

**HAMILTONBAN TOWNSHIP
STORMWATER MANAGEMENT
ORDINANCE**

ORDINANCE NO. 2012-04

HAMILTONBAN TOWNSHIP

ADAMS COUNTY, PENNSYLVANIA

Adopted July 3, 2012

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ARTICLE I – GENERAL PROVISIONS

Section 101: Short Title

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

Section 102: Statement of Findings

The Supervisors of Hamiltonban Township find that:

- A. Stormwater is an important water resource, which provides groundwater recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.
- B. Inadequate management of accelerated runoff of stormwater resulting from development throughout a watershed increases flows and velocities, contributes to erosion and sedimentation, overtaxes the carrying capacity of streams and storm sewers, greatly increases the cost of public facilities to carry and control stormwater, undermines floodplain management and flood control efforts in downstream communities, reduces groundwater recharge, threatens public health and safety, and increases nonpoint source pollution of water resources.
- C. A comprehensive program of stormwater management, including reasonable regulation of development and activities causing accelerated runoff, is fundamental to the public health, safety, and welfare and the protection of the people of Hamiltonban Township, their resources, and the environment.

Section 103: Purpose

The purpose of this Ordinance is to promote health, safety, and welfare within Hamiltonban Township and its watersheds by minimizing the harm and maximizing the benefits described in Section 102 of this Ordinance, through provisions designed to:

- A. Meet 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 the Commonwealth.
- B. Preserve the natural drainage systems as much as possible.
- C. Manage stormwater runoff close to the source.
- D. Provide procedures and performance standards for stormwater planning and management.
- E. Maintain groundwater recharge to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
- F. Prevent scour and erosion of stream banks and stream beds.

- G. Provide proper operation and maintenance of all stormwater management Best Management Practices that are implemented within Hamiltonban Township.
- H. Provide standards to meet NPDES permit requirements.

Section 104: Statutory Authority

Hamiltonban Township is empowered to regulate land use activities that affect stormwater impacts by the authority of the Municipal Planning Code 53 P.S. §10101 *et seq.*, Second Class Township Code 53 P.S. §65101 *et seq.*, and the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, *et seq.*, as amended, the “Stormwater Management Act.”

Section 105: Applicability

- A. All Regulated Activities, as defined in Article II, and all activities that may affect stormwater runoff, including land development and earth disturbance activity, are subject to regulation by this Ordinance.
- B. Any submission that does not require a stormwater management plan at the time of subdivision or land development will still be required to address stormwater management at the time the individual lots are developed or construction commences, unless said subdivision proposes infrastructure features, such as a cul-de-sac street, for which stormwater management controls are ordinarily required.
- C. Development of the individual lots is subject to stormwater management as defined within the ordinance.

Section 106: Repealer

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

Section 107: Severability

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

Section 108: Compatibility with Other Requirements

Approvals issued and actions taken under this Ordinance do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other code, law, regulation, or ordinance. In the event of a conflict, between this Ordinance and any other ordinance, the more restrictive ordinance shall apply.

Section 109: Erroneous Permit

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

Section 110: Duty of Persons Engaged in the Development of Land

Notwithstanding any provision(s) of this Ordinance, including exemptions, any landowner or any person engaged in the alteration or development of land which may affect stormwater runoff characteristics shall implement such measures as are reasonably necessary to prevent injury to health, safety, or other property. Such measures shall include actions as are required to manage the rate, volume, direction, and quality of resulting stormwater runoff in a manner which adequately protects health, property and water quality.

Section 111: Municipal Liability Disclaimer

- A. Neither the granting of any approval under this Ordinance, nor the compliance with the provisions of this Ordinance, or with any condition imposed by a Hamiltonban Township official hereunder, shall relieve any person from any responsibility or damage to persons or property resulting there from, or as otherwise imposed by law nor impose any liability upon Hamiltonban Township for damages to persons or property.
- B. The granting of a permit which includes any stormwater management facilities shall not constitute a representation, guarantee, or warranty of any kind by Hamiltonban Township, or by an official or employee thereof, of the practicability or safety of any structure, use or other plan proposed, and shall create no liability upon or cause of action against such public body, official or employee for any damage that may result pursuant thereto.

ARTICLE II – DEFINITIONS

Section 201: Interpretation

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

- A. Words used in the present tense also imply the future tense.
- B. Words used in the singular include the plural, and vice versa.
- C. Words of masculine gender include feminine gender, and vice versa.
- D. The words and abbreviation “includes,” “including,” “shall include,” “such as,” and “e.g.” are not limited to the specific example(s) given but are intended to extend the words or words’ meaning(s) to all other instances of like kind and character.
- E. The words “shall,” “required,” or “must” are mandatory; the words “may” and “should” are permissive.

Section 202: Definitions

Adams County Conservation District - As defined in Section 3(c) of the Conservation District Law (3 P.S. § 851 (c)) that has the authority under a delegation agreement executed with DEP to administer and enforce all or a portion of the regulations promulgated under 25 Pa. Code 102.

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.

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

Best Management Practice (BMP) - Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from regulated activities, to meet state water quality requirements, to promote groundwater recharge, and to otherwise meet the purposes of this Ordinance.

Best Management Practice, Nonstructural - Operational and/or behavior-related practices that attempt to minimize the contact of pollutants with stormwater runoff.

Best Management Practice, Structural - Measures consisting of a physical device or practice that is installed to capture and treat stormwater runoff. Structural BMPs include, but are not limited to, a wide variety of practices and devices, from large-scale retention ponds and constructed wetlands, to small-scale underground treatment systems, infiltration facilities, filter strips, low impact design, bioretention,

wet ponds, permeable paving, grassed swales, riparian or forested buffers, sand filters, detention basins, and manufactured devices. Structural stormwater BMPs are permanent appurtenances to the project site.

BMP Manual - Pennsylvania Stormwater Best Management Practices Manual, Pennsylvania Department of Environmental Protection, December 2006 (Document #363-0300-002), as amended and updated.

Clean Water Act - The Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq.*, and any subsequent amendments thereto.

Contributory Drainage Area (of Impervious Surface) - the area of the impervious surface contributing to a concentration point directed to a pervious surface

Conveyance Facility - a natural conveyance channel, manmade conveyance channel or pipe conveyance facility including but not limited to, streams, channels, swales, pipes, conduits, culverts and storm sewers

County - Adams County Pennsylvania

Culvert - A structure which carries surface water through an obstruction.

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

DEP - The Pennsylvania Department of Environmental Protection.

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

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

Detention Basin - A structure designed to retard stormwater runoff by temporarily storing and releasing the runoff at a predetermined rate.

Detention Volume - The volume of runoff that is captured and released into the waters of this Commonwealth at a controlled rate.

Development Site (Site) - See Project Site.

Disconnected Impervious Area (DIA) - An impervious or impermeable surface that is disconnected from any stormwater drainage or conveyance system and is redirected or directed to a pervious area, which allows for infiltration, filtration, and/ or increased time of concentration.

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

Down-slope Property Line - That portion of a property line of a lot or parcel of land being developed located such that overland or pipe flow from the development site would be directed toward it.

Drainage Easement - A limited right of use granted in private land, allowing the use of private land for stormwater management purposes, where in no structure may be constructed.

Earth Disturbance Activity - A construction or other human activity which disturbs the surface of the land, including land clearing and grubbing, grading, excavations, embankments, land development, agricultural plowing or tilling, operation of animal heavy use areas, timber harvesting activities, road maintenance activities, oil and gas activities, well drilling, mineral extraction, and the moving, depositing, stockpiling, or storing of soil, rock or earth materials.

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

E&S Manual - The Pennsylvania DEP Erosion and Sedimentation Control Manual, as amended and updated.

Erosion and Sedimentation Control Plan (E&S Plan) - A site-specific plan consisting of both drawings and a narrative that identifies BMPs to minimize accelerated erosion and sedimentation before, during and after earth disturbance activities.

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

FEMA - Federal Emergency Management Agency.

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

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

Flow Path - The path that stormwater follows from the discharge point to the nearest property line or conveyance facility. The length of the path is measured along the ground slope.

Forest Management / Timber Operations - Planning and activities necessary for the management of forest land. These include conducting a timber inventory, preparation of a forest management plan, silvicultural treatment, developing or establishing a cutting budget, logging road design and construction, timber harvesting, site preparation, and reforestation.

Groundwater Recharge - Replenishment of existing natural underground water supplies.

Hazardous Materials / Substances - Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

Impervious Surface (Impervious Area) - A surface that prevents the infiltration of water into the ground. Impervious surfaces and areas include but are not limited to roofs, additional indoor living spaces, patios and decks, garages, storage sheds and similar structures, streets, driveways, access drives, parking areas, and sidewalks. Any areas designed to be covered by loose surfacing materials such as gravel, stone and/or crushed stone, and intended for storage of and/or travel by vehicles, or pedestrians shall be considered impervious; however, a credit may be given for pervious surface that are designed and maintained as such. The credit shall be developed on a case by case basis. Surfaces or areas designed, constructed and maintained to permit infiltration may be considered pervious in terms of stormwater management; however, this definition is not iterative throughout all definitions as determined by the Subdivision and Land Development and Zoning ordinances. (eg. Impervious coverage (as allowed per zoning ordinances) must include the pervious surfaces such as porous concrete or pavers in the impervious area calculation.)

Infiltration - Water flowing downward through the ground surface.

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

Infiltration Trench / Bed - An area of excavated earth filled with loose stone or similar materials into which surface water is directed for infiltration into the ground.

In-Kind Repair / Replacement - Repair or replacement of materials with the same or similar materials in the same location. This is not applicable when repair/replacement is within a Regulated Activity area.

Invasive / Exotic Plants - Plant species on the “Invasive Exotic Plants in Pennsylvania List” published by the PA Department of Conservation and Natural Resources, as amended.

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 - Shall include any of the following activities:

- A. The improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving:
 - 1. A group of two (2) or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or

2. The division or allocation of land or space, whether initially or cumulatively, between or among two (2) or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features.
- B. A subdivision of land.
- C. Development in accordance with Section 503(1.1) of the Pennsylvania Municipalities Planning Code.

Minor Stormwater Management Plan - A plan prepared and submitted to Hamiltonban Township for proposed projects which qualify to use the Simplified Approach. The Minor Stormwater Management Plan is broken down into List A component requirements and requirements for a "Complete" Minor Stormwater Management Plan, the requirements for which are provided under the Simplified Approach in Appendix D

Municipality - Hamiltonban Township, Adams County, Pennsylvania.

Noxious Plant - Those species as listed in the PA Noxious Weed Control Law (3 P.S. § § 255.1—255.11), as amended and/or recodified.

NPDES - National Pollution Discharge Elimination System, as authorized by the Clean Water Act (33 U.S.C. §1251 *et seq.* [1972], as amended).

NPDES Permit - A permit required for stormwater discharges associated with construction activities, as required by the Clean Water Act (33 U.S.C. §1251 *et seq.* [1972], as amended).

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

O&M - Operation and Maintenance.

O&M Plan - Operation and Maintenance Plan.

PCSM - Post-Construction Stormwater Management.

PCSM Plan - Post Construction Stormwater Management Plan.

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

Percolation - The downward movement, under the influence of gravity, of water under hydrostatic pressure through interstices of the soil or rock.

Person - An individual, partnership, public or private association or corporation, firm, trust, estate, Township, governmental unit, public utility or any other legal entity whatsoever. Whenever used in any section prescribing or imposing a penalty, the term "person" shall include the members of a partnership, the officers, agents and servants of a corporation and the officers of a Township.

Pervious Area - Any area not defined as impervious.

Pennsylvania Municipalities Planning Code - Act of 1968, P.L.805, No. 247, as reenacted and amended.

Point Source - Any discernible, confined, or discrete conveyance, including, but not limited to: any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, CAAP, CAFO, landfill leachate collection system, or vessel or other floating craft from which pollutants are or may be discharged.

Project Site (Site) - The specific area of land where any Regulated Activity in Hamiltonban Township is planned for, conducted on, constructed, or maintained.

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

Regulated Activity - Any activities or actions that involve the alteration, disturbance or development of land as described in this ordinance. For the purpose of this ordinance this includes but is not limited to areas where stormwater flows or land use conditions are altered, Regulated Earth Disturbance Activities, disturbed areas, etc.

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.

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

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

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

Riparian Buffer - A Best Management Practice that consists of permanent vegetation along surface waters. (Such areas serve as natural vegetative filters between upland landscapes and waterways.)

Riparian Forest Buffer - A type of riparian buffer that consists of permanent vegetation that is predominantly native trees and shrubs along surface waters that is maintained in a natural state or sustainably managed to protect and enhance water quality, stabilize stream channels and banks, and separate land use activities from surface waters.

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

Rooftop Detention - Temporary ponding and gradual release of stormwater falling directly onto roof surface by incorporating control-flow roof drains into building design.

Road Maintenance Activities - See definition as found in Title 25, Chapter 102.1.

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

Runoff Characteristics - The surface components on any watershed which either individually or in any combination thereof, directly affect the rate, amount and direction of stormwater runoff. These may include, but are not limited to; vegetation, soils, slopes and any type of manmade landscape alterations.

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

Sediment Basin - A barrier, dam, retention or detention basin designed to retain sediment.

Semi-Pervious Surface - A surface which permits a limited amount of vertical transmission of water.

Soil Cover Complex Method - A method of runoff computation in NRCS publication "Urban Hydrology for Small Watersheds", technical Release No. 55.

Special Management Areas - Those areas outlined in Chapter 7 of the BMP Manual. Special Management Areas include: brownfields, highways and roads, karst areas, mined lands, water supply well areas, surface water supplies and special protection waters.

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

State Water Quality Requirements - The regulatory requirements to protect, maintain, reclaim, and restore water quality under Title 25 of the Pennsylvania Code and the Clean Streams Law.

Storm Drain System - Publicly or privately owned facilities by which stormwater is collected and/or conveyed including but not limited to, any roads with drainage systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures.

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

Storm Sewer - A pipe or conduit, or a system of pipes or conduits, which intercepts and carries surface stormwater runoff, but excludes sewage, industrial wastes and similar discharges.

Stormwater - Drainage runoff from the surface of the land resulting from precipitation, snow melt or ice melt.

Stormwater Best Management Practice (Stormwater BMP) - Activities, facilities, designs, measures, or procedures used to manage stormwater impacts from Regulated Activities, to meet state water quality requirements, to promote groundwater recharge, and to otherwise meet the purposes of this Ordinance.

Stormwater Management Facility - Any structure, natural or man-made, that, due to its condition, design, or construction, conveys, stores, or otherwise affects stormwater runoff. Typical stormwater

management facilities include, but are not limited to, detention and retention basins, open channels; storm sewers, pipes, and infiltration facilities.

Stormwater Management Plan (The Plan) - The Adams County Stormwater Management Plan of November, 2011, which incorporates the requirements of the Act of October 4, 1978, P.L. 864 (Act 167), as amended, and known as the “Storm Water Management Act.”

Stormwater Management Site Plan (SWM Site Plan) - A plan prepared by the developer or his representative indicating how stormwater runoff will be managed at the development site in accordance with this Ordinance.

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

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

SWM - Stormwater Management.

Technical Review Checklist (Optional) - A checklist of technical items to be used by the reviewing entity when reviewing a PCSM Plan.

USDA - United States Department of Agriculture.

Watercourse - a stream of water; river, brook, creek, channel or ditch, whether natural or man-made.

Waters of the 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 the 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 III – STORMWATER MANAGEMENT STANDARDS

Section 301: General SWM Requirements

- A. For all regulated activities, unless preparation of a SWM Site Plan is specifically exempted in Section 302:
1. Preparation and implementation of an approved SWM Site Plan is required.
 2. No regulated activities shall commence until the Supervisors of Hamiltonban Township issues written approval of an SWM Site Plan which demonstrates compliance with the requirements of this Ordinance.
- B. All SWM Site Plans for Regulated Activities shall include such measures as necessary to:
1. Protect health, safety, and property.
 2. Meet the water quality goals of this Ordinance:
 - a. Minimize disturbance to floodplains, wetlands, wooded areas, and existing vegetation.
 - b. Maintain or extend riparian buffers.
 - c. Avoid erosive flow conditions in natural flow pathways.
 - d. Minimize thermal impacts to waters of the Commonwealth.
 - e. Disconnect impervious surfaces by directing runoff to pervious areas.
 - f. Minimize soil disturbance and compaction.
 3. Incorporate the techniques for Low Impact Development Practices described in the Pennsylvania Stormwater Best Management Practices Manual (BMP Manual).
- C. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without the written notification of the adjacent property owner(s) by the developer. Copies of all such notifications shall be included in the SWM Site Plan submission.
- D. For all Regulated Activities where erosion and sediment control is required in accordance with Title 25 of the Pennsylvania Code and the Clean Streams Law, the SWM Site Plan shall include the required erosion and sedimentation control measures. Necessary E&S BMPs shall be designed in accordance with the Erosion and Sediment Pollution Control Program Manual (E&S Manual), No. 363-2134-008 (March 2012), as amended and updated. Approval of the SWM Site Plan by Hamiltonban Township shall be conditioned on the applicant obtaining erosion and sedimentation control approval from the appropriate agency(ies), when applicable.

- E. For all Regulated Activities where NPDES permitting is required in accordance with the Clean Water Act (33 U.S.C. §1251 *et seq.* [1972], as amended), the SWM Site Plan shall include the information required in the applicant's NPDES Permit application. Approval of the SWM Site Plan by Hamiltonban Township shall be conditioned on the applicant obtaining NPDES Permit approval from the appropriate agency(ies), when applicable.
- F. For all regulated activities, implementation of the volume controls in Section 303 and the peak rate controls of Section 304 is required unless exempt under requirements as defined in Section 302.
- G. Special Management Areas – SWM Site Plans involving Regulated Activities within Special Management Areas shall be prepared in a manner consistent with the guidance provided in Chapter 7 of the BMP Manual. The SWM Site Plan submission shall include design details for Stormwater BMPs within said Special Management Area.
- H. A SWM Site Plan may propose that stormwater related to the proposed Regulated Activities be accommodated by existing stormwater management facilities on adjoining or nearby properties provided that the SWM Site Plan documents the following.
 - 1. The use of the Stormwater BMPs located on said adjoining or nearby property is approved in writing by the owner of the property.
 - 2. The Stormwater BMPs located on said adjoining or nearby property are designed in a manner that can accommodate the stormwater management needs of the Regulated Activity in a manner consistent with all requirements of this Ordinance. The SWM Site Plan shall include all documentation necessary for Hamiltonban Township to confirm such compliance.
- I. SWM Site Plans, once approved by Hamiltonban Township, shall remain on site throughout the duration of the regulated activity and be available for review as may be necessary by representatives of Hamiltonban Township.
- J. The design of all Stormwater BMPs over karst geology shall include an evaluation of measures necessary to minimize adverse effects including hydro-geologic studies if required by the Township.
- K. Hamiltonban Township may, after consultation with and approval by DEP, approve measures for meeting the state water quality requirements other than those in this Ordinance, provided that they meet the minimum requirements of, and do not conflict with, state law including, but not limited to, the Clean Streams Law. Hamiltonban Township shall maintain a record of consultations with DEP pursuant to this paragraph.
 - 1. DEP is not required to be consulted for waiver of the requirements within:
 - a. Section 306. Design Criteria
 - b. Section 307. Regulations Governing Stormwater Management Facilities
 - c. Section 308. Calculation Methodology
 - d. Section 309. Carbonate Geology

- L. All natural streams, channels, swales, drainage systems and/or areas of surface water concentration shall be maintained in their existing condition unless an alteration is approved by the Township. All encroachment activities shall comply with the requirements of PA DEP 25 PA Code Chapter 105 (Water Obstructions and Encroachments), Rules and Regulations of PA DEP. Any approvals or permits issued do not relieve compliance as referenced in Section 108, Compatibility with Other Permit and Ordinance Requirements.
- M. The technical standards provided within this Ordinance are considered the baseline for design and layout of an SWM Plan. Use of other alternative and innovate designs for controlling stormwater runoff may be permitted when approved by the Township Engineer.
- N. All existing Stormwater Management Facilities and Agreements shall continue to be maintained with the intended functionality as designed and approved.
- O. All work shall be in accordance with the Township's Construction and Material Specifications.

Section 302: Exemptions

- A. A property owner or developer of any Regulated Activity that meets the following exemption criteria may be, upon approval from Hamiltonban Township, exempt from certain stormwater management requirements of this ordinance. However, the property owner or developer shall be subject to all other requirements of this Ordinance other than related requirements for which an exemption or exemptions have been authorized. The criteria for exemption in this Section apply to the total development proposed, including instances in which the development is proposed to take place in phases. The date of enactment of this Ordinance shall be the starting point from which future development and the respective exemption criteria shall be cumulatively considered and regulated.
 1. Regulated Activities that involve proposal of less than 5,000 square feet of impervious surface, where the total cumulative impervious added since November 23, 2011 is less than 5,000 square feet, may be exempted from portions of Article III including volume control (Section 303) and peak rate control (Section 304), Article IV and V of the Hamiltonban Township SWM Ordinance. The applicant shall complete requirements as defined by the Simplified Approach (see Appendix D).
 2. Agricultural Activities shall be exempt from the rate control, volume control and SWM Site Plan preparation and submission requirements of this Ordinance provided the agricultural activities are performed in accordance with the requirements of 25 Pa. Code 102. Further, such activities shall not be subject to the exemption approval process of Section 302.B of this ordinance.
 3. Forest management and timber operations shall be exempted from the rate control, volume control and SWM Site Plan preparation and submission requirements of this Ordinance provided the forest management and timber operations are performed in accordance with the requirements of 25 PA Code 102. Further, such activities shall not be subject to the exemption approval process of Section 302.B of this ordinance.

4. Regulated Activities involving domestic gardening for single-family consumption shall be exempted from volume control, rate control, and SWM Site Plan preparation and submission requirements of this Ordinance. Further, such activities shall not be subject to the exemption approval process of Section 302.B of this Ordinance.
 5. In Kind Repair, In Kind Replacement, and maintenance of existing surfaces, and structures shall be exempted from volume control, rate control, and SWM Site Plan preparation and submission requirements of this Ordinance. Further, such activities shall not be subject to the exemption approval process of Section 302.B of this Ordinance.
- B. Authorization of Exemptions: Hamiltonban Township shall determine, in accordance with the following requirements and process, whether the proposed Regulated Activity qualifies for exemption under the requirements as defined by the Simplified Approach.
1. The property owner or developer proposing the Regulated Activity shall submit documents as required under the Simplified Approach.
 2. Upon receipt of the exemption request form, the Hamiltonban Township Supervisors or its designee shall either approve or deny the exemption request. If the exemption request is denied, the Hamiltonban Township Supervisors or its designee shall direct the property owner or developer to submit the information required to demonstrate that the proposed Regulated Activity complies with the requirements of this Ordinance or meets the exemption criteria.
 3. Exemption request approval shall be at the discretion of the Hamiltonban Township Supervisors or its designee, and shall be subject to the following:
 - a. Hamiltonban Township may deny any exemption request or suspend or revoke any approved exemption request at any time for any project where Hamiltonban Township believes that the proposed Regulated Activity poses a threat to public health, safety, property, or the environment.
 - b. Approval of an exemption request does not relieve the property owner or developer from other applicable requirements of this Ordinance or of other Hamiltonban Township ordinance or regulations.
 - c. Hamiltonban Township reserves the right to deny an exemption request if a drainage problem is known or identified by Hamiltonban Township to exist or is expected to exist downstream from the proposed Regulated Activity.

Section 303: Volume Controls

The low impact development practices provided in the BMP Manual shall be utilized for all Regulated Activities. Water volume controls shall be implemented using the Design Storm Method in Section 303.A

- A. The Design Storm Method (CG-1 in the BMP Manual) may be used for any size of Regulated Activity. This method requires detailed modeling to achieve the following standards.
 - 1. The post-development total runoff volume shall not increase for all storms equal to or less than the two (2)-year twenty-four (24) hour duration precipitation.
 - 2. For modeling purposes:
 - a. Existing (pre-development), non-forested, pervious areas must be considered meadow within the regulated area unless the existing land use dictates a lower runoff condition.
 - b. Twenty percent (20%) of existing impervious area within the regulated area, when present, shall be considered meadow in the model for existing conditions.
 - 3. Infiltration BMPs shall be designed per Section 306 S. and 306 T.
- B. Infiltration Alternative: Where infiltration is not possible due to soil characteristics or is not desirable given other characteristics, water quality control may be proposed as an alternative to strict adherence to the volume control standards of Section 303 of this Ordinance. Where water quality control is proposed, the following standards shall be achieved.
 - 1. At a minimum, the following documentation shall be provided to justify the proposal to reduce the infiltration requirements:
 - a. Description of and justification for field infiltration / permeability testing with respect to the type of test and test locations.
 - b. An interpretive narrative describing existing soils of the site and their structure as these relate to the interaction between soils and water characteristics of the site. In addition to providing soil and soil profile descriptions, this narrative shall identify depth to seasonal water tables and depth to bedrock and provide a description of all subsurface elements (restrictive layers, geology, etc.) that influence the direction and rate of subsurface water movement.
 - c. A qualitative assessment of the site's contribution to annual aquifer recharge shall be made, along with the identification of any restrictions or limitations associated with the use of designed infiltration facilities.

- d. The provided documentation must be signed and sealed by a qualified professional.
2. Water Quality BMPs shall be implemented on all permanent stormwater discharges from the proposed project site to achieve pollutant removal efficiencies in accordance with the following table. (Efficiency removal rating shall be based on a testing specification for particle size distribution as required per TARP Tier 1 and 2 Protocol Testing. The minimum design flow shall be based on the peak flow produced from 1" of rain as calculated.)

Required Pollutant Removal Efficiencies for Infiltration Alternatives

Pollutant Load	Units	Required Removal Efficiency (%)
Total Suspended Solids (TSS)	Pounds	85%
Total Phosphorus (TP)	Pounds	85%
Total Nitrate (NO ₃)	Pounds	50%

3. Design guidance from the most current version of the BMP Manual, or equivalent resource as pre-coordinated with Hamiltonban Township, shall be consulted when choosing design criteria for water quality BMPs.

Section 304: Rate Controls

- A. Post-development discharge rates shall not exceed the pre-development discharge rates for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year 24-hour storms. If it is shown that the peak rates of discharge indicated by the post-development analysis are less than or equal to the peak rates of discharge indicated by the pre-development analysis for 1-, 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storms, then the requirements of this section have been met. Otherwise, the applicant shall provide additional controls as necessary to satisfy the peak rate of discharge requirement.
- B. For computation of pre-development peak discharge rates:
 - a. Existing (pre-development) pervious areas must be considered meadow within the regulated area, unless the existing land use dictates a lower runoff condition.
 - b. Twenty percent (20%) of existing impervious area within the regulated area, when present, shall be considered meadow in the model for existing conditions.
- C. The developer shall demonstrate that the flows for the 1, 2, 5 and 10 year frequency storms peak rates are less than or equal to pre-development rates during the construction phase.

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

For the purposes of the Act 167 Stormwater Management (Plan) elements and this Ordinance, design policy pertaining to stormwater management facilities for Pennsylvania Department of Transportation (PennDOT) roadways and associated facilities is provided in Section 13.7 (Antidegradation and Post Construction Stormwater Management Policy) of PennDOT Publication No. 13M, Design Manual Part 2 (August 2009), as developed, updated, and amended in consultation with the Pennsylvania Department of Environmental Resources (DEP). As stated in DM-2.13.7.D (Act 167 and Municipal Ordinances), PennDOT roadways and associated facilities shall be consistent with Act 167 Plans. DM-2.13.7.B (Policy on Antidegradation and Post Construction Stormwater Management) was developed as a cooperative effort between PennDOT and DEP. DM-2.13.7.C (Project Categories) discusses the anticipated impact on the quality, volume, and rate of stormwater runoff.

Where standards in the Act 167 elements of this Ordinance are impractical, PennDOT may request assistance from DEP, in consultation with the Township and County, to develop an alternative strategy for meeting State water quality requirements and the goals and objectives of the Act 167 elements.

For the purposes of the Act 167 elements in this Ordinance, road maintenance activities are regulated under 25 PA Code Chapter 102.

Section 306: Design Criteria and Standards

- A. Off-Site Areas - Off-site areas proposed to drain through a proposed development site are not subject to release rate criteria when determining allowable peak runoff rates; however, on-site drainage facilities shall be designed to safely convey off-site flows through the development site. When conditions as described above are encountered, separate analysis for developed and off-site areas shall be made for comparison purposes.
- B. On-Site Areas - On-Site Areas proposed to remain outside a Regulated Activity area shall be considered as existing conditions, without considering any reductions in cover type. When conditions as described above are encountered, separate analysis for these areas shall be made for comparison purposes.
- C. "Downstream Hydraulic Capacity Analysis" - Any existing downstream hydraulic capacity analysis shall be conducted in accordance with this Ordinance.
 - 1. All downstream facilities impacted by the total site area of the Regulated Activity shall be studied to determine if the facility has adequate capacity to handle existing and proposed flows. An impacted downstream facility is one to which the runoff from the total site area of the Regulated Activity comprises more than 50% of the total flow to such a facility. The study shall end at a perennial stream. Downstream facilities include, but are not limited to, manmade or natural swales and open channels, pipes, inlets, culverts, bridges and roadways.
 - 2. If any private facility is found to be undersized, the applicant shall be responsible for updating the facility in coordination with the regulated activity and appropriate municipal representation.

- D. Regional Detention Alternatives - For certain areas within the study area, it may be more cost-effective to provide one control facility for more than one development site than to provide an individual control facility for each development site. The initiative and funding for any regional runoff control alternatives are the responsibility of prospective developers. The design of any regional control basins must incorporate reasonable development of the entire upstream watershed. The peak outflow of a regional basin would be determined on a case-by-case basis.
- E. Capacity Improvements of Local Drainage Networks - In certain instances, local drainage conditions may dictate more stringent levels of runoff control than those based upon protection of the entire watershed. In these instances, if the developer can prove that it would be feasible to provide capacity improvements to relieve the capacity deficiency in the local drainage network, then the capacity improvements could be provided by the developer in lieu of runoff controls on the development site. Any capacity improvements would be designed based upon development of all areas tributary to the proposed improvement and the capacity criteria specified in this ordinance. In addition, all new development upstream of a proposed capacity improvement shall be assumed to implement the applicable runoff controls consistent with this Ordinance except that all new development within the entire subarea(s) within which the proposed development site is located shall be assumed to implement the developer's proposed discharge control, if any.
- F. Capacity improvements may be provided as necessary to implement any regional or sub-regional detention alternatives.
- G. Where the potential for groundwater and/or surface water contamination exists, based on the proposed use of the Regulated Activity, safeguards shall be incorporated into the site.
1. For industrial or commercial sites where it is possible that toxic or hazardous substances may come into contact with stormwater runoff, pretreatment of the first-flush (first 1/2 inch) runoff over areas where industrial and commercial operations take place shall be provided. Pretreatment shall include means for separating light and heavy toxic and hazardous substances from the stormwater before the stormwater is conveyed to the general stormwater management facility(ies).
 2. Infiltration systems may be used to handle runoff from commercial or industrial working or parking areas only after the first-flush stormwater from these areas has been pretreated for removal of toxic and hazardous substances.
- H. Roof drains and sump pumps shall discharge to lawns, infiltration or vegetative BMPs, or pervious areas wherever/whenever possible. If the above discharge criteria cannot be met or when it is more advantageous to connect directly to streets, storm sewers or other stabilized conveyance designations, then the discharge will be permitted on a case by case basis by Hamiltonban Township. All discharges shall be conveyed in a manner as to not cause water problems on adjoining property owners.
- I. Subsurface detention facilities shall provide adequately designed pretreatment for removal of pollutants, oil, trash and debris. Appropriate supporting information shall be provided for all proposed devices. All subsurface facilities shall be designed such that access for inspection and cleaning of the facility can occur.

- J. Inlets shall be placed on both sides of the street at low spots and at the upper side of street intersections to prevent stormwater from crossing an intersection. Other devices such as high efficiency grates or perforated pipe may be required if conditions warrant. All inlets at low points along the roadway shall have a 10" curb reveal and shall be equipped with pavement base drain extending 50 feet in either direction, parallel to the centerline of the roadway.
- K. Manholes, inlets, headwalls, and endwalls shall conform to the requirements of the PennDOT Publication 408, as modified by the adopted Township Standards.
- L. Design Standards – Detention and Retention Facilities
 - 1. Permanent Detention and Retention Facilities shall be designed to meet the following standards:
 - a. The maximum permitted depth for dry detention or retention basins shall be 6 feet, measured from the bottom of the emergency spillway to the lowest point in the basin.
 - b. The minimum top width of all basin embankments shall be 8 feet.
 - c. The maximum permitted side slopes for detention or retention basins shall be 4 horizontal to 1 vertical. In order to obtain a waiver for slopes steeper than 4:1, the plan must include a planting schedule to stabilize the embankments. The proposed vegetation shall be low maintenance varieties.
 - d. Minimum Bottom Slope - All detention basins shall have a minimum bottom slope of 2% unless infiltration facilities are provided.
 - e. Any stormwater management facility (i.e., detention basin) designed to store runoff and requiring a berm or earthen embankment required or regulated by this Ordinance shall be designed to provide an emergency spillway to handle flow up to and including the 100-year, 24 hour design storm at post-development conditions, assuming the principal outlet structure to be clogged. The height of embankment must be set as to provide a minimum 1 foot of freeboard above the maximum elevation computed for the clogged orifice condition. Should any stormwater management facility require a dam safety permit under PA DEP 25 PA Code Chapter 105, the facility shall be designed in accordance with PA DEP 25 PA Code Chapter 105 and meet the regulations of PA DEP 25 PA Code Chapter 105 concerning dam safety which may be required to pass storms larger than 100-year event.
 - f. A cutoff trench of impervious material shall be provided within all basin embankments.
 - g. Where a basin embankment is constructed using fill on an existing 15% or greater slope, the basin must be keyed into the existing grade.

- h. Fencing. Any above-ground stormwater management detention/retention facility, that is designed to store at least a two foot (2') depth of runoff, shall be subject to the following fencing requirements:
 - i. Stormwater facility must be completely surrounded by a chain link fence of not less than four (4) feet in height. Alternative fences and barriers may be permitted upon request to and approval by the Township.
 - ii. All gates or doors opening through such enclosure shall be equipped with a self-closing and self-latching device for keeping the gate or door securely closed at all times, when not in actual use.
 - i. All outlet structures and emergency spillways shall include a satisfactory means of energy dissipation at its outlet to assure conveyance and flow without endangering the safety and integrity of the basin and the downstream drainage area.
 - j. A concentrated discharge of stormwater to an adjacent property shall be within a natural drainage way or watercourse, or an easement shall be required.
 - k. All facilities shall be provided with an access slope at no more than 5:1 along with an access easement.
 - l. Plans for infiltration must show the locations of existing and proposed septic tank infiltration areas and wells. A minimum 10 feet separation from On Lot Disposal Systems (OLDS) infiltration areas, including replacement areas, is required; however, 25 feet is desirable. Infiltration rates shall be based upon perc and probe tests conducted at the site of the proposed facility.
 - m. Guards shall be provided on all intake and outfall structures as well as outlet structures. The guard bars shall be one-half inch (1/2") diameter galvanized bars on six inch (6") centers attached to the structure with three eighth inch (3/8") diameter stainless steel anchors.
- M. All storage facilities shall completely drain both the volume control and rate control capacities over a period of time not less than 24 hours and not more than 72 hours from the end of the design storm. However, any designed infiltration at such facilities is exempt from the minimum 24-hour standard, i.e., may infiltrate in a shorter period of time, so long as none of the stormwater flowing into the infiltration facility is discharged directly into the surface waters of the Commonwealth. (Inordinately rapid infiltration rates may indicate the presence of large fractures or other conditions for which an additional soil buffer may be required.) Where extended detention facilities are utilized to mitigate increased volume, the increased volume is required to be detained not less than 24 hours from the end of the 24 hour design storm (assuming the peak rate occurs at approximately the 12 hour time period in the storm).

- N. For all regulated activities, SWM BMPs shall be designed, implemented, operated, and maintained to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code, the Clean Streams Law, and the Stormwater Management Act.
- O. Design for BMPs shall be in accordance with design standards as listed in the BMP Manual or other legitimate source.
- P. Existing (pre-development), pervious areas must be considered meadow within the regulated area, unless the existing land use dictates a lower runoff condition.
- Q. Infiltration BMPs shall be spread out such that impervious to BMP loading ratios are less than or equal to 5:1, made as shallow as practicable, and located to maximize use of natural on-site infiltration features while still meeting the other requirements of this Ordinance.
- R. Impervious Area.
1. The measurement of impervious areas shall include all of the impervious areas in the total proposed development, even if development is to take place in phases.
 2. For development taking place in phases, the total proposed impervious for all phases must be used in determining conformance with this Ordinance.
 3. For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this Ordinance; except that the volume controls in Section 303 and the peak rate controls of Section 304 do not need to be considered for existing impervious areas that are not being altered by the proposed Regulated Activity.
 4. Twenty percent (20%) of existing impervious area within the regulated area, when present, shall be considered meadow in the model for existing conditions.
- S. Infiltration BMPs shall be designed in the following manner. A detailed soils evaluation of the project site shall be performed to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified professional, and at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation, and subgrade stability, seasonally high groundwater table, suitability of stormwater management facilities and maximum infiltration capacity in depth of water per unit area. The general process for designing the infiltration BMP shall be:
1. Site evaluation to determine general areas of suitability for infiltration practices.
 2. Provide field test throughout the area proposed for development to determine appropriate percolation rate and/or hydraulic conductivity. At least one (1) infiltration test must be included in each soil group and at least one (1) infiltration test must be conducted for each five (5) lots proposed for development. Infiltration tests must be taken at the location and depth of all proposed infiltration structures.