TOWNSHIP OF ANTRIM,
FRANKLIN COUNTY, PENNSYLVANIA
ORDINANCE NO. 363 OF 2023

AN ORDINANCE AMENDING THE STORMWATER MANAGEMENT REQUIREMENTS AS SET FORTH IN THE CODE OF THE TOWNSHIP OF ANTRIM

WHEREAS, the Township of Antrim currently has stormwater regulations as set forth in Chapter 126 of the Code of the Township of Antrim, Pennsylvania; and

WHEREAS, the Township of Antrim has an active National Pollutant Discharge Elimination System (NPDES) Permit, #PAI133536, issue by the Pennsylvania Department of Environmental Protection; and

WHEREAS, the Township of Antrim's NPDES Permit requires the Township to enact an ordinance that is consistent with the Pennsylvania Department of Environmental Protection 2022 Model Ordinance; and

WHEREAS, the Antrim Township Board of Supervisors desire to amend Chapter 126 in a manner consistent with the Pennsylvania Department of Environmental Protection's 2022 Model Ordinance to promote the public health, safety, and welfare of the residents of the Township.

NOW, THEREFORE, BE IT ENACTED AND ORDAINED, by the Board of Supervisors of the Township of Antrim, Franklin County, Pennsylvania, as follows:

Section 1. Chapter 126 entitled "Stormwater Management" shall be repealed in its entirety and replaced with a new Chapter 126 entitled "Stormwater Management" and shall read as follows:

Chapter 126
Stormwater Management

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ARTICLE I – DEFINITIONS

§126-1 – Definitions

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

A. Words used in the present tense include the future tense; the singular number includes the plural, and the plural number includes the singular; words of masculine gender include feminine gender; and words of feminine gender include masculine gender.
B. The word "includes" or "including" shall not limit the term to the specific example but is intended to extend its meaning to all other instances of like kind and character.
C. The words "shall" and "must" are mandatory; the words "may" and "should" are permissive.
D. These definitions do not necessarily reflect the definitions contained in pertinent regulations or statutes and are intended for this Chapter only.

ACCELERATED EROSION – The removal of the surface of the land through the combined action of man's activity and the natural processes of a rate greater than would occur because of the natural process alone.

AGRICULTURAL ACTIVITY – Activities associated with agriculture such as agricultural cultivation, agricultural operation, and animal heavy use areas. This includes the work of producing crops including tillage, land clearing, plowing, disking, harrowing, planting, harvesting crops or pasturing and raising of livestock and installation of conservation measures. Construction of new buildings or impervious area is not considered an agricultural activity.

AGRICULTURAL OPERATION – An enterprise that is actively and continuously engaged in the commercial production and preparation for market of crops, livestock and livestock products and in the production, harvesting and preparation for market or use of agricultural, agronomic, horticultural, silvicultural and aquacultural crops and commodities. The term includes an enterprise that implements changes in production practices and procedures or types of crops, livestock, livestock products or commodities produced consistent with practices and procedures that are normally engaged by farmers or are consistent with technological development within the agricultural industry excluding the construction of buildings, structures and impervious surfaces.

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; also the changing of surface conditions by causing the surface to be more or less impervious; land disturbance.

APPLICANT – A landowner, developer, or other person who has filed an application to the Municipality for approval to engage in any regulated activity at a project site in the Municipality.

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

CONSERVATION DISTRICT – Franklin County Conservation District.

CULVERT – A structure with appurtenant works, which carries a stream, or stormwater runoff under or through an embankment or fill.

DAM – A artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water or another fluid or semi-fluid, or a refuse bank, fill or structure for highway, railroad or other purposes which does or may impound water or another fluid or semi-fluid.

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

DESIGNEE – The agent of the Antrim Township Planning Commission and/or agent of the Antrim Township Board of Supervisors involved with the administration, review or enforcement of any provisions of this Chapter by contract or memorandum of understanding.

DETENTION BASIN – A structure designed to temporarily detain surface runoff for a period of time sufficient to reduce the velocity and rate of surface flows leaving a site. Detention basins drain fully after rainfall has ceased.

DEP – The Pennsylvania Department of Environmental Protection.

DEVELOPED - Manmade changes made to a property or lot, which may include, but are not limited to, buildings or other structures for which a building permit must be obtained under the requirements of the Uniform Construction Code, mining, dredging, filling, grading, paving, excavation or drilling operations, or the storage of equipment or materials.

DEVELOPER – Any landowner, agent of such landowner or tenant with the permission of such landowner who makes or causes to be made a subdivision of land, a land development or any of the regulated activities as defined in §126-4.

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

EASEMENT – A right granted for the use of private land for certain public, quasi-public or private purpose; also the land to which such right pertains.

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

EROSION AND SEDIMENT POLLUTION CONTROL PLAN – A plan that is designed to minimize accelerated erosion and sedimentation.

EXCEPTIONAL VALUE WATERS – Surface waters of high quality which satisfy Pennsylvania Code Title 25 Environmental Protections, Chapter 93 Water Quality Standards, Section 93.4b(b) (relating to anti-degradation).

EXISTING CONDITION – The dominant land cover during the 5-year period immediately preceding a proposed regulated activity.

FEMA – Federal Emergency Management Agency.

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

FLOODPLAIN – Any land area susceptible to inundation by water from any natural source or delineated by applicable FEMA maps and studies as being a special flood hazard area. Also includes areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania DEP Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by DEP).

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

FOREST MANAGEMENT/TIMBER OPERATIONS – Planning and activities necessary for the management of forestland. These include conducting a timber inventory, preparation of forest management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting, site preparation, and reforestation.

FREEBOARD – The difference between the design flow elevation in the emergency spillway of a basin and the top of the basin embankment; and the difference between the design flow elevation of a swale and the top of the swale embankment.

GRADE – A slope, usually of a road, channel or natural ground specified in percent and shown on plans as specified herein. (To) Grade – to finish the surface of a roadbed, top of embankment or bottom of excavation.

GRASSED WATERWAY (SWALE) – A natural or man-made drainageway of parabolic, trapezoidal, rectangular, or triangular cross-section shaped to required dimensions and vegetated with erosion-resistant grasses for conveyance of runoff.

GREEN INFRASTRUCTURE – Systems and practices that use or mimic natural processes to infiltrate, evapotranspire, or reuse stormwater on the site where it is generated.

GROUNDWATER RECHARGE – Replenishment of existing natural underground water supplies.

HIGH QUALITY WATERS – Surface waters having quality which exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water by satisfying Pennsylvania Code Title 25 Environmental Protection, Chapter 93 Water Quality Standards, § 93.4b(a).

HYDROLOGIC SOIL GROUP (HSG) – Infiltration rates of soils vary widely and are affected by subsurface permeability as well as surface intake rates. Soils are classified into four HSGs (A, B, C, and D) according to their minimum infiltration rate, which is obtained for bare soil after prolonged wetting. The NRCS defines the four groups and provides a list of most of the soils in the United States and their group classification. The soils in the area of the development site may be identified from a soil survey report that can be obtained from local NRCS offices or conservation district offices. Soils become less pervious as the HSG varies from A to D (NRCS[1,2]).

IMPERVIOUS SURFACE - Any surface on a lot that, because of the surface's composition or compacted nature, impedes or prevents natural infiltration of water into the soil, including, but not limited to, roofs, solid decks, driveways, patios, swimming pools, sidewalks (other than public walks located in [the Municipality's] right-of-way), parking areas, tennis courts, concrete, asphalt, or crushed stone streets or paths, or compacted gravel or dirt surfaces, as determined by [implementing agency].

INFILTRATION FACILITY – A structure or other man-made feature designed to collect runoff and direct it into the ground.

INLET – A surface connection to a closed drain. A structure at the diversion end of a conduit. The upstream end of any structure through which water may flow.

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

LAND DEVELOPMENT – Any of the following activities:

A. The improvement of one 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 non-residential building on a lot or lots regardless of the number of occupants or tenure.
   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. "Land Development" does not include development which involves:
   1. The conversion of an existing single-family detached dwelling or single-family semi-detached dwelling into not more than three residential units, unless such units are intended to be condominiums.
   2. The addition of an accessory building, including farm buildings, on a lot or lots subordinate to an existing principal building.
   3. The addition or conversion of buildings or rides within the confines of an enterprise which would be considered an amusement park. For the purpose of the subsection, an amusement park is defined as a tract or areas used principally as a location for permanent amusement structures or rides. This exclusion shall not apply to newly acquired acreage by an amusement park until initial plans for the expanded area have been approved by the proper authorities.

LOT - A designated parcel, tract, or area of land established by a plat or otherwise as permitted by law and to be used, developed, or built upon as a unit.

LOW IMPACT DEVELOPMENT (LID) – Site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration, evapotranspiration, and reuse of rainwater. LID can be applied to new development, urban retrofits, and revitalization projects. LID utilizes design techniques that infiltrate, filter, evaporate, and store runoff close to its source. Rather than rely on costly large-scale conveyance and treatment systems, LID addresses stormwater through a variety of small, cost-effective landscape features located on-site.

MUNICIPALITY – Township of Antrim, Franklin County, Pennsylvania.

NRCS – USDA Natural Resources Conservation Service (previously SCS).

OPEN CHANNEL – A drainage element in which stormwater flows with an open surface. Open channels include, but shall not be limited to, natural and man-made drainageways, swales, streams, ditches, and canals.

OUTLET – Points of water disposal from a stream, river, lake, tidewater or artificial drain.

PEAK DISCHARGE – The maximum rate of stormwater runoff from a specific storm event.

PIPE – A culvert, closed conduit, or similar structure (including appurtenances) that conveys stormwater.

PERVIOUS AREA – Any area not defined as impervious.

PLANNING COMMISSION – The planning commission of the Township of Antrim.

PROJECT SITE – The specific area of land where any regulated activities in the Municipality are planned, conducted, or maintained.

PROPERTY OWNER OR OWNER - The owner of a lot as shown on the County tax records.

QUALIFIED DESIGN PROFESSIONAL – A Pennsylvania registered professional engineer.

REGULATED ACTIVITIES – Any earth disturbance activities or any activities that involve the alteration or development of land in a manner that may affect stormwater runoff.

REGULATED EARTH DISTURBANCE ACTIVITY – Activity involving earth disturbance subject to regulation under 25 Pa. Code 92, 25 Pa. Code 102, or the Clean Streams Law.

RELEASE RATE – The rate at which runoff is released from a site or sub-area measured in cubic feet per second.

RETENTION BASIN – A reservoir, formed from soil or other material, which is designed to retain permanently a certain amount of stormwater which also may be designed to temporarily detain surface runoff for a period of time sufficient to reduce the velocity and rate of surface flows leaving a site. Retention basins also may receive fresh water from year-round streams. Retention basins always contain water, and thus may be considered man-made lakes or ponds.

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

RIPARIAN BUFFER – A permanent area of trees and shrubs located adjacent to streams, lakes, ponds and wetlands.

RUNOFF – Any part of precipitation that flows over the land.

SEDIMENT – Soils or other materials transported by surface water as a product of erosion.

SEDIMENTATION – The process by which mineral or organic matter is accumulated or deposited by moving wind, water or gravity. Once this matter is deposited (or remains suspended in water), it is usually referred to as "sediment".

SEDIMENT BASIN – A temporary dam or barrier constructed across a waterway or at other suitable locations to intercept the runoff and to trap and retain the sediment.

SHEET FLOW – Runoff that flows over the ground surface as a thin, even layer, not concentrated in a channel.

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

STATE WATER QUALITY REQUIREMENTS – The regulatory requirements to protect, maintain, reclaim, and restore water quality under Title 25 of the Pennsylvania Code and the Clean Streams Law.

STORM SEWER – A pipe that conveys stormwater.

STORMWATER – Drainage runoff from the surface of the land resulting from precipitation or snow or ice melt.

STORMWATER MANAGEMENT FACILITY – Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater management facilities include, but are not limited to: detention and retention basins; open channels; storm sewers; pipes; and infiltration facilities.

STORMWATER MANAGEMENT FEE - The fee charged for costs incurred by the Township of Antrim in providing stormwater management services.

STORMWATER MANAGEMENT SITE PLAN – The plan prepared by the developer or his representative indicating how stormwater runoff will be managed at the development site in accordance with this Chapter. **Stormwater Management Site Plan** will be designated as **SWM Site Plan** throughout this Chapter.

STORMWATER SERVICES – Antrim Township's program for stormwater quality and for the partial control and conveyance of stormwater, including, but not limited to: public education; monitoring; removing, and regulating stormwater pollutants; other activities described in Antrim Township's NPDES permit; mapping; planning; regulating, reviewing, and inspecting private stormwater infrastructure; operating, constructing, improving, cleaning, and maintaining Antrim Township's stormwater system; and any and all expenses deemed reasonably necessary to the management of stormwater within Antrim Township in the judgment of Antrim Township Board of Supervisors, including but not limited to the payment of principal and debt service, and the establishment of a reserve fund, to pay for these services.

STORMWATER SYSTEM - The system of natural and constructed conveyances for collecting, managing, and transporting stormwater, including but not limited to lakes, ponds, rivers, perennial, intermittent, and/or channeled streams, connected wetlands, open ditches, catch basins, and other inlets, pipes, storm sewers, drains,

culverts, and created stormwater management facilities that provide partial treatment by passive means such as wet detention ponds, detention basins, and stormwater wetlands.

SUBDIVISION - The division or re-division of a lot, tract or parcel of land by any means into two 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 subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

SUPERVISORS – The Antrim Township Board of Supervisors.

SWALE – See "Grassed Waterway"

TOWNSHIP – Antrim Township, Franklin County, Pennsylvania.

USDA – United States Department of Agriculture.

WATERCOURSE – A permanent stream, intermittent stream, river, brook, creek channel or ditch for water, whether natural or man-made.

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

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

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

ARTICLE II – GENERAL PROVISIONS

§126-2 – Findings

The Antrim Township Board of Supervisors finds that:

A. Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed increases flood flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of existing streams and storm sewers, greatly increases the cost of public facilities to convey and manage stormwater, undermines floodplain management and flood reduction efforts in upstream and downstream communities, reduces groundwater recharge, and threatens public health and safety.

B. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated erosion, is fundamental to the public health, safety, welfare, and the protection of the people of the Municipality and all the people of the Commonwealth, their resources, and the environment.

C. Stormwater is an important water resource that provides groundwater recharge for water supplies and supports the base flow of streams.

D. The use of green infrastructure and low impact development (LID) are intended to address the root cause of water quality impairment by using systems and practices which use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near where it falls to earth. Green infrastructure practices and LID contribute to the restoration or maintenance of pre-development hydrology.

E. Federal and state regulations require certain municipalities to implement a program of stormwater controls. These municipalities are required to obtain a permit for stormwater discharges from their separate storm sewer systems under the National Pollutant Discharge Elimination System (NPDES) program. In order to establish, operate, and maintain the stormwater infrastructure of Antrim Township, sufficient and stable funding is required.

F. Antrim Township intends to establish fair and equitable stormwater management fees to assure that each lot within the Township will pay its proportionate share of the costs of operation, maintenance, administration, and improvement of all stormwater services provided or paid for by Antrim Township.

§126-3 – Purpose

The purpose of this Chapter is to promote the public health, safety and welfare within the Municipality and its watershed by minimizing damages and maximizing the benefits described in the previous section of this Chapter through provisions designed to:

A. Meet legal water quality requirements under state law, including regulations at 25 Pa. Code 93 to protect, maintain, reclaim, and restore the existing and designated uses of the waters of this Commonwealth.
B. Preserve natural drainage systems.
C. Manage stormwater runoff close to the source, reduce runoff volumes and mimic predevelopment hydrology.
D. Provide procedures and performance standards for stormwater planning and management.
E. Maintain groundwater recharge to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
F. Prevent scour and erosion of stream banks and streambeds.
G. Provide proper operation and maintenance of all stormwater best management practices (BMPs) that are existing or implemented within the Municipality.
H. Provide standards to meet NPDES permit requirements.

§126-4 – Statutory Authority

A. The Municipality is empowered to regulate land use activities that affect runoff by the authority of the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended, and/or the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, et seq., as amended, The Stormwater Management Act.
B. The Municipality is empowered by [53 Pa. Cons. Stat. § 67705] to assess reasonable and uniform fees for stormwater management activities and facilities.

§126-5 – Applicability

All activities regulated by this Chapter, whether or not the activity affects stormwater runoff, and all activities that may affect stormwater runoff, including but not limited to, land development and earth disturbance activity, are subject to regulation by this Chapter.

The following is a list of some of the "Regulated Activities" that shall be regulated by this Chapter. However, this Chapter shall also apply to any activity regulated by the requirements of this Chapter whether or not included in the list below.

A. Land Development
B. Subdivision
C. Construction of new or additional impervious or semi-pervious surfaces (driveways, parking lots, etc.)
D. Construction of new buildings or additions to existing buildings
E. Diversion or piping of any natural or man-made stream channel
F. Installation of stormwater management facilities or appurtenances thereto
G. Any activity requiring that a land development or subdivision plan (as defined in Chapter 125) be filed as required by Chapter 125.
H. Creating, diverting, piping, changing the direction of, or altering the flow of stormwater or non-stormwater discharge from property that will have an adverse impact on other property/properties or be in violation of any of the requirements as set forth in this Chapter.

§126-6 – Compatibility with Other Requirements

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

Approvals issued and actions taken under any other code, law, regulation, or ordinance do not relieve the applicant of the requirements within this Chapter.

§126-7 – Erroneous Permit or Authorization

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

§126-8 – Waivers, Modifications, and Exemptions

A. If the Municipality determines that any requirement under this Chapter cannot be achieved for a particular regulated activity, the Municipality may, after an evaluation of alternatives, approve measures other than those in this Chapter, subject to §126-8(B) and §126-8(C).
B. Waivers or modifications of the requirements of this Chapter may be approved by the Municipality if enforcement will exact undue hardship because of peculiar conditions pertaining to the land in question, provided that the modifications will not be contrary to the public interest and that the purpose of the Chapter is preserved. Cost or financial burden shall not be considered a hardship. Modification may be considered if an alternative standard or approach will provide equal or better achievement of the purpose of the Chapter. A request for modifications shall be in writing and accompany the Stormwater Management Site Plan submission. The request shall provide the facts on which the request is based, the provision(s) of the Chapter involved and the proposed modification.
C. No waiver or modification of any regulated stormwater activity involving earth disturbance greater than or equal to one acre may be granted by the Municipality unless that action is approved in advance by the Department of Environmental Protection (DEP) or the delegated county conservation district.
D. Residential regulated activities that result in cumulative earth disturbances less than 1 acre are exempt from the requirements in §126-10, §126-13, and Article IV of this Chapter.
E. Agricultural activity is exempt from the SWM Site Plan preparation requirements of this Chapter provided the activities are performed according to the requirements of 25 Pa. Code Chapter 102.
F. Forest management and timber operations are exempt from the SWM Site Plan preparation requirements of this Chapter provided the activities are performed according to the requirements of 25 Pa. Code Chapter 102.
G. Exemptions from any provisions of this Chapter shall not relieve the applicant from the requirements in §126-9(D) through §126-9(G).
H. Regulated activities that meet the exemption criteria in the following table may be eligible for an exemption from the requirements of Article III of this chapter, subject to a review by the Township Engineer and at the sole discretion of the Township Supervisors. Requests for exemptions shall be submitted in writing for review by the Township and shall clearly identify the justification and basis for the request. The exemption criteria shall apply to all regulated activities proposing construction of impervious surfaces after the effective date of this chapter. Regulated activities related to commercial and/or industrial development shall not be eligible for exemptions. The total impervious surface area at a site shall be calculated for the area inclusive of both existing and proposed impervious surfaces. Gravel and stone areas shall be included in the impervious area calculation but can be reduced according to the area reduction factors and sample calculation provided in Exhibit 2, Figure B-1.

Stormwater Management Exemption Criteria

Total Parcel Size (acres)	Maximum Impervious Area Exemption (square feet)
Less than or equal to 1/4	2,500
1/4 to 1	5,000
1 to 2	10,000
2 to 5	15,000
More than 5	20,000

I. The Municipality may deny or revoke any exemption pursuant to this Section at any time for any project that the Municipality believes may pose a threat to public health and safety or the environment.

ARTICLE III – STORMWATER MANAGEMENT STANDARDS

§126-9 – General Requirements

A. For all regulated activities, unless preparation of an SWM Site Plan is specifically exempted in §126-8:
   1. Preparation and implementation of an approved SWM Site Plan is required.
   2. No regulated activities shall commence until the Municipality issues written approval of a SWM Site Plan, which demonstrates compliance with the requirements of this Chapter.

B. SWM Site Plans approved by the Municipality, in accordance with §126-21 shall be on site throughout the duration of the regulated activity.

C. The Municipality may, after consultation with DEP, approve measures for meeting the state water quality requirements other than those in this Chapter, provided that they meet the minimum requirements of, and do not conflict with, state law including, but not limited to, the Clean Streams Law.

D. For all regulated earth disturbance activities, erosion and sediment control BMPs shall be designed, implemented, operated, and maintained during the regulated earth disturbance activities (e.g., during construction) to meet the purposes and requirements of this Chapter and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law. Various BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual* (E&S Manual[3]), No. 363-2134-008, as amended and updated.

E. Impervious areas:
   1. The measurement of impervious areas shall include all of the impervious areas in the total proposed development even if development is to take place in stages.
   2. For development taking place in stages, the entire development plan must be used in determining conformance with this Chapter.
   3. For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this Chapter; except that the volume controls in §126-13 and the peak rate controls of §126-10 do not need to be retrofitted to existing impervious areas that are not being altered by the proposed regulated activity.

F. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification from the owner, developer, or representative to the adjacent property owner(s). The Township shall be copied on these communications. In the event the adjacent property owner disputes the flows, the owner/developer shall propose a solution that satisfies the adjacent property owner, or the discharge shall be altered to maintain a minimum of twenty (20) feet from the property line. Such stormwater flows shall be subject to the requirements of this Chapter.

G. All regulated activities shall include such measures as necessary to:
   1. Protect health, safety, and property.
   2. Meet the water quality goals of this Chapter by implementing measures to:
      (a) Minimize disturbance to floodplains, wetlands, and wooded areas.
      (b) Maintain or extend riparian buffers.

(c) Avoid erosive flow conditions in natural flow pathways.
(d) Minimize thermal impacts to waters of this Commonwealth.
(e) Disconnect impervious surfaces by directing runoff to pervious areas, wherever possible.

3. Incorporate methods described in the *Pennsylvania Stormwater Best Management Practices Manual* (BMP Manual[4]). If methods other than green infrastructure and LID methods are proposed to achieve the volume and rate controls required under this Chapter, the SWM Site Plan must include a detailed justification demonstrating that the use of LID and green infrastructure is not practicable.

H. The design of all facilities over karst shall include an evaluation of measures to minimize adverse effects.

I. Infiltration BMPs should be spread out, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other requirements of this Chapter.

J. Normally dry, open top, storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm.

K. The design storm volumes to be used in the analysis of peak rates of discharge should be obtained from the latest version of the Precipitation-Frequency Atlas of the United States, National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Spring, Maryland.

1. NOAA's Atlas 14[5] can be accessed at: http://hdsc.nws.noaa.gov/hdsc/pfds/.

L. For all regulated activities, SWM BMPs shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this Chapter and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Storm Water Management Act.

M. Various BMPs and their design standards are listed in the BMP Manual.

N. The following calculations methods are acceptable based on the watershed size:

1. Standard Rational Method shall be acceptable for analysis of watersheds up to 20 acres in size.
2. The Modified Rational Method shall be acceptable for analysis of watersheds up to 200 acres in size.
3. NRCS Methods (TR-55 or TR-20) shall be acceptable for watershed analyses of all sizes.

O. Provide safe conveyance of the 100-year design storm runoff from offsite watersheds, if any. All pre-development calculations shall be based upon existing land uses except existing agricultural uses, which shall be based on

1. Cultivated Land with Conservation Treatment
2. Pasture in Good Condition,
3. Meadow in Good Condition,
4. Farmstead
5. Unless ground cover generates a lower CN or c

P. Rainfall intensities shall be consistent with appropriate times-of-concentration for overland flow and return periods from the Design Storm Curves of PA DOT Rainfall Curves (Figure B-3) in Exhibit 2.

Q. Runoff Curve Numbers (CN) for both existing and proposed shall be obtained from Table B-2 in Exhibit 2.

R. Runoff coefficients (c) for both existing and proposed conditions shall be obtained from Table B-3 in Exhibit 2.

S. Storm sewers, swales and other stormwater conveyance structures shall be designed to convey post development runoff from a 25-year design storm without surcharging inlets and with adequate freeboard in open drainageways.

1. 6" of freeboard shall be provided in swales carrying 14 cfs of less.
2. 1 ft. of freeboard shall be provided in drainageways designed to carry flow of 15 cfs or greater.

T. The minimum pipe diameter permitted for use in storm sewer system and/or stormwater carry culverts shall be 15".

U. The minimum pipe slope permitted for use in storm sewer system and/or stormwater carry culverts shall be 0.35%.

V. Stormwater drainage systems shall be provided in order to permit unimpeded flow along natural watercourses, except as modified by stormwater management facilities or open channels consistent with this Chapter.

W. The existing points of diffused or concentrated drainage that discharge onto adjacent property shall not be altered without written permission of the affected property owner(s).

X. If existing diffused discharge becomes concentrated in Post Development Condition and discharges onto adjacent property, document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no E&S, flooding, or other harm will result from the concentrated discharge.

Y. Where a development site is traversed by watercourses, drainage easements shall be provided conforming to the line of such watercourses.
   1. Easements shall be centered on the watercourse and have a minimum width of 20.0 ft.
   2. The terms of the easement shall prohibit excavation, the placing of fill or structures and any alterations that may adversely affect the flow of stormwater within any portion of the easement.

Z. When it can be shown that, due to topo conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways is subject to approval by DEP.

AA. Any SWM facilities that would be located in or adjacent to waters of the Commonwealth or wetlands shall be subject to approval by PADEP and, if applicable, the U.S. Army Corps of Engineers. When there is a question whether wetlands may be involved, it is the responsibility of the Developer or his agent to demonstrate to the applicable regulatory agencies that the land in question cannot be classified as wetlands.

BB. Cleanout structures for storm sewers shall be installed at the following max. spacing:
   1. 15" pipe – 200 ft spacing
   2. 18-36" pipe – 300 ft spacing
   3. 42-60" pipe – 500 ft spacing
   4. $\geq$ 66" pipe - unlimited

CC. The SWM plan shall include calculations indicating velocities of flow, grades, sizes, and capacities of water carrying structures, and retention and detention structures as well as sufficient design information to construct such facilities.

DD. Proposed lots or buildings adjacent to basins and significant channels shall have a finished floor elevation of 2 feet above the 100-year storm event level calculated for these facilities.

EE. The plans shall specify the minimum allowable finished first floor elevation for these lots or buildings.

FF. Stormwater runoff channels shall be designed and installed to avoid trapping excess sediment.

GG. E&S pollution control measures shall be required for all plans submitted and shall be in accordance with the applicable standards and specifications set forth in the latest edition of the DEP E&S Pollution Control Program Manual and all other aspects of DEP Chapter 102.

HH. Special provisions may be required for watersheds draining to high quality (HQ) and exceptional value (EV) waters in accordance with PADEP regs.

II. Adequate erosion protection shall be provided along all open channels at all points of discharge.

§126-10 – Stormwater Management Districts

Antrim Township is divided into stormwater management districts as shown on the Stormwater Management District Map (Exhibit 1).

In addition to the requirements specified below, the Ground Water Recharge (§126-13) and Water Quality (§126-14) requirements shall be implemented.

Standards for managing runoff in each Stormwater Management District are shown below. Development sites in Antrim Township must control post-development runoff rates to pre-development runoff rates for each specified design storm as follows:

District	Design Storm Post-Development	Design Storm Pre-Development
A	2- year	1- year
	5- year	5- year
	10- year	10- year
	25- year	25- year
	50-year	50-year
	100-year	100-year
B	2- year	1- year
	5- year	2- year
	10- year	5- year
	25- year	10- year
	50-year	25-year
	100-year	50-year
C	2- year	1- year
	5- year	5- year
	10- year	10- year
	25- year	25- year
	50-year	50-year
	100-year	100-year

§126-11 – Stormwater Management District Implementation Provisions (Performance Standards)

A. General – Post-development peak rates of runoff from any regulated activity shall meet the peak release rates of runoff prior to development for the design storms specified on the Stormwater Management District Map (Exhibit 1) and this section.

B. District Boundaries - The boundaries of the Stormwater Management Districts are shown on the Stormwater Management District Map that is available for inspections at the municipal office. A copy of the Stormwater Management District Map at a reduced scale is included in the Chapter (Exhibit 1). The exact location of the Stormwater Management District boundaries as they apply to a given development site shall be determined by mapping the boundaries using the two-foot topographic contours (or most accurate data required) provided as part of the Drainage Plan.

C. Sites located in more than one (1) District – for proposed development located in two (2) or more Stormwater Management Districts, the allowable post-development peak discharge rate shall be determined based on the location of the point(s) of discharge from the site. Stormwater discharge shall be detained according to the provisions of the Stormwater Management District in which the point of discharge is located. Existing district boundaries shall not be altered by development beyond that which is required to construct the proposed structures and/or facilities and provide proper access to and from the site given the natural topographic limitations and constraints of the site.

§126-12 – Design Criteria for Stormwater Management Facilities

A. Stormwater Management Facilities are not permitted unless it is proven that all other options to use LID BMP's have been exhausted.

B. Release rates from storage structures shall be based on the runoff from the 1-year, 2-year, 5-year and 10-year, 25-year, 50-year and 100-year pre-development storm events according to the Stormwater Management District Map in (Exhibit 1).

C. All stormwater facilities shall be designed in accordance with the following minimum standards.

1. Embankment material used for basin construction shall be comprised of either on-site or imported fill which meets the following criteria:
   (a) Free of organic material, ash, cinders, and demolition debris.
   (b) Particle size distribution that is well graded.
   (c) Plasticity index less than 10, liquid limit less than 30.
   (d) Less than 15% by weight rock fragments larger than 3 inches, less than 30% by weight larger than ¾ inch and less than 30% smaller than No. 200 sieve.
2. Embankment slopes shall not be steeper than one (1) foot vertical in three (3) feet horizontal.
3. The top width of basin embankments shall not be less than six (6) feet.
4. Emergency spillways in berms or earthen embankments shall be designed to convey the peak discharge from a 100-year design storm event while maintaining a minimum 1.0 foot of freeboard, assuming that the principal outlet structure is completely blocked. Proper erosion control measures shall be provided to protect the spillway and embankment against the erosive effects of accelerated discharge. Calculations for erosion protection shall be provided.
5. All embankments shall incorporate a compacted clay core and cutoff key trench meeting the criteria for embankment material as well as the following additional criteria:
   (a) Soil shall be relatively impermeable and meet the following USCS classification groups as determined by ASTM D2487/D2488: CL and/or CL-ML.
6. Top width of compacted clay core shall be a minimum of 2 feet with a top elevation equal to the 25-year storm peak water storage elevation or higher. The bottom width of clay key trench shall be a minimum of 4 feet and the key shall extend a minimum of 2 feet into virgin, undisturbed soil below the topsoil layer.
7. Anti-seep collars shall be installed on all basin outlet pipes. The required size and spacing of the collars shall be confirmed through calculations.
8. Basins which are not designed to infiltrate shall be kept in a maintainable condition with a minimum bottom slope of 1% sloped toward the principal outlet structure. If paved low flow channels are used, then the basin bottom slope can be reduced to 0.5%. Paved low flow channels shall have a minimum width of 4 feet and be constructed of four-inch-thick concrete over four-inches of compacted PennDOT No. 2A stone.
9. Underdrains are highly discouraged in stormwater basins. If an underdrain is proposed, include a note with the underdrain detail that states the following:
   (a) The Township must be notified when the underdrain is open and when it is closed again. Once the underdrain has been closed, the Township reserves the right to verify. When the underdrain is opened for maintenance purposes, the basin is to be restored to the approved design. This requires infiltration tests to be done to verify that the approved infiltration rates have been restored.
10. Storage facilities shall be designed to release the 1-year post development storm runoff volume over a minimum duration of 24-hours.

§126-13 – Ground Water Recharge (Infiltration/Recharge/Retention)

A. The ability to retain and maximize the ground water recharge capacity of the area being developed is preferred and shall be proposed wherever feasible. Design of the infiltration/recharge stormwater management facilities shall give consideration to providing ground water recharge to compensate for the reduction in the percolation that occurs when the ground surface is paved and roofed over. These measures are required in hydrologic soil groups A and B and should be utilized wherever feasible. Soils used for the construction of basins shall have low-erodibility factors ("K" factors).

1. The Township reserves the right to waive the requirements of this section if the Township receives documentation from a qualified design professional which demonstrates the implementation of infiltration practices would pose a threat to public health, safety, welfare and the protection of the people of the Municipality, their resources and the environment, or if site-specific soils testing demonstrates that suitable infiltration rates cannot be achieved. At a minimum, a site's suitability for infiltration practices shall be determined using the criteria in §126-13(D)(1) and §126-13(E)(4).

B. The green infrastructure and low impact development practices provided in the BMP Manual shall be utilized for all regulated activities wherever possible. Water volume controls shall be implemented using the *Design Storm Method* in Subsection 1).
   1. The *Design Storm Method* (CG-1 in the BMP Manual) is applicable to any size of regulated activity. This method requires detailed modeling based on site conditions. This method shall be performed for each point of interest, individually, on the project.
      (a) Do not increase the post-development total runoff volume for all storms equal to or less than the 2-year 24-hour duration precipitation.
      (b) For modeling purposes:
         (1) Existing (predevelopment) non-forested pervious areas must be considered meadow in good condition.
         (2) 20% of existing impervious area, when present, shall be considered meadow in good condition in the model for existing conditions.

C. The recharge volume provided at the site shall be directed to the most permeable HSG available, if feasible.

D. A detailed soils evaluation of the project site shall be required to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified design professional, and at a minimum, address soil permeability, depth to bedrock and normal or seasonal high-water table, susceptibility to sinkhole formation, and subgrade stability. The general process for designing the infiltration BMP shall be:
   1. Analyze hydrologic soil groups as well as natural and man-made features within watershed to determine general areas of suitability for infiltration practices.
   2. Provide field tests to determine the presence of appropriate soil percolation rates between 0.55 and 8.25 in/hr. Values outside this range may be acceptable with recommendation from a qualified professional.
   3. Infiltration testing procedures shall follow the steps outlined in DEP's Pennsylvania Stormwater BMP Manual, Appendix C.
   4. Testing shall be performed at the location of each proposed bottom elevation of the Infiltration BMP. A plan including the frequency and locations of soil tests shall be submitted to the Township for review and approval.
   5. The design infiltration rate shall be the average of all infiltration tests taken, including tests that are 0.0 in/hr, with a factor of safety depending on the infiltration test method:
      (a) Double Ring Infiltrometer test factor of safety = 2
      (b) Percolation Test factor of safety = 3
   6. Infiltration BMPs shall be capable of completely infiltrating the collected runoff volume within 3 days (72 hours).
   7. Infiltration BMP bottoms shall be separated by a minimum of 24" vertically from the seasonal high-water table and/or bedrock layer, as documented by on site soil testing.
   8. Infiltration BMPs shall be constructed in virgin, where practical. In the event that Infiltration BMPs are constructed in fill material, the fill material shall be comprised of 50% sand and 50% compost.
   9. Recharge/infiltration facilities shall not be used as sediment basins where practical. If a recharge/infiltration facility is used as a sediment basin, the bottom of the sediment basin shall be over excavated a minimum of 2' and backfilled with amended soils before being converted to a recharge/infiltration facility.
   10. Specific requirements shall be included on the plans to protect infiltration BMPs from compaction by equipment and to prevent sediment from entering infiltration BMPs during construction. This requirement shall be provided in note form on the plan.

11. Infiltration BMPs shall be at least 20 feet down-gradient, or 100 feet upgradient from on-site and/or offsite building foundations.
12. Infiltration BMPs shall be a minimum of 100 feet from any water supply well where the runoff is from commercial or industrial pervious parking areas. For all other applications a minimum distance of 50 feet shall be used.
13. Infiltration BMPs shall not be located within 50 feet of septic systems and/or septic system drain fields.
14. All infiltration BMP's shall incorporate a conveyance and control for overflow runoff.
15. Waiver of any or all of these requirements will be evaluated on an individual basis and may be granted at the discretion of the Township only upon written request and explanation of the reason(s) that these requirements should not apply provided by a Qualified Design Professional.

E. Extreme caution shall be exercised where infiltration is proposed in geologically susceptible areas such as strip mine or limestone areas. Extreme caution shall also be exercised where salt or chloride would be a pollutant since soils do little to filter this pollutant and it may contaminate the groundwater. It is also extremely important that the qualified design professional evaluate the possibility of groundwater contamination from the proposed infiltration/recharge facility and recommend a hydrogeologic justification study be performed if necessary. Whenever a basin will be located in an area underlain by limestone, a geological evaluation of the proposed location shall be conducted to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent ground water contamination and, where necessary, sinkhole formation. The infiltration requirement in the High Quality/Exceptional Waters shall be subject to the PADEP's Chapter 93 and Antidegradation Regulations. The Municipality may require the installation of an impermeable liner in detention basins. A detailed hydrogeologic investigation may be required by the Township. All prevention provisions shall be stated and shown on the plan with details provided for each.
    1. Infiltration BMPs shall have loading ratios no greater than 8.0:1 overall drainage area to infiltration bottom area, and 5.0:1 impervious drainage area to infiltration bottom area. If the site is underlain by karst topography, the infiltration BMPs shall have loading ratios no greater than 8.0:1 overall drainage area to infiltration bottom area, and 3.0:1 impervious drainage area to infiltration bottom area.
    2. If pretreatment is to be used in order to meet the required loading ratio, the following needs to be provided:
        (a) Pretreatment BMPs need to be called out as "Pretreatment" in the PCSM report and on the plans. The pretreatment BMPs shall be labeled to designate for which BMP they provide pretreatment.
        (b) Demonstrate through calculations that the pretreatment BMPs are creating an equivalent, acceptable loading ratio.
    3. Stormwater runoff from significant pollutant producing sources (so-called "hot spots" such as industrial uses, gas stations, fast-food and other commercial uses generating large numbers of vehicle trips, and other uses at the determination of the Township) shall be filtered and/or pretreated using a water quality BMP before being discharged.
    4. In these cases, the Township may require that a detailed geologic evaluation of the project site be performed to determine the suitability for recharge, including both the potential for groundwater contamination and potential for sinkhole formation. The evaluation shall be performed by a registered professional geologist licensed in the Commonwealth of Pennsylvania and/or any other Township-approved professional, and at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation, and subgrade stability.

    It shall be the developer's responsibility to verify if the site is underlain by limestone. The following note shall be attached to all drainage plans and signed and sealed by the developer's engineer or geologist:

I, _____, hereby certify that the proposed detention basin / infiltration BMP (circle one) is / is not underlain by limestone.

F. The Municipality may require the developer to provide safeguards against groundwater contamination for uses which may cause groundwater contamination should there be a mishap or spill.
G. Where pervious pavement is permitted for parking lots, recreational facilities, non-dedicated streets, or other areas, pavement construction specifications and maintenance schedules shall be noted on the plan.
H. Recharge/infiltration facilities may be used in conjunction with other innovative or traditional BMPs, stormwater control facilities, and nonstructural stormwater management alternatives.

§126-14 – Water Quality Requirements

A. In addition to the performance standards and design criteria requirements of Article III of this Chapter, the land developer shall comply with the following water quality requirements of this Article unless otherwise exempted by provisions of this Chapter.
   1. The Township reserves the right to waive the requirements of this section if the Township believes that the implementation of infiltration practices would pose a threat to public health, safety, welfare, property and the protection of the people of the Municipality, their resources and the environment.
   2. Developed areas will provide adequate storage and treatment facilities necessary to capture and treat stormwater runoff. The Recharge Volume computed under §126-13 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.
   3. The Water Quality Volume (WQv) is the storage capacity needed to treat stormwater runoff produced by "P" inch of rainfall (90% Rule) from the developed areas of the site (For "P" Values, see Exhibit 2, Table B-5). The following calculation formula is used to determine the storage volume, WQv, in acre-feet of storage:

      $WQv = [(P)(Rv)(A)]/12$
      WQv = Water Quality Volume
      P = Rainfall Amount (90% of events producing this rainfall (Exhibit 2, Table B-5)
      A = Area in acres
      $Rv = 0.05 + 0.009(I)$ where I is the impervious surface percentage

B. Water quality requirements must be addressed in the Post Construction Stormwater Management narrative.
C. WQv shall be designed as part of a stormwater management facility which incorporates water quality BMPs as a primary benefit of using that facility, in accordance with design specifications contained in "Pennsylvania Handbook of Best Management Practices for Developing Areas".

Design of infiltration BMPs proposed to comply with the water quality requirements of this section shall be in accordance with the design requirements outlined in the previous §126-12.

§126-15 – Riparian Buffers

A. In order to protect and improve water quality, a Riparian Buffer Easement shall be created and recorded as part of any subdivision or land development that encompasses a Riparian Buffer, as applicable per DEP regulations.
B. Except as required by 25 Pa. Code Chapter 102, the Riparian Buffer Easement shall be measured to be the greater of the limit of the 100 year floodplain or a minimum of 35 feet from the top of the streambank (on each side).
C. Minimum Management Requirements for Riparian Buffers.
   1. Existing native vegetation shall be protected and maintained within the Riparian Buffer Easement

2. Whenever practicable, invasive vegetation shall be actively removed and the Riparian Buffer Easement shall be planted with native trees, shrubs and other vegetation to create a diverse native plant community appropriate to the intended ecological context of the site.

D. The Riparian Buffer Easement shall be enforceable by the Municipality and shall be recorded in the Franklin County Recorder of Deeds Office, so that it shall run with the land and shall limit the use of the property located therein. The easement shall allow for the continued private ownership and shall count toward the minimum lot area as required by Zoning Chapter.

E. Recreational trails may be permitted, at the discretion of the Township, within the Riparian Buffer Easement and shall be constructed and maintained in a manner that will maintain the extent of the existing 100-year floodplain, improve or maintain the stream stability, and preserve and protect the ecological function of the floodplain.

F. The following conditions shall apply when public and/or private recreation trails are permitted within Riparian Buffers:
   1. Trails shall be for non-motorized use only.
   2. Trails shall be designed to have the least impact on native plant species and other sensitive environmental features.

G. Septic drain fields and sewage disposal systems shall not be permitted within the Riparian Buffer Easement and shall comply with setback requirements established under 25 Pa. Code Chapter 73.

ARTICLE IV – STORMWATER MANAGEMENT SITE PLAN REQUIREMENTS

§126-16 – Plan Requirements

The following items shall be included in the SWM Site Plan and shall be signed and sealed by a Pennsylvania licensed engineer.

A. Appropriate sections from the Municipal's Subdivision and Land Development Chapter, and other applicable local Chapters or ordinances, shall be followed in preparing the SWM Site Plans.

B. No SWM Site Plan shall be implemented without Municipal approval. The Municipality shall not approve any SWM Site Plan that is deficient in meeting the requirements of this Chapter. At its sole discretion and in accordance with this Article, when a SWM Site Plan is found to be deficient, the Municipality may either disapprove the submission and require a resubmission, or in the case of minor deficiencies, the Municipality may accept submission of modifications.

C. Provisions for permanent access or maintenance easements for all physical SWM BMPs, such as ponds and infiltration structures, as necessary to implement the Operation and Maintenance (O&M) Plan discussed in paragraph §126-25 below.

D. SWM Site Plans shall be submitted, reviewed, and approved as part of the Subdivision and/or Land Development Plan. If a SWM Site Plan is proposed without a Subdivision and/or Land Development Plan, it is at the Township's discretion how to process the SWM Site Plan.

E. The SWM Site Plan shall be submitted on 24-inch x 36-inch sheets and shall be prepared in a form that meets the requirements for recording at the offices of the Recorder of Deeds of Franklin County. The SWM Site Plan shall provide the following information:
   1. A general description of the project and a detailed narrative of the stormwater management proposal and conclusions describing the management techniques, types of storage and conveyance facilities, and a comparison between the pre-development and post-development peak runoff levels.
   2. Staging and implementation schedule for constructing the proposed stormwater management facilities.
   3. A note which states: During all stages of construction, the Owner, Developer and/or Contractor shall ensure that stormwater runoff is effectively managed prior to discharging from the property through collection and conveyance through approved on site stormwater management and erosion and sediment pollution control facilities. Developer, Owner and/or Contractor shall be jointly and severally liable for ensuring that the stormwater runoff is effectively managed prior to discharge onto other property.

4. A note which states: All owners of lots/land on this plan are advised that the Pennsylvania Department of Environmental Protection (PADEP) may revise the stormwater requirements for said lots/land in the future. All owners of lots/land on this plan shall be required to comply with the revised DEP regulations, even though said regulations may be different than the regulations currently in effect.
5. A note which states: The inspector for Antrim Township's Engineering firm must be present at the pre-construction meeting and for the installation of stormwater controls and BMPs. Construction may not commence or proceed without them.
6. A note on the plan indicating the location and responsibility for maintenance of stormwater management facilities that would be located off-site. All off-site facilities shall meet the performance standards and design criteria specified in this Chapter.
7. A statement, signed by the landowner, acknowledging the stormwater management system to be a permanent fixture that can be altered or removed only after approval of a revised plan by the Municipality.
8. A note which states that no person shall modify, remove, fill, landscape or alter any existing stormwater BMP, unless it is part of an approved maintenance program, without the written approval of the Municipality.
9. A note which states that no person shall place any structure, fill, landscaping or vegetation into a stormwater BMP or within a drainage easement, which would limit or alter the functioning of the BMP, without the written approval of the Municipality.
10. A determination of site conditions in accordance with the BMP Manual[4]. A detailed site evaluation shall be completed for projects proposed in areas of carbonate geology or karst topography, and other environmentally sensitive areas, such as brownfields.
11. Complete hydrologic and hydraulic structural computations for all stormwater management facilities. Structural computations shall be submitted to the Municipality and their Engineer.
12. Stormwater runoff design computations and documentation as specified in this Ordinance, or as otherwise necessary to demonstrate that the maximum practicable measures have been taken to meet the requirements of this Ordinance, including the recommendations and general requirements in §126-9.
13. The effect of the project (in terms of runoff volumes, water quality, and peak flows) on surrounding properties and aquatic features and on any existing stormwater conveyance system that may be affected by the project, including offsite watersheds, if any.
14. Overland drainage paths of proposed swales or channels to convey water. The plans shall show all points of discharge from the site (swale, pipe, watercourse, sheet flow, etc.).
15. A soil erosion and sediment control plan, where applicable, as prepared for and submitted to the approval authority.
16. The location of all erosion and sedimentation control facilities.
17. The location of the project relative to highways, municipalities, or other identifiable landmarks.
18. The 100-year flood plain as determined by the Federal Emergency Management Agency (FEMA).
19. Existing contours at intervals of two feet. In areas of steep slopes (greater than 15 percent), five-foot contour intervals may be used.
20. Existing streams, lakes, ponds, or other bodies of water and wetlands within the project area.
21. Other physical features including sinkholes, streams, existing drainage courses, and areas of natural vegetation to be preserved.
22. The locations of all existing and proposed utilities, sanitary sewers, and water lines on the property being developed and within 50 feet of the subject property lines.
23. An overlay showing soil names and boundaries.
24. Proposed changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added.
25. Existing and proposed structures, roads, paved areas, and buildings. These features shall be shown within 50 feet of the property lines when access is permitted.

26. Final contours at intervals of two feet. In areas of steep slopes (greater than 15 percent), five-foot contour intervals may be used.
27. Construction details, sections and specifications for stormwater facilities with sufficient information and dimensions for construction interpretation that will provide the developer and constructor with sufficient information to meet the requirements of this Chapter.
28. The name of the development, the name and address of the owner of the property, and the name of the individual or firm preparing the plan.
29. The date of submission and all subsequent revisions.
30. A graphic and written scale not smaller than fifty (50) feet to the inch.
31. North arrow.
32. The total tract boundary and size with distances marked to the nearest hundredth of a foot and bearings to the nearest second.
33. Existing and proposed land use(s).
34. A key map showing all existing man-made features beyond the property boundary that would be affected by the project.
35. Plan and profile drawings of all SWM BMPs, including drainage structures, pipes, open channels, and swales.
36. SWM Site Plan shall show the locations of existing and proposed on-lot wastewater facilities and water supply wells.
37. The SWM Site Plan shall include an O&M Plan for all existing and proposed physical stormwater management facilities. This plan shall address long-term ownership and responsibilities for O&M as well as schedules and costs for O&M activities.
38. Easements shall be placed around all stormwater management facilities that would prohibit structures and other obstructions from being placed in areas intended and required for stormwater management. Easements shall have a minimum width of twenty (20) feet and be centered on the facility (i.e. pipe, swale) to which access is being provided. For storage, retention and infiltration facilities the easement shall conform substantially to the size, shape and configuration of such facility.
39. A note shall be provided to grant the Township access to inspect stormwater structures and facilities during reasonable times in regard to any aspect regulated by this Chapter. In the case of an emergency, the Municipality shall have immediate access.
40. Maintenance and ownership provisions in accordance with Article V.
41. The following signature block for the design engineer who is licensed in the Commonwealth of Pennsylvania:

    _____, on this date _____, have
    (Design Engineer) (date of signature)
    reviewed and hereby certify that, to the best of my knowledge and ability, the stormwater management plan meets all design standards and criteria of Antrim Township Stormwater Management Chapter. A list of the waivers of this Chapter that are requested.
42. A justification must be included in the SWM Site Plan if BMPs other than green infrastructure methods and LID practices are proposed to achieve the volume, rate and water quality controls under this Chapter.

§126-17 – Plan Submission

The SWM Site Plan shall be submitted as follows:

A. The SWM Site Plan must be submitted as part of the Subdivision and/or Land Development plan.
B. Letter of Transmittal listing all submitted items.
C. Seven (7) paper copies of the full plan set.
D. One (1) searchable PDF of the full plan set.
E. One (1) completed Administrative Stormwater Checklist and one (1) completed Technical Stormwater Checklist with notes of where the information can be found in the reports or on the plan.

F. One (1) PDF of full PCSM and E&S Reports/Calculations/Worksheets.
G. One (1) digital plan submitted in State Plane 83 South after all comments are addressed.

Antrim Township will distribute the necessary submitted documents to the Municipal Engineer and Franklin County Planning Office. It is the responsibility of the Owner, Developer, and/or Applicant to submit SWM Site Plans to the Franklin County Conservation District and the Pennsylvania Department of Environmental Protection.

§126-18 – Plan Review

A. SWM Site Plans shall be reviewed by the Municipality and their engineer for consistency with the provisions of this Chapter. All costs incurred by the Municipality for such reviews shall be reimbursed to the Municipality by the developer.
B. The Municipality shall notify the applicant in writing within 45 days whether the SWM Site Plan is approved or disapproved. If the SWM Site Plan involves a Subdivision and Land Development Plan, the notification shall occur within the time period allowed by the Municipalities Planning Code (90 days). If a longer notification period is provided by other statute, regulation, or ordinance, the applicant will be so notified by the Municipality. This timing provision restarts with each resubmission of the SWM Site Plan.
C. Extensions of time may be agreed to by the Municipality and developer/owner to allow comments to be addressed. Such extensions shall be submitted in writing in the form provided by the Municipality and acted on by the Board of Supervisors.
D. For any SWM Site Plan that proposes to use any BMPs other than green infrastructure and LID practices to achieve the volume and rate controls required under this Chapter, the Municipality will not approve the SWM Site Plan unless it determines that green infrastructure and LID practices are not practicable.
E. If the Municipality disapproves the SWM Site Plan, the Municipality will state the reasons for the disapproval in writing.
F. The Municipality may approve the SWM Site Plan with conditions and, if so, shall provide the acceptable conditions for approval in writing. The SWM Site Plan is not approved until the conditions are satisfied.

§126-19 – Modification or Revision of Plans

A modification to a submitted SWM Site Plan that involves a change in SWM BMPs or techniques, or that involves the relocation or redesign of SWM BMPs, that is necessary because soil or other conditions are not as stated on the SWM Site Plan as determined by the Municipality, or to address review comments shall require a resubmission of the modified SWM Site Plan in accordance with this Article. The timing provision shall restart with each resubmission or modification. Detailed comment response letters stating how and where each comment has been addressed is required with each submission.

Modifications to a SWM Site Plan that is approved by the Municipality and recorded shall be submitted to the Municipality for review. The Municipality, at its sole discretion, shall determine if the modification will be permitted and the method of amending the recorded SWM Site Plan.

§126-20 – Resubmission of Disapproved SWM Site Plans

A disapproved SWM Site Plan may be resubmitted, with the revisions addressing the Municipality's concerns, to the Municipality in accordance with this Article. Each resubmission shall include a full submission of all project documents. The applicable review fee must accompany a resubmission of a disapproved SWM Site Plan.

§126-21 – Authorization to Construct and Term of Validity

The Municipality's approval of a SWM Site Plan authorizes the regulated activities contained in the SWM Site Plan for a maximum term of validity of 5 years following the date of approval. The Municipality may specify a term of validity shorter than 5 years in the approval for any specific SWM Site Plan. Terms of validity shall

commence on the date the Municipality signs the approval for an SWM Site Plan. If an approved SWM Site Plan is not completed according to §126-22 within the term of validity, then the Municipality may consider the SWM Site Plan disapproved and may revoke any and all permits. SWM Site Plans that are considered disapproved by the Municipality shall be resubmitted in accordance with §126-20 of this Chapter.

In the event a SWM Site Plan is required to meet new regulations or be amended by DEP, EPA or any other entity, the modified plan shall be submitted to the Municipality for review and shall not be deemed approved until the modified SWM Site Plan is satisfactory to all entities.

§126-22 – As-Built Plans, Completion Certificate and Final Inspection

A. The developer shall be responsible for providing as-built plans of all SWM BMPs and drainage included in the approved SWM Site Plan. The as-built plans and an explanation of any discrepancies with the construction plans shall be submitted to the Municipality. As-built plans shall be submitted as follows:
   1. PDF submission
   2. Paper submission in the quantity set forth by the Municipality
   3. Plans in State Plane 83 South after a satisfactory review and inspection
B. The as-built submission shall include:
   1. A certification of completion signed by a Pennsylvania Licensed Engineer verifying that all permanent SWM BMPs and drainage have been constructed according to the approved plans and specifications.
   2. The latitude and longitude coordinates for all permanent SWM BMPs at the central location of the BMPs.
   3. If any licensed qualified design professionals contributed to the construction plans, then a licensed qualified design professional must sign the completion certificate.
   4. Red lined changes or confirmation of the following:
      (a) Actual constructed BMPs overlaid on the approved SWM site plan
      (b) Actual constructed drainage systems and drainage facilities on the approved site plan
      (c) Actual constructed inverts, top of grates, slopes, and capacities on the drainage profiles
   5. Detailed written explanation of any discrepancies.
C. After receipt of the completion certification by the Municipality, the Municipality may conduct a final inspection.

ARTICLE V – OPERATION AND MAINTENANCE

§126-23 – Performance Guarantee

The applicant shall provide a financial guarantee to the Township for the proper installation and construction of all stormwater management controls as required by the approved Stormwater Management Site Plan and this Chapter in the amount of 110% of the total estimated construction cost of all elements of the approved plan. Performance guarantees may, at the Township's sole discretion, be released in part upon written request after required improvements have been constructed. Such request shall be made in the form provided by the Township. Full release of Performance guarantees shall not occur until after as built drawings have been received and approved and a final on-site inspection has been completed. Financial Security for stormwater management controls to be constructed pursuant to Section 508 of the Pennsylvania Municipalities Planning Code may be used in lieu of the financial security required by this Section.

§126-24 – Responsibilities of Developers and Landowners

A. The Municipality shall make the final determination on the continuing maintenance responsibilities prior to final approval of the SWM Site Plan. The Municipality may require a dedication of such facilities as part of the requirements for approval of the SWM Site Plan. Such a requirement is not an indication that the Municipality will accept the facilities. The Municipality reserves the right to accept or reject the ownership and operating responsibility for any portion of the stormwater management controls.

B. Facilities, areas, or structures used as SWM BMPs shall be enumerated as permanent real estate appurtenances and recorded as deed restrictions or conservation easements that run with the land.
C. The O&M Plan shall be recorded as a restrictive deed covenant that runs with the land.
D. The Municipality may take enforcement actions against an owner for any failure to satisfy the provisions of this Article.
E. When ownership will ultimately be the responsibility of a Homeowner's Association an agreement shall be provided to the Township by the Applicant/Owner/Developer defining the terms and conditions under which ownership and maintenance responsibilities will be transferred to the Homeowner's Association. Other items may be required in the agreement where determined necessary to guarantee satisfactory installation and maintenance of all facilities. The agreement shall be subject to the review and approval of the Municipality.
F. Identification of the responsible party or entity for ownership and maintenance of both temporary and permanent stormwater management and erosion and sediment control facilities. In meeting these requirements, the following priority for ownership is herein established:
    1. As a first priority, the facilities should be incorporated within individual lots so that respective lot owners will own and be responsible for maintenance in accordance with this section and the recorded deed restrictions.
    2. As a second priority, in the event that the first priority cannot be achieved, ownership and maintenance shall be the responsibility of a Homeowners' Association. The Township shall have complete discretion in determining whether or not the first priority can be achieved. The stated responsibilities of the Homeowners' Association in terms of owning and maintaining the stormwater management facilities shall be submitted with final plans for determination of their adequacy and, upon their approval, shall be recorded with the approved subdivision and / or land development plan with the recorder of deeds of Franklin County, Pennsylvania. In addition, the approved subdivision and / or land development plan and any deed written from said plan for a lot or lots shown therein shall contain a condition that it shall be mandatory for the owner or owners of said lot to be members of said Homeowners' Association.
    3. Municipal ownership shall not be permitted.

§126-25 – Operation and Maintenance Agreements

A. Prior to final approval of the SWM Site Plan, the property owner shall sign and record an Stormwater Facilities Operation and Maintenance (O&M) Agreement (see Exhibit 3) covering all stormwater control facilities which are to be privately owned.
    1. The owner, successor and assigns shall maintain all facilities in accordance with the approved SWM Site Plan and the approved maintenance schedule in the O&M Agreement.
    2. Description of maintenance requirements and outline of routine maintenance actions and schedules necessary to ensure proper operation of the facility(ies).
    3. Upon presentation of proper credentials, duly authorized representatives of the municipality may enter at reasonable times upon any property within the municipality to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Chapter. In the event of an emergency, the Municipality shall have immediate access. The owner shall keep on file with the Municipality the name, address, and telephone number of the person or company responsible for maintenance activities; in the event of a change, new information shall be submitted by the owner to the Municipality within ten (10) working days of the change.
B. The owner is responsible for operation and maintenance (O&M) of the SWM BMPs. If the owner fails to adhere to the O&M Agreement, the Municipality may perform the services required and charge the owner appropriate fees. Nonpayment of fees may result in a lien against the property.

ARTICLE VI – PROHIBITIONS

§126-26 – Prohibited Discharges and Connections

A. Any drain or conveyance, whether on the surface or subsurface, that allows any non-stormwater discharge including sewage, process wastewater, and wash water to enter a regulated small MS4 or to enter the surface waters of this Commonwealth is prohibited.

B. No person shall allow, or cause to allow, discharges into a regulated small MS4, or discharges into waters of this Commonwealth, which are not composed entirely of stormwater, except (1) as provided in paragraph C below and (2) discharges authorized under a state or federal permit.

C. The following discharges are authorized unless they are determined to be significant contributors to pollution a regulated small MS4 or to the waters of this Commonwealth:
   1. Discharges or flows from firefighting activities.
   2. Discharges from potable water sources including water line flushing and fire hydrant flushing, if such discharges do not contain detectable concentrations of Total Residual Chlorine (TRC).
   3. Non-contaminated irrigation water, water from lawn maintenance, landscape drainage and flows from riparian habitats and wetlands.
   4. Diverted stream flows and springs.
   5. Non-contaminated HVAC condensation and water from geothermal systems.
   6. Residential (i.e., not commercial) vehicle wash water where cleaning agents are not utilized.
   7. Non-contaminated hydrostatic test water discharges, if such discharges do not contain detectable concentrations of TRC.

D. In the event that the Municipality or DEP determines that any of the discharges identified in Subsection C significantly contribute pollutants or is causing erosion or sedimentation to a regulated small MS4 or to the waters of this Commonwealth, the Municipality or DEP will notify the responsible person(s) to cease the discharge.

§126-27 – Roof Drains and Sump Pumps

A. Include the following notes on the plans:
   1. Roof drains shall not be connected to streets, sanitary or storm sewers or roadside ditches, except as provided in §126-27(A)(2).
   2. When it is more advantageous to connect directly to streets or storm sewers, connections of roof drains to streets or roadside ditches may be permitted by the Municipality when proposed and approved on SWM site plan.
   3. Roof drains and sump pumps shall discharge to infiltration or vegetative BMPs designed and planned to receive such flows.

§126-28 – Alteration of SWM BMPs

Include the following note on the plans: No person shall modify, remove, fill, landscape, or alter any SWM BMPs, facilities, areas, or structures that were installed as a requirement of this Chapter without the written approval of the Municipality.

ARTICLE VII – FEES AND EXPENSES

(Reserved for future use)

ARTICLE VIII – ENFORCEMENT AND PENALTIES

§126-29 – Right-of-Entry

Upon presentation of proper credentials, the Municipality or its designated agent may enter at reasonable times upon any property within the Municipality to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Chapter.

§126-30 – Inspection

A. The landowner or the owner's designee shall inspect SWM BMPs, facilities and/or structures installed under this Chapter according to the following frequencies, at a minimum, to ensure the BMPs, facilities and/or structures continue to function as intended:
   1. Annually for the first 5 years
   2. Once every 3 years thereafter
   3. During or immediately after the cessation of a 10-year or greater storm
B. The Municipality or the assigned inspector shall inspect the privately owned SWM BMPs as deemed necessary by the Township.
C. Inspections should be conducted by the owner or designee during or immediately following precipitation events. A written inspection report shall be created to document each inspection. The inspection report shall contain the date and time of the inspection, the individual(s) who completed the inspection, the location of the BMP, facility or structure inspected, observations on performance, and recommendations for improving performance, if applicable. Inspection reports shall be submitted to the Municipality upon request. Property owner shall have 30 days to submit reports when requested.
D. The Municipal Engineer or his Municipal assignee shall observe any phases of the installation of the permanent stormwater management facilities that are deemed appropriate by the Municipal Engineer and the Municipality.
E. During any stage of the work, if the Municipal Engineer determines that the permanent stormwater management facilities are not being installed in accordance with the approved Stormwater Management Plan, the Municipality shall revoke any existing building/land use permits until a revised Drainage Plan is submitted and approved, as specified in this Chapter.

§126-31 – Enforcement

A. It shall be unlawful for a person to undertake any regulated activity except as provided in an approved SWM Site Plan, unless specifically exempted in §126-8.
B. It shall be unlawful to violate §126-28 of this Chapter.
C. The municipal governing body is hereby authorized and directed to enforce all of the provisions of this Chapter. Inspections regarding compliance with the SWM Site Plan are a responsibility of the Municipal engineer or other qualified persons designated by the Municipality.
   1. A set of design plans approved by the Municipality shall be on file at the site throughout the duration of the construction activity. Periodic inspections may be made by the Municipality or designee during construction.
   2. Adherence to Approved Plan
      a) It shall be unlawful for any person, firm or corporation to undertake any regulated activity under §126-5 on any property except as provided for in the approved drainage plan and pursuant to the requirements of this Chapter. It shall be unlawful to alter or remove any control structure required by the drainage plan pursuant to this Chapter or to allow the property to remain in a condition which does not conform to the approved drainage plan.
   3. After receipt of the certification by the Municipality, a final inspection shall be conducted by the municipal engineer or designated representative to certify compliance with this Chapter.
   4. Prior to revocation or suspension of an approval or permit, the governing body will schedule a meeting to discuss the non-compliance if there is no immediate danger to life, public health or property.
D. The Municipality or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMP(s) in the event the Landowner fails to operate and maintain the BMPs in accordance with the approved SWM site plan. All costs incurred by the Municipality shall be reimbursed to the Township. It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities, and in no event shall be construed to impose any such obligation on the Municipality.

E. In the event there is a chemical spill or discharge of a substance that may contaminate the soil or groundwater, the Municipality may enter the site and take whatever remediation action is necessary in the event the landowner fails to remediate the site immediately. All costs incurred by the Municipality shall be reimbursed to the Township.

F. In the event the Municipality performs work of any nature or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Landowner shall reimburse the Municipality for all expenses (direct and indirect) incurred within thirty (30) days of receipt of invoice from the Municipality. If not paid within said thirty (30) day period, the Municipality may enter a lien against the property in the amount of such costs, or may proceed to recover his costs through proceedings in equity or at law as authorized under the provisions of the Pennsylvania Municipalities Planning Code.

§126-32 – Suspension and Revocation

A. Any approval or permit issued by the Municipality pursuant to this Chapter may be suspended or revoked for:
   1. Non-compliance with or failure to implement any provision of the approved SWM Site Plan or O&M Agreement.
   2. A violation of any provision of this Chapter or any other applicable law, ordinance, rule, or regulation relating to the Regulated Activity.
   3. The creation of any condition or the commission of any act during the Regulated Activity which constitutes or creates a hazard, nuisance, pollution, or endangers the life or property of others.

B. A suspended approval may be reinstated by the Municipality when:
   1. The Municipality has inspected and approved the corrections to the violations that caused the suspension.
   2. The Municipality is satisfied that the violation has been corrected.

C. An approval that has been revoked by the Municipality cannot be reinstated. The applicant may apply for a new approval under the provisions of this Chapter.

D. If a violation causes no immediate danger to life, public health, or property, at its sole discretion, the Municipality may provide a limited time period for the owner to correct the violation. In these cases, the Municipality will provide the owner, or the owner's designee, with a written notice of the violation and the time period allowed for the owner to correct the violation. If the owner does not correct the violation within the allowed time period, the Municipality may revoke or suspend any, or all, applicable approvals and permits pertaining to any provision of this Chapter.

E. An occupancy permit shall not be issued unless the certification of compliance has been secured. The occupancy permit shall be required for each lot owner and/or developer for all subdivisions and land development in the Municipality.

§126-33 – Public Nuisance

A. The violation of any provision of this Chapter is hereby deemed a Public Nuisance.

B. Each day that a violation continues shall constitute a separate violation.

§126-34 – Penalties

A. Anyone violating the provisions of this Chapter shall be subject to a fine of not more than $1,000 for each violation, recoverable with costs including, but not limited to attorney fees, court costs, filing fees, etc., or imprisonment of not more than 90 days, or both. Each day that the violation continues shall be a separate offense.

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

§126-35 – Appeals

A. Any person aggrieved by any action of the Municipality or its designee, relevant to the provisions of this Chapter, may appeal to the Municipality within 30 days of that action.
B. Any person aggrieved by any decision of the Municipality, relevant to the provisions of this Chapter, may appeal to the County Court of Common Pleas in the county where the activity has taken place within 30 days of the Municipality's decision.

§126-36 – Repealer

Any other Chapter provision(s) or regulation of the Municipality inconsistent with any of the provisions of this Chapter is hereby repealed to the extent of the inconsistency only.

§126-37 – Severability

If any article, section, or provision in this ordinance should be decided by the courts to be unconstitutional or invalid, such decision shall not affect the validity of this ordinance as a whole or any part thereof other than the parts so decided to be unconstitutional or invalid.

Section 2. – Effective date. This ordinance shall become effective in accordance with the law.

ENACTED By the Board of Supervisors of the Township of Antrim at its regular meeting 14th day of February, 2023.

Attest:

Jennifer Beckwell
Township Secretary

SUPERVISORS OF ANTRIM TOWNSHIP

Chairman

(SEAL)

ANTRIM TOWNSHIP SEAL FRANKLIN COUNTY, PA

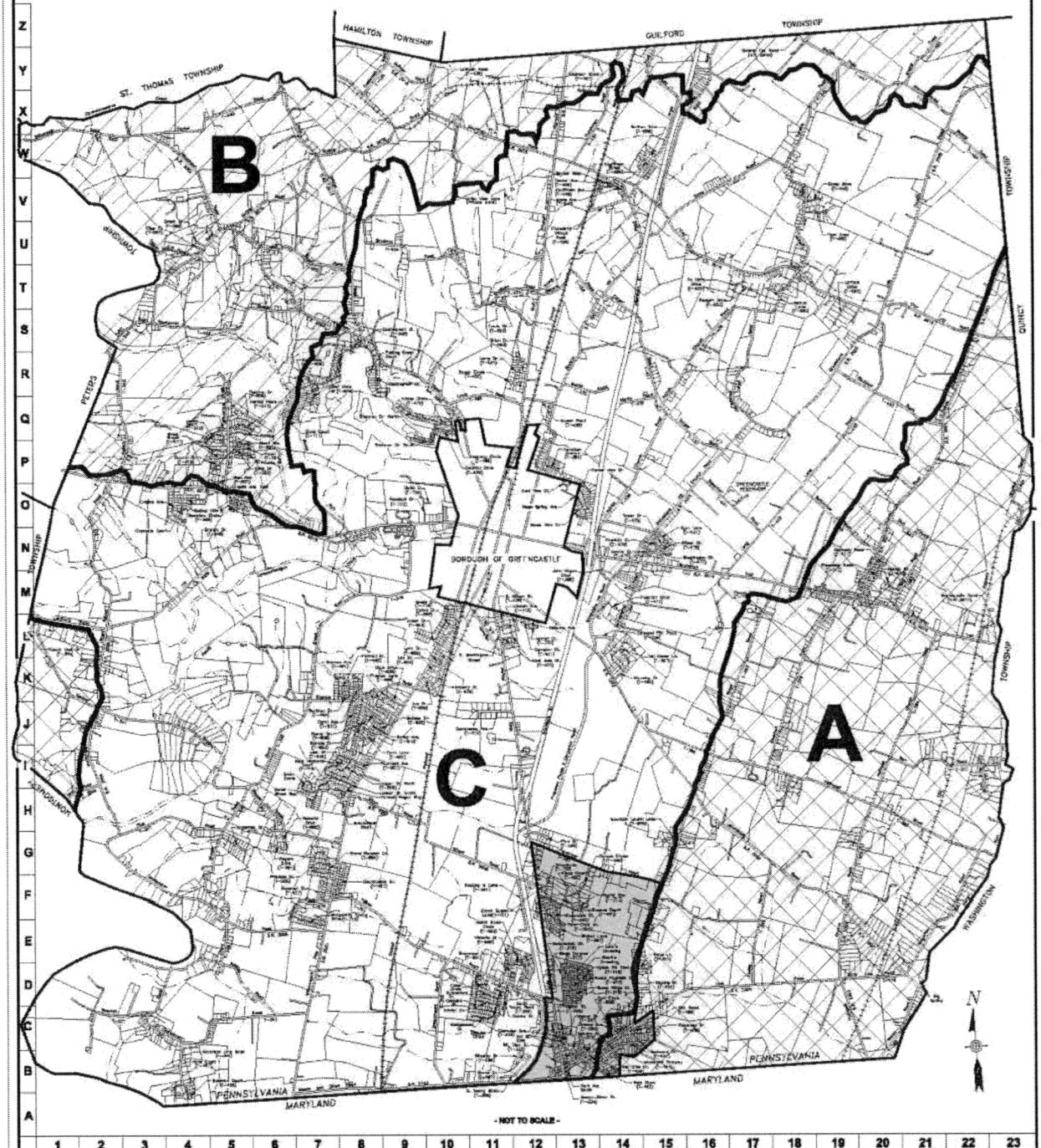
EXHIBIT 1

ANTRIM TOWNSHIP
STORMWATER MANAGEMENT DISTRICT
MAP

EXHIBIT 1

STORMWATER MANAGEMENT DISTRICT MAP

ANTRIM TOWNSHIP, FRANKLIN COUNTY, PA



STORMWATER MANAGEMENT DISTRICT LEGEND

DISTRICT	POST DEVELOPMENT DISCHARGE	TO PRE DEVELOPMENT DISCHARGE
A	2-YEAR 5-YEAR 10-YEAR 25-YEAR 100-YEAR	1-YEAR 5-YEAR 10-YEAR 25-YEAR 100-YEAR
B	2-YEAR 5-YEAR 10-YEAR 25-YEAR 100-YEAR	1-YEAR 2-YEAR 5-YEAR 10-YEAR 50-YEAR
C	PROVISIONAL DIRECT DISCHARGE DISTRICT. DETENTION IS NOT REQUIRED IF DISCHARGE CAN BE CONVEYED TO A STREAM OR WATERCOURSE IN A SAFE MANNER SUBJECT TO THE REQUIREMENTS OF STORMWATER ORDINANCE SECTION 302. OTHERWISE DISTRICT A REQUIREMENTS SHALL APPLY.	

ANTRIM TOWNSHIP / HAGERSTOWN, MD URBANIZED AREA

DEVELOPMENT LOCATED IN OR DISCHARGING TO THE ANTRIM TOWNSHIP URBANIZED AREA SHALL BE SUBJECT TO THE PROHIBITIONS IN ARTICLE IV OF THE STORMWATER ORDINANCE. IN ADDITION TO THE REQUIREMENTS OF THE APPLICABLE WATERSHED DISTRICT(S) IN WHICH THE DEVELOPMENT IS LOCATED.

Prepared By:
martin and martin incorporated
phone: (717) 264-6759
37 south main street • suite A
chambersburg, pennsylvania 17201

DECEMBER 9, 2005

EXHIBIT 2

FIGURE B-1: Gravel / Stone Impervious Area Reduction Factor Table and Sample Impervious Area Calculation

FIGURE B-2: PennDOT Delineated Regions

FIGURE B-3: Storm Intensity-Duration-Frequency Curve (PennDOT Region 3)

TABLE B-2: Runoff Curve Numbers (NRCS (SCS) TR-55)

TABLE B-3: Rational Runoff Coefficients

TABLE B-4: Roughness Coefficients (Manning's "N") For Overland Flow (U.S. Army Corps Of Engineers, Hec-1 Users Manual)

TABLE B-5: 24-Hour Storm Values Representing 90% Of Annual Rainfall (Pa Handbook Of Best Management Practices For Developing Areas)

TABLE B-6: Stormwater Credits for Computing Post Development Hydrograph

FIGURE B-1

Gravel / Stone Impervious Area Reduction Factor				
Hydrologic Soil Group	**A**	**B**	**C**	**D**
Reduction Factor	0.58	0.77	0.85	0.89

Sample Impervious Area Calculation

GIVEN:	Property Size (parent tract)	= 5+ acres
	Hydrologic Soil Group	= C
	Existing Impervious Areas (paving, rooftops, etc.)	= 2,500 SF
	Proposed Impervious Areas	= 8,000 SF
	Existing Gravel / Stone Areas	= 4,000 SF
	Proposed Gravel / Stone Areas	= 6,000 SF

FIND: Total impervious area to determine if the project is eligible for an exemption review by the Township based on the criteria in Section 204.1.

SOLUTION:

1. For hydrologic soil group C, the gravel / stone area impervious reduction factor is 0.85.

2. Total Impervious Area = (2,500 SF + 8,000 SF) + [(4,000 SF + 6,000 SF) x 0.85]

   = 10,500 SF + 8,500 SF

   = 19,000 SF

3. 19,000 SF < 20,000 SF therefore, in accordance with Section 204.1, this site may be exempt from the requirements of Article III, subject to the review of the Township Engineer and at the sole discretion of the Township Supervisors.

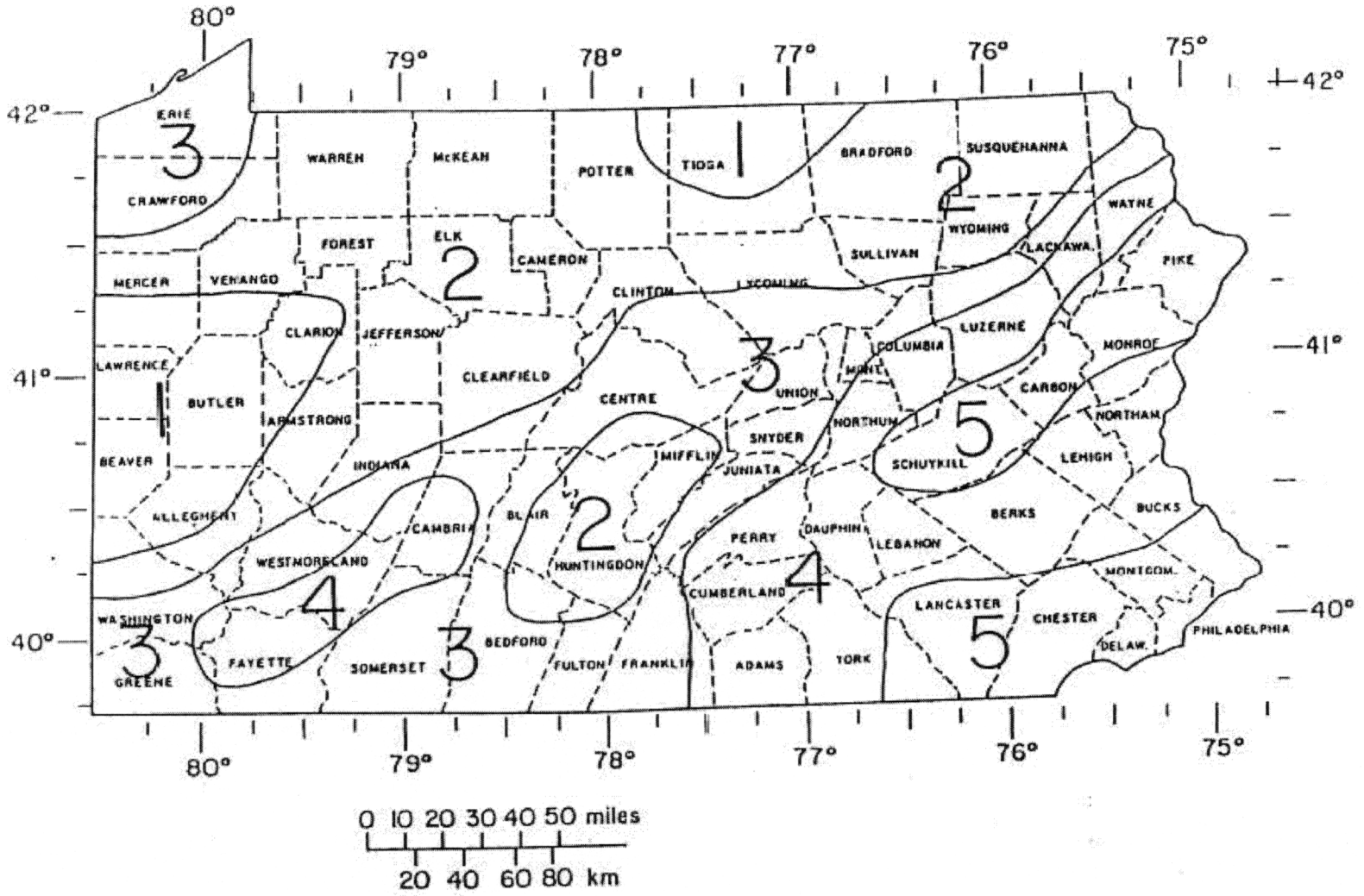


Figure 1. Delineated regions with uniform rainfall

FIGURE B-2

FIGURE B-3
PENNDOT STORM INTENSITY-DURATION-FREQUENCY CURVE

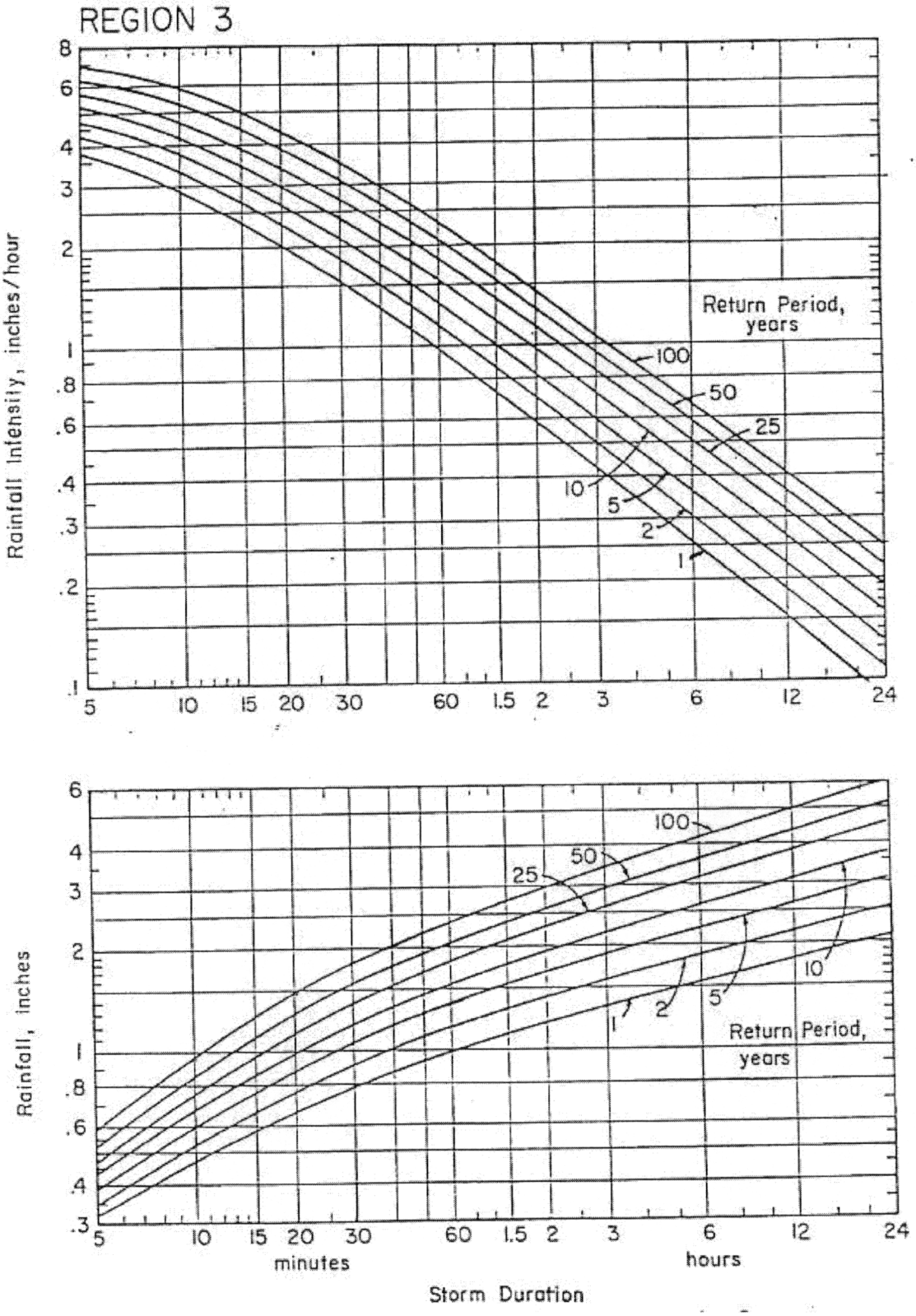


TABLE B-2
Runoff Curve Numbers
(From NRCS (SCS) TR-55)

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

* Includes Multi-Family Housing unless justified lower density can be provided.
** Caution - CN values under 40 may produce erroneous modeling results.

Note: Existing site conditions of bare earth or fallow shall be considered as meadow when choosing a CN value.

TABLE B-3
RATIONAL RUNOFF COEFFICIENTS

	HYDROLOGIC SOIL GROUP			
LAND USE DESCRIPTION	A	B	C	D
Cultivated Land : without conservation treatment	.49	.67	.81	.88
: with conservation treatment	.27	.43	.61	.67
Pasture or range land : poor condition	.38	.63	.78	.84
: good conditions	---*	.25	.51	.65
Meadow : good conditions	---*	---*	.44	.61
Wood or Forest Land : thin stand, poor cover, no mulch	---*	.34	.59	.70
: good cover	---*	---*	.45	.59
Open Spaces, lawns, parks, golf courses, cemeteries				
Good conditions : grass cover on 75% or more of the area	---*	.25	.51	.65
Fair conditions : grass cover on 50% to 75% of the area	---*	.45	.63	.74
Commercial and business areas (85% impervious)	.84	.90	.93	.96
Industrial districts (72% impervious)	.67	.81	.88	.92
Residential :				
Average lot size Average % Impervious				
1/8 acre or less 65	.59	.76	.86	.90
1/4 acre 38	.25	.49	.67	.78
1/3 acre 30	---*	.49	.67	.78
1/2 acre 25	---*	.45	.65	.76
1 acre 20	---*	.41	.63	.74
Paved parking lots, roofs, driveways, etc.	.99	.99	.99	.99
Streets and roads :				
Paved with curbs and storm sewers	.99	.99	.99	.99
Gravel	.57	.76	.84	.88
Dirt	.49	.69	.80	.84

Notes : Values are based on S.C.S. definitions and are average values.
Values indicated by "---" should be determined by the design engineer based on site characteristics.

Source : New Jersey Department of Transportation, Technical Manual for Stream Encroachment, August, 1984

TABLE B-4

Roughness Coefficients (Manning's "n") for Overland Flow

Surface Description			n		
Dense Growth			0.4	-	0.5
Pasture			0.3	-	0.4
Lawns			0.2	-	0.3
Bluegrass Sod			0.2	-	0.5
Short Grass Prairie			0.1	-	0.2
Sparse Vegetation			0.05	-	0.1
Bare Clay-Loam Soil (eroded)			0.01	-	0.0
Concrete/Asphalt	-	very shallow depths (less than ¼ inch)	0.10	-	0.1
	-	small depths (1/4 inch to several inches)	0.05	-	0.1

Roughness Coefficients (Manning's "n") For Channel and Pipe Flow

Reach Description	n
Natural stream, clean, straight, no rifts or pools	0.03
Natural stream, clean, winding, some pools or shoals	0.04
Natural stream, winding, pools, shoals, stony with some weeds	0.05
Natural stream, sluggish deep pools and weeds	0.07
Natural stream or swale, very weedy or with timber underbrush	0.10
Concrete pipe, culvert or channel	0.013
Corrugated metal pipe	0.024
Spiral rib metal pipe	0.012
Corrugated polyethylene pipe	0.020
Smooth-lined corrugated polyethylene pipe	0.012

(zip b2/823.262/Table B-4)

TABLE B-5

24-Hour Storm Values Representing 90 % of Annual Rai
PA Handbook of Best Management Practices for Developin

PennDOT Rainfall Region	P Inches
1	1.13
2	1.48
3	1.60
4	1.95
5	2.04

TABLE B-6

Stormwater Credits for Computing Post-Development Hydrograph

The developer may, subject to approval of the municipal engineer, use the stormwater credi described in the following table, in computing post-development hydrograph:

Stormwater Credit	Description
Natural Area Conservation	Conservation of natural areas such as forest, wetlands, or other sensitive areas in a protected easement thereby retaining their pre-development hydrologic and water quality characteristics. Using this credit, a designer may subtract conservation areas from total site area when computing the required water quality volume. Additionally, the post-development curve number (CN) for these areas may be assumed to be forest in good condition.
Disconnection of Rooftop Runoff	Credit is given when rooftop runoff is disconnected and then directed over a pervious area where it may either infiltrate into the soil or filter over it. Credit is typically obtained by grading the site to promote overland flow or by providing bioretention on single-family residential lots. If a rooftop area is adequately disconnected, the impervious area may be deducted from the total impervious cover. Additionally, the post-development CNs for disconnected rooftop areas may be assumed to be forest in good condition.
Disconnection of Non-Rooftop Runoff	Credit is given for practices that disconnect surface impervious cover by directing it to pervious areas where it is either infiltrated or filtered though the soil. As with rooftop runoff, the impervious area may be deducted from the total impervious cover thereby reducing the required water quality volume.
Stream Buffer Credit	Credit is given when a stream buffer effectively treats stormwater runoff. Effective treatment constitutes capturing runoff from pervious and impervious areas adjacent to the buffer and treating the runoff through overland flow across a grass or forested area. Areas treated in this manner may be deducted from total site area in calculating and may contribute to meeting requirements for groundwater recharge.
Grass Channel (Open Section Roads)	Credit may be given when open grass channels are used to reduce the volume of runoff and pollutants during smaller storms. Use of grass channels will automatically meet the minimum groundwater recharge requirement. If designed according to appropriate criteria, these channels may meet water quality criteria for certain types of residential development.
Environmentally Sensitive Rural Development	Credit is given when a group of environmental site design techniques are applied to low density or rural residential development. This credit eliminates the need for structural practices to treat both the required recharge volume Re, and water quality volume. The designer must still address the channel protection volume, the overbank protection and overbank /extreme flood event requirements for all roadway and connected impervious surfaces.

EXHIBIT 3

STORMWATER FACILITIES OPERATION & MAINTENANCE (O&M) AGREEMENT

UPI NUMBER _____

STORMWATER FACILITIES OPERATION & MAINTENANCE (O&M) AGREEMENT

THIS AGREEMENT, made and entered into this ____day of _____, 20___, by and between _____, a _____ with principal offices located at _____ (hereinafter the "Landowner"), and Antrim Township, Franklin County, Pennsylvania, a municipal corporation with principal offices located at 10655 Antrim Church Road, Greencastle PA 17225 (hereinafter "Municipality").

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Franklin County, Pennsylvania, Deed Book/Instrument Number _____, (hereinafter "Property"), and

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

WHEREAS, the Subdivision/Land Management Plan (hereinafter "Plan") for the _____ which is expressly made a part hereof, as approved or to be approved by the Municipality, provides for the detention or retention of stormwater within the confines of the Property, and

WHEREAS, the Municipality and the Landowner, his successor and assigns agree that the health, safety, and welfare of the residents of the Municipality require that on-site stormwater management facilities be constructed and maintained on the Property, and

WHEREAS, the Municipality requires, through the implementation of the Conococheague Creek Watershed Stormwater Management Plan, that stormwater management facilities as shown on the Plan be constructed and adequately maintained by the Landowner, his successors and assigns.

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

1. The on-site stormwater management facilities shall be constructed by the Landowner, his successors and assigns, in accordance with the terms, conditions and specifications identified in the Plan.

2. The Landowner, his successors and assigns, shall maintain the stormwater management facilities in good working condition, acceptable to the Municipality so that they are performing their design functions.

3. The Landowner, his successors and assigns, hereby grant permission to the Municipality, its authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities whenever the Municipality deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access road, etc. When

inspections are conducted, the Municipality shall give the Landowner, his successors and assigns, copies of the inspection report with findings and evaluations. At a minimum, maintenance inspections shall be performed in accordance with the following schedule:

- Annually for the first 5 years after the construction of the stormwater facilities,
- Once every 3 years thereafter, or
- During or immediately after the cessation of a 10 year or greater storm.

4. All reasonable costs for said inspection shall be borne by the Landowner and payable to the Municipality.

5. The Landowner shall convey to the Municipality easements and/or rights-of-way to assure access for periodic inspections by the Municipality and maintenance, if required.

6. In the event the Landowner, his successors and assigns, fail to maintain the stormwater management facilities in good working condition acceptable to the Municipality, the Municipality may enter upon the Property and take such necessary and prudent action to maintain said stormwater management facilities and to charge the costs of the maintenance and/or repairs to the Landowner, his successors and assigns. This provision shall not be construed as to allow the Municipality to erect any structure of a permanent nature on the land of the Landowner, outside of any easement belonging to the Municipality. It is expressly understood and agreed that the Municipality is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the Municipality.

7. The Landowner, his successors and assigns, will perform maintenance in accordance with the maintenance schedule for the stormwater management facilities including sediment removal as outlined on the approved schedule and/or Subdivision/Land Management Plan.

8. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work or labor, use of equipment, supplies, materials, and the like on account of the Landowner's or his successors' and assigns' failure to perform such work, the Landowner, his successors and assigns, shall reimburse the Municipality upon demand, within 30 days of receipt of invoice thereof, for all costs incurred by the Municipality hereunder. If not paid within said 30-day period, the Municipality may enter a lien against the Property in the amount of such costs, or may proceed to recover its costs through proceedings in equity or at law as authorized under the provisions of the Pennsylvania Municipalities Planning Code.

9. The Landowner, his successors and assigns, shall indemnify the Municipality and its agents and employees against any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the Municipality for the construction, presence, existence or maintenance of the stormwater management facilities by the Landowner, his successors and assigns.

10. In the event a claim is asserted against the Municipality, its agents or employees, the Municipality shall promptly notify the Landowner, his successors and assigns, and they shall defend, at their own expense, any suit based on such claim. If any judgment or claims against the Municipality, its agents or employees shall be allowed, the Landowner, his successors and assigns shall pay all costs and expenses

in connection therewith.

11. In the event of an emergency or the occurrence of special or unusual circumstances or situations, the Municipality may enter the Property, if the Landowner is not immediately available, without notification or identification, to inspect and perform necessary maintenance and repairs, if needed, when the health, safety or welfare of the citizens is at jeopardy. However, the Municipality shall notify the Landowner of any inspections, maintenance or repair undertaken within 5 days of the activity. The Landowner shall reimburse the Municipality for its costs.

This Agreement shall be recorded among the land records of Franklin County, Pennsylvania and shall constitute a covenant running with the Property and/or equitable servitude, and shall be binding on the Landowner, his administrators, executors, assigns, heirs and any other successors in interest, in perpetuity.

Witness:

_____ _____

Witness: **ANTRIM TOWNSHIP**

_____ _____
Board of Supervisors

COMMONWEALTH OF PENNSYLVANIA :
: SS
COUNTY OF FRANKLIN :

This record was acknowledged before me on _____ by _____.

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

_____
Notary Public
Printed Name:
My Commission Expires on _____

COMMONWEALTH OF PENNSYLVANIA :
: SS
COUNTY OF FRANKLIN :

ON_____, 20___, before me, a Notary Public, the undersigned officer, personally appeared_____, who acknowledged himself to be_____ of the Antrim Township Board of Supervisors, a municipal corporation, and that he as such officer, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the Board by himself as Chairman.

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

_____
Notary Public
Printed Name:
My Commission Expires on _____

CERTIFICATE OF RESIDENCE

I hereby certify that the precise residence of the Township of Antrim is:
10655 Antrim Church Road
Greencastle, PA 17225

Witnessed my had this ___day of _____, 20___.

_____