NORTH HUNTINGDON TOWNSHIP
STORMWATER MANAGEMENT ORDINANCE

PROPOSED ORDINANCE NO. 8 OF 2020

ORDINANCE NO. 2262

North Huntingdon Township,
Westmoreland County, Pennsylvania

Prepared By:

Adopted at a Public Meeting Held On:
November 18, 2020

North Huntingdon Township Stormwater Management Ordinance

North Huntingdon Township Stormwater Management Ordinance

ARTICLE I General Provisions.

§101. Short Title.

This Ordinance shall be known and may be cited as the "North Huntingdon Township Stormwater Management Ordinance."

§102. Findings.

The Board of Commissioners of North Huntingdon Township finds that:

A. Stormwater runoff from lands modified by human activities threatens public health and safety by causing decreased infiltration of rainwater and increased runoff flows and velocities, which overtax the carrying capacity of existing streams and storm sewers, causes property damage and risk to public safety, and greatly increases the cost to the public to manage stormwater.

B. Inadequate planning and management of accelerated stormwater runoff resulting from land development and redevelopment throughout a watershed can also harm surface water resources by changing the natural hydrologic patterns, accelerating stream flows (which increase scour and erosion of stream-beds and stream-banks thereby elevating sedimentation), destroying aquatic habitat and elevating aquatic pollutant concentrations and loadings such as sediments, nutrients, heavy metals and pathogens. Groundwater resources are also impacted through loss of recharge.

C. North Huntingdon Township is located in three (3) different watersheds, which are each the Turtle Creek Watershed, Sewickley Creek Watershed, and the Youghiogheny River Watershed. North Huntingdon Township will endeavor to cooperate with other municipalities located in these watersheds to address issues of stormwater management, water quality, pollution and flooding.

D. Non-stormwater discharges to municipal separate storm sewer systems can contribute to pollution of waters of the Commonwealth in North Huntingdon Township.

E. Stormwater can be an important water resource by providing groundwater recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.

F. Public education on the control of pollution of stormwater is an essential component in successfully managing stormwater.

G. A comprehensive program of stormwater management, including reasonable regulation of land development and redevelopment causing loss of natural infiltration, is fundamental to the public health, safety, welfare, and the protection of the people of North Huntingdon Township and all the people of the Commonwealth, their resources, and the environment.

H. The use of open space conservation, green infrastructure, low impact development (LID), and riparian buffers 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, LID, and riparian buffers contribute to the restoration or maintenance of pre-development hydrology.

I. Stormwater structures are considered vital infrastructure and can pose a significant hazard. Outlets and waterways which carry stormwater shall be maintained free of obstructions to allow for non-restricted flow of stormwater to avoid impoundment of water.

J. Occupancy and modification of floodplains shall be avoided wherever there is a practicable alternative to reduce long and short-term adverse impacts in order to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains.

K. 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 municipal separate storm sewer systems (MS4) under the National Pollutant Discharge Elimination System (NPDES). North Huntingdon Township is subject to MS4 requirements.

L. The Westmoreland Conservation District (WCD) is a recognized regulatory agency with authority in the county and this municipality to regulate erosion and sediment controls and stormwater management related to land development activities. Because WCD's authority crosses municipal boundaries they are enabled to oversee environmental issues for the general benefit of all county residents.

M. The Westmoreland County Integrated Water Resources Plan (IWRP) addresses all water resources and provides a decision-making tool for development and redevelopment with respect to those resources including stormwater and its management. Refer to www.paiwrp.com and www.westmorelandstormwater.org.

§103. About & Purpose.

The North Huntingdon Township Stormwater Management Ordinance is based on the Westmoreland County Model Stormwater Management Ordinance. The Westmoreland County Model Stormwater Management Ordinance was based on the DEP 2022 Model Stormwater Management Ordinance (5/2016), and was created as part of the Westmoreland County IWRP 2020. Its creation was guided by the Watershed Planning Advisory Committee, the WCD, the Westmoreland County Department of Planning and Development; approved by the DEP on 04 February 2020; and formally adopted by the Westmoreland County Commissioners by Resolution on 04 June 2020.

The Pennsylvania Storm Water Management Act (Act 167 of 1978) requires municipalities to "adopt or amend, and shall implement such ordinances and regulations, including zoning, subdivision and development, building code, and erosion and sedimentation ordinances, as are necessary to regulate development within the Municipality in a manner consistent with the applicable watershed stormwater plan and the provisions of this act". DEP is directed under Act 167 to develop a model stormwater ordinance. DEP's intention in publishing the 2022 Model Stormwater Management Ordinance is that its use will satisfy both Act 167 requirements, and MS4 regulatory requirements.

The purpose of the North Huntingdon Township Stormwater Management Ordinance (Ordinance) is to promote health, safety, and welfare within North Huntingdon Township and its watersheds by minimizing the harms and maximizing the benefits described in this Section of this Ordinance, through provisions designed to:

A. Manage stormwater runoff impacts at their source by regulating activities that cause the

problems, reduce runoff volumes and mimic natural hydrology.

B. Maintain existing flows and quality of streams and watercourses.
C. Prevent scour and erosion of streambanks and streambeds.
D. Utilize and preserve the existing natural drainage systems as much as possible.
E. Restore and preserve the natural and beneficial values served by streamside and waterbody floodplains.
F. Focus on infiltration of stormwater, to maintain groundwater recharge, to prevent degradation of surface and groundwater quality and to otherwise protect water resources.
G. Promote stormwater runoff prevention and emphasize infiltration and evapotranspiration through the protection and conservation of natural resource systems and the use of nonstructural BMPs and other creative methods of improving water quality and managing stormwater runoff.
H. Promote the use of green infrastructure in development and redevelopment where it can also improve stormwater management within the broader watershed in which the project is located.
I. Meet legal water quality requirements under State law, including regulations at 25 Pa.Code, Chapter 93.4a, to protect and maintain "existing uses" and maintain the level of water quality to support those uses in all streams, and to protect and maintain water quality in "special protection" streams.
J. Provide review procedures and performance standards for stormwater planning and management.
K. Provide for proper operation and maintenance (O&M) of all permanent stormwater management BMPs that are implemented in North Huntingdon Township.
L. Provide a mechanism to identify controls necessary to meet the NPDES and MS4 permit requirements, and to encourage infrastructure improvements that lead to separation of storm sewer systems from sanitary sewer systems.
M. Assist in detecting and eliminating illicit stormwater discharges into North Huntingdon Township's separate storm sewer system.

§104. Statutory Authority.

A. North Huntingdon Township is empowered to regulate land use activities that affect stormwater runoff by the authority of the Stormwater Management Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.1, et seq., as amended, and the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended.
B. North Huntingdon Township is also empowered to regulate land use activities that affect stormwater runoff by the authority of the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended.

§105. Applicability.

A. All Regulated Development Activities as defined by this Ordinance are subject to regulation by this Ordinance.
B. This Ordinance applies to any land development or regulated earth disturbance activities within North Huntingdon Township and all stormwater runoff entering into the municipality's separate or combined storm sewer system from lands within the boundaries of the municipality.

C. Earth disturbance activities and associated stormwater management controls are also regulated under existing State law and implementing regulations. This Ordinance shall operate in coordination with those parallel requirements; the requirements of this Ordinance shall be no less restrictive in meeting the purposes of this Ordinance than State law.

§106. Repealer.

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

§107. Severability.

If any word, phrase, section, sentence, clause or part of this Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, invalidity or illegality by a court of competent jurisdiction, shall not affect or impair any of the remaining words, phrases, sections, sentences, clauses or parts of this Ordinance. It is hereby declared to be the intent of the Board of Commissioners of North Huntingdon Township that this Ordinance would have been adopted had such unconstitutional, illegal or invalid word, phrase, section, sentence, clause or part thereof not been included herein.

§108. Compatibility with Other Requirements.

A. 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. To the extent that this Ordinance imposes more rigorous or stringent requirements for stormwater management, the specific requirements contained in this Ordinance shall be followed.
B. Conflicting provisions in other municipality ordinances or regulations shall be construed to retain the requirements of this Ordinance addressing State water quality requirements.

§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 the Municipality purporting to validate such a violation.

§110. Prohibitions.

Shall be consistent with PAG-13 NPDES General Permit for stormwater discharges from MS4 communities and as listed here.

A. Prohibited Discharges

1. No person in North Huntingdon Township shall introduce, permit or allow, or cause to introduce, permit or allow, stormwater discharges into the municipality separate

storm sewer system which are not composed entirely of stormwater, except as permitted by this Ordinance, or

a. as provided in paragraph 2. below, or
b. discharges as authorized under a State or Federal permit.

2. Permissible discharges, based on a finding by the municipality that the discharge(s) do not significantly contribute to pollution to surface waters of the Commonwealth, are recommended to be discharged safely to a vegetated area or infiltration BMP, but can also be discharged to a storm sewer system, include but are not limited to:
   a. Discharges from firefighting activities.
   b. Potable water sources including dechlorinated water line and fire hydrant flushings.
   c. Non-contaminated irrigation drainage from agricultural practices.
   d. Routine external building washdown (which does not use detergents or other compounds).
   e. Non-contaminated Air conditioning condensate.
   f. Water from individual residential car, boat or other residential vehicle washing that does not use detergents or other compounds.
   g. Springs.
   h. Non-contaminated Water from basement or crawl space sump pumps.
   i. Non-contaminated water from foundation or from footing drains.
   j. Flows from riparian habitats and wetlands.
   k. Lawn watering.
   l. Pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used.
   m. Splash pad (recreational spray patio with no standing water) discharges.
   n. Non-contaminated groundwater.
3. In the event that the municipality determines that any of the discharges identified in paragraph 2. above significantly contributes to pollution of waters of the Commonwealth, or is so notified by DEP, the municipality will notify the landowner and/or the responsible person to cease the discharge.
4. Upon notice provided by the municipality under paragraph 3. above, the discharger will have a reasonable time as determined by the municipality, to cease the discharge consistent with the degree of pollution caused by the discharge.
5. Nothing in this Section shall affect, limit or alleviate a discharger's responsibilities under State or Federal law.

B. Prohibited Connections

The following sources, activities or connections are prohibited, except as provided in Subsection 110.A.1. and Subsection 110.A.2.:

1. Any drain or conveyance, whether on the surface or subsurface, which allows any non-stormwater discharge including but not limited to, sewage, process wastewater and wash water, to enter the separate storm sewer system, and any connections to the storm drain system from indoor drains and sinks.
2. Any drain or conveyance connected from a commercial, industrial or other non-residential land use to the separate storm sewer system which has not been

documented in plans, maps, or equivalent records, and approved by North Huntingdon Township.

3. Drains carrying stormwater or groundwater shall not be connected to or discharge to any public or private sanitary sewer system or facility.

C. **Prohibited Activities**

1. A landowner may not alter the natural flow of surface water or groundwater (including springs) on his property by concentrating it in an artificial channel or pipe and discharging it upon lower land, private or public, even though no more water is thereby collected than would naturally have flowed upon the lower land in a sheet flow, shallow concentrated flow, or groundwater flow condition.
2. A landowner may not alter any BMPs, facilities or structures that were installed under this Ordinance or a prior municipal stormwater management ordinance, without written approval of the municipality.

D. **Roof Drains and Sump Pumps**

1. Roof drains and sump pumps shall discharge to infiltration or vegetative BMPs wherever feasible.

§111. Liability Disclaimer.

A. Neither the granting of any approval under the stormwater management provisions of this Ordinance, nor the compliance with the provisions of this Ordinance, or with any condition imposed by any public body of North Huntingdon Township or by a North Huntingdon Township official, employee or consultant hereunder, shall relieve any person from any responsibility for damage to person or property resulting therefrom, or as otherwise imposed by law, nor impose any liability upon the municipality for damages to persons or property.

B. The granting of a permit which includes any stormwater management does not constitute a representation, guarantee or warranty of any kind by the municipality or WCD, 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.

§112. North Huntingdon Township Road ROW Conveyance Responsibilities.

The following establishes North Huntingdon Township road right-of-way (ROW) conveyance responsibilities:

A. New Roads

1. All new roads being constructed are required to adhere to this Ordinance in its entirety.

B. Culverts

1. Many North Huntingdon Township owned roads contain a culvert system collecting stormwater, which ultimately discharges near a side of the road. Also, some North Huntingdon Township owned roads contain a culvert(s) purely serving to pass a concentrated flow of water, perennial or intermittent, from one side of the road to the other side of the road. Regardless, North Huntingdon Township is only

responsible for the culvert(s) and flow of water within the road's ROW, unless a drainage easement owned by North Huntingdon Township exists. North Huntingdon Township is not required to alter an existing conveyance path to benefit private interest. Furthermore, if a drainage easement does not exist, North Huntingdon Township is not responsible for:

a. The flow of water or conveyance channel on private property;
b. Privately owned conveyance infrastructure on private property.

C. Road Surface Runoff for Roads Originally Constructed before 1993

1. Many North Huntingdon Township owned roads existed prior to adoption of the first stormwater management ordinance in 1993. Should a property owner concern be brought to North Huntingdon Township's attention regarding runoff (i.e. in a sheet flow or shallow concentrated flow condition) from the surface of a road originally constructed before 1993, impacting private property, a historical review is it to be performed by the municipality to establish whether the road was constructed first, or the property was developed first.
    a. If the road was constructed first, and no significant changes have been made to the road from a hydraulic standpoint which have increased road surface runoff characteristics on to private property, North Huntingdon Township is not responsible for damages on private property from the road surface runoff, nor required to install infrastructure to handle the road surface runoff to benefit private interest.
    b. If the property was developed first, hereby meaning that the feature(s) being claimed for damages from the road surface runoff pre-existed the corresponding North Huntingdon Township owned road, then North Huntingdon Township is responsible for mitigation.

ARTICLE II Definitions.

§201. Interpretations and Word Usage.

For the purposes of this Ordinance, the 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.

§202. Definition of Terms.

Act 167 – The Stormwater Management Act, Act of October 4, 1978, P. L. 864, No. 167, as amended by the Act of May 24, 1984, No. 63, 32 P.S. §§680.1 *et seq*. The Municipality is empowered to regulate land use activities that affect runoff and surface and groundwater quality and quantity by the authority of the Act, the "Storm Water Management Act."

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

Agricultural Activity – Activities associated with agriculture such as agricultural cultivation, agricultural operation, and animal heavy use areas. This includes the work of producing crops and raising livestock including tillage, land clearing, plowing, disking, harrowing, planting, harvesting crops, or pasturing and raising of livestock and installation of Conservation Practices. Except for high tunnels that are exempt pursuant to the provisions of Act 15 of 2018, construction of new buildings or impervious areas is not considered an agricultural activity.

Applicant – A landowner, developer or other person who has filed an application for development or for approval to engage in any regulated earth disturbance activity at a project site in North Huntingdon Township.

Animal Concentration (heavy use) Areas – A barnyard, feedlot, loafing area, exercise lots, or other similar animal confinement areas that will not maintain a growing crop, or where deposited manure nitrogen is in excess of crop needs, but excluding areas managed as pastures or other cropland, and pasture access ways, if they do not cause direct flow of nutrients to surface water or groundwater.

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

Channel – A perceptible natural or artificial waterway which periodically or continuously contains moving water or which forms a connecting link between two bodies of water. It has a definite bed and banks which confine the water.

Chapter 102 – Title 25 Pa Code Chapter 102 Erosion and Sedimentation Control.

Chapter 105 – Title 25 Pa Code Chapter 105 Dam Safety and Waterway Management.

Combined Sewer System – A sewer system designed to serve as both sanitary sewer and storm sewer.

CSO, Combined Sewer Overflow – An intermittent flow or other untreated discharge from a municipal combined sewer system (including domestic, industrial and commercial wastewater and stormwater) which results from a flow in excess of the dry weather carrying capacity of the system.

Conservation District – The Westmoreland Conservation District (WCD), 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.

Conservation Plan – A plan written by an NRCS or SCS certified planner that identifies Conservation Practices and includes site specific BMPs for agricultural plowing or tilling activities and Animal Concentration Areas.

Conservation Practices – Practices installed on agricultural lands to improve farmland, soil and/or water quality which have been identified in a current Conservation Plan.

Conveyance –

(a) Any structure that carries a flow.
(b) The ability of a pipe, culvert, swale or similar facility to carry the peak flow from the design storm.

Culvert – A closed conduit for the free passage of surface drainage under a highway, railroad, canal or other embankment.

DEP – The Pennsylvania Department of Environmental Protection.

Demonstrated Equivalency – A stormwater management project on an alternative site(s) within the same watershed as the proposed development that will provide equal or better achievement of the purpose of the Ordinance and will not substantially or permanently impair the appropriate use or development of adjacent property. Examples include streambank stabilization, creation or enhancement of riparian buffers, removal of existing impervious surfaces and establishment of 'green' easements, installation of stormwater management and water quality facilities, etc.

Design Criteria –

(a) Engineering guidelines specifying construction details and materials.

(b) Objectives, results or limits which must be met by a facility, structure or process in performance of its intended functions.

Design Storm – See "storm frequency".

Detention – The slowing, dampening or attenuating of runoff flows entering the natural drainage pattern or storm drainage system by temporarily holding water on a surface area in a detention basin or within the drainage system.

Detention Basin – A pond, basin, reservoir or underground system constructed to impound or retard surface runoff temporarily.

Developer – A person that seeks to undertake or undertakes the activities associated with changes in land use or seeks to undertake or undertakes any regulated earth disturbance activities at a project site in North Huntingdon Township. The term "developer" includes, but is not limited to, the term subdivider, owner and builder, even though the person involved in successive stages of a project may change or vary.

Development – An "earth disturbance activity," as herein defined and any activity, construction, alteration, change in land use, change in land cover, or practice that affects stormwater runoff characteristics. The term also includes redevelopment.

Development Site – The specific tract of land where any development or earth disturbance activities in North Huntingdon Township are planned, conducted, undertaken or maintained.

Discharge – The flow or rate of flow from a canal, conduit, channel or other hydraulic structure.

Disturbed Area – A land area where an earth disturbance activity is occurring or has occurred.

Drainage – In general, the removal of surface water from a given area commonly applied to surface water and groundwater.

Drainage Area – Any of the following activities:

(a) The area of a drainage basin or watershed, expressed in acres, square miles or other unit of area (also called "catchment area", "watershed", "river basin").
(b) The area served by a sewer system receiving storm and surface water, or by a watercourse.

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, land development, building construction, oil and gas activities, well drilling, mineral extraction, and the moving, depositing, stockpiling, or storing of soil, rock or earth materials.

Encroachment – Any structure or activity which in any manner changes, expands or diminishes, the course, current or cross-section of any watercourse, floodway or body of water.

Erosion – The process by which land, including channels, is worn away by water, wind, or chemical action.

Erosion Control – The application of measures to reduce erosion of land surfaces.

Erosion and Sediment Control Plan – A plan for a project site which identifies BMPs to minimize accelerated erosion and sedimentation of land.

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

FEMA – Federal Emergency Management Agency.

Floodplain – Any land area susceptible to inundation by water from any natural source or delineated by applicable FEMA maps and studies as being a special flood hazard area. Also includes areas that comprise Group 13 Soils, as listed in Appendix A of the 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.

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

Ground Cover – Materials and/or vegetation covering the ground surface.

Groundwater – Subsurface water occupying the saturation zone, from which wells and springs are fed.

Groundwater Recharge – Replenishment of existing natural underground water supplies.

High Tunnel – A structure which meets the following:

(a) Is used for the production, processing, keeping, storing, sale or shelter of an agricultural commodity as defined in section 2 of the act of December 19, 1974 (P.L.973, No.319), known as the Pennsylvania Farmland and Forestland Assessment Act of 1974, or for the storage of agricultural equipment and supplies.

(b) Is constructed consistent with all of the following:

i. Has metal, wood or plastic frame
ii. When covered, has plastic, woven textile or other flexible covering
iii. Has a floor made of soil, crushed stone, matting, pavers or a floating concrete slab

Hot Spots – Areas where land use or activities generate highly contaminated runoff, with concentrations of pollutants that are higher than those typically found in stormwater (e.g., vehicle salvage yards and recycling facilities, vehicle fueling stations, fleet storage areas, vehicle equipment and cleaning facilities, vehicle service and maintenance facilities, and certain industrial/commercial activity areas).

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 permeable as the HSG varies from A to D (NRCS1,2).

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

Infiltration – Any of the following activities:
(a) The flow or movement of water through the interstices or pores of a soil or other porous medium.
(b) The absorption of liquid by the soil.

Land Development – Any of the following activities:
(a) The improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving:
    i. A group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure.
    ii. 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.

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.

Maintenance – The upkeep necessary for efficient operation of physical properties.

MS4 (municipal separate storm sewer system) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(a) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law), including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States;
(b) Designed or used for collecting or conveying stormwater;
(c) Which is not a combined sewer; and
(d) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2."

Municipalities Planning Code – Act 247 of 1968, as amended by Act 170 of 1988, 53 P.S. §10101 *et seq*.

Municipality – North Huntingdon Township, Westmoreland County, Pennsylvania.

Native Vegetation – Plant species that have historically grown in Pennsylvania and are not invasive species, controlled plants or noxious weeds as defined by PA DCNR, or PA Department of Agriculture.

Natural Stormwater Runoff Regime – A watershed where natural surface configurations, runoff characteristics and defined drainage conveyances have attained the conditions of equilibrium.

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

NRCS – Natural Resources Conservation Service (previously Soil Conservation Service).

O&M – Operation(s) and maintenance.

Outfall – "point source" as described in 40 CFR §122.2 at the point where the North Huntingdon Township storm sewer system discharges to surface waters of the Commonwealth. Also, the point, location or structure where drainage discharges from a sewer, drain or other conduit as well as the conduit leading to the ultimate discharge point.

Outlet Control Structure – The means of controlling the relationship between the head water elevation and the discharge, placed at the outlet or downstream end of any structure through which water may flow.

Overland Flooding – Flooding that occurs for a variety of reasons all stemming from excessive stormwater runoff including too much rain in too little time, added impervious development, change in land use, change in land cover, malfunction or clogging of existing stormwater systems.

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

Peak Flow – Maximum flow.

Pervious Area – Any material or surface that allows water to pass through at a rate equal to or greater than natural ground cover.

Performance Standard – A standard which establishes an end result or outcome which is to be achieved but does not prescribe specific means for achieving it.

Person – An individual, partnership, public or private association or corporation, firm, trust, estate, municipality, governmental unit, public utility or any other legal entity whatsoever which is recognized by law as the subject of rights and duties. Whenever used in any section prescribing or imposing a penalty, the term "person" shall include the members of a partnership, the officers, members, servants and agents of an association, officers, agents and servants of a corporation, and the officers of a municipality or county, but shall exclude any department, board, bureau or agency of the Commonwealth.

Point Source – Any discernible, confined and discrete conveyance including, but not limited to, any pipe, ditch, channel, tunnel, or conduit from which stormwater is or may be discharged, as defined in State regulations at 25 Pa.Code §92.1.

Pollutant Reduction Plan (PRP) – A plan required by the MS4 permit to calculate existing pollutants of concern and the minimum reduction in loading from stormwater discharges, and to select the best management practices to achieve the minimum reductions.

Project Site – The specific area of land where any development or regulated earth disturbance activities in North Huntingdon Township are planned, conducted, undertaken or maintained.

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

Record Drawings – Drawings showing the stormwater management system of a site as-built, created after the completion of construction and intended for use as a permanent record of the stormwater management system.

Redevelopment – Earth disturbance activities on land which has previously been disturbed or developed.

Regulated Development Activity – Any earth disturbance activities or any activities that involve the change of land cover, alteration or development of land in a manner that may affect stormwater runoff as listed in the Regulated Development Activity Table. This includes earth disturbance on

any portion of, part, or during any stage of, a larger common plan of development. With regard to road maintenance, the term only includes activities involving one (1) acre or more of earth disturbance. Refer to the Regulated Development Activity Table in Article III of this Ordinance.

Release Rate – The percentage of existing conditions peak rate of runoff from a site or subarea to which the proposed conditions peak rate of runoff must be reduced to protect downstream areas.

Release Rate Percentage – The watershed factor determined by comparing the maximum rate of runoff from a subbasin to the contributing rate of runoff to the watershed peak rate at specific points of interest.

Resource Extraction – Any activity that involves withdrawing materials from the natural environment.

Retention Basin – A pond, basin, usually enclosed by artificial dikes, that is used to retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate.

Retention Volume/Removed Runoff – The volume of runoff that is captured and not released directly into the surface waters of this Commonwealth during or immediately after a storm event.

Return Period – The average interval in years over which an event of a given magnitude can be expected to recur.

Riparian Buffer – A permanent area of native vegetation including herbaceous material, shrubs and/or trees located adjacent to streams, lakes, ponds and wetlands.

Road Maintenance – Earth disturbance activities within the existing road cross-section, such as grading and repairing existing unpaved road surfaces, cutting road banks, cleaning or clearing drainage ditches and other similar activities.

Runoff – That part of precipitation which flows over the land.

Runoff Characteristics – The surface components of any watershed which affect the rate, amount and direction of stormwater runoff. These may include, but are not limited to, vegetation, soils, slopes and manmade landscape alterations.

SALDO – Subdivision and land development ordinance.

Sediment – Mineral or organic solid material that is being transported or has been moved from its site of origin by air, water or ice and has come to rest.

Sedimentation – The process by which mineral or organic matter is accumulated or deposited by moving water, wind or gravity.

Separate Storm Sewer System – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) primarily used for collecting and conveying stormwater runoff. Refer to MS4.

Small Project Stormwater Management Plan (Small Project) – Regulated Development Activity that, measured on a cumulative basis from five (5) years prior to the application, creates an additional impervious area of equal to or greater than 3,000 square feet and less than 10,000 square feet, or involves either land cover change or earth disturbance activity of an area equal to or greater than 5,000 square feet and less than 20,000 square feet, and do not involve the alteration of stormwater facilities or water courses.

State Water Quality Requirements – As defined under State regulations– protection of designated and existing uses (See 25 Pa.Code, Chapters 93 and 96)–including:

(a) Each stream segment in Pennsylvania has a "designated use," such as "cold water fishery" or "potable water supply," which are listed in 25 Pa.Code, Chapter 93. These uses must be protected and maintained, under State regulations.

(b) "Existing uses" are those attained as of November 1975, regardless whether they have been designated in 25 Pa.Code, Chapter 93. Regulated earth disturbance activities must be designed to protect and maintain existing uses and maintain the level of water quality necessary to protect those uses in all streams, and to protect and maintain water quality in special protection streams.

(c) Water quality involves the chemical, biological and physical characteristics of surface water bodies. After regulated earth disturbance activities are complete, these characteristics can be impacted by addition of pollutants such as sediment, and changes in habitat through increased flow volumes and/or rates as a result of changes in land surface area from those activities. Therefore, permanent discharges to surface waters must be managed to protect the stream bank, streambed and structural integrity of the waterway, to prevent these impacts.

Storage Facility – Any surface or sub-surface facility that stores stormwater runoff, see "detention basin" and "retention basin."

Storm Frequency – The average interval in years over which a storm event of a given precipitation volume can be expected to occur. 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.

Storm Sewer – A sewer that carries intercepted surface runoff, street water and other drainage but excludes domestic sewage and industrial waste.

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

Stormwater Collection Systems – Natural or manmade structures that collect and transport stormwater through or from a drainage area to the point of final outlet including, but not limited

to, any of the following conduits and appurtenant features, canals, channels, ditches, streams, culverts, streets and pumping stations.

Stormwater Management Facility – A constructed measure for detention, retention, infiltration and water quality treatment of stormwater runoff.

Stormwater Management Plan (SMP) – The plan for managing stormwater runoff rate, volume and water quality as required by the Stormwater Management Act, 32 P.S. §680.1 *et seq*.

Stormwater Management Performance District – An area designated within the North Huntingdon Township Stormwater Management Performance Districts which includes standards for stormwater rate, volume and water quality. Refer to Appendix A.

Subdivision – As defined in The Pennsylvania Municipalities Planning Code, Act of July 31, 1968, P.L. 805, No. 247, as amended.

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

Township Engineer – An individual with engineering authority on behalf of North Huntingdon Township, either employed with North Huntingdon Township or a consultant representative.

USDA – United States Department of Agriculture.

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

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 water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

Watershed – The entire region or area drained by a river or other body of water whether natural or artificial. A "designated watershed" is an area delineated by the DEP and approved by the Environmental Quality Board for which Counties are required to develop watershed stormwater management plans.

Watershed Stormwater Management Plan – The plan for managing stormwater runoff throughout a designated watershed as required by the Pennsylvania Stormwater Management Act (Act 167), 32 P.S. §680.1 *et seq*.

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 Performance Standards.

§301. Stormwater Management Performance Districts.

For purposes of stormwater management, North Huntingdon Township is located in three (3) different watersheds, which are each the Turtle Creek Watershed, Sewickley Creek Watershed, and Youghiogheny River Watershed. Each aforementioned watershed includes Stormwater Management Performance Districts as shown in Appendix A per the map entitled "North Huntingdon Township Stormwater Management Performance Districts", which is hereby adopted as a portion of this Ordinance.

Stormwater Management Performance Districts within the Turtle Creek Watershed and Sewickley Creek Watershed generally match the Westmoreland County IWRP. For more information on the Westmoreland County IWRP refer to www.westmorelandstormwater.org. Stormwater Management Performance Districts within the Youghiogheny River Watershed of North Huntingdon Township are not available through the Westmoreland County IWRP, in which applicants must reference Appendix A and/or contact North Huntingdon Township.

§302. General Requirements.

A. Projects that propose greater than one (1) acre of earth disturbance are subject to NPDES Permit requirements and will require a Stormwater Management Plan (SMP).
B. No Regulated Development Activity within North Huntingdon Township shall commence until the requirements of this Ordinance are met, unless stated otherwise by the Township Engineer and only for Small Project SMPs (Small Projects) which require both a Building Permit and Occupancy Permit.
C. Stormwater management required for Regulated Development Activities shall be based on the following Regulated Development Activity Table, which is only applicable for projects with earth disturbance less than one (1) acre and that have not had cumulative impacts, within five (5) years preceding the permit application date, that are in excess of the square foot limits.

Regulated Development Activity Table

Category	New Impervious Area	Land Cover Change Area / Earth Disturbance Activity Area	Next Steps
Exempt	0	Less than one (1) acre of earth disturbance activity	Comply with **Ordinance Section 303**
No-Harm	Less than 3,000 square feet	Less than 5,000 square feet	Comply with **Ordinance Section 304**
Waivers / Modifications / Demonstrated Equivalency	Less than one (1) acre, subject to municipal approval	Less than one (1) acre of earth disturbance activity	Comply with **Ordinance Section 305**
Small Project	3,000 square feet to less than 10,000 square feet	5,000 square feet to less than 20,000 square feet	Comply with **Ordinance Section 306**
SMP	Equal to or greater than 10,000 square feet	Equal to or greater than 20,000 square feet	Consult a qualified professional

§303. Exemption from Performance Standards.

A. The following Regulated Development Activities are specifically **exempt** from stormwater management:

1. Agricultural activity limited to plowing or tilling activities, for animal concentrated (heavy) use areas provided the activities are performed according to the requirements of Chapter 102, or Conservation Practices being installed as part of the implementation of a Conservation Plan written by an NRCS or SCS-certified planner. This exemption does not include any other type of earth disturbance subject to NPDES permit requirements such as earth disturbance equal to or greater than one (1) acre.
2. A high tunnel, if proof is provided that the high tunnel is exempt pursuant to the provisions of Act 15 of 2018. Such an exemption does not exempt high tunnels from other requirements applicable under Federal, State or municipal laws.
3. Forest management and timber operations, provided the activities are performed according to the requirements of Chapter 102.
4. Resource extraction activities, provided they are done in accordance with applicable DEP regulations.
5. Roadway resurfacing and maintenance projects, which do not increase impervious area, and underground infrastructure projects are exempt from the provisions of this Ordinance, provided the activities meet the requirements of all other municipal, State and Federal requirements.
6. Domestic landscaping and/or vegetable gardening.
7. Voluntary Green Infrastructure (GI) or the retrofit of stormwater management infrastructure as conversion to green infrastructure BMPs to correct existing problems, that are solely intended to better manage runoff from existing development, are not part of new development or redevelopment, and that do not fall under the requirements of this Ordinance or other development ordinances.
8. North Huntingdon Township may deny or revoke any exemption pursuant to this Section at any time for any project that North Huntingdon Township believes may pose a threat to public health, safety, property, or the environment.

§304. No-Harm.

Applicants may request approval of "No-Harm" regarding stormwater management for their project. No-Harm requests must meet the following criteria deemed appropriate by North Huntingdon Township *and in compliance with all Commonwealth laws and regulations*:

A. Project able to discharge directly into an existing stormwater management or flood control facility, and applicant is able to prove the facility has sufficient storage capacity for both the facility's original design intent plus the proposed project.
B. Project is less than the square foot limits established within the Regulated Development Activity Table in Section 302 of this Ordinance.
C. Project will generate less than 0.5 cubic feet per second (cfs) for the 10-year storm peak rate increase as compared to pre-development peak rate.
D. Project is not part of a larger effort being 'piecemealed' in order to avoid stormwater management regulations.

E. Project is not part of a larger development which has grown 'piecemeal' over the past five (5) years.
F. Project is not located in a neighborhood, watershed, or location where known stormwater problems exist, such as overland flooding like flooding of structures or roadways.
G. Project does not discharge to a combined sewer.
H. Project will not degrade water quality of the receiving stream. Refer to the Westmoreland County IWRP www.westmorelandstormwater.org for maps of impaired streams to determine if the project area is not within an impaired stream corridor or provide documentation that further degradation will not occur.

To qualify for No-Harm, applicant may, at the request of the municipality, submit calculations, drawings, and details showing that the project meets the above criteria. Projects approved for No-Harm may be exempted from constructing all or some of the usual stormwater management practices regularly required for similar projects. To be approved, No-Harm requests must be reviewed and approved by the Township Engineer, and/or the WCD as applicable.

§305. Waivers / Modifications / Demonstrated Equivalency.

A. If the Township Engineer, and the WCD and/or DEP as applicable, determines that any requirement under this Ordinance cannot be achieved for a particular Regulated Development Activity, the municipality may, after an evaluation of alternatives, approve measures other than those in this Ordinance, subject to this Section paragraphs B, C and D *and in compliance with all Commonwealth laws and regulations*. The request for a waiver, modification, or demonstrated equivalency shall originate with the landowner, shall be in writing, include a study of downstream effects, and accompany the SMP submission to the municipality. The request shall provide the facts on which the request is based, the provision(s) of this Ordinance involved and the proposed modification or demonstrated equivalency. The Township Engineer, and/or the WCD as applicable, shall review the request to determine if it meets the requirements of the Ordinance including this Section, paragraphs B, C and D. If acceptable to the municipality, and/or the WCD as applicable, and the Regulated Development Activity involving earth disturbance is less than one (1) acre, the municipality may grant the waiver or modification. If the Regulated Development Activity involving earth disturbance is equal to or greater than one (1) acre, the plan will be subject to the NPDES requirements of DEP.
B. Waivers, modifications, or demonstrated equivalency of the requirements of this Ordinance may be approved by the municipality if enforcement will exact undue hardship because of unique physical circumstances or pre-existing site conditions peculiar to the land in question, provided that the modifications or demonstrated equivalency will not be contrary or detrimental to the public interest and shall achieve the intended outcome, and that the purpose of the Ordinance is preserved. Hardship must be due to such unique physical circumstances or pre-existing site conditions and not the circumstances or conditions generally created by the provisions of this Ordinance; and there is no possibility that the property can be developed in strict conformity with the provisions of this Ordinance. Cost or financial burden shall not be considered a hardship. Hardship cannot have been created by the landowner or developer. Modification or demonstrated equivalency shall not substantially or permanently impair the appropriate use or development of adjacent property(s) not under the landowner's control. Modification or demonstrated equivalency

may be considered if an alternative standard or approach will provide equal or better achievement of the purpose of the Ordinance.

C. No waiver, modification or demonstrated equivalency of any Regulated Development Activity involving earth disturbance greater than or equal to one (1) acre may be granted by the Municipality unless that action is approved in advance by the DEP or the WCD.

D. Applicants may request approval of a demonstrated equivalent stormwater activity for their project in lieu of performing traditional stormwater management measures. Demonstrated equivalent stormwater activity requests will be evaluated by the Township Engineer, and/or the WCD as applicable, on a case-by-case basis. Prior approval of a demonstrated equivalent stormwater activity on a site does not set a precedent for future approval of the same or other alternative activities on any site. The approval of a demonstrated equivalent stormwater activity does not excuse the applicant from following standard erosion and sediment control, and standard stormwater practices as applicable on the original site.

1. Demonstrated equivalent stormwater activities shall only be approved when the following criteria are met:
    a. Traditional stormwater management activities on the site are precluded by a particular site limitation, such as contaminated soil, steep slopes, existing buildings/infrastructure, combined sewer;
    b. Construction of traditional stormwater management measures on the site would require extra permits or lead to excessive permitting activities and delays;
    c. The site in question does not already have a stormwater management problem; and
    d. The site in question is not already contributing to water quality problems in the receiving stream.
2. Approvable demonstrated equivalent stormwater activities may include the following:
    a. Restoration of an existing degraded wetland, stream channel, floodplain, or riparian buffer, including daylighting of a stream.
    b. Restoration, retrofit or upgrade an existing stormwater management feature (inadequate detention pond, for example).
    c. Creation of new stormwater management features, especially green infrastructure, for a previously unmanaged site.
    d. Provide a water-based benefit to the public other than stormwater management (for example, extend a public sewer to an area not already served).
    e. Treatment of abandoned mine drainage.
3. The proposal for demonstrated equivalency shall be accompanied by documentation or methodology quantifying the equivalency of the proposed project to what would have been originally required. Acceptable documentation or methodology may include use of the Worksheets and Checklist found in the DEP NPDES permit application, Appendix D or approved method showing the proposed equivalency:
    a. Controls approximately the same amount of runoff volume as what would originally have been proposed.

b. Improves approximately the same amount of runoff quality as would have been originally proposed.
c. Is located within an impaired watershed or stream reach which will benefit from the proposed project. Impairment may include stream impairment, reduced stream buffer, and pollutant loading. Refer to the Westmoreland County IWRP at www.westmorelandstormwater.org.

4. The demonstrated equivalent stormwater activity shall:
   a. Be constructed concurrently with the project for which it is being applied;
   b. Be constructed according to plans approved by the municipality, and/or the WCD as applicable, including any erosion control and stormwater management measures as applicable;
   c. Obtain all necessary permits;
   d. Be located on land owned by or controlled by the applicant or by a cooperating public or private entity(s) (school, church, club, municipality, etc.);
   e. Be protected by a perpetual easement or deed restriction, or landowner agreement;
   f. Be located in the same general watershed as the project for which it is being applied; and
   g. Have an O&M Plan specifying who is responsible for what tasks.

§306. Small Project.

A. Project is within the square foot limits established within the Regulated Development Activity Table in Section 302 of this Ordinance.
B. For new impervious surfaces, the first two (2) inches of runoff shall be permanently removed from the runoff flow, and shall not be released to Waters of the Commonwealth. Removal options include reuse, evaporation, transpiration and infiltration.
C. Facilities, to the greatest extent possible and subject to municipality approval, shall be designed to drain the permanently removed runoff volume in a period no greater than 72 hours. Runoff volumes in excess of two (2) inches shall be safely conveyed to a stable vegetated area, natural watercourse, the curb or gutter line of roadway or existing storm collection/conveyance/control system as applicable.
D. A Small Project must be submitted to North Huntingdon Township, and/or the WCD as applicable, and shall consist of the following items and related support material needed to determine compliance with Sections 307 to 311 of this Ordinance:
   1. A narrative including a general description of proposed stormwater management techniques, including calculations, assumptions and criteria used in the design of the stormwater management facilities and BMPs, and construction specifications of the materials to be used for stormwater management facilities and BMPs;
   2. A schematic showing proposed locations of all stormwater management facilities and BMPs, limits of disturbance (including the type and amount of proposed impervious area), structures, roads, paved areas and buildings;
   3. Small Project Worksheet (refer to Appendix C);
   4. Executed Small Project Letter of Acknowledgment prior to construction (refer to Appendix B);
   5. Executed O&M Agreement after construction (refer to Appendix B); and

6. Erosion and sediment control plan, including each review and letter of adequacy from the WCD.

E. A Small Project is exempt from the following requirements within this Ordinance:
   1. Article IV Section 402
   2. Article IV Subsection 401.I.
   3. Article V Subsection 502.F.
   4. Article V Section 506
   5. Article VI Subsection 601.C.
   6. Article VI Subsection 602.B.1.
   7. Article VI Section 604
   8. Article VII

§307. General Standards.

A. Proposed land development must consider avoiding, minimizing, and mitigating impacts to the site that may increase stormwater runoff from the proposed project. Applied sequentially, these three low impact development strategies should be an overall guide as a project is planned and carried out.

B. The Westmoreland County IWRP provides an online decision-making tool to assist developers, designers, property owners in addressing all water resources during development and redevelopment and should be consulted. Refer to www.paiwrp.com and www.westmorelandstormwater.org.

C. The following provisions shall be considered the overriding performance standards against which all proposed stormwater control measures shall be evaluated and shall apply throughout North Huntingdon Township:
   1. Any landowner and 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. For alteration or development taking place in stages, the cumulative development must be used in determining conformance with this Ordinance. Such measures shall include:
      a. To assure that the maximum rate of stormwater runoff, as calculated using the standards of this Ordinance, is no greater after development than prior to development activities for the 2-, 10-, 50-, 100- year storms. Rainfall data shall be obtained from NOAA Atlas 14 or other source approved by the municipality.
      b. To manage the water quality, rate and volume and direction of resulting stormwater runoff in a manner which otherwise adequately protects health and property from possible injury.
      c. If deemed necessary, to notify adjacent property owners or owners of affected properties of any alteration or increase of stormwater flows.
   2. Runoff treatment BMPs must be employed where necessary to ensure the water quality, rate and volume requirements are met.
   3. Volume control BMPs shall be used to maintain existing hydrologic conditions for small storm events by promoting groundwater recharge and/or evapotranspiration. Runoff volume controls shall be implemented using the PA Stormwater BMP Manual 2006 or other approved method such as those listed in the following chart.

Acceptable SMP Computation Methodologies

Method	Agency	Applicability
Win TR-20 (or commercial computer package based on TR-20)	USDA NRCS	Applicable where use of full hydrologic computer model is desirable or necessary.
Win TR-55 (or commercial computer package based on TR-55; i.e. VT/PSUHM)	USDA NRCS	Applicable for land development plans within limitations described in TR-55.
HEC-1, HEC-HMS	US Army Corps of Engineers	Applicable where use of full hydrologic computer model is desirable or necessary.
PennDOT 584 (based on Rational Method)	PennDOT	Applicable under standards established by PennDOT.
EFH2	USDA NRCS	Applicable in agricultural areas subject to the program limits.
SWMM	EPA	Applicable in urban and suburban areas subject to limits established by EPA.
PA Stormwater BMP Manual 2006	DEP	Applicable under standards established by DEP.
Other Methods	Varies	Other methodologies approved by the municipality.

4. The SMP shall specify permanent stormwater BMPs to be implemented, operated and maintained to meet legal water quality, rate and volume requirements. If methods other than low impact development (LID) and green infrastructure methods are proposed to achieve the volume and rate controls required under this Ordinance, the SMP must include a detailed justification demonstrating that the use of LID and green infrastructure is not practicable.

D. In order to protect and maintain water quality, additional stormwater runoff created by the development project must be captured, stored and treated. In addition, post construction stormwater infiltration of runoff must replicate preconstruction infiltration of runoff to the maximum extent possible with the exception of Hot Spots. As a minimum, this shall be a volume of additional runoff generated by a 2-year, 24-hour storm. Preferred BMP's for Hot Spots include storm inlet filters, proprietary stormwater quality devices, underground detention tanks, detention ponds with forebays, tree planting, green roof. Permeable pavement, infiltration BMP's, and rain gardens are not recommended for Hot Spots.

E. In addition to the provisions set forth in paragraphs A. through C., inclusive, as set forth above, all Regulated Development Activities within North Huntingdon Township shall be designed, implemented, operated and maintained to meet the purposes of this Ordinance, through these two elements:
   1. Erosion and sediment control during the earth disturbance activities (e.g., during construction).
   2. Water quality, rate and volume protection measures after completion of earth disturbance activities (e.g., post-construction stormwater management), including O&M.

F. No Regulated Development Activity within North Huntingdon Township shall commence until the requirements of this Ordinance are met, unless stated otherwise by the Township

Engineer and only for Small Projects which require both a Building Permit and Occupancy Permit.

G. All BMPs used to meet the requirements of this Ordinance shall conform to the State water quality requirements, and any more stringent requirements as determined by North Huntingdon Township.

H. LID and green infrastructure techniques described in the PA Stormwater BMP Manual 2006 or most current edition are encouraged.

I. Projects proposed in North Huntingdon Township are subject to the MS4 regulations, which must comply with North Huntingdon Township's approved MS4 permit, including compliance with the six Minimum Control Measures (MCM's) and with North Huntingdon Township's Pollutant Reduction Plan (PRP).

§308. Watershed Standards.

A. The stormwater management performance standards in this Ordinance are intended to implement the provisions, standards and criteria contained in the Pennsylvania Stormwater Management Act (Act 167), 32 P.S. §680.1 *et seq*. If there is any discrepancy between the provisions of this Ordinance and the provisions, standards and criteria of the Act, or if a SMP is subsequently approved and adopted by the appropriate governmental agency or body, then the provisions, standards and criteria of the current watershed plan shall govern.

B. Management of stormwater runoff is key objective of 25 Pa.Code, Chapter 93, of the DEP Regulations, because runoff can change the physical, chemical and biological integrity of waterbodies thereby impacting rate, volume and water quality.

C. The SMP shall describe how these rate, volume and water quality protection requirements will be met. Infiltration BMPs shall be evaluated and utilized to the maximum extent possible to manage the net change in stormwater runoff generated so that post construction discharges do not degrade the physical, chemical or biological characteristics of the receiving waters. These BMPs may be used to satisfy all or part of the requirements found within this Ordinance.

D. Refer to the Stormwater Management Performance Districts outlined in Appendix A, and as stated in Section 301. The SMP shall describe how the proposed project will address performance standards, impairments, and pollutant loading found in the Westmoreland County IWRP. Refer to www.westmorelandstormwater.org.

§309. Design Criteria for Stormwater Management Facilities and BMPs.

A. General Criteria

1. Applicants may select runoff control techniques, or a combination of techniques, which are most suitable to control stormwater runoff from the development site. Refer to the Acceptable SMP Computation Methodologies in Section 307 of this Ordinance. All controls must be subject to approval of the Township Engineer, and/or the WCD as applicable. The Township Engineer, and/or the WCD as applicable, may request specific information on design and/or operating features of the proposed stormwater controls in order to determine their suitability and adequacy in terms of the standards of this Ordinance.
2. If the proposed development site is located in an impaired watershed according to Category 4 of the PA Integrated Water Quality Monitoring and Assessment Report,

or in a watershed with a TMDL according to Category 5 of the same Report, the applicant shall identify the source and cause of impairment and shall propose, if required or applicable the use of BMPs to mitigate any impacts to the waters.

3. The applicant should consider the effect of the proposed stormwater management techniques on any special soil conditions or geological hazards which may exist on the development site. In the event such conditions are identified on the site, the Township Engineer, and/or the WCD as applicable, may require in depth studies by a competent geotechnical engineer or geologist. Not all stormwater control methods may be advisable or allowable at a particular development site.
4. The applicant shall consider the effect of the proposed stormwater management techniques on existing stream impairments and pollutant loading. Refer to the Westmoreland County IWRP at www.westmorelandstormwater.org.
5. The applicant shall consider existing conditions on the site for the prior five (5) years to determine prevailing land cover characteristics, and shall consider 20% of existing impervious cover as meadow for pre-existing conditions on redevelopment sites.
6. The stormwater management practices to be used in developing a SMP for a particular site shall be selected according to the following order of preference:
    a. Site planning for locating proposed buildings, impervious areas and grading which minimizes disruption of the natural site characteristics especially utilizing low impact development techniques.
    b. Minimization of impervious areas and promotion of retentive grading.
    c. Implementation of non-structural measures (refer to the PA Stormwater BMP Manual 2006 or current edition).
    d. Implementation of innovative / green infrastructure structural measures (refer to the PA Stormwater BMP Manual 2006 or current edition).
    e. Stormwater detention/retention structures.
7. Any BMP which is a dam, culvert, stream obstruction or encroachment or outfall as defined in 25 Pa.Code, Chapter 105, shall be designed according to the requirements in those regulations.
8. Drainage easements shall be provided for all stormwater conveyance and BMPs serving multiple properties and not located within a public ROW. Easements shall include ingress and egress to a public ROW, and shall be recorded at the County with the final or record drawing, as appropriate. Easements shall be a minimum width of 20 feet. Terms of easement shall prohibit excavation or placement of fill or structures and any alteration that may adversely affect the flow of stormwater within any portion of the easement.
9. No person shall install, create, modify, remove, fill, landscape or otherwise alter or place any structure, soil, rock, material or vegetation in or on, or otherwise adversely affect, any stormwater management facility or any area within a stormwater easement without the written approval of North Huntingdon Township, and/or approval of the WCD as applicable.
10. Persons engaged in land development activities shall provide to North Huntingdon Township the required O&M Plan per Article IV Section 404, and financial guarantees per Article IV Section 405.

B. Criteria for Stormwater Management Facilities and BMPs

1. If stormwater management facilities and BMPs are utilized for the development site, the facility(s) shall be designed such that post-development peak runoff rates from the developed site are controlled to those rates defined by a Stormwater Management Performance District for the 2-, 10-, 50-, 100- year storm frequencies. Rainfall data shall be obtained from NOAA Atlas 14 or other source as approved by the municipality.
2. All stormwater management facilities and BMPs shall be equipped with outlet/overflow structures to provide rate discharge control for the designated storm frequencies. Provision shall also be made to safely pass the entire post-development 100-year storm without breaching or otherwise damaging the facilities, downstream or neighboring properties.
3. Release of stormwater flow from a development site must be to an existing stormwater conveyance or easement whether natural or man-made. Calculations and information shall be presented as to the ownership, responsible party, capacity, and stability of such conveyance. Release of 'sheet flow' as from a level spreader, will be permitted on a case-by-case basis as approved by the municipality, and/or the WCD as applicable.
4. All stormwater management facilities and BMPs shall be designed to control volume and water quality as defined by the Stormwater Management Performance District. Refer to Appendix A.
5. Shared stormwater management facilities and BMPs, which provide control of runoff for more than one development site within a single subarea may be considered and are encouraged. Such facilities shall meet the criteria contained in this Section. In addition, runoff from the development sites involved shall be conveyed to the facility in a manner that avoids adverse impacts (such as flooding or erosion) to channels and properties located between the development site and the shared storage facilities.
6. Where stormwater management facilities and BMPs will be utilized, multiple use facilities, such as wetlands, lakes, ballfields or similar recreational/open space uses are encouraged wherever feasible, subject to the approval of North Huntingdon Township.
7. Other considerations which shall be incorporated into the design of the stormwater management facilities and BMPs include:
    a. Inflow and outflow structures shall be designed and installed to prevent erosion and embankments, cuts, fills and bottoms of impoundment type structures should be protected from soil erosion.
    b. Control and removal of debris both in the storage structure and in inlet or outlet devices shall be a design consideration.
    c. Inflow and outflow structures, pumping stations and other structures shall be designed and protected, using safety benches, trash racks, energy dissipaters and other means to minimize safety hazards.
    d. Access may be restricted as specified by the provisions for fencing swimming pools as found in the Pennsylvania Uniform Construction Code, and in appropriate instances such restriction of access may include fencing in a minimum height of four (4) feet.

e. Interior slopes of storage ponds shall not exceed a ratio of three (3) to one (1) horizontal to vertical dimension, with a combination of interior and exterior slopes not exceeding five (5). Steeper slopes may be approved by the Township Engineer if documented to be stable by a geotechnical engineer.
f. Landscaping shall be provided for the facility which stabilizes disturbed areas and preserves the natural and beneficial values of the surrounding area.
g. Facility shall be located to facilitate maintenance, considering the frequency and type of equipment that will be required.
h. Underground detention / retention / infiltration facilities shall be equipped with open grate inlet or manhole access to facilitate visual inspections.

C. Criteria for Collection/Conveyance Facilities

1. All stormwater runoff collection or conveyance facilities, whether storm sewers or other open or closed channels, shall be designed in accordance with the following basic standards:
   a. All building sites shall use measures to provide drainage away from and around the structure in order to prevent any potential flooding damage as much as practical. Such measures shall include grading the surrounding lawn or pavement area so that it slopes away from the structure by a minimum of five (5) percent slope over a minimum distance of 10 feet; raising the floor of the structure so that it is a minimum of six (6) inches above the predominate surrounding land elevation and above the designated floodplain elevation for those located within a floodplain; eliminating or waterproofing penetrations thru the structure's walls or foundation; constructing berms, curbs, or swales to divert surface water around the structure; arranging roof and area drains to carry water away from the structure.
   b. Developers proposing a land development or subdivision shall arrange internal drainage within the subdivision so that surface water is safely directed and channeled away from all structures within and adjacent to the development site.
   c. Developers shall provide to all persons constructing a structure within a land development site, standards including drawings and specifications to ensure that those persons adhere to the general site plans and SMP for the development. Persons constructing a structure within a land development site shall submit to the Township Engineer, and/or the WCD as applicable, drawings, calculations, and other information to show how they will meet the stormwater management requirements of the development site.
   d. Lots located on the high side or low side of streets shall extend roof, trench and area drains to a stable vegetated area, natural watercourse, the curb or gutter line of roadway or storm collection/conveyance/control system (if applicable) in accordance with the approved SMP for the development site.
   e. For all building sites and lots, the inclusion of rain barrels, rain gardens, dry wells and other strategies for infiltration of roof runoff close to its source is encouraged.

f. Collection/conveyance facilities should not be installed parallel and less than 10 feet from the top or bottom of an embankment, for an embankment greater than or equal to 15 feet in height, to avoid the possibility of failing or causing the embankment to fail, unless documented to be stable by a geotechnical engineer.

g. All collection/conveyance facilities shall be designed to convey the 25-year storm peak flow rate from the contributing drainage area and to carry it to the nearest suitable outlet such as a stormwater control facility, curbed street, storm sewer or natural watercourse.

h. Open channels shall be designed to convey the 25-year storm peak flow rate from the contributing drainage area at velocities that will not lead to erosion of the channel. The design of an open channel must be supported with calculations which prove the channel's proposed permanent erosion protection.

   i. North Huntingdon Township will not accept the dedication of an open channel in a state of erosion at the time of dedication, even if the open channel previously existed in an approved state.

   ii. If vegetation is the proposed permanent erosion protection of a designed open channel, North Huntingdon Township will not accept dedication of the open channel until sufficient vegetative growth exists as approved by the Township Engineer.

2. Wherever storm sewers are proposed to be utilized, they shall comply with the following additional criteria:

   a. Where practical, designed to traverse under grassed areas. If constructed within five (5) feet of road paving, sidewalks or other surfaced areas, storm sewers shall have maximum compaction of backfill to prevent settlement of the superimposed surface or development.

   b. Preferably installed after excavating and filling in the area to be traversed is completed, unless installed in the original ground with a minimum cover of three (3) feet and/or adequate protection during remaining construction.

   c. *Designed.*

      i. With cradle when traversing fill areas of indeterminate stability.

      ii. With concrete anchors when gradient is 20 percent or greater.

      iii. With encasement or special backfill requirements when traversing under a paved area.

   d. Designed to adequately handle the anticipated stormwater flow and be economical to construct and maintain. The minimum pipe size shall be 15 inches in diameter, with exception to roof drains, foundation drains or similar conveyance.

   e. Storm pipe, trenching, bedding and backfilling requirements and appropriate grates, catch basins, stormwater inlets, manholes and other appurtenances shall conform to the requirements of the municipality and/or applicable PennDOT specifications.

   f. All proposed storm pipe intended to be offered for dedication to North Huntingdon Township within a proposed ROW or drainage easement must be approved by the Township Engineer, and/or WCD as applicable, during

SMP review. Reinforced concrete pipe and corrugated metal pipe will only be approved in unique cases. In all other cases, proposed storm pipe (with exception to roof drains, foundation drains, or similar conveyance) shall be either high-density polyethylene (HDPE) pipe per AASHTO M294, or polypropylene pipe per AASHTO M330, and furthermore:

i. HDPE pipe and polypropylene pipe shall be provided from a manufacturer qualified in either:
   a. PennDOT Bulletin 15 (Publication 35) Subsection 601.2(a)6.f Thermoplastic Pipes – Group VI
   b. PennDOT Bulletin 15 (Publication 35) Subsection 601.2(a)6.g Thermoplastic Pipes – Group VII

ii. North Huntingdon Township reserves the right to require polypropylene pipe for critical cases, including:
   a. Proposed final grade to proposed pipe invert is greater than or equal to eight (8) feet in depth;
   b. Other circumstances as per the Township Engineer.

iii. North Huntingdon Township reserves the right to require polypropylene pipe be provided from a manufacturer qualified specifically in PennDOT Bulletin 15 (Publication 35) Subsection 601.2(a)6.g Thermoplastic Pipes – Group VII.

g. Storm inlets and structures shall be designed to be adequate, safe, self-cleaning and unobtrusive and consistent with municipality standards with sufficient capture and conveyance capacity and spacing of inlets and cleanouts for maintenance.

h. Where a proposed sewer or conveyance connects with an existing storm sewer or conveyance system, the applicant shall demonstrate that sufficient capacity exists in the downstream system to handle the additional flow.

i. Storm sewer outfalls shall be equipped with energy dissipation devices to prevent erosion and conform with applicable requirements of the DEP for stream encroachments (Section 7 of the Dam Safety and Encroachments Act, 32 P.S. §693.1, et seq., and the rules and regulations promulgated thereunder at 25 Pennsylvania Code §105.441-105.449). Also, refer to the DEP Erosion and Sediment Pollution Control Program Manual 2012 or most recent version.

D. Criteria for Riparian Buffers

1. If a riparian buffer is required by DEP as part of an NPDES permit, then DEP regulations will govern.
2. If a riparian buffer is used to meet stormwater management requirements and/or MS4 pollutant load reduction credits, it shall meet the following requirements:
   a. In order to protect and improve water quality, a riparian buffer easement may be created and recorded as part of any subdivision or land development that encompasses a riparian buffer.
   b. Except as required by PA Code Title 25 Chapter 102, the riparian buffer easement shall may be measured to a minimum of 35 feet measured from the top of the nearest bank (on each side), or an average of 35 feet with no distance from top of bank less than 25 feet.

c. Minimum management requirements for riparian buffers:
    i. Existing native vegetation shall be protected and maintained within the riparian buffer easement.
    ii. 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.
    iii. There shall be no earth disturbance beyond which is necessary to establish or maintain a planted buffer.

3. The riparian buffer easement shall be enforceable by the municipality and shall be recorded in the appropriate 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, unless otherwise specified in the municipal zoning ordinance.
4. Any permitted use within the riparian buffer easement shall be conducted 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.
5. Stormwater drainage pipes and all other linear utility lines as approved by the municipality shall be permitted within the riparian buffer easement, but they shall cross the easement in the shortest practical distance. Other stormwater management facilities and BMPs are not permitted within the riparian buffer easement.
6. The following conditions shall apply when public and/or private recreation trails are permitted within riparian buffers:
    a. Trails shall be for non-motorized use only.
    b. Trails shall be designed to have the least impact on native plant species and other sensitive environmental features.
7. Septic drainfields 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.

E. Criteria for Stream Restoration Project

1. A stream restoration project may eligible for stormwater management and/or MS4 load reduction credits, if it meets qualifying criteria set by the municipality and as follows:
    a. Existing conditions, such as channel or streambank erosion and an actively enlarging or incising urban stream condition, shall be documented prior to restoration.
    b. Projects should be located on 1st to 3rd order (small) streams to be effective.
    c. Project should address a minimum of 100 linear feet of stream channel and both sides where need to do so is evident.
    d. Upstream impervious area should be sufficiently treated to address peak flows that may exceed engineering design thresholds or compromise channel form and function.

e. Utilize a comprehensive approach employing a mix of techniques appropriate to the site, creating long-term stability of the streambed, streambanks and floodplain.
f. Armored length of streams (i.e. using riprap or gabions) may be used to maintain channel stability, but the same length shall not be included in the load reduction calculation.
g. Project shall maximize floodplain reconnection, with minimal channel invert elevation increase (i.e. bank height ratio = 1.0 or less) to achieve the objective.
h. Project shall include a minimum 35-foot permanent riparian buffer.
i. Project shall include an O&M Plan identifying O&M activities, frequencies and responsible parties.

§310. Erosion and Sedimentation Controls.

A. No Regulated Development Activity within North Huntingdon Township shall commence until approval by North Huntingdon Township, and/or the WCD as applicable, of an erosion and sediment control plan.
B. Any earth disturbance activity of 5,000 square feet or more requires an erosion and sediment control plan under 25 Pa.Code §102.4(b). Refer to the DEP Erosion and Sediment Pollution Control Program Manual 2012 or most recent version.
C. In addition, under Title 25 Pa.Code, Chapter 92, a DEP NPDES construction activities permit is required for Regulated Development Activities involving one (1) acre or more.
D. Evidence of any necessary permit(s) for Regulated Development Activities from the appropriate DEP regional office or WCD must be provided to the municipality. The issuance of an NPDES construction permit (or permit coverage under the Statewide General Permit (PAG-2)) may satisfy certain requirements upon review and approval by the municipality.
E. A copy of the erosion and sediment control plan and any permit required by DEP or North Huntingdon Township shall be available at the project site at all times.

§311. Water Obstructions and Encroachments.

A. No Regulated Development Activities which require Chapter 105 (Water Obstructions and Encroachment) permit from either DEP or WCD shall commence until all permits have received DEP or WCD approval, and municipal approval.
B. Evidence of any necessary Chapter 105 permit from DEP / WCD shall be provided to the municipality.
C. Proposed development shall avoid the long and short term adverse impacts associated with the occupancy and modification of floodplains as designated by FEMA, to the extent possible wherever there is a practicable alternative in order to reduce the risk of flood loss, minimize the impacts of floods on human safety, health and welfare, and restore and preserve the natural and beneficial values served by flood plains.
D. Any proposed development found to be within the base floodplain of a waterway shall include the identification of impacts, an evaluation of practicable alternatives outside the floodplain, and when impacts cannot be avoided, the development of measures to minimize the impacts and restore and preserve the floodplain as appropriate. Findings shall be

presented at a public meeting and a determination made by the Board of Commissioners of North Huntingdon Township.

E. Any proposed SMP should be consistent with the provisions of the PA Floodplain Management Act 166 of 1978 and applicable municipal floodplain ordinances.

ARTICLE IV Stormwater Management Plan (SMP) Requirements.

§401. General Requirements.

No development, subdivision plat or land development project shall be approved; no permit authorizing construction or development issued; nor any earth disturbance activity subject to this Ordinance shall be initiated or undertaken unless and until a SMP for such activity is reviewed and approved in accord with the provisions of this Ordinance.

A. No Regulated Development Activity within the municipality shall commence until approval by the municipality of a SMP which demonstrates compliance with State water quality requirements after construction is complete. Refer to the Regulated Development Activity Table located in Article III of this Ordinance.

B. The SMP must be designed, implemented and maintained to meet State water quality requirements, and any other more stringent requirements as determined by the municipality.

C. To control post-construction stormwater impacts from Regulated Development Activities, State water quality requirements can be met by BMPs, including site design and green infrastructure, which provide for replication of pre-construction stormwater infiltration and runoff conditions, so that post-construction stormwater discharges do not degrade the physical, chemical or biological characteristics of the receiving waters. As described in the DEP Comprehensive Stormwater Management Policy (#392-0300-002, September 28, 2002), this may be achieved by the following:

1. *Infiltration*. Replication of pre-construction stormwater infiltration conditions.
2. *Treatment*. Use of water quality treatment BMPs to ensure filtering out of the chemical and physical pollutants from the stormwater runoff.
3. *Streambank and Streambed Protection*. Management of volume and rate of post-construction stormwater discharges, using detention / retention and other means, to prevent physical degradation of receiving waters (e.g., from scouring).

D. In the absence of an existing stormwater conveyance or easement whether natural or man-made for release of stormwater flow from a development site, an easement must be provided. Information shall be presented as to the ownership, responsible party, and agreement for said easement.

E. The SMP must meet DEP regulations that require municipalities to ensure design, implementation and maintenance of BMPs that control runoff from new development and redevelopment after Regulated Development Activities are complete. These requirements include the need to implement post-construction stormwater facilities and BMPs with assurance of long-term O&M of those BMPs.

F. Evidence of any necessary permit(s), such as Chapter 102 erosion and sedimentation control or Chapter 105 stream encroachment, for Regulated Development Activities from WCD or the appropriate DEP regional office must be provided to the municipality. The issuance of an NPDES construction permit (or permit coverage under the Statewide General Permit (PAG-2)) may satisfy the requirements of paragraph (A.) above, after review and approval by the municipality.

G. Appropriate sections from the municipality's SALDO, and other applicable local ordinances, shall be followed in preparing the SMP.

H. North Huntingdon Township shall not approve any SMP that is deficient in meeting the requirements of this Ordinance. At its sole discretion and in accordance with this Article,

when a SMP is found to be deficient, North Huntingdon Township may either disapprove the submission and provide review comments to the applicant, or in the case of minor deficiencies, North Huntingdon Township may accept the submission and state those conditions which must be met for acceptance.

I. *Professional Certification*. The SMP (including all calculations) must be prepared and sealed by a qualified professional with training and expertise in hydrology and hydraulics. Documentation of qualifications may be required by North Huntingdon Township.

§402. SMP Contents.

The SMP shall include a narrative and a set of plan drawings. Refer to an example checklist in Appendix D.

A. A narrative describing the overall stormwater management concept for the project.
   1. A determination of site conditions in accordance with the PA Stormwater BMP Manual. A detailed site evaluation shall be completed for projects proposed environmentally sensitive areas, such as brownfields.
   2. *Runoff Calculations*. Stormwater runoff design calculations for determining pre- and post-development discharge rates, for designing proposed stormwater control facilities and to demonstrate that the maximum practicable measures have been taken to meet the requirements of this Ordinance, must be submitted with the SMP. All calculations shall be prepared using the methods and data prescribed by general requirements in Article III Section 302. Refer to the Acceptable Computation Methodologies table in Article III Section 307 of this Ordinance.
      a. Runoff volume and rate shall be calculated according to generally accepted methods such as those listed under Article III Section 307 of this Ordinance.
      b. Detention/retention requirements, including volume, routing, etc. for BMPs shall be calculated using commonly acceptable standard method(s).
      c. Water quality calculations shall be determined by using the PA Stormwater BMP Manual 2006 or current edition Worksheets 12 and 13 or acceptable alternative method by the municipality.
   3. Expected project time schedule for the installation of all temporary and permanent stormwater control measures and devices. If the development is to be constructed in stages, the applicant must describe how stormwater facilities and BMPs will be sequentially installed to manage stormwater runoff safely during each stage of development.
   4. The effect of the project (in terms of runoff rate, volumes, and water quality) on surrounding properties and aquatic features and on any existing stormwater conveyance system that may be affected by the project.
   5. If appropriate, the narrative should provide justification as to why any preferred stormwater management techniques, such as LID and green infrastructure, as listed in this Ordinance, are not proposed for use. Refer to the PA Stormwater BMP Manual 2006 or most recent edition for list of acceptable management techniques.
   6. O&M program and responsible party(s) for permanent stormwater facilities and BMPs. Refer to Article VI of this Ordinance.

B. The SMP drawings shall be drawn to a scale of not less than 1-inch equals 100 feet. All sheets shall contain a title block with name and address of applicant and designer, scale, north arrow, legend and date of preparation.

1. *Existing and Proposed Features*. The drawing shall show the following:
    a. *Watershed Location.* Provide a key map (using USGS Topo maps) showing the location of the development site within the watershed(s) and watershed subarea(s). On all site drawings, show the boundaries of the watershed(s) and subarea(s) as they are located on the development site and identify watershed name(s) and subarea number(s). Refer to the Stormwater Management Performance Districts in Appendix A.
    b. *Floodplain Boundaries*. Identify 100-year floodplains on the development site (as appropriate) based on the municipality Flood Insurance Study maps, or other studies as appropriate.
    c. *Natural Features*. Show all bodies of water (natural or artificial), watercourses (permanent and intermittent), swales, wetlands and other natural drainage courses on the development site, or which will be affected by runoff from the development.
    d. *Soils*. Provide an overlay showing soil types and boundaries within the development site (consult WCD, SCS and U.S. Geological Survey for information).
    e. *Contours*. Show existing and final contours at intervals of two (2) feet; in areas with slopes greater than 15 percent, 5-foot contour intervals may be used.
    f. *Land Cover*. Show existing and final land cover classifications, including existing and proposed improvements, as necessary to support and illustrate the runoff calculations performed.
    g. *Drainage Area Delineations*. Show the boundaries of the drainage areas and points of interest employed in the runoff calculations performed.
    h. *Utilities and Easements*. Show any existing utilities, stormwater management or drainage controls and/or structures, such as sanitary sewers, water, gas, electric, telecommunications, storm sewers, swales, culverts, and any easements, which are located on the development site, or which are off-site but may be affected by runoff from the development.
2. *Proposed Stormwater Facilities and BMPs*. All proposed stormwater runoff control measures must be shown on the drawing including methods for collecting, conveying and storing stormwater runoff onsite, which are to be used both during and after construction. Erosion and sedimentation controls shall be shown in accordance with applicable North Huntingdon Township and WCD requirements. The drawing shall provide information on the exact type, location, sizing, design and construction of all proposed facilities and relationship to the existing watershed drainage system.
    a. If the development is to be constructed in stages, the applicant must demonstrate that stormwater facilities will be installed to manage stormwater runoff safely during each stage of development.
    b. A schedule for the installation of all temporary and permanent stormwater control measures and devices shall be included in the narrative and shown on the drawing.
    c. O&M program and responsible party(s) for permanent stormwater BMPs. Refer to Article VI of this Ordinance.

3. *Easements, ROWs, Deed Restrictions*. BMPs and stormwater management facilities that provide control for more than one lot shall be located on a separate dedicated lot or in an easement. All existing and proposed easements for any BMPs and stormwater management facilities and controls for access, inspections, maintenance, repair, preservation and use shall be shown on the drawing and, if required, dedicated to the entity, association or person required. The easement and the purpose for the same shall be set forth on the drawing and in the agreement required by the Ordinance.

§403. Other Permits/Approvals.

A list of any approvals/permits relative to stormwater management that will be required from other governmental agencies (e.g., Chapter 102 Erosion and Sedimentation Control, PennDOT HOP, Chapter 105 Water Obstruction and Encroachment Permit from DEP) and anticipated dates of submission/receipt should be included with the SMP submission. Copies of permit applications may be requested by North Huntingdon Township where they may be helpful for review.

§404. O&M Plan.

The application shall contain a proposed O&M Plan for all stormwater control facilities in accordance with the following and as described in Article VI of this Ordinance:

A. Identify the responsible party and their responsibilities as described in Article VI Section 601 (e.g., municipality, property owner, private corporation, homeowner's association or other entity).
B. Include an O&M Plan for all stormwater facilities, outlining the routine maintenance actions and schedules necessary to ensure proper operation of the stormwater control facilities as described in Article VI Section 602.
C. Execute and record an O&M Agreement, as described in Article VI Section 603.
D. Refer to Article VI Section 604 regarding deposit to the North Huntingdon Township Stormwater Management Fund.

§405. Financial Guarantees

Submit financial guarantees in accordance with the provisions of this Ordinance. Refer to Article VII.

ARTICLE V SMP Submission and Review Procedures.

§501. Preapplication Phase.

A. The Westmoreland County IWRP provides an online decision-making tool to assist developers, designers, property owners in addressing all water resources during development and redevelopment and should be consulted. Refer to www.paiwrp.com for the decision-making tool and www.westmorelandstormwater.org.

B. Applicants should refer to the Westmoreland County IWRP located at www.westmorelandstormwater.org, for mapping of impaired streams, riparian buffers and pollutant loading to determine appropriate BMPs to address sources of impairments.

C. Before submitting the SMP, and any other plan required by a reviewing agency, applicants are urged to consult with the municipality, Westmoreland County Department of Planning and Development and WCD, and PennDOT where applicable, on the requirements for safely managing the development site in a manner consistent with the municipality ordinances, applicable watershed stormwater management and Federal and State requirements. These agencies may also be helpful in providing necessary data for the SMP.

D. Applicants are encouraged to submit a schematic with a narrative description of the proposed stormwater management controls for general guidance and discussion with the municipality and other agencies.

E. The pre-application phase is not mandatory; any review comments provided by the municipality or other agencies are advisory only and do not constitute any legally binding action on the part of the municipality or any County agency.

§502. SMP Submission and Review.

A. *Submission of SMP.* SMP application shall be submitted with the preliminary and final subdivision/land development applications or if no subdivision or land development is involved, then with the application for development. Copies of the SMP shall be submitted to the following agencies as determined by North Huntingdon Township:

1. One digital copy and one hard copy to North Huntingdon Township.
2. One copy to the WCD (when applicable).
3. One copy to the local sanitary authority (when applicable).
4. One copy to the Westmoreland County Department of Planning and Development. (if applicable)
5. One copy to the Westmoreland County Department of Public Safety / local emergency management coordinator (when applicable)
6. One copy to DEP (when applicable)

B. *Notification of Affected Municipalities.* As needed, the municipality shall notify municipalities upstream and downstream of the development site which may be affected by the stormwater runoff and proposed controls for the site. Copies of the SMP will be made available to the affected municipalities upon request. Comments received from any affected municipalities will be considered by the Township Engineer and County agencies in their reviews.

C. *Review by Township Engineer, and/or the WCD as applicable.* SMP shall be reviewed by the Township Engineer, and/or the WCD as applicable. BMPs shall be shown on the SMP and erosion and sediment control plans, as applicable. At its discretion, the municipality

and/or WCD may also engage other specialists in hydrology or hydraulics to assist with the SMP review. As applicable, the WCD will review the SMP for general compliance with the watershed plan standards and criteria and watershed-wide impacts and, where appropriate, may consult with adjacent municipalities and counties for their comments. If the WCD review identifies the improper application of the watershed standards and criteria or the possibility of harmful impacts downstream from the development site's proposed stormwater management system, the applicant and Township Engineer will be notified so that the necessary modifications can be made to promote safe stormwater management. The municipality, and/or the WCD as applicable, shall notify the applicant in writing within 45 days whether the SMP is approved or disapproved. If the SMP involves a subdivision or land development project, the notification shall occur within 90 days, unless the applicant is notified that a longer notification period is provided by other statute regulation or ordinance. If modifications are required, the review period may be extended by the municipality, and/or the WCD as applicable, in order for the applicant to address inadequacies.

D. A disapproved SMP may be resubmitted, with the revisions addressing the concerns, to the Municipality, and the WCD as applicable, in accordance with this Article.

E. *Township Engineer Review*. The Township Engineer shall approve or disapprove the SMP based on the requirements of North Huntingdon Township ordinances, the standards and criteria of the watershed plan, applicable State and Federal requirements and good engineering practice. The Township Engineer shall submit a letter containing the review comments, corresponding to the approval or disapproval.

F. *SMP Approval Process*. The approval of the SMP by the Township Engineer, and/or the WCD as applicable, shall be submitted to the North Huntingdon Township Board of Commissioners for final action. Final approval of the SMP rests with the municipality.

G. *Permits Required From Other Governmental Agencies*. Where the proposed development requires a permit from the DEP, PennDOT, or an erosion/sedimentation permit or Chapter 105 permit from the WCD, then final SMP approval shall be conditional upon receipt of such permits. However, no building permit shall be issued, nor construction or development started, until the permits are received and copies filed with the municipality.

H. Reviews by the Municipality may be subject to fees, in reference to Article VII Section 706 of this Ordinance. Reviews by WCD may be subject to their fees. Contact WCD for their latest schedule of fees.

§503. Status of SMP after Approval.

A. Upon final SMP approval and North Huntingdon Township receipt of all necessary permits, fees, financial guarantees, and agreements, the applicant may commence to install or implement the approved SMP, BMPs or erosion and sediment controls.

B. If site development or building construction does not begin within two (2) years of the date of final approval of the SMP, then before doing so, the applicant shall re-submit the SMP, BMPs and erosion and sediment control plan to verify that no condition has changed on the property, adjacent to the site or within the watershed that would affect the feasibility or effectiveness of the previously approved stormwater management controls. Further, if for any reason development activities are suspended for two (2) years or more, then the same requirement for re-submission of the SMP shall apply.

§504. *Modification of SMP.*

A. If the request for a SMP modification is initiated before construction begins, the SMP must be resubmitted and reviewed according to the procedures, contained in this Ordinance.

B. If the request for a SMP modification is initiated after construction is underway, the Township Engineer, and the WCD as applicable, shall have the authority to approve or disapprove the modification based on field conditions; provided:

1. The requested changes in stormwater controls do not result in any modifications to other approved municipality land use/development requirements (e.g., building setbacks, yards, etc.).
2. The performance standards in this Ordinance are met.
3. Notification of the verdict from the Township Engineer, and the WCD as applicable, shall be sent to each the permittee and the Township Manager of North Huntingdon Township.
    i If the Township Manager does not concur with the aforementioned verdict, then the Township Manager shall have the authority to stop the field change, within five (5) days from receiving said verdict. Furthermore, the Township Manager shall also have the authority to require the permittee to submit the SMP modification for full SMP review in accordance with this Ordinance, if needed.

C. It shall be unlawful to, and no person shall, alter, replace, modify, landscape or remove, or otherwise adversely affect, any permanent stormwater management facilities, BMP controls, or any area within a stormwater easement or dedicated or designated area for stormwater facilities and BMPs required by an approved SMP, BMP O&M Plan, or to allow the property to remain in a condition which does not conform to an approved SMP, BMP O&M Plan, unless an exception is granted in writing by the municipality and/or approval is secured from all relevant agencies of the Commonwealth.

§505. *Inspection of Stormwater Management Facilities and BMPs.*

A. The municipality or a designated representative may inspect the implementation, construction, and condition of the temporary and permanent stormwater management system and controls for the development site. The municipality or a designated representative shall have the right to temporarily locate on any BMP in the municipality such devices as are necessary to conduct monitoring and/or sampling the discharge from such BMP.

B. The permittee shall notify the Township Engineer, and/or the WCD as applicable, 48 hours in advance of the completion of the following key development phases:

1. At the completion of preliminary site preparation including stripping of vegetation, stockpiling of topsoil and construction of temporary stormwater management control facilities.
2. At the completion of rough grading but prior to placing topsoil, permanent drainage or other site development improvements and ground covers.
3. During construction of the permanent stormwater facilities and BMPs at such times as specified by the Township Engineer.
4. Completion of permanent stormwater management facilities and BMPs including established ground covers and plantings.

5. Completion of final grading, vegetative control measures or other site restoration work done in accordance with the approved SMP and/or permit.

C. The Municipality and/or WCD may conduct inspections during construction as it deems appropriate.

D. No work shall commence on any subsequent phase until the preceding one has been inspected and approved. If there are deficiencies in any phase, the Township Engineer, and/or the WCD as applicable, shall issue a written description of the required corrections and stipulate the time by which they must be made.

E. If, during construction, the contractor or permittee identifies any site condition, such as subsurface soil conditions, alterations in surface or subsurface drainage, which could affect the feasibility of the approved stormwater facilities, or erosion and sedimentation controls he/she shall notify the Township Engineer, and/or the WCD as applicable, within 24 hours of the discovery of such condition and request a field inspection. The Township Engineer, and/or the WCD as applicable, shall determine if the condition requires a modification of the SMP, BMPs or erosion and sediment control plan.

F. In cases where stormwater facilities or erosion and sedimentation controls are to be installed in areas of landslide-prone soils or other special site conditions exist, North Huntingdon Township may require special precautions such as a geotechnical study, soil tests and core borings, full-time inspectors and/or similar measures. All costs of any such measures shall be borne by the permittee.

§506. Record Drawings, Completion Certificate, and Final Inspection.

A. The developer shall be responsible for providing record drawings of all stormwater management facilities and BMPs as-built and included in the approved SMP. The record drawings and an explanation of any discrepancies with the final drawings (i.e. pre-construction) shall be submitted to the Municipality, and the WCD as applicable.

B. The record drawing submission shall include a certification of completion signed by a qualified professional verifying that all permanent stormwater management facilities and BMPs have been constructed according to the approved SMP. The latitude and longitude coordinates for all permanent stormwater management facilities and BMPs must also be submitted, at the central location of the BMPs.

C. After receipt of the completion certification by the Municipality, the Municipality, and the WCD as applicable, may conduct a final inspection.

ARTICLE VI Operation and Maintenance (O&M) of Stormwater Facilities and BMPs.

§601. O&M Responsibilities.

A. The SMP for the development site shall contain an O&M Plan prepared by the developer and approved by North Huntingdon Township, and/or the WCD as applicable. The O&M Plan shall outline the responsible party(ies) and required routine maintenance actions and schedules necessary to insure proper O&M of the stormwater control facility(s).

B. The SMP for the development site shall establish responsibilities for the continuing O&M of all stormwater facilities and BMPs, consistent with the following:
   1. If a development consists of structures or lots which are to be separately owned and in which streets, sewers and other public improvements are to be dedicated to the municipality, stormwater facilities and BMPs should also be dedicated to and maintained by the municipality, except for those individual on-lot facilities and BMPs for privately owned structures.
   2. If a development site is to be held in single ownership or if sewers and other improvements are to be privately owned, operated and maintained, then the O&M of stormwater facilities and BMPs should be the responsibility of the owner or private management entity.
   3. Person(s) responsible for O&M of stormwater facilities and BMPs shall be named with contact information provided.

C. The North Huntingdon Township Board of Commissioners, upon recommendation of the Township Engineer, and/or the WCD as applicable, shall make the final determination on the continuing maintenance responsibilities prior to final approval of the SMP.

D. The North Huntingdon Township Board of Commissioners reserves the right to accept the ownership and operating responsibility for any or all of the stormwater management facilities and BMPs.

E. If the development site involves land located in more than one municipality, then the SMP shall be reviewed by North Huntingdon Township, and/or the WCD as applicable, to determine if all activities both within and outside of the municipality meet the requirements of this Ordinance.

F. Stormwater facilities and BMPs shall be inspected by the owner/responsible party named in the O&M Plan on a regular basis as determined by the municipality or as approved in the O&M Plan. Inspections may include photographs, written reports, measured drawings as necessary to document conditions of the facility(s) and the report shall be provided to the municipality as requested.

§602. Stormwater Facility and BMP O&M Plan Requirements.

A. No Regulated Development Activities within the municipality will be considered complete until approval by the municipality of an O&M Plan which describes how the permanent (i.e. post-construction) stormwater facilities and BMPs will be properly operated and maintained.

B. The following items shall be included in the O&M Plan:
   1. Map(s) of the project area, in a form that meets the requirements for recording at the Office of the Recorder of Deeds of Westmoreland County, refer to the

http://www.wcdeeds.us/dts/. The contents of the maps(s) shall include, but not be limited to:

a. Ownership and O&M responsibilities of stormwater facilities and BMPs.
b. Clear identification of the location and nature of permanent stormwater facilities and BMPs.
c. The location of the project site relative to highways, municipality boundaries or other identifiable landmarks.
d. Existing and final contours at intervals of two (2) feet are required if the general slope of the site is less than 15 percent, and at vertical intervals of five (5) feet if the general slope is equal to or greater than 15 percent.
e. Existing streams, lakes, ponds, or other bodies of water within the project site area.
f. Other physical features including flood hazard boundaries, sinkholes, streams, existing drainage courses, and areas of natural vegetation to be preserved.
g. The locations of all existing and proposed utilities, sanitary sewers, and water lines within 50 feet of property lines of the project site.
h. Proposed final changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added.
i. Proposed final structures, roads, paved areas, and buildings.
j. A 20-foot wide access easement around all stormwater facilities and BMPs that would provide ingress to and egress from a public ROW.

2. A description of how each permanent stormwater facility and BMP will be operated and maintained, and the identity of the person(s) responsible for O&M.
3. The name of the project site, the name and address of the owner of the property, and the name of the individual or firm who prepared the O&M Plan.
4. A statement, signed by the landowner, acknowledging that the stormwater facilities and BMPs are fixtures that can be altered or removed only after approval by the municipality.

C. Each stormwater facility and BMP shall be recorded with the County as permanent real estate appurtenances, and as deed restrictions or conservation easements that run with the land. The property owner shall sign and record an O&M Agreement for those facilities and BMPs. Refer to Appendix B of this Ordinance.
D. If the owner fails, refuses or neglects to maintain any stormwater facility and/or BMP, the municipality reserves the right to conduct maintenance work and charge and assess the owner any and all costs, expenses incurred and fees set by the municipality. The municipality reserves the right to take enforcement actions for failure to perform required O&M. Refer to Article VII of this Ordinance.
E. A financial guarantee for timely installation and proper construction of stormwater facilities and BMPs shall be as specified in Article VII of this Ordinance.

§603. O&M Agreement for Privately Owned Stormwater Facilities and BMPs.

A. The property owner shall sign and record an O&M Agreement covering all stormwater facilities and BMPs which are to be privately owned. The O&M Agreement, in reference to Appendix B, shall stipulate that:

1. The owner, successors and assigns shall maintain all facilities in accordance with the approved maintenance schedule and shall keep all facilities in a safe and functional manner and consistent with the surrounding natural area.
2. The owner, successors and assigns shall convey to the municipality easements and/or ROWs to assure access for periodic inspections by the municipality and maintenance, if required.
3. The owner, successors and assigns shall keep on file with the municipality the name, address and telephone number of the person or company responsible for maintenance activities; and in the event of a change, new information will be submitted to the municipality within 10 days of the change.
4. If the owner, successors and assigns fails to maintain the stormwater facilities and BMPs following due notice by the municipality to correct the problem(s), the municipality may perform the necessary maintenance work or corrective work and the owner shall reimburse the municipality for all costs.

B. Other items may be included in the agreement where determined necessary to guarantee the satisfactory inspection and maintenance of all stormwater facilities and BMPs for a 10-year period. When a Regulated Development Activity is equal to or greater than 10 acres, the O&M Agreement shall be subject to the review and approval of the North Huntingdon Township Solicitor and the North Huntingdon Township Board of Commissioners, and shall be in a form such as may be recorded in the Office of the Recorder of Deeds in the County in which the facility is located.

C. The property owner shall sign an O&M Agreement with the municipality covering all stormwater facilities and BMPs that are to be privately owned. The agreement shall be substantially the same as the O&M Agreement in Appendix B of this Ordinance.

§604. North Huntingdon Township Stormwater Management Fund.

A. Persons installing stormwater facilities or BMPs shall be required to pay a specified amount to the North Huntingdon Township Stormwater Management Fund to help defray municipal costs regarding the new infrastructure. The amount of the deposit shall be determined as follows:
   1. If the stormwater facilities and/or BMPs are to be privately owned and maintained, the deposit shall cover the cost of inspections performed by the municipality for a period of 10 years, as estimated by the Township Engineer. After that period of time, inspections will be performed at the expense of the municipality.
   2. If the stormwater facilities and/or BMPs are to be accepted, owned and maintained by the municipality, the deposit shall cover the estimated costs for inspections and O&M for 10 years. The Township Engineer will establish the deposit value based on a cost estimate submitted by the applicant.
   3. The deposit shall be converted to present worth of the annual series value. The Township Engineer shall determine the present worth equivalent which shall be subject to the approval of the Township Manager of North Huntingdon Township.

B. If stormwater facilities and BMPs are proposed that also serves as a recreation facility (e.g., ball field, lake), North Huntingdon Township may reduce the amount or waive the deposit based upon the value of the land for public recreation purposes, or North Huntingdon Township may accept the deposit on behalf of the agency managing the recreation resource and make said deposit available to the agency's maintenance department.

C. If at some future time, stormwater facilities and BMPs (whether publicly or privately owned) are eliminated due to the installation of storm sewers or other stormwater facilities and BMPs, the unused portion of the deposit will be applied to the cost of abandoning the facility and connecting to the storm sewer system or other facility. Any amount of the deposit remaining after costs of abandonment are paid will be returned to the depositor.

ARTICLE VII Fees, Financial Guarantees and Dedication of Public Improvements.

§701. Guarantee of Completion.

A. A completion guarantee or financial security in the form of a bond, cash deposit, cashier's check or other negotiable securities acceptable to the municipality shall provide for, and secure to the municipality, the completion of any improvements which may be required on or before the date fixed in the formal action of approval or accompanying agreement for completion of the improvements. The guarantee or security shall cover any and all stormwater management facilities, BMPs, erosion and sedimentation controls and other required improvements (collectively, "improvements") and shall be equal to 110% of the cost of completion estimated as of 90 days following the date scheduled for completion by the developer. Annually the municipality may adjust the amount of financial security by comparing the actual cost of the improvements which have been completed and the estimated cost for the completion of the remaining improvements as of the expiration of the 90th day after either the original date scheduled for completion or a rescheduled date of completion. Subsequent to said adjustment, the municipality may require the developer to post additional security in order to assure that the financial security equals said 110%. Any additional security shall be posted by the developer in accordance with this Subsection.

B. The amount of the guarantee or financial security required shall be determined utilizing the provisions of §509 (g) of the Municipalities Planning Code.

§702. Release of Completion Guarantee.

The developer must satisfy Article V Section 506 of this Ordinance prior to submitting a request to North Huntingdon Township for return or release of the completion guarantee or financial security. Should a developer submit a request for return or release of the completion guarantee or financial security prior to satisfying Article V Section 506 of this Ordinance, the Township Engineer shall deem this request invalid and state that Article V Section 506 of this Ordinance must be satisfied prior to recognizing said request as valid.

The completion guarantee or financial security shall be returned or released upon written certification by the Township Engineer that improvements and facilities have been installed and completed in accordance with the approved SMP. The procedures for requesting and obtaining a release of the completion guarantee shall be in a manner prescribed by the §510 of the Municipalities Planning Code.

§703. Default of Completion Guarantee.

If improvements are not installed in accordance with the approved SMP, the Board of Commissioners of North Huntingdon Township may enforce any corporate bond or any security by appropriate legal and equitable remedies. If proceeds of such bond or other security are insufficient to pay the cost of installing or making repairs or corrections to all the improvements covered by said security, the North Huntingdon Township Board of Commissioners may at its option install part of such improvements in all or part of the development and may institute appropriate legal or equitable action to recover the monies necessary to complete the remainder of the improvements. All proceeds, whether resulting from the security or from any legal or equitable

action brought against the developer, or both, shall be used solely for the installation of the improvements covered by such security and not for any other municipality purpose.

§704. Dedication of Public Improvements.

A. When streets, stormwater management facilities, BMPs, erosion and sedimentation controls or other required improvements in the development have been completed in accordance with the final drawings, such improvements shall be deemed private until such time as they have been offered for dedication to North Huntingdon Township and accepted by separate ordinance or resolution or until they have been condemned for use as a public facility. The municipality shall be under no obligation to accept such facilities or controls unless and until the municipality so determines that it is in the best interest of the municipality to do so.
B. Prior to acceptance of any improvements or facilities, the Township Engineer shall inspect the same to ensure that the same are constructed in accordance with the approved SMP and are functioning properly.
C. The developer must satisfy Article V Section 506 of this Ordinance prior to public improvements being offered for dedication to North Huntingdon Township. Should a developer offer for dedication the public improvements to North Huntingdon Township prior to satisfying Article V Section 506 of this Ordinance, the Township Engineer shall deem this request invalid and state that Article V Section 506 of this Ordinance must be satisfied prior to recognizing said offer for dedication as valid.

§705. Maintenance Guarantee.

Prior to North Huntingdon Township acceptance of any improvements or facilities, the applicant shall provide financial security to secure the structural integrity and functioning of the improvements. The security shall:

A. Be in the form of a bond, cash, cashier's check or other negotiable securities acceptable to the municipality.
B. Be for a term of 18 months from the date of acceptance.
C. Be in an amount equal to 15 percent of the actual cost of the improvements and facilities so dedicated.

§706. Fee Schedule.

The North Huntingdon Township Board of Commissioners may adopt by resolution, from time to time, a reasonable schedule of fees to cover the cost of pre-submitted and pre-construction meetings, SMP reviews, inspections and other activities necessary to administer, monitor and enforce the provisions of this Ordinance. All fees shall be set in accordance with the applicable provisions of the Municipalities Planning Code, 53 P.S. §10101 *et seq.*, and any dispute over the fee amount shall be resolved in the manner prescribed by the Municipalities Planning Code. Refer to the schedule of fees enacted by the North Huntingdon Township Board of Commissioners. Also, reviews by WCD may be subject to their fees. Contact WCD for their latest schedule of fees.

ARTICLE VIII Enforcement Procedures and Remedies.

§801. Right of Entry.

Upon presentation of proper credentials, duly authorized representatives of North Huntingdon Township may enter at reasonable times upon any property to inspect, investigate or ascertain the condition of the subject property in regard to an aspect related to stormwater management regulated by this Ordinance. Prohibitions and unreasonable delays in allowing the municipality access to a stormwater management facility pursuant to this Ordinance is a violation of this Ordinance. The failure of any person or entity to grant entry or to undertake any action which impedes or prevents entry is prohibited and constitutes a violation of this Ordinance.

§802. Enforcement Generally.

A. It shall be unlawful for a person to undertake any Regulated Development Activity except as provided in an approved SMP, unless specifically exempt in Article III Section 303 of this Ordinance.

B. It shall be unlawful to alter any BMPs, facilities or structures that were installed under this Ordinance or a prior stormwater management ordinance, without written approval of the municipality.

C. In the event that the applicant, developer, owner or his/her agent fails to comply with the requirements of this Ordinance or fails to conform to the requirements of any permit, a written notice of violation shall be issued. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of the violation(s). Upon failure to comply within the time specified, unless otherwise extended by the municipality, the applicant, developer, owner or his/her agent shall be subject to the enforcement remedies of this Ordinance. Such notice may require without limitation:

   1. Whenever the municipality finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the municipality may order compliance by written notice to the responsible person. Such notice may require without limitation, any or all of the following:
      a. The performance of monitoring, analyses, and reporting.
      b. The elimination of prohibited connections or discharges.
      c. Cessation of any violating discharges, practices, or operations.
      d. The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property.
      e. Payment of a fine to cover administrative and remediation costs.
      f. The implementation of stormwater management measures or facilities.
      g. O&M of stormwater management measures and/or facilities.
      h. Assessment and payment of any and all costs and expenses relative to corrective measures taken or to be taken and reasonable costs, expenses and attorney fees incurred by the municipality in and related to enforcement and collection proceedings.
   2. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violations(s). Said notice may further advise that, if applicable, should the violator fail to take the required action within the established

deadline, the work will be done by the municipality or designee and the expense thereof shall be charged to the violator.

3. Failure to comply within the time specified shall also subject such person to the penalty provisions of this Ordinance. All such penalties shall be deemed cumulative and shall not prevent the municipality from pursuing any and all other remedies available in law or equity.

§803. Suspension and Revocation.

A. Any approval or permit issued by the municipality pursuant to this Ordinance may be suspended or revoked for:
   1. Non-compliance with or failure to implement any provision of the approved SMP or O&M Agreement.
   2. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule, or regulation related to the Regulated Development Activity.
   3. The creation of any condition or the commission of any act during the Regulated Development 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 Ordinance.

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 may 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 Ordinance.

§804. Preventative Remedies.

A. In addition to other remedies, the municipality may institute and maintain appropriate actions by law or in equity to restrain, correct or abate a violation, to prevent unlawful construction, to recover damages and to prevent illegal occupancy of a building or premises.

B. In accordance with the Municipalities Planning Code, 53 P.S. §10101 *et seq.*, the municipality may refuse to issue any permit or grant approval to further improve or develop any property which has been developed in violation of this Ordinance.

§805. Violations and Penalties.

A. Any person who has violated or knowingly permitted the violation of the provisions of this Ordinance or has refused, neglected or failed to perform any of the actions required pursuant to the notice set forth in Section 802, upon conviction thereof in an action brought

before a magisterial district judge in the manner provided for the enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure, shall be guilty of a summary offense, and shall be sentenced to pay a fine of not less than $100.00 nor more than $1,000.00 for each violation, plus costs, together with reasonable attorney fees; and, in default or failure of full and timely payment of such fine, costs and fees, to a term of imprisonment not to exceed ninety (90) days or to a term of imprisonment to the extent permitted by law for the punishment of violations of summary offenses, whichever is less. Each day that a violation of this Ordinance continues or each Section of this Ordinance which shall be found to have been violated shall constitute a separate offense. No judgment shall commence or be imposed, levied or be payable until the date of the determination of a violation by the magisterial district judge. Each day that a violation of this Ordinance continues or each Section of this Ordinance which shall be found to have been violated shall constitute a separate offense.

B. If the defendant neither pays nor timely appeals the judgment, North Huntingdon Township may enforce the judgment pursuant to applicable rules of civil procedure.
C. Each day that a violation continues shall constitute a separate violation unless the magisterial district judge further determines that there was a good faith basis for the person violating this Ordinance to have believed that there was no such violation. In such case there shall be deemed to have been only one such violation until the fifth day following the date of the district justice's determination of the violation; thereafter each day that a violation continues shall constitute a separate violation.
D. All judgments, costs and reasonable attorney fees collected for the violation of this Ordinance shall be paid over to the municipality.
E. The court of common pleas, upon petition, may grant an order of stay, upon cause shown, tolling the per diem fine pending a final adjudication of the violation and judgment.
F. Nothing contained in this Section shall be construed or interpreted to grant to any person or entity other than the municipality, the right to commence any action for enforcement pursuant to this Section.
G. Each day that a violation of any provision of this Ordinance shall constitute a separate violation and be deemed a public nuisance.

§806. Additional Remedies.

In addition to the above remedies, the municipality may also seek the remedies and penalties under applicable Pennsylvania statutes, or regulations adopted pursuant thereto including, but not limited to, the Stormwater Management Act, 32 P.S. §§693.1 *et seq.*, and the erosion and sedimentation regulations, 25 Pa.Code, Chapter 102. Any activity conducted in violation of this Ordinance or any Pennsylvania approved watershed SMP may be declared a public nuisance by the municipality and abatable as such.

§807. Appeals.

A. Appeals

1. Any person aggrieved by a decision of the municipality or any of its authorized persons or agencies, may appeal in writing said decision to the North Huntingdon Township Board of Commissioners within thirty (30) days of any decision. Any appeal must be filed with the Board of Commissioners. If a decision appealed is

from an authorized person or agency of the municipality, a copy of the written appeal must be filed with such person or agency by such appellant within thirty (30) days of such decision.

2. The appellant shall pay to the municipality at the time of filing the appeal, any and all fees and charges as set forth in a Resolution of the municipality.

B. Procedure

1. Any Appeal filed pursuant to this Section shall be governed by the Local Agency Law of the Commonwealth of Pennsylvania (2 Pa. C.S.A. §105, specifically 2 Pa. C.S.A. §551-§555).

C. Hearing

1. The Board of Commissioners shall schedule a hearing within sixty (60) days of receipt of said Appeal. Written notice of the hearing shall be given to the party filing the Appeal and any authorized person or agency of the municipality involved, not less than fifteen (15) days prior to said hearing.

D. Hearing Procedure

1. All testimony may be stenographically recorded and a full and complete record be kept of the proceedings. In the event all testimony is not stenographically recorded and a full and complete record of the proceedings is not provided by the local agency, such testimony shall be stenographically recorded and a full and complete record of the proceedings and shall be kept at the request of any party agreeing to pay the costs thereof.
2. The Board of Commissioners shall not be bound by technical rules of the evidence at the aforesaid hearing, and all relevant evidence of reasonably probative value may be received. Reasonable examination and cross-examination shall be permitted.

E. Adjudication

1. The adjudication of the Board of Commissioners shall be in writing, shall contain findings and the reasons for the adjudication, and shall be served upon all parties to the Appeal or their counsel personally, or by mail.

F. Appeal from Adverse Adjudication

1. Pursuant to 2 Pa. C.S.A. Section 751 et seq. any person aggrieved by the adjudication of the Board of Commissioners who has a direct interest in such adjudication shall have the right to appeal therefrom to the Court vested with jurisdiction of such appeals by or pursuant to Title 42 (Relating to Judiciary and Judicial Procedure).

§808. Severability.

EACH SECTION, PARAGRAPH, SENTENCE, AND PROVISION OF THIS ORDINANCE IS SEPARABLE, AND IF ANY PROVISION IS HELD UNCONSTITUTIONAL OR INVALID FOR ANY REASON, SUCH DECISION SHALL NOT AFFECT THE REMAINDER OF THIS ORDINANCE.

Ordained and Enacted at a regular meeting of the Board of Commissioners of the Township of North Huntingdon, County of Westmoreland, Commonwealth of Pennsylvania, a full quorum being present on the 18th day of November, 2020.

TOWNSHIP OF NORTH HUNTINGDON
BOARD OF COMMISSIONERS

By: _____
Zachary J. Haigis, President

ATTEST:

_____
Jeffrey F. Silka, Township Secretary

SEAL
SOLICITOR: Bruce E. Dice, Esquire

REFERENCES

1. U.S. Department of Agriculture, National Resources Conservation Service (NRCS). *National Engineering Handbook.* Part 630: Hydrology, 1969-2001. Originally published as the ***National Engineering Handbook***, Section 4: Hydrology. Available from the NRCS online at: http://www.nrcs.usda.gov/.

2. U.S. Department of Agriculture, Natural Resources Conservation Service. 1986. ***Technical Release 55: Urban Hydrology for Small Watersheds***, 2nd Edition. Washington, D.C.

3. Pennsylvania Department of Environmental Protection. No. 363-0300-002 (December 2006), as amended and updated. ***Pennsylvania Stormwater Best Management Practices Manual.*** Harrisburg, PA.

4. Pennsylvania Department of Environmental Protection. No. 363-2134-008 (March 31, 2012), as amended and updated. ***Erosion and Sediment Pollution Control Program Manual.*** Harrisburg, PA.

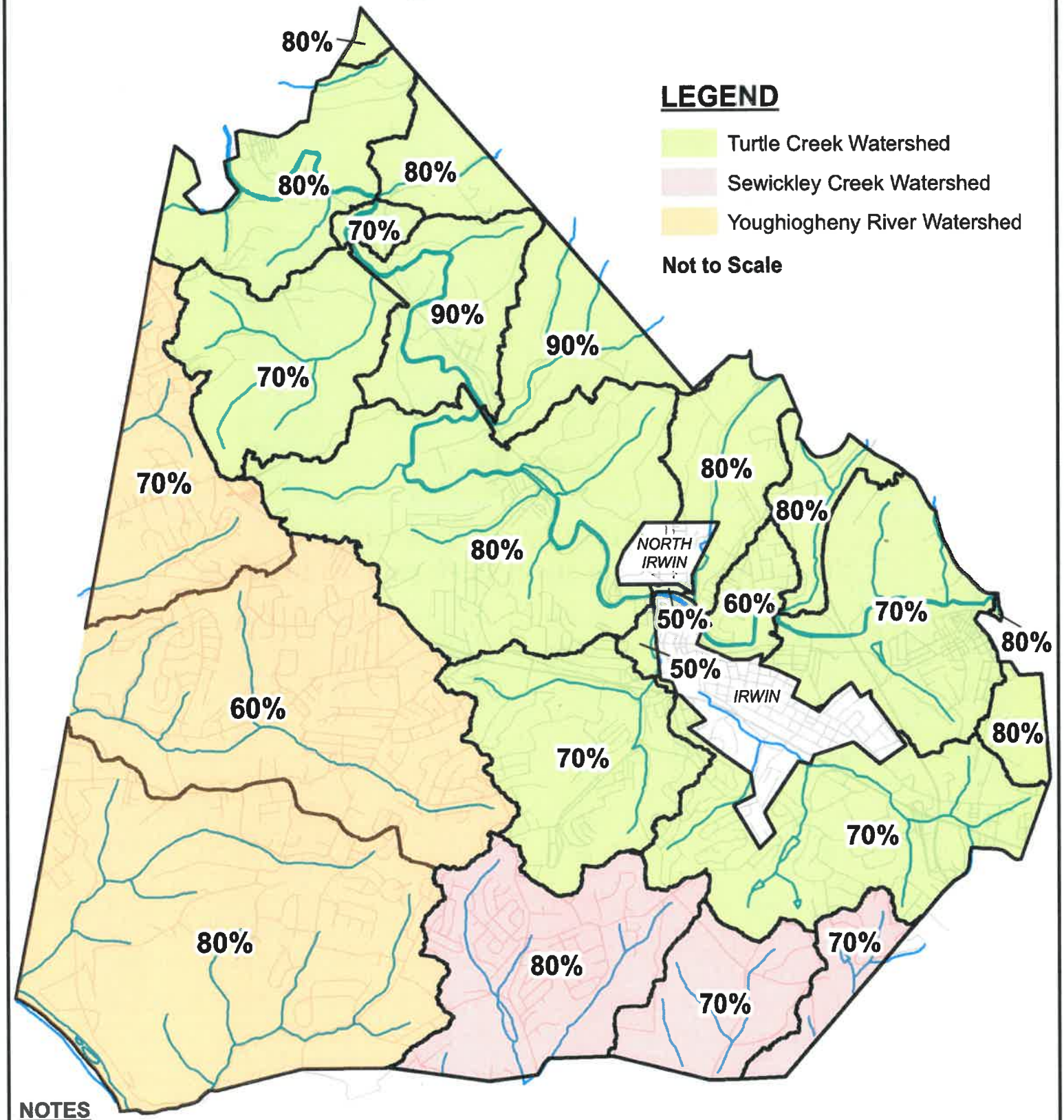
5. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Hydrometeorological Design Studies Center. 2004-2006. ***Precipitation-Frequency Atlas of the United States, Atlas 14***, Volume 2, Version 3.0, Silver Spring, Maryland. Internet address: http://hdsc.nws.noaa.gov/hdsc/pfds/.

6. PennDOT **Publication 408 – Construction Specifications, Publication 584 - Drainage Manual** current editions.

Appendix A

North Huntingdon Township
Stormwater Management Performance Districts

North Huntingdon Township
Stormwater Management Performance Districts



LEGEND

- Turtle Creek Watershed
- Sewickley Creek Watershed
- Youghiogheny River Watershed

Not to Scale

NOTES

A) For the purposes of stormwater management, North Huntingdon Township is located in three (3) different watersheds; the Turtle Creek Watershed, Sewickley Creek Watershed and Youghiogheny River Watershed. Each aforementioned watershed includes Stormwater Management Performance Districts, which have corresponding release rate percentages, as shown.

B) For further clarity on which Stormwater Management Performance District corresponds to a proposed project, contact North Huntingdon Township.

N
W E
S

Appendix B

Acknowledgment & Agreement

SMALL PROJECT
LETTER OF ACKNOWLEDGMENT

Project Name: _____ Date: _____

Location: _____

- New impervious area can potentially increase stormwater runoff from this site and the use of proposed stormwater facilities and/or best management practices (BMPs) can manage those impacts by mimicking natural processes to provide groundwater recharge and stream base flow.
- Regulated Development Activities on this site shall not begin until North Huntingdon Township has issued an approval for a Small Project Stormwater Management Plan (Small Project), unless stated otherwise by the Township Engineer.
- If stormwater management facilities and/or BMPs included on the proposed Small Project require revisions or changes, the applicant shall revise and resubmit to North Huntingdon Township for approval. If a problem arises, the applicant may need to seek the assistance of a qualified professional.
- Installed stormwater facilities and/or BMPs shall not adversely affect any property, septic systems, or drinking water wells on this or any other property.
- The applicant acknowledges that once the stormwater management facilities and/or BMPs are installed, each is a permanent fixture of the property, shall be inspected and maintained regularly to retain the original function, and cannot be altered or removed without the approval of North Huntingdon Township.

I (we) _____, hereby acknowledge the above statements and agree to assume full responsibility for the implementation, construction, operation, and maintenance of the proposed stormwater management facilities and/or BMPs. Furthermore, I (we) acknowledge that the steps, assumptions, and guidelines provided in the North Huntingdon Township Stormwater Management Ordinance and corresponding Appendix C regarding a Small Project will be adhered to.

Signature: _____ Date: _____

Signature: _____ Date: _____

OPERATION AND MAINTENANCE (O&M) AGREEMENT

Stormwater Management Best Management Practices

Tax ID No. 54-___-___-___-____

THIS AGREEMENT, made and entered into this day _____of _____, 20_____, by and between _____ (hereinafter the "Landowner"), and North Huntingdon Township, Westmoreland County, Pennsylvania (hereinafter "Municipality");

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Westmoreland County, Pennsylvania, Deed Book _____ at page _____, (hereinafter "Property").

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

WHEREAS, the stormwater management best management practices (BMPs) Operation and Maintenance (O&M) Plan approved by the Municipality (hereinafter referred to as the "O&M Plan") for the property identified herein, which is attached hereto as Appendix 1 and made part hereof, as approved by the Municipality, provides for management of stormwater within the confines of the Property through the use of BMPs; and

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

WHEREAS, the Municipality requires, through the implementation of the Stormwater Management Plan (SMP), that stormwater management BMPs as required by said SMP and the North Huntingdon Township Stormwater Management Ordinance be constructed and adequately operated and maintained by the Landowner, successors, and assigns.

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

1. The Landowner shall construct the BMPs in accordance with the drawings and specifications identified in the SMP.
2. The Landowner shall operate and maintain the BMPs as shown on the SMP in good working order in accordance with the specific O&M requirements noted on the approved O&M Plan.
3. The Landowner hereby grants permission to the Municipality, its authorized agents and employees, to enter upon the property, at reasonable times and upon presentation of proper credentials, to inspect the BMPs whenever necessary. Whenever possible, the Municipality shall notify the Landowner prior to entering the property.
4. In the event the Landowner fails to operate and maintain the BMPs per paragraph 2., the Municipality or its representatives may enter upon the Property and take whatever action is deemed necessary to maintain said BMPs. 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. A timeline shall be set as mutually agreed upon.
5. In the event the Municipality, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like,

the Landowner shall reimburse the Municipality for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the Municipality.

6. The intent and purpose of this Agreement is to ensure the proper maintenance of the on-site BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create any additional liability of any party for damage alleged to result from or be caused by stormwater runoff.
7. The Landowner, its executors, administrators, assigns, and other successors in interests, shall release the Municipality from all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against said employees and representatives from the construction, presence, existence, or maintenance of the BMPs by the Landowner or Municipality.
8. The Municipality intends to inspect the BMPs at a minimum of once every three years, or as needed, to ensure their continued functioning.

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

ATTEST:

WITNESS the following signatures and seals:

For the Municipality:

_____

For the Landowner:

_____

_____

ATTEST:

State of Pennsylvania

County of Westmoreland

On this, the _____day of _____, 20___, before me

_____, the undersigned officer, personally appeared

_____

known to me (or satisfactorily proven) to be the persons whose names subscribed to within instrument, and acknowledged that they executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

_____

NOTARY PUBLIC

LANDOWNER MAINTENANCE SCHEDULE

As with all infiltration practices, Dry Wells require regular and effective maintenance to ensure prolonged functioning. The following represents minimum maintenance requirements for Dry Wells:

1. Inspect Dry Wells at least four times a year, as well as after every storm exceeding one inch.

2. Dispose of sediment, debris/trash, and any other waste material removed from a Dry Well at suitable disposal/recycling sites and in compliance with local, state and federal waste regulations.

3. Evaluate the drain-down time of the Dry Well to ensure the maximum time of 72 hours is not being exceeded. If drain-down times are exceeded the maximum, drain the Dry Well via pumping and clean out the perforated piping, if included. If slow drainage persists, the system may need replacing.

4. Regularly clean out gutters and ensure proper connections to facilitate the effectiveness of the Dry Well.

5. Replace filter screens that intercept roof runoff as necessary.

6. If an intermediate sump box exists, clean it out at least once per year.

Appendix C

Small Project Assistive Documents and Worksheet

SMALL PROJECT ASSISTIVE DOCUMENTS AND WORKSHEET

Appendix C has been developed to assist those proposing a residential project to meet the requirements of the North Huntingdon Township Stormwater Management Ordinance (based on the Westmoreland County Model Stormwater Management Ordinance) without having to draft a formal Stormwater Management Plan (SMP). A Small Project SMP (Small Project) is only permitted as defined in Article II Section 202 and per Article III Section 306, each within the North Huntingdon Township Stormwater Management Ordinance, and by using the recommendations in this Appendix for volume control. Additional information can be found in Chapter 6 of the PA Stormwater BMP Manual 2006 or most recent version.

A. What is an applicant required to submit?

All requirements of Article III Section 306 of the North Huntingdon Township Stormwater Management Ordinance, including:

1. A narrative including a brief description of the proposed stormwater facilities and best management practices (BMPs), types of materials to be used, total square footage of proposed impervious areas, volume calculations;
2. A schematic showing location of existing and proposed structures, driveways, or other paved areas with approximate surface area in square feet; location of any existing or proposed utilities, especially on-site septic system and/or potable water wells showing proximity to infiltration facilities, location and dimensions of all proposed stormwater facilities and BMPs;
3. Small Project Worksheet;
4. Executed Small Project Letter of Acknowledgment prior to construction (refer to Appendix B);
5. Executed Operation and Maintenance (O&M) Agreement after construction (refer to Appendix B); and
6. Westmoreland Conservation District (WCD) erosion and sediment control "Adequacy" letter as required by Municipal, County or State regulations.

B. Determination of Required Control Volume and Sizing Stormwater Facilities and BMPs

By following the steps outlined throughout the next few pages and completing a Small Project Worksheet, an applicant can determine the runoff volume that is required to be controlled and how to choose the appropriate stormwater facility or BMP to permanently remove the runoff volume from the site. Impervious area calculations must include all areas on the lot proposed to be covered by roof area or pavement which would prevent rain from naturally percolating into the ground, including proposed impervious surfaces such as sidewalks, driveways, parking areas, patios or swimming pools. Please note that sidewalks, driveways or patios that are designed and constructed to allow for infiltration by means of permeable paving systems are not included in this calculation.

Small Project Schematic: ***Example***

Project Name: _____ **Date:** _____

Location: _____

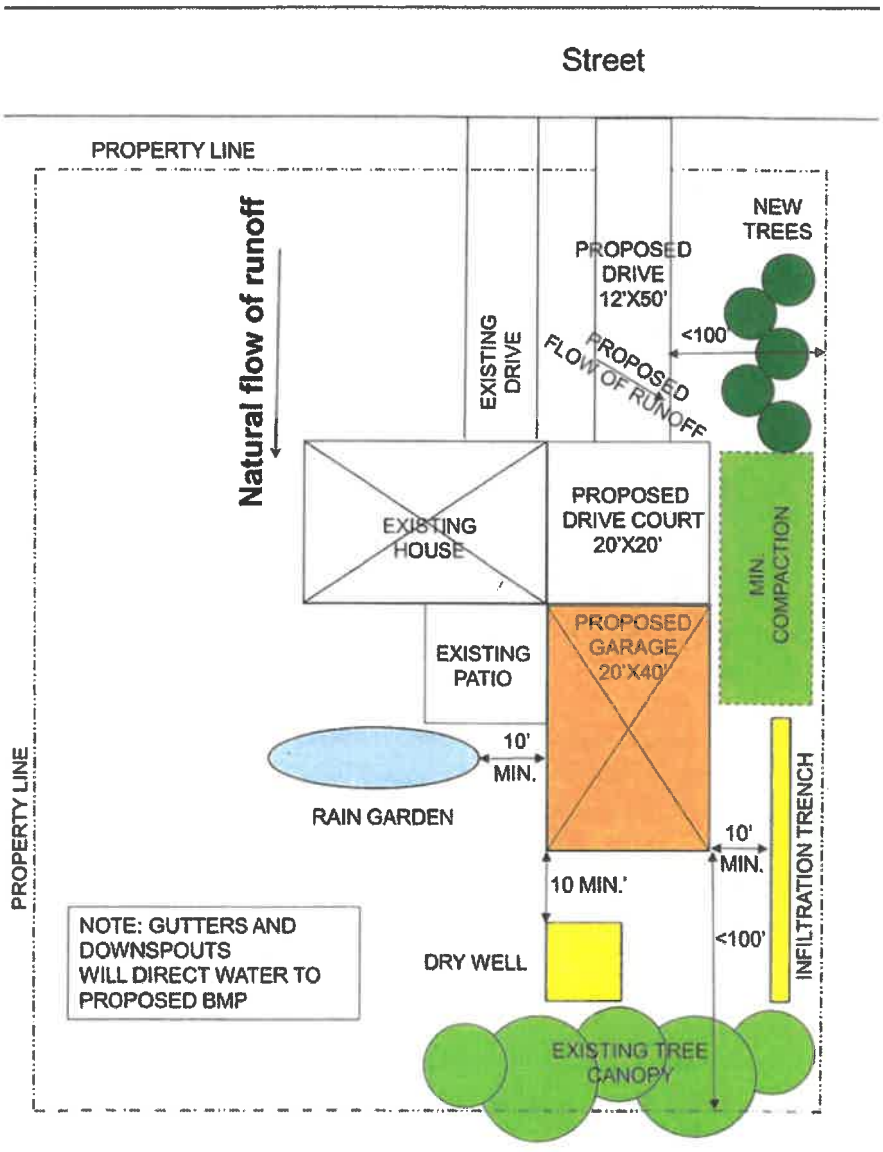


Figure 1 – Schematic ***Example***

Step 1: Determine Total Impervious Surfaces and Total Required Control Volume

Table 1: Total Required Control Volume *Example*

New Impervious Surface	Dimensions (length x width)	Area (ft^2)	2" Design Storm Multiplier (0.167)	Required Control Volume (ft^3)
Garage Roof	*20'x40'*	*800* ft^2	0.167	*133* ft^3
Driveway Court	*20'x20'*	*400* ft^2	0.167	*67* ft^3
Driveway	*12'x50'*	*600* ft^2	0.167	*100* ft^3
		ft^2		ft^3
		ft^2		ft^3
		ft^2		ft^3
	Total Required Control Volume (enter in Table 2) =			*300* ft^3

In Table 1, in reference to the example above and as shown in Figure 1, list each of the new improvements that create impervious area on the property along with their dimensions and total area in square feet in the first three columns. Then, multiply the area in square feet by the design storm multiplier to determine required control volume and input that value in the last column. Add each of the required control volumes together to equal the "Total Required Control Volume" and enter in Table 2.

Step 2: Selecting BMPs

Several BMPs are suitable for Small Projects, however, their application depends on the volume required to be controlled, how much land is available, and the site constraints. Proposed residential development activities can apply both nonstructural and structural BMPs to control the volume of runoff from the site. A number of these different volume control BMPs are described below. Note that Figure 1 is an example of how these BMPs can be utilized on a property to control the Total Required Control Volume.

Credit can be taken for nonstructural BMPs on a site to reduce the Total Required Control Volume. Credits must follow the requirements listed in this Appendix. Fill out Table 2 with proposed nonstructural BMP credits and structural BMP volume controls, from Table 6 and Table 10, to meet the Total Required Control Volume. Note that the "Total Volume Controlled" shall be greater than or equal to the Total Required Control Volume.

Table 2: Determination of Volume Controlled *Example*

Total Required Control Volume (Table 1)	*300* ft^3
Nonstructural BMP Credit Summary (Table 6)	*137* ft^3
Adjusted Required Control Volume (after credits) (Table 1 to Table 6)	*163* ft^3
Structural BMP Volume Control Summary (Table 10)	*202* ft^3
Total Volume Controlled (Table 6 + Table 10)	*339* ft^3

Step 3: Nonstructural BMPs

1. Tree Planting and Preservation

   Trees and forests reduce stormwater by capturing, storing and evapotranspiring rainfall through their roots and leaves. Tree roots and leaf litter also create soil conditions that promote infiltration of rainwater into the soil and that breakdown excessive nutrients and pollutants. For more information refer to the PA Stormwater BMP Manual 5.6.3.

   Considerations for credit:

   - Proposed tree plantings must be at least six (6) feet in height and have at least a 2-inch caliper trunk, and the quantity entered in Table 3.
   - Proposed tree plantings must be native to Pennsylvania. Refer to http://www.dcnr.pa.gov/Conservation/WildPlants/Pages/default.aspx
   - Existing trees must have at least a 4-inch caliper trunk, and must be located within 100 feet of impervious surfaces.
   - Measure existing tree canopy by determining the square foot area covered within the drip line of the tree(s), and enter the area in Table 4.
   - Site runoff should be directed via sheet flow to the area(s) of trees being used for volume control.

Table 3: Proposed Tree(s) *Example*

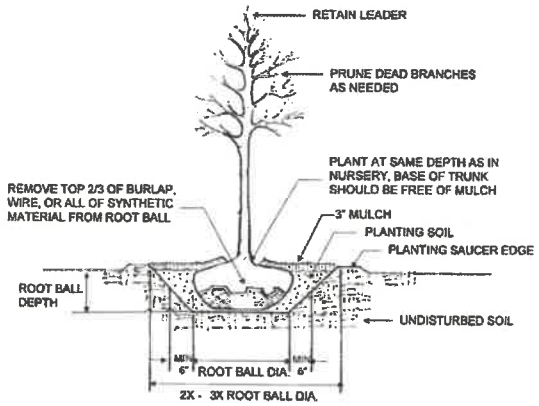
New Trees	Volume Control Multiplier	Tree Quantity	Volume Controlled (ft^3)
Deciduous	6 ft^3	*2*	*12* ft^3
Evergreen	10 ft^3	*3*	*30* ft^3

Total Volume Control Credit, Proposed Tree(s) (enter in Table 6) = *42* **ft^3**

Table 4: Existing Tree(s) *Example*

Existing Tree Canopy (ft^2)	Distance of Impervious to Canopy (ft)	Volume Control Multiplier	Volume Controlled (ft^3)
ft^2	0 ft to 20 ft	0.0833	ft^3
2000 ft^2	20 ft to 100 ft	0.0416	*83* ft^3

Total Volume Control Credit, Existing Tree(s) (enter in Table 6) = *83* **ft^3**



TREE PLANTING

WCD 2009 N.T.S

2. Minimize Soil Compaction and Revegetate

When soil is overly compacted during construction it can cause a drastic reduction in the permeability of the soil and rarely is the soil profile completely restored. Runoff from overly compacted vegetated areas can resemble increased runoff from impervious areas. Minimizing soil compaction during the construction process, or restoring and amending compacted soils and revegetating them after construction can greatly increase natural infiltration on a site. For more information refer to the PA Stormwater BMP Manual 5.6.2 and 5.6.3.

Considerations for credit:

- Area(s) shall not be stripped of topsoil and areas shall be protected from construction vehicles and lay down space with construction fencing or mats. Enter square foot area in Table 5.
- Soil ripping and soil amendments can be used to restore the soils.
- Vegetation should be used, especially native plants and meadow mixes as an alternative to lawn.

Table 5: Minimize Compaction *Example*

Type of Stabilization	Area of Minimal Compaction (ft^2)	Volume Control Multiplier	Volume Controlled (ft^3)
Meadow	ft^2	0.0275	ft^3
Lawn	*600* ft^2	0.0208	*12* ft^3

Total Volume Control Credit, Min. Compaction (enter in Table 6) = *12* **ft^3**

Plywood sheets protect lawn from compaction.

Fencing protects areas from compaction.

Step 4: Determining Nonstructural BMP Credit

Table 6: Nonstructural BMP Credit Summary *Example*

Nonstructural BMP	Storage Volume Credit (ft^3)
Proposed Tree(s)	*42* ft^3
Existing Tree(s)	*83* ft^3
Minimize Compaction	*12* ft^3
Total (enter in Table 2)	*137* **ft^3**

Step 5: Structural BMPs

1. Infiltration Trench

An infiltration trench is a linear stormwater management BMP consisting of a continuously perforated pipe at a minimum slope in a stone-filled trench. During small storm events, infiltration trenches can significantly reduce volume and serve in the removal of fine sediments and pollutants. Runoff is stored in the pipe and between the stones and infiltrates through the bottom of the facility and into the surrounding soil matrix. Runoff should be pretreated using vegetative buffer strips or swales to limit the amount of coarse sediment entering the trench which can clog and render the trench ineffective. In all cases, an infiltration trench should be designed with a positive overflow to a stable outlet point. For more information refer to the PA Stormwater BMP Manual 6.4.4.

Design considerations:

- Continuously perforated pipe, minimum 4-inch diameter, set at a minimum slope (approx. 1%) in a stone filled, nearly level-bottomed trench on un-compacted soils.
- The trench width and depth can vary, but it is recommended that infiltration trenches be no wider than four (4) feet, and a minimum of 30 inches and maximum six (6) feet in depth.
- Stone fill should be clean, angular stone, which achieves 40% void space when installed. AASHTO #57 aggregate and AASHTO #1 aggregate are recommended; others are as approved by the Township Engineer, and/or the WCD as applicable. Stone shall be separated from soil layers by four (4) inches of straw (top and bottom) or a nonwoven geotextile (top, sides, and bottom).
- A minimum of six (6) inches of topsoil can be placed over trench and vegetated.
- Cleanouts or inlets should be installed at both ends and at intersections of the infiltration trench and at appropriate intervals to allow access to the perforated pipe.
- The discharge or outlet from the infiltration trench should be safely conveyed to a stable vegetated area, natural watercourse, the curb or gutter line of roadway or existing storm collection/conveyance/control system as applicable.

Maintenance:

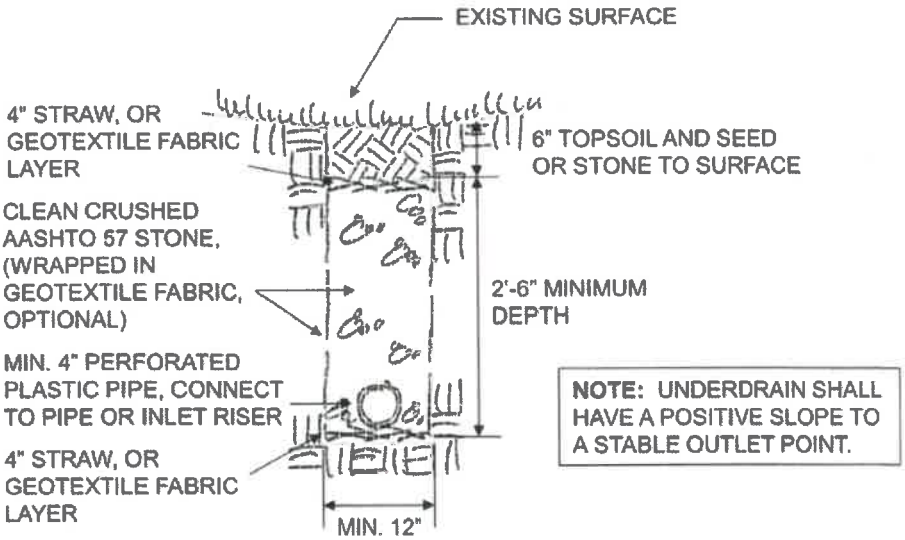
- Cleanouts, catch basins and inlets should be inspected at least twice per year and cleaned out as necessary to maintain function of the system.
- The vegetation along the surface of the infiltration trench should be maintained in good condition and any bare spots should be re-vegetated as soon as possible.
- Vehicles should not be parked or driven on the trench and care should be taken to avoid soil compaction by lawn mowers.

Table 7: Infiltration Trench *Example*

Adjusted Required Control Volume, Table 2 (ft^3)	Trench Length (ft)	Trench Width (ft)	Trench Depth (ft)	Trench Volume (ft^3)	Storage Volume Divider	Volume Controlled (ft^3)
163 ft^3	*46* ft	*3* ft	*3* ft	*413* ft^3	0.4	*165* ft^3

Total Volume Control, Infiltration Trench (enter in Table 10) = *165* ft^3

Infiltration Trench Construction



Perforated pipe surrounded with stone and wrapped in geotextile.

Perforated pipe surrounded in stone with straw separation layers.

2. Rain Garden

A rain garden is a landscaped shallow depression that uses mulch, soil mix, and deep-rooted plants to capture, adsorb and infiltrate stormwater runoff from roofs, and pavement. For more information refer to the PA Stormwater BMP Manual 6.4.5. Note that each the rain garden's surface volume and rain garden's soil storage volume must be greater than or equal to the "Adjusted Required Control Volume".

Design considerations:

- A rain garden should be located on nearly level ground and no closer than 10 feet to a building foundation and 25 feet from septic field or wellhead.
- A rain garden can vary in length, width and depth. A rain garden should have a ponding depth (i.e. until the principal spillway is activated) of 6 to 12 inches, and a total surface depth (i.e. to top of embankment) of no greater than 18 inches.
- Side slopes within the garden should not exceed 3:1 horizontal to vertical.
- The rain garden should be constructed in layers with a minimum 4-inch perforated underdrain in a clean angular stone envelope, separated from soil layers by four (4) inches of straw (top and bottom) or a nonwoven geotextile (top, sides, and bottom), covered with 12 inches to 36 inches of 50-30-20 topsoil-sand-compost mix or as approved by the municipality, and three (3) inches of shredded bark mulch or vegetated cover. Soil depth should be determined by plant choices and control volume requirements.
- Vegetation should be deep rooted and tolerant of wet and dry conditions, salts and environmental stress.
- A principal spillway should be set in the rain garden such as a vertical pipe or inlet box, with basket type grate set even with the ponding depth, below the surrounding ground elevation and connected to each the perforated underdrain and outlet pipe.
- The outlet pipe from the rain garden should be safely conveyed to a stable vegetated area, natural watercourse, the curb or gutter line of roadway or existing storm collection/conveyance/control system as applicable.

Maintenance:

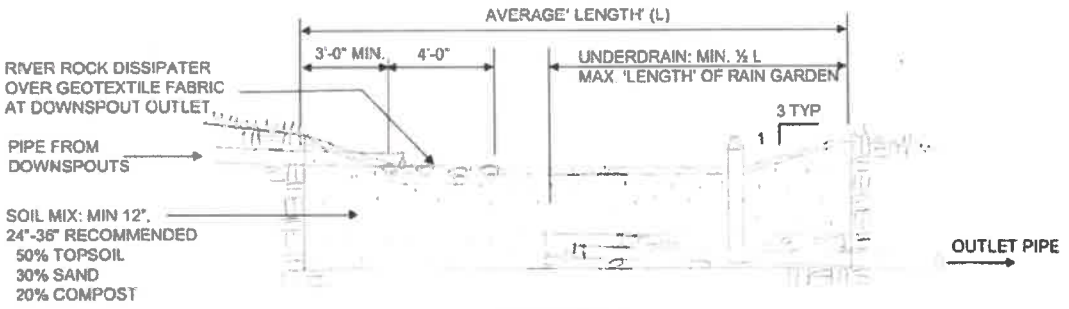
- Cleanouts, catch basins and inlets should be inspected at least twice per year and cleaned out as necessary to maintain performance. Detritus should be removed from the rain garden as necessary to prevent clogging of the overflow outlet.
- The vegetation should be maintained in good condition and replaced as necessary. Rain garden plants may need to be watered during dry spells.
- Rain garden should be weeded and shredded bark mulch should be amended as necessary to prevent weeds.

Table 8: Rain Garden *Example*

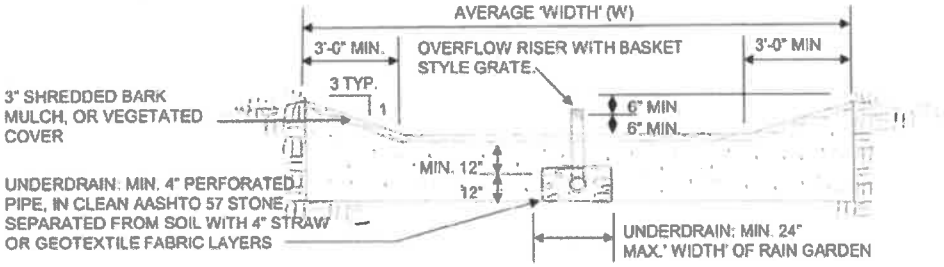
Adjusted Required Control Volume, Table 2 (ft^3)	Rain Garden Surface Area (ft^2)	Ponding Depth Divider (0.5 ft to 1.0 ft)	Volume Controlled, Surface (ft^3)	Soil Mix Depth (1 ft to 3 ft)	Soil Storage Volume Multiplier	Volume Controlled, Soil (ft^3)
163 ft^3	*336* ft^2	*0.5* ft	*168* ft^3	*2* ft	0.3	*202* ft^3

Total Volume Control, Rain Garden (enter in Table 10) = ***202*** **ft^3**

Rain Garden Construction



SECTION AA



SECTION BB

Mark rain garden location to avoid utilities.

Excavate rain garden at least 10' from foundation.

Separate bottom from soil with geotextile or straw.

Use decorative but tolerant plants.

3. Dry Well / Seepage Pit

A dry well or seepage pit is a subsurface storage facility that temporarily stores stormwater runoff from roofs and/or driveways, and infiltrates it into the surrounding soils. Roof downspouts connect directly to a dry well or seepage pit that is an excavated pit filled with clean angular stone with an overflow pipe to ensure the system will not be overwhelmed. Prefabricated chamber systems or perforated pipe sections are commercially available for use as dry wells and should be designed, constructed and maintained according to the manufacturer's recommendations. Applicants are required to submit supporting documentation for meeting the Total Required Control Volume and maintenance requirements. For more information on dry wells and seepage pits refer to the PA Stormwater BMP Manual 6.4.6.

Design considerations:

- A dry well / seepage pit should be located on nearly level ground and no closer than 10 feet to a building foundation and 25 feet from septic field or wellhead.
- A dry well / seepage pit can vary in length, width and depth, but should be a minimum depth of 3 feet.
- A downspout should direct water to the surface, a system of perforated pipes should distribute the water throughout the system with an inspection/cleanout pipe to the surface. A principal spillway should outlet excess water during intense storms. A low flow outlet shall also be installed.
- The storage system should be clean angular stone, which achieves 40% void space when installed. AASHTO #57 aggregate and AASHTO #1 aggregate are recommended; others are as approved by the Township Engineer, and/or the WCD as applicable. Stone shall be separated from soil layers by four (4) inches of straw (top and bottom) or a nonwoven geotextile (top, sides, and bottom).
- The outlet from the dry well / seepage pit should be safely conveyed to a stable vegetated area, natural watercourse, the curb or gutter line of roadway or existing storm collection/conveyance/control system as applicable.

Maintenance:

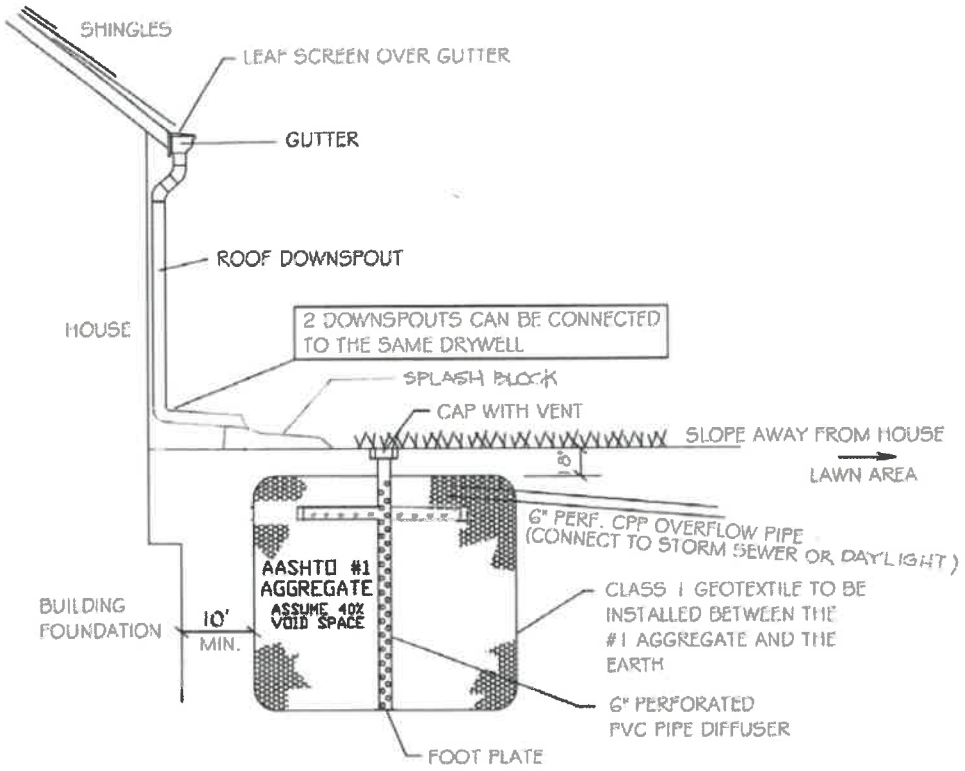
- Dry wells and seepage pits should be inspected at least four (4) times per year, and after each storm event exceeding 1-inch.
- Remove sediment, debris, and any other waste material from the system as needed.
- Regularly clean out gutters and downspouts to ensure proper connections and to maintain effectiveness of the system.
- Replace any filter screen or clean out any sump that may intercept roof runoff as necessary.

Table 9: Dry Well / Seepage Pit *Example*

Adjusted Required Control Volume, Table 2 (ft^3)	Dry Well Length (ft)	Dry Well Width (ft)	Dry Well Depth (ft)	Dry Well Volume (ft^3)	Storage Volume Divider	Volume Controlled (ft^3)
163 ft^3	*9.2* ft	*9* ft	*5* ft	*414* ft^3	0.4	*166* ft^3

Total Volume Control, Dry Well / Seepage Pit (enter in Table 10) = ***166*** **ft^3**

Dry Well / Seepage Pit Construction



Excavate a dry well at least 10' from foundation.

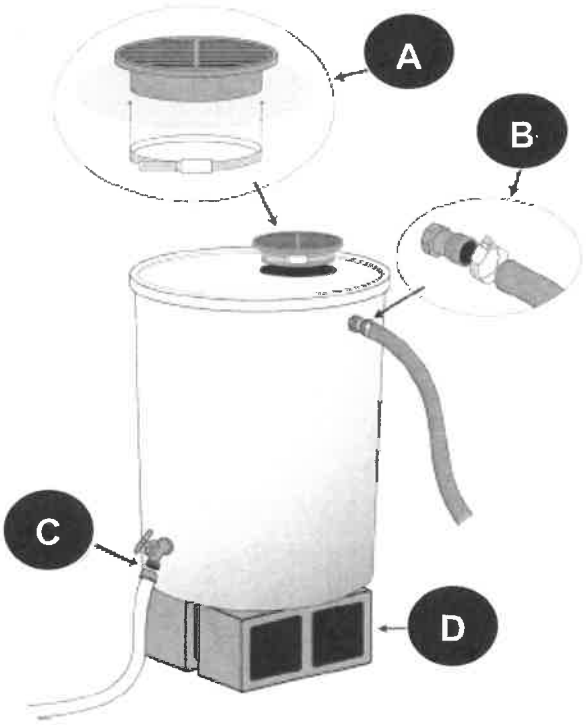
Separate stone from soil with straw layers or geotextile.

4. Alternative BMP Capture and Reuse

Rain barrels and cisterns are above or below ground containers used for temporary storage of rainwater, to be used for landscape irrigation and other similar uses after the rain has ended. A rain barrel or cistern **cannot be used** as a volume control measure because infiltration is not guaranteed after a storm event, but they are viable alternative method to capture and reuse stormwater.

Considerations:

- Rain barrels and cisterns should be directly connected to a downspout with a mosquito screen.
- There should be a means to release the water after a storm event to provide volume for the next event.
- An overflow, near the top of the container should direct water to a vegetated area away from any structures.
- Barrels can be connected in series to provide more volume collection.



ANATOMY OF A RAIN BARREL

A – hole in top for downspout connection, with screen for mosquitoes

B – hole on side near top for overflow hose

C – hole on side near bottom for spigot

D – blocks to elevate barrel for hose connection or watering can

Step 6: Determining Structural BMP Volume Control

Table 10: Structural BMP Volume Control Summary *Example*

Structural BMP	Storage Volume (ft^3)	
Infiltration Trench		ft^3
Rain Garden	*202*	ft^3
Dry Well / Seepage Pit		ft^3
Total (enter in Table 2)	***202***	**ft^3**

Step 7: O&M Requirements

It is the property owner's responsibility to properly maintain any stormwater facilities and BMPs in accordance with the minimum maintenance requirements listed in this Appendix. The property owner shall execute a Small Project Letter of Acknowledgment (refer to Appendix B) prior to construction, and execute an O&M Agreement (refer to Appendix B) after construction. It is also the property owner's responsibility to inform any future owners of the function and O&M needed for any BMPs on the property prior to the purchase of the property.

SMALL PROJECT WORKSHEET

Project Name: _____ **Date:** _____

Location: _____

Table 1: Total Required Control Volume

New Impervious Surface	Dimensions (length x width)	Area (ft^2)	2" Design Storm Multiplier (0.167)	Required Control Volume (ft^3)
		ft^2		ft^3
		ft^2		ft^3
		ft^2		ft^3
		ft^2		ft^3
		ft^2		ft^3
		ft^2		ft^3

Total Required Control Volume (enter in Table 2) = _____ **ft^3**

Table 2: Determination of Volume Controlled

Total Required Control Volume (Table 1)	**ft^3**
Nonstructural BMP Credit Summary (Table 6)	ft^3
Adjusted Required Control Volume (after credits) (Table 1 to Table 6)	ft^3
Structural BMP Volume Control Summary (Table 10)	ft^3
Total Volume Controlled (Table 6 + Table 10)	**ft^3**

Nonstructrual BMPs

Table 3: Proposed Tree(s)

New Trees	Volume Control Multiplier	Tree Quantity	Volume Controlled (ft^3)
Deciduous	6 ft^3		ft^3
Evergreen	10 ft^3		ft^3

Total Volume Control Credit, Proposed Tree(s) (enter in Table 6) = _____ ft^3

Table 4: Existing Tree(s)

Existing Tree Canopy (ft^2)	Distance of Impervious to Canopy (ft)	Volume Control Multiplier	Volume Controlled (ft^3)
ft^2	0 ft to 20 ft	0.0833	ft^3
ft^2	20 ft to 100 ft	0.0416	ft^3

Total Volume Control Credit, Existing Tree(s) (enter in Table 6) = _____ ft^3

Table 5: Minimize Compaction

Type of Stabilization	Area of Minimal Compaction (ft^2)	Volume Control Multiplier	Volume Controlled (ft^3)
Meadow	ft^2	0.0275	ft^3
Lawn	ft^2	0.0208	ft^3

Total Volume Control Credit, Min. Compaction (enter in Table 6) = _____ ft^3

Table 6: Nonstructural BMP Credit Summary

Nonstructural BMP	Storage Volume Credit (ft^3)
Proposed Tree(s)	ft^3
Existing Tree(s)	ft^3
Minimize Compaction	ft^3
Total (enter in Table 2)	**ft^3**

Structrual BMPs

Table 7: Infiltration Trench

Adjusted Required Control Volume, Table 2 (ft^3)	Trench Length (ft)	Trench Width (ft)	Trench Depth (ft)	Trench Volume (ft^3)	Storage Volume Divider	Volume Controlled (ft^3)
ft^3	ft	ft	ft	ft^3	0.4	ft^3

Total Volume Control, Infiltration Trench (enter in Table 10) = _____ ft^3

Table 8: Rain Garden

Adjusted Required Control Volume, Table 2 (ft^3)	Rain Garden Surface Area (ft^2)	Ponding Depth Divider (0.5 ft to 1.0 ft)	Volume Controlled, Surface (ft^3)	Soil Mix Depth (1 ft to 3 ft)	Soil Storage Volume Multiplier	Volume Controlled, Soil (ft^3)
ft^3	ft^2	ft	ft^3	ft	0.3	ft^3

Total Volume Control, Rain Garden (enter in Table 10) = _____ ft^3

Table 9: Dry Well / Seepage Pit

Adjusted Required Control Volume, Table 2 (ft^3)	Dry Well Length (ft)	Dry Well Width (ft)	Dry Well Depth (ft)	Dry Well Volume (ft^3)	Storage Volume Divider	Volume Controlled (ft^3)
ft^3	ft	ft	ft	ft^3	0.4	ft^3

Total Volume Control, Dry Well / Seepage Pit (enter in Table 10) = _____ ft^3

Table 10: Structural BMP Volume Control Summary

Structural BMP	Storage Volume (ft^3)
Infiltration Trench	ft^3
Rain Garden	ft^3
Dry Well / Seepage Pit	ft^3
Total (enter in Table 2)	**ft^3**

Appendix D

Stormwater Management Plan Checklist

STORMWATER MANAGEMENT PLAN (SMP) CHECKLIST

See North Huntingdon Township Stormwater Management Ordinance for complete requirements.

Project Name:_____ Date:_____

Location:_____ Performance District:_____

Owner:_____ Contact Information:_____

SMP Preparer:_____ Contact Information:_____

Submission Requirements

- Application
- Fees, financial guarantees, stormwater management fund
- [x] SMP copies per Article V Section 502.A.
- Erosion and sediment control plan
- Operation and Maintenance (O&M) Agreement
- Municipal notification(s)

General Requirements

Narrative:

- Project description, including Stormwater Management Performance District, existing and proposed features and improvements, soils and limitations, landform, land cover, drainage areas, utilities, proposed stormwater management facilities and BMPs, easements and other information required by the North Huntingdon Township Stormwater Management Ordinance
- Stormwater calculations
- Project schedule
- Construction sequence, including phases if applicable
- Justification for stormwater management facilities and/or BMPs
- O&M requirements and responsible party(s)

Drawing:

- Location map (USGS)
- Stormwater Management Performance District
- Existing natural features
- Soils; and limitations
- Landform; existing and proposed contours at 2-foot intervals, or 5-foot intervals for slopes equal to or greater than 15 percent
- Land cover; existing and proposed improvements
- Drainage areas; existing and proposed
- Utilities; existing and proposed
- Stormwater management facilities and BMPs; existing and proposed
- Easements, including offsite easements for drainage
- Stormwater construction details and sections (as applicable)
- Stormwater construction notes and sequence
- O&M requirements and responsible party(s)