintained by the Borough. Even if the Borough elects to accept dedication of streets, the Borough is under no obligation to accept storm water management facilities located outside the public right-of-way.
 - 2. If a Development Site includes operation and maintenance by single ownership, or if sewers and other public improvements are to be privately owned and maintained, then the operation and maintenance of storm water BMPs shall be the responsibility of the owner or private management entity.
- B. The Borough shall make the final determination on the continuing operation and maintenance responsibilities. The Borough reserves the right to accept or reject the operation and maintenance responsibility for any or all storm water BMPs and/or storm water management facilities.
- C. Maintenance of storm water management facilities shall include, but are not limited to, the following:

1. Liming and fertilizing vegetated channels and other areas according to DEP's *Erosion and Sediment Pollution Control Program Manual*.
2. Reestablishment of vegetation by seeding and mulching or sodding of scoured areas or areas where vegetation has not been successfully established. Selection of seed mixtures shall be in accordance with approved Erosion and Sediment Control Plan.
3. Mowing as necessary to maintain adequate strands of grass and to control weeds.
4. Removal of silt from all permanent structures that trap silt or sediment to keep the material from building up in grass waterways, pipes, detention or retention basins, infiltration structures or BMPs, so their capacity to store or convey water is not reduced.
5. All pipes, swales and detention facilities shall be kept free of debris or other obstruction and in original design condition.
6. Regular inspection of the areas in question to assure proper implementation of BMPs, their maintenance and ongoing operation.

Section 703. Maintenance of Facilities Accepted by the Borough

Where the Borough accepts dedication of all or some of the completed storm water management facilities, the Borough may require the posting of financial security to secure structural integrity as well as the functioning of such storm water management facilities in accordance with the design and specifications as contained in the approved SWM Site Plan, for a term not to exceed eighteen (18) months from the date of acceptance of dedication. Said financial security shall be of the same type as described in Section 501 of this Ordinance with regard to installation of such storm water management facilities. The amount of financial security shall not exceed fifteen percent (15%) of the actual cost of installation of such storm water management facilities.

Section 704. Maintenance of Facilities by Private Person or Entity

In cases where permanent storm water management facilities are to be owned by a private person or entity, such person or entity shall be responsible for maintenance of the storm water management facilities. A legally binding agreement between the private person or entity and the Borough, such as the Storm Water Management Agreement and Declaration of Easement, as provided in *Appendix 11* of this Ordinance, and which contains provisions for continuing operation and maintenance of storm water BMPs, shall be signed by both parties prior to final approval by the Borough of the development site's SWM Site Plan. The legally binding agreement identified above shall also include notice that in the event the individual property owner should fail to comply with the terms of this Ordinance for the maintenance and care of the land in question, the Borough shall have the authority to carry out those duties hereby imposed upon individual property owners. The Borough may, after giving notice to an individual property owner that he is not properly maintaining the areas subject to this Ordinance, and by making demand that such compliance shall be made within the time period set forth in the notification, enter upon said property and take such actions as may be required to bring the area into compliance with this Ordinance. The Borough shall further have the right to file a municipal lien against such property for the cost of maintenance work carried out under this Section, plus a penalty of 10% of the costs of such work. The Borough shall in addition to the filing of a municipal lien have any other remedies provided by law against any property owner who should fail to comply with the terms of this Ordinance.

Section 705. Storm Water Management Easements

- A. Storm water management easements are required for all areas used for off-site storm water control, unless a waiver is granted by the Borough.
- B. Storm water management easements shall be provided by the property owner if necessary for access for inspections and maintenance, or for the preservation of storm water runoff conveyance, infiltration and detention areas and other BMPs, by persons other than the property owner. An agreement shall be signed granting such easements, as provided in *Appendix 11* of this Ordinance.

Section 706. Borough Storm Water BMP Operation and Maintenance Fund

- A. If storm water BMPs are accepted by the Borough for dedication, the Borough may require persons installing storm water BMPs to pay a specified amount to the Borough Storm Water BMP Operation and Maintenance Fund, to help defray future costs of periodic inspections, operation and maintenance activities. The amount may be determined as follows:
 - 1. If the BMP is to be owned and maintained by the Borough, the amount shall cover the estimated costs for operation and maintenance for ten (10) years, as determined by the Borough.
 - 2. The amount shall be converted to present worth of the annual series values.
- B. If a BMP is proposed that also serves a recreation facility, the Borough may adjust the amount due accordingly.
- C. If at any time dedicated storm water management facilities are eliminated due to the installation of new storm sewers or other storm water management facilities, the unused portion of the O&M fund deposit will be applied to the cost of abandoning the facilities and connecting to the storm sewers or other storm water management facilities. Any amount remaining after the costs of abandonment and connection are paid will be returned to the depositor.

Section 707 Maintenance of Existing Storm Water Management Facilities

Storm water management facilities existing on the effective date of this Ordinance on individual lots which have not been accepted by the Borough or for which maintenance responsibility has not been assumed by private entity such as a homeowners' association shall be maintained by the individual property owners. Such maintenance shall include at a minimum those items set forth in Section 702 above. If the Borough determines at any time that any permanent storm water management facility has been eliminated, altered, blocked through the erection of structures or the deposit of materials, or improperly maintained, the Borough may determine that such condition constitutes a nuisance and shall notify the property owner of corrective measures which are required, and provide for a reasonable period of time, not to exceed 30 days, within which the property owner shall take such corrective action. If the property owner does not take the required corrective action, the Borough may either perform the work or contract for the performance of the work and bill the property owner for the cost of the work plus a penalty of 10% of the cost of the work. If such bill is not paid by the property owner within 30 days, the Borough may file a municipal claim against the property upon which the work was performed in accordance with applicable laws.

Section 708 Alteration of Storm Water Management Facilities

No person shall modify, remove, fill, landscape or alter storm water management facilities which may have been installed on a property unless a storm water management plan has been approved which authorizes such modification, removal, filling, landscaping or alteration. No person shall place any structure, fill, landscaping or vegetation into a storm water management facility or within a drainage easement which will limit or alter the functioning of the facility or easement in any manner.

ARTICLE VIII. STORM WATER MANAGEMENT FOR WATER QUALITY

Section 801. General Requirements

- A. All Regulated Earth Disturbance Activities within the Borough shall be designed, implemented, operated and maintained to meet the purposes of this Ordinance through the following elements:
 - 1. Erosion and sediment control during the earth disturbance/construction activities.
 - 2. Water quality protection measures after completion of earth disturbance/construction activities, including operation and maintenance.
- B. Erosion and sediment control during Regulated Earth Disturbance Activities shall be addressed as required by Section 307 of this Ordinance and as found in state regulations at 25 Pa. Code § 102.
- C. Post-construction water quality protection shall be addressed as required by Section 804 of this Ordinance.
- D. All Best Management Practices (BMPs) used to meet the requirements of this Ordinance shall conform to the State Water Quality Requirements and any more stringent requirements as determined by the Borough.
- E. Techniques described in *Appendix 13* of this Ordinance, Low Impact Development Practices, are encouraged since they reduce the costs of complying with the requirements of this Ordinance and the State Water Quality Requirements.

Section 802. Permit Requirements By Other Government Entities

The following requirements may apply to certain Regulated Earth Disturbance Activities under this Ordinance and must be met prior to commencement of Regulated Earth Disturbance Activities:

- A. All Regulated Earth Disturbance Activities subject to permit requirements by DEP under regulations found at 25 Pa. Code § 102.
- B. Work within natural drainageways subject to permit by DEP under regulations found at 25 Pa. Code § 105.
- C. Any storm water management facility that would be located in or adjacent to surface waters of the Commonwealth, including wetlands, subject to permit by DEP under regulations found at 25 Pa. Code § 105.
- D. Any storm water management facility that would be located on a state highway right-of-way or that would require access from a state highway shall be subject to approval by PennDOT.
- E. Culverts, bridges, storm sewers or any other facilities which must pass through or convey flows from the tributary area and any facility which may constitute a dam subject to permit by DEP under regulations found at 25 Pa. Code § 105.

Section 803. Erosion and Sediment Control During Regulated Earth Disturbance Activities

- A. Regulated Activities disturbing more than 5,000 square feet require an Erosion and Sediment Control Plan be submitted to the Lancaster County Conservation District for approval in accordance with regulations found at 25 Pa. Code § 104.2(b). Such plans must also be acceptable to the Borough following the Lancaster County Conservation District’s review and approval.
- B. Regulated Earth Disturbance Activities also require approval of either a General or Individual NPDES Permit for Construction by the Lancaster County Conservation District as required under regulations found at 25 Pa. Code § 92.
- C. Copies of the Erosion and Sediment Control Plan and any required permit shall be available at the development site at all times.

Section 804. Requirements After Completion of Regulated Earth Disturbance Activities

- A. BMPs must be designed, implemented and maintained to meet State Water Quality Requirements, and any other more stringent requirements as determined by the Borough.
- B. Post-construction storm water impacts from Regulated Earth Disturbance Activities are controlled through BMPs that provide for replication of pre-construction storm water infiltration and runoff conditions so that post-construction storm water discharges do not degrade the physical, chemical or biological characteristics of the receiving waters. Such measures may include the following:
 - 1. Infiltration: Replication of pre-construction storm water infiltration conditions.
 - 2. Treatment: Use of water quality treatment BMPs to ensure filtering out of the physical and chemical pollutants from the storm water runoff.
 - 3. Streambank and Streambed Protection: Management of volume and rate of post-construction storm water discharges to prevent physical degradation of receiving waters.
- C. Evidence of any necessary permits for Regulated Earth Disturbance Permits from DEP or the Lancaster County Conservation District must be provided to the Borough.

ARTICLE IX. PROHIBITIONS

Section 901. Prohibited Discharges

- A. No person in the Borough shall allow, or cause to allow, storm water discharges into the Borough's separate storm sewer system, which are not composed entirely of storm water except as provided in paragraph (B) of this section and discharges allowed under a state or federal permit.

- B. Discharges, that may be allowed based on a finding that the Borough that the discharge(s) do not significantly contribute to pollution of surface waters of the Commonwealth, include the following:
 - 1. Discharges from fire fighting activities.
 - 2. Potable water sources including dechlorinated water line and fire hydrant flushings.
 - 3. Irrigation drainage.
 - 4. Routine external building washdown, which does not use detergents or other compounds.
 - 5. Air conditioning condensate.
 - 6. Water from individual residential car washing.
 - 7. Springs.
 - 8. Water from crawl space pumps.
 - 9. Uncontaminated water from foundation or from footing drains.
 - 10. Flows from riparian habitats and wetlands.
 - 11. Lawn watering.
 - 12. Pavement washwaters where spills or leaks of hazardous or toxic materials have not occurred and where detergents are not used.
 - 13. Dechlorinated swimming pool discharges.
 - 14. Uncontaminated ground water.

- C. If the Borough determines that any of the discharges identified in paragraph (B) do significantly contribute to pollution of the waters of the Commonwealth, or if the Borough is so notified by DEP, the Borough will notify the responsible person to cease the discharge.

Section 902. Prohibited Connections

The following connections are prohibited, except as provided in Section 901 (B) of this Ordinance:

- A. Any drain or conveyance, whether on the surface or subsurface, which allows any non-storm water discharge to enter the Borough separate storm sewer system, including sanitary wastewater, industrial wastewater or wash water, and any connections to the storm drain system from indoor drains and sinks.
- B. Any drain or conveyance connected from a commercial or industrial land use to the Borough separate storm sewer system, which has not been documented in plans, maps or equivalent records and approved by the Borough.

Section 903. Roof Drains

- A. Roof drains shall not be connected to streets, sanitary or storm sewers, or roadside ditches or swales, unless waived by the Borough for special circumstances. Proof that no non-storm water discharges will be made through these connections must be submitted to the Borough for approval by the responsible person.
- B. Roof drains shall discharge to infiltration areas or vegetative BMPs to the maximum extent practicable.

Section 904. Alteration of BMPs

- A. No person shall modify, remove, fill, landscape or alter any existing storm water BMP unless it is part of an approved maintenance program without the written approval of the Borough.
- B. No person shall place any structure, fill, landscaping or vegetation into a storm water BMP or within a drainage easement, which would limit or alter the functioning of the BMP, without the written approval of the Borough.

ARTICLE X. ENFORCEMENT AND PENALTIES

Section 1001. Notice of Violation

- A. Whenever the Borough finds that a person has violated any provisions or failed to meet any requirements of this Ordinance, the Borough may issue a Notice of Violation, which may require the violator to conduct one or more of the following:
1. Conduct monitoring, analysis and reporting.
 2. Eliminate prohibited discharges or connections.
 3. Cease existing violating discharges, practices or operations.
 4. Abate or remediate storm water pollution or contamination hazards and restore any affected property.
 5. Pay fine or civil penalty to cover administrative and remediation costs.
 6. Implement storm water BMPs.
 7. Properly operate and maintain storm water BMPs.
- B. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violation(s). Said notice may further advise that should the violator fail to take the required action within the established deadline, the work will be done by the Borough or its designee at the expense of the violator. The Notice of Violation shall also inform the violator of his/her right to appeal as set forth in Section 1004 of this Ordinance.
- C. Failure to comply within the time specified shall also subject the violator to the penalty provisions found in Section 1003 of this Ordinance. All such penalties shall be deemed cumulative and shall not prevent the Borough from pursuing any and all other remedies available in law or equity. Each day that a violation continues shall constitute a separate violation.

Section 1002. Suspension and/or Revocation of Permits and Approvals

- A. Any building, land development or other permit or approval issued by the Borough may be suspended or revoked by the Borough for the following reasons:
1. Noncompliance with or failure to implement any provision of the permit.
 2. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule or regulation relating to the development site.
 3. The creation of any condition or the commission of any act during construction or development which constitutes or creates a hazard or nuisance, pollution, or which endangers the life of property of others.

- B. A suspended permit or approval may be reinstated by the Borough when:
 - 1. The Borough or its designee has inspected and approved the corrections to the storm water BMPs or the elimination of the hazard or nuisance.
 - 2. The Borough is satisfied that the violation of this Ordinance or other applicable law, ordinance, rule or regulation has been corrected.
- C. A permit or approval revoked by the Borough under this Ordinance cannot be reinstated. The applicant may apply for a new permit under the provisions of this Ordinance.

Section 1003. Violations and Penalties

- A. It shall be a violation of this Ordinance to commit or permit any other person to commit any of the following acts:
 - 1. To commence regulated activities prior to obtaining unconditional approval of a storm water management site plan or in violation of the terms or conditions of a storm water management site plan approved under this Ordinance.
 - 2. To install, repair, modify or alter storm water management facilities prior to obtaining approvals under this Ordinance, or, in a manner which violates the terms and conditions of any approval issued under this Ordinance.
 - 3. To misuse or fail to maintain any storm water management facility installed upon a property.
 - 4. To construct any improvements upon, grade, fill or take any other action which will impair the proper functioning of any storm water management facility.
 - 5. To place false information on, or, omit relevant information from an application for approval under this Ordinance.
 - 6. To fail to comply with any other provisions of this Ordinance.
- B. For each violation of the provisions of this Ordinance, the owner, agent, lessee, or contractor or any other person who commits, takes part in, or assists in any such violation shall be liable upon conviction thereof in a summary proceeding to pay a fine of not less than \$200.00 nor more than \$1,000.00 for each offense, together with the costs of prosecution. Each day or portion thereof in which a violation exists shall be considered a separate violation of this Ordinance, and each Section of this Ordinance which is violated shall be considered a separate violation.
- C. The Borough may also institute suits to restrain, prevent, or abate a violation of this Ordinance in equity or at law. Such proceedings in equity or at 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.

Section 1004. Appeals

- A. Any person aggrieved by any action of the Borough may appeal to the Borough Council within thirty (30) days of that action.

- B. Any person aggrieved by the decision of the Borough Council may appeal to the Lancaster County Court of Common Pleas within thirty (30) days of that decision.

ARTICLE XI. EFFECTIVE DATE

This Ordinance shall become effective five (5) days after its enactment by the Borough Council of Millersville Borough, Lancaster County, Pennsylvania.

DULY ORDAINED AND ENACTED this _____ day of _____, 20 __, by the Borough Council of Millersville Borough, Lancaster County, Pennsylvania, in lawful session duly assembled.

BOROUGH OF MILLERSVILLE
Lancaster County, Pennsylvania

By: _____
President, Borough Council

Attest: _____
Secretary

[SEAL]

APPROVED this _____ day of _____, 20 __

Mayor