STORMWATER MANAGEMENT ORDINANCE

BOROUGH OF EDGEWOOD
ALLEGHENY COUNTY, PENNSYLVANIA

Ordinance No. 1051

Section 101 - General Provisions

A. Purpose

These regulations have the following general purposes and objectives:

1. To assure safe management of stormwater runoff resulting from land alteration and disturbance activities in accordance with watershed stormwater management plans adopted pursuant to the Pennsylvania Storm Water Management Act (Act 167 of 1978, as amended).

2. To utilize and preserve the existing natural drainage systems and to preserve the flood-carrying capacity of streams.

3. To encourage natural infiltration of rainfall to preserve groundwater supplies and stream flows.

4. To provide for adequate maintenance of all permanent stormwater management structures in the Borough of Edgewood (Borough).

5. Provide review procedures and performance standards for stormwater planning and management.

6. Manage stormwater impacts close to the runoff source, which requires a minimum of structures and relies on natural processes.

7. Maintain existing flows and quality of streams and watercourses.

B. Liability Disclaimer

1. Neither the granting of any approval under the provisions of this Article, nor the compliance with the provisions of this Article, or with any condition imposed by an official of the Borough of Edgewood, hereunder, shall relieve any person from any responsibility for damage to persons or property resulting there from, or as otherwise imposed by law, nor impose any liability upon the Borough of Edgewood for damages to persons or property.

2. The granting of a permit which includes any stormwater management facilities shall not constitute a representation, guarantee or warranty of any kind by the Borough of Edgewood, 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.

C. Statement of Findings

1. Inadequate management of accelerated runoff of stormwater resulting from development and redevelopment increases flows and velocities which causes erosion and sedimentation, overtaxes the carrying capacity of streams, channels and storm sewers, increases the cost of public facilities to carry and control stormwater, reduces groundwater recharge, and increases nonpoint source pollution of water resources.

2. A comprehensive program of stormwater management, including reasonable regulation of development, redevelopment, and other activities causing accelerated runoff, is fundamental to the public health, safety, and welfare and the protection of people of the Commonwealth, their resources, and the environment.

3. Stormwater is an important water resource, which provides groundwater recharge for water supplies and base flow of streams, which also protects and maintains surface water quality.

4. Federal and state regulations require that the Borough implement a program of stormwater controls and obtain a permit for stormwater discharges from its separate storm sewer system under the National Pollutant Discharge Elimination System (NPDES).

D. Statutory Authority

1. Primary Authority:

   a. The Borough is empowered to regulate these activities by the authority of the Act of October 4, 1978, P.L. 864 (Act 167), 32 P.S. Section 680.I, et seq., as amended, the "Storm Water Management Act" and the (appropriate municipal code).

2. Secondary Authority:

   a. The Borough also is empowered to regulate land use activities that affect runoff by the authority of the Act of July 31, 1968, P.L. 805, No. 247, The Pennsylvania Municipalities Planning Code, as amended.

E. Applicability

All regulated activities and all activities that may affect stormwater runoff, including land development, redevelopment, and earth disturbance activities, are subject to regulation by this Ordinance. This includes any activities that change the cover of the land, including the runoff coefficient of the land surface.

F. Repealer

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

G. Severability

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

H. Compatibility with Other Ordinances

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.

Section 102 - Stormwater Management Performance Standards

A. Stormwater Management Districts

1. For purposes of stormwater management, the Borough of Edgewood is located in the following stormwater management district:

Monongahela River Watershed

This district is subdivided into subareas which have similar hydrological characteristics and drain to a common point.

2. The location and boundaries of the watershed(s) and subareas are shown on the "Municipal Stormwater Management District Map" which is hereby adopted as a part of this section and located in Appendix A.

B. General Standards

1. All proposed stormwater control measures shall be evaluated according to the following performance standard:

a. 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. Such measures shall include such actions as are required:

(1) To assure that the maximum rate of stormwater runoff is no greater after development than prior to development activities; or

(2) To manage the quantity, velocity and direction of resulting stormwater runoff in a manner which otherwise adequately protects health and property from possible injury.

2. The stormwater management plan for the development site shall consider all the stormwater runoff flowing over the site.

3. No discharge of toxic materials shall be permitted into any stormwater management system. Where required by federal and state regulation, the landowner or developer shall be responsible for obtaining and NPDES permit for stormwater discharges.

4. SWM Site Plans approved by the municipality shall be on site throughout the duration of the regulated activity.

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

6. For all regulated earth disturbance activities, erosion and sediment control BMPs shall be designed, implemented, operated, and maintained during the regulated earth disturbance activities (e.g., during construction) to meet the purposes and requirements of this Ordinance and to meet all requirements under Title 25 of the Pennsylvania Code and the Clean Streams Law. Various BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual* (E&S Manual) 2, No. 363-2134-008 (April 15, 2000), as amended and updated.

7. For all regulated activities, implementation of the volume controls is required.

8. Impervious areas:

a. The measurement of impervious areas shall include all of the impervious areas in the total proposed development even if development is to take place in stages.

b. For development taking place in stages, the entire development plan must be used in determining conformance with this Ordinance.

c. For projects that add impervious area to a parcel, the total impervious area on the parcel is subject to the requirements of this Ordinance.

9. Stormwater flows onto adjacent property shall not be created, increased, decreased, relocated, or otherwise altered without written notification of the adjacent property owner(s). Such stormwater flows shall be subject to the requirements of this Ordinance.

10. To the maximum extent practicable, incorporate the techniques for Low Impact Development Practices described in the *Pennsylvania Stormwater Best Management Practices Manual* (BMP Manual).

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

12. Facilities, areas, or structures used as Stormwater Management BMPs shall be enumerated as permanent real estate appurtenances and recorded as deed restrictions or conservation easements that run with the land.

    Storage facilities should completely drain both the volume control and rate control capacities over a period of time not less than 24 and not more than 72 hours from the end of the design storm.

13. In conjunction with meeting the requirements of the ordinance, the Applicant shall refer to and meet all conditions and requirements set forth in the Borough of Edgewood's Municipal Separate Storm Sewer System (MS4) Prohibited Discharge Ordinance.

14. In conjunction with meeting the requirements of the ordinance, the Applicant shall refer to and meet all conditions and requirements set forth in the Borough of Edgewood's Total Maximum Daily Load (TMDL) Plan as adopted and revised.

C. Watershed Standards: Designated Monongahela River Stormwater Management Watershed

1. The stormwater performance standards contained in this section are intended to implement the standards and criteria contained in the Monongahela River Stormwater Management Plan (Plan), adopted and approved in accordance with

the Pennsylvania Storm Water Management Act. If there is any discrepancy between the provisions of this section and the standards and criteria of the Plan, or if the watershed Plan is subsequently amended, then the standards/criteria of the current watershed Plan shall govern.

2. Storm Frequencies. Stormwater management facilities on all development sites shall control the peak stormwater discharge for the 1-, 2-, 10-, 25-, 50-, and 100-year storm frequencies. The SCS 24-hour, Type II Rainfall Distribution shall be used for analyzing stormwater runoff for both pre- and post-development conditions. The 24-hour total rainfall for these storm frequencies in the watershed are:

Storm Frequency	Rainfall Depth (inches)
1-Year	1.97
2-Year	2.50
10-Year	3.61
25-Year	4.31
50-Year	4.40
100-Year	5.71

3. Calculation Methods

a. Development Sites: For the purpose of computing peak flow rates and runoff hydrographs from development sites, calculations shall be performed using one of the following: SCS publications, Technical Release (TR) 55 or 20, HEC I, Penn State Runoff Model (PSRM) or Modified Rational Method.

b. Stormwater Collection/Conveyance Facilities: For the purposes of designing storm sewers, open swales and other stormwater runoff collection and conveyance facilities, the Rational Method shall be applied. Rainfall intensities for design should be obtained from the Pennsylvania Department of Transportation rainfall charts.

c. Routing of hydrographs through detention/retention facilities for the purpose of designing those facilities shall be accomplished using the Modified-Puls Method or other recognized reservoir routing method subject to the approval of the Borough.

d. Predevelopment Conditions: Predevelopment conditions shall be assumed to be those which exist on any site at the time of adoption of the

Monongahela River Stormwater Management Plan. Hydrologic conditions for all areas with pervious cover (i.e., fields, woods, lawn areas, pastures, cropland, etc.) shall be assumed to be in "good" condition, and the lowest recommended SCS runoff curve number (CN) shall be applied for all pervious land uses within the respective range for each land use and hydrologic soil group.

4. Release Rate Percentage

a. Definition. The release rate percentage defines the percentage of the pre-development peak rate of runoff that can be discharged from an outfall on the site after development. It applies uniformly to all land development or alterations within a subarea. A listing of the release rate percentage by subarea appears in Appendix B of this Ordinance; the subareas are delineated on the Release Rate Percentage Map.

b. Procedure for Use

(1) Identify the specific subarea in which the development site is located from the watershed map and obtain the subarea release rate percentage from Appendix B and the Release Rate Percentage Map.

(2) Compute the pre- and post-development runoff hydrographs for each stormwater outfall on the development site using an acceptable calculation method for the 1-, 2-, 10-, 25-, 50- and 100-year storms. Apply no on-site detention for stormwater management but include any techniques to minimize impervious surfaces and/or increase the time of concentration for stormwater runoff flowing from the development site. If the post- development peak runoff rate and the runoff volume are less than or equal to the predevelopment peak runoff rate and volume, then additional stormwater control shall not be required at that outfall.

If the post-development peak runoff rate and volume are greater than the predevelopment peak runoff rate and volume, then stormwater detention shall be required. The capacity of the detention facility shall be calculated by be calculated multiplying the subarea release rate percentage by the predevelopment rate of runoff from the development site to determine the maximum allowable release rate from any detention facility for the four prescribed storm events.

5. No Harm Evaluation

a. An applicant may seek to exceed the otherwise applicable subarea release rate percentage by performing the "No Harm Evaluation". This evaluation requires an independent engineering analysis to demonstrate that other reasonable options exist to prevent the occurrence of increased stormwater runoff discharge rates and/or velocities or that measures can be provided to prevent increased stormwater discharge rates and/or velocities from increasing flood elevations and accelerating erosion at all downstream points in the watershed.

b. A "No Harm Evaluation" will be considered only in the following instances:

(1) In the Monongahela River Watershed: only in instances where the discharge to a stream channel from the development site occurs directly to the Monongahela River, an adequately sized storm or combined sewer which discharges directly into the Monongahela River, or through a properly sized and designed regional stormwater detention facility.

c. The analysis for the no-harm evaluation shall be submitted to the Borough of Edgewood and Allegheny County Planning Department for review and approval.

d. The "No Harm Evaluation" shall be prepared by a registered engineer who is experienced in hydrology and hydraulics and is licensed in the Commonwealth of Pennsylvania. The "No Harm Evaluation" analysis shall be completed using the following procedure:

e. The analysis shall be completed using the Penn State Runoff Model (PSRM) in the following manner:

(1) Develop the runoff hydrograph(s) for the design storms of the site and areas tributary to it using the PSRM for pre-development conditions using the land use characterizations contained in the Monongahela River Watershed Stormwater Management Plan.

(2) Develop the post-development discharge hydrograph from the proposed site using the PSRM. If no management or controls are proposed, this would be equivalent to the runoff hydrograph under the post-development conditions. If some management or controls are proposed, then the runoff hydrograph under post- development conditions should be modified to reflect their effects on the rate, volume and timing of discharges.

(3) Subtract the runoff hydrograph ordinates under pre-development conditions (step 1) from the discharge hydrograph ordinates (step 2) maintaining the time scales of both hydrographs for one-to-one correspondence.

(4) Obtain the PSRM for the existing conditions for the Monongahela River Watershed from the County of Allegheny.

(5) Locate the subbasin(s) in which the proposed development is located and into which the discharge hydrograph enters. If more than one subbasin receives this incremental flow, divide the flow accordingly.

(6) Add the incremental increase computed in step 3 to the runoff hydrograph of the subbasin(s) identified in step 5.

(7) Route the adjusted runoff hydrograph through the Monongahela River Watershed PSRM and note any increase in peak flows which would occur in downstream subbasins. If no increase is noted, then the "No-Harm" has been demonstrated. If no increase is observed in peak flows, the increased potential for erosion and/or sedimentation in downstream channels resulting from any change in the flood hydrograph predicted by the model shall be evaluated. If no increased potential can be demonstrated by appropriated technical means, then the "No-Harm" exemption may be requested.

(8) If an increase in peak flow is observed in any of the downstream subbasins or increased potential for erosion and/or sedimentation is indicated, the "No-Harm" exemption shall not be granted.

6. Volume Controls

a. The low impact development practices provided in the BMP Manual[1] shall be utilized for all regulated activities to the maximum extent practicable. Water volume controls shall be implemented using the *Design Storm Method* in Subsection A or the *Simplified Method* in Subsection B below. For regulated activity areas equal or less than I acre that do not require hydrologic routing to design the stormwater facilities, this Ordinance establishes no preference for either methodology; the Applicant may select either methodology on the basis of economic considerations, the intrinsic limitations on applicability of the analytical procedures associated with each methodology, and other factors.

(1) Do not increase the post-development total runoff volume for all storms equal to or less than the 2-year 24-hour duration precipitation.

(2) For modeling purposes:

i. Existing (predevelopment) non-forested pervious areas must be considered meadow or its equivalent.

ii. 20% of existing impervious area, when present, shall be considered meadow in the model for existing conditions.

b. The *Simplified Method* (CG-2 in the BMP Manual [1] provided below is independent of site conditions and should be used if the *Design Storm Method* is not followed. This method is not applicable to regulated activities greater than I acre or for projects that require design of stormwater storage facilities. For new impervious surfaces:

(1) Stormwater facilities shall capture at least the first 2 inches of runoff from all new impervious surfaces.

(2) At least the first 1 inch of runoff from new impervious surfaces shall be permanently removed from the runoff flow--i.e., it shall not be released into the surface waters of this Commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.

(3) Wherever possible, infiltration facilities should be designed to accommodate infiltration of the entire permanently removed runoff; however, in all cases at least the first 0.5 inch of the permanently removed runoff should be infiltrated.

7. Rate Controls

a. Post-development discharge rates shall not exceed the predevelopment discharge rates for the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year storms. If it is shown that the peak rates of discharge indicated by the post-development analysis are less than or equal to the peak rates of discharge indicated by the predevelopment analysis for 1-, 2-, 5-, 10-, 25-, 50-, and 100-year, 24-hour storms, then the requirements of this section have been met. Otherwise, the Applicant shall provide additional controls as necessary to satisfy the peak rate of discharge requirement.

Section 103 - Design Criteria for Stormwater Management Controls

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. All controls shall be subject to the review of the Borough Engineer and approval of the Borough. The Borough 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. 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 Borough may require the developer and/or owner to provide in-depth studies by a competent geotechnical engineer. Not all stormwater control methods may be advisable or allowable at a particular development site.

3. In developing a stormwater management plan for a particular site, stormwater controls shall be selected according to the following order of preference:

   a. infiltration of runoff on-site
   b. flow attenuation by use of open vegetated swales and natural depressions
   c. stormwater detention/retention structures

4. Infiltration practices shall be used to the extent practicable to reduce volume increases and promote groundwater recharge. A combination of successive practices may be used to achieve the applicable minimum control requirements. Justification shall be provided by the applicant for rejecting each of the preferred practices based on actual site conditions.

B. Criteria for Infiltration Systems

1. Infiltration systems shall be sized and designed based upon local soil and ground water conditions.

2. Infiltration systems greater than three (3) feet deep shall be located at least ten (10) feet from basement walls.

3. Infiltration systems shall not be used to handle runoff from commercial or industrial working or parking areas. This prohibition does not extend to roof areas which are demonstrated to be suitably protected from the effects of the commercial/industrial activities.

4. Infiltration systems may not receive runoff until the entire drainage area to the system has received final stabilization.

5. The stormwater infiltration facility design shall provide an overflow system with measures to provide a non-erosive velocity of flow along its length and at the outfall.

C. Criteria for Flow Attenuation Facilities

1. If flow attenuation facilities are employed to assist in the control of peak rates of discharge, their effects must be quantified using the SCS Technical Release (TR) 55 Urban Hydrology for Small Watersheds or other approved method. The effects of the flow attenuation facilities on travel time should be reflected in the calculations.

2. Flow attenuation facilities such as swales and natural depressions should be properly graded to ensure positive drainage and avoid prolonged ponding of water.

3. Swales shall be properly vegetatively stabilized or otherwise lined to prevent erosion.

4. Swales shall be designed according to the recommendations contained in the Commonwealth of Pennsylvania Erosion and Sediment Pollution Control Program Manual.

D. Criteria for Stormwater Detention Facilities

1. If detention facilities are utilized for the development site, the facility(ies) shall be designed such that post-development peak runoff rates from the developed site are controlled to those rates defined by the subarea release rate percentage for the 1-, 2-, 10-, 25-, 50-, and 100-year storm frequencies.

2. All detention facilities shall be equipped with outlet structures to provide discharge control for the four (4) designated storm frequencies. Provisions shall also be made to safely pass the post-development 100-year storm runoff without damaging (i.e., impairing the continued function of the facilities). Should any stormwater management facilities qualify as a dam under PA DEP Chapter 105, the facility shall be designed in accordance with those regulations and meet the regulations concerning dam safety.

3. Shared-storage facilities which provide detention of runoff for more than one development site within a single subarea are encouraged wherever feasible and provided such facilities 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.

4. Where detention facilities will be utilized, multiple use facilities, such as wetlands, lakes, ball fields or similar recreational/open space uses are encouraged wherever feasible, subject to the approval of the Borough of Edgewood and Pennsylvania Department of Environmental Protection's (PA DEP) Chapter 105 regulations.

5. Other considerations which should be incorporated into the design of the detention facilities include:

   a. Inflow and outflow structures shall be designed and installed to minimize erosion, 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 all inlet or outlet devices shall be a design consideration.

   c. Inflow and outflow structures, pumping stations, and other structures shall be designed and protected to minimize safety hazards.

   d. The water depth at the perimeter of a storage pond should be limited to that which is safe for children. This is especially necessary if bank slopes are steep or if ponds are full and re-circulating in dry periods. Restriction of access (fence, walls, etc.) may be necessary depending on the location of the facility.

   e. Side slope of storage ponds shall not exceed a ration of two-and-one-half to one (2.5:1) horizontal to vertical dimension.

   f. Landscaping shall be provided for the facility which harmonizes with the surrounding area.

   g. Facility shall be located to facilitate maintenance, considering the frequency and type of equipment that will be required.

E. 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 sites shall be graded to provide drainage away from and around the structure in order to prevent any potential flooding damage.

b. Lots located on the high side of streets shall extend roof and French drains to the curb line storm sewer (if applicable). Low side lots shall extend roof and French drains to a stormwater collection/conveyance/control system or natural watercourse in accordance with the approved stormwater management plan for the development site.

c. Collection/conveyance facilities should not be installed parallel and close to the top or bottom of a major embankment to avoid the possibility of failing or causing the embankment to fail.

d. 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, storm sewer or natural watercourse.

e. Where drainage swales or open channels are used, they shall be suitably lined to prevent erosion and designed to avoid excessive velocities.

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

a. Where practical, designed to traverse under seeded and planted areas. If constructed within ten (10) feet of road paving, walks or other surfaced areas, drains shall have a narrow trench and 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 the drain is installed in the original ground with a minimum of three (3) feet cover and/or adequate protection during the fill construction.

c. Landscaping shall be provided for the facility which harmonizes with the surrounding area. At no time will the instillation of woody vegetation be permitted on a constructed embankment of a Stormwater Management Facility.

d. Designed: (1) with cradle when traversing fill areas of indeterminate stability, (2) with anchors when gradient exceeds twenty (20) percent, (3) stone bedding as appropriate to pipe material selected, and (4) with encasement or special backfill (100% stone backfill) requirements when traversing under a paved area.

e. Designed to adequately handle the anticipated stormwater flow by containing the hydraulic gradeline for the peak flow within the pipe, and be economical to construct and maintain. The minimum pipe size shall be fifteen (15) inches in diameter. Submit full hydraulic computations for all

pipe segments documenting hydraulic and energy gradelines for the design storm peak flow rate.

f. Drain pipe, trenching, bedding and backfilling requirements shall conform to the requirements of the Borough of Edgewood and applicable PennDOT Specifications, Form 408.

g. Pipe within a Borough right-of-way shall be reinforced concrete pipe with a minimum diameter of 15 inches. Pipe located outside the Borough right-of-way shall be constructed with either reinforced concrete pipe, polymer coated, fully lined corrugated metal pipe, or smooth lined corrugated polyethylene pipe.

h. Storm inlets and structures shall be designed to be adequate, safe, self-cleaning and unobtrusive and consistent with the Borough of Edgewood standards and applicable PennDOT Specifications, Form 408.

i. Appropriate grates shall be designed for all catch basins, stormwater inlets and other entrance appurtenances. All grates shall be bicycle safe grates and conform to the PennDOT Roadway Construction Drawings.

j. Manholes shall be designed so that the top shall be at finished grade and sloped to conform to the slope of the finished grade. Top castings of structures located in roads or parking areas shall be machined or installed to preclude "rattling."

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

l. Storm sewer outfalls shall be equipped with energy dissipation devices to prevent erosion and conform with applicable requirements of the PA DEP for stream encroachments (Chapter 105 of PA DEP Rules and Regulations).

Section 104 - Erosion and Sedimentation Controls

A. A Soil Erosion and Sedimentation Control Plan shall be prepared for each development site in accordance with the Pennsylvania Erosion/Sedimentation Regulations (25 PA Code, Chapter 102), the standards and guidelines of the Allegheny County Conservation District, and the Borough of Edgewood standards.

B. Proposed erosion/sedimentation measures shall be submitted with the stormwater management plan as part of the applicant's preliminary and final plans. A copy of the

approved erosion and sedimentation control plan shall be available at the project site at all times.

C. The plan should show the type, location, and application of the proposed erosion/sedimentation control measures (BMPs), and include the calculations and criteria used in designing them.

D. Some of the guides to be followed in designing the erosion/sedimentation measures (BMPs) include:

E. Smallest practicable area of soil should be exposed at any one time during construction, and exposure should be limited to the shortest practicable period of time.

F. Temporary ditches, dikes, vegetation, and/or mulching shall be used to protect critical areas exposed during development.

G. Sediment basins (debris basins, desilting basins, or silt traps) shall be installed and maintained to remove sediment from runoff waters from land undergoing development.

H. Wherever possible, temporary BMPs should be designed to serve as part of a site's permanent stormwater management control system

Section 105 - Maintenance of Stormwater Management Controls

A. Maintenance Responsibilities

1. The maintenance plan for stormwater management facilities located on the development site shall establish responsibilities for the continuing operation and maintenance of all proposed stormwater control facilities, consistent with the following principals:

   a. 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 Borough, stormwater control facilities should also be dedicated to the Borough.

   b. If a development site is to be maintained in single ownership or if sewers and other public improvements are to be privately owned and maintained, then the ownership and maintenance of stormwater control facilities shall be the responsibility of the owner or private management entity.

2. The Borough shall make the final determination on the continuing maintenance responsibilities prior to final approval of the stormwater management plan. The Borough reserves the right to reject the ownership and operating responsibility for any or all of the stormwater management controls.

B. Maintenance Agreement for Privately Owned Stormwater Facilities

1. Prior to final approval of the site's stormwater management plan the applicant and Borough shall execute a maintenance agreement covering all stormwater control facilities which are to be privately owned. The maintenance agreement shall be recorded with the final subdivision/land development plan for the site. The agreement shall stipulate that:

   a. All facilities shall be maintained in accordance with the approved maintenance schedule and in a safe and attractive manner.

   b. Easements and or rights-of-way shall be conveyed to the Borough to assure access for periodic inspections by the Borough, and maintenance, if required.

   c. The name, address and telephone number of the person or company responsible for maintenance activities shall be filed with the Borough prior to final approval of the stormwater management plan. If this information changes, the new information shall be submitted to the Borough within ten (10) days of the change.

   d. If the facility owner fails to maintain the stormwater control facilities, the Borough may perform the necessary maintenance work or corrective work following due notice by the Borough to the facility owner to correct the problem(s). The facility owner shall reimburse the Borough for all costs and expenses incurred by the Borough.

2. Other items may be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities.

Section 106 - Stormwater Plan Requirements

A. General Requirements

1. No final subdivision/land development plan shall be approved, no permit authorizing construction issued, or any earth moving or land disturbance activity initiated until the final stormwater management plan for the development site is approved in accordance with the provisions of this Ordinance.

B. Exemptions for Small Developments

1. At the time of application, the Borough shall determine if the subdivision/land development qualifies as a "small development" and, therefore, is eligible for a simplified stormwater plan submission. For the purposes of this Ordinance, a small development is any subdivision or land development which results in (or

will result when fully constructed) the creation of 5,000 or less square feet of impervious surface area.

2. Applications for small developments shall include a plan which describes the type and location of proposed on-site stormwater management techniques or the proposed connection to an existing storm sewer system. The plan should show accurately site boundaries, five-foot interval contours, locations of watershed and/or subarea boundaries on the site (if applicable) and any watercourses, floodplains, or existing drainage facilities or structures located on the site. The Borough shall require that the plan be prepared by a registered professional engineer, surveyor or landscape architect.

3. The Borough Engineer shall review and the Borough of Edgewood shall approve the proposed provisions for stormwater management in accordance with the standards and requirements of this ordinance.

   Agricultural and Silviculture use of lands when operated in accordance with a farm conservation plan approved by the local soil conservation district or when it is determined by the local soil conservation district that such use will not cause excessive erosion and sedimentation.

4. For a parcel or tract of land held under single ownership, only one application for a small development, as defined above, shall be permitted before requiring a stormwater management plan for the entire parcel. A project cannot be phased to circumvent the stormwater requirements by using the exemption for small developments.

5. Stormwater management plans for small developments do not have to be prepared by a registered professional engineer or land surveyor. Whenever the submission of runoff calculations are required by the Borough Engineer, they shall be prepared.

C. Stormwater Plan Contents

1. General Format: The stormwater plan shall be drawn to a scale of not less than 1 inch = 200 feet. All sheets shall contain a title block with; name and address of the applicant and the engineer who prepared the plan, graphic scale, north arrow, legend and date of preparation.

2. Existing and Proposed Features: The plan shall show the following:

   a. Watershed Location: Provide a key map 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 names(s) and subarea number(s).

b. Floodplain Boundaries: Identify the 100-year floodplains on the development site (as appropriate) based on the Borough of Edgewood's Flood Insurance Study maps.

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 county, 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 fifteen (15) percent, five (5) foot contour intervals may be used.

f. Land Cover: Show existing and final land cover classifications as necessary to support and illustrate the runoff calculations performed.

g. Drainage Area Delineations: Show the boundaries of the drainage areas employed in the runoff calculations performed.

h. Stormwater Management Controls: Show any existing stormwater management or drainage controls and/or structures, such as sanitary and storm sewers, swales, culverts, etc. which are located on the development site, or which are located off- site but will be affected by runoff from the development.

3. Professional Certification: The stormwater management plan (including all calculations) shall be prepared and sealed by a registered professional engineer with training and expertise in hydrology and hydraulics. Documentation of qualifications may be required by the Borough.

4. Runoff Calculations: Calculations for determining pre- and post- development discharge rates and for designing proposed stormwater control facilities must be submitted with the stormwater management plan. All calculations shall be prepared using the methods and data prescribed by Section 102 of this Article.

5. Stormwater Controls: All proposed stormwater runoff control measures must be shown on the plan including methods for collecting, conveying and storing stormwater runoff on-site, which are to be used both during and after construction. Erosion and sedimentation controls shall be shown in accordance with Section 104 of this Article. The plan 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 submitted.

c. If appropriate, a justification should be submitted as to why any preferred stormwater management techniques, as listed in Section 103, are not proposed for use.

6. Easements. Rights-of-Way, Deed Restrictions: All existing and proposed easements and rights-or-way for drainage and/or access to stormwater control facilities shall be shown along with any areas subject to special deed restrictions relative to or affecting stormwater management on the development site.

a. If a conservation easement is provided the long term ownership, access, maintenance, and use restrictions must be identified on the recording plan.

7. Other Permits/Approvals: A list of any approvals/permits relative to stormwater management that will be required from other governmental agencies (PA DEP Chapter 105 and 106 permits and/or NPDES permit) and anticipated dates of submission/receipt should be included with the stormwater plan submission. Copies of permit applications may be requested by the Borough.

8. Maintenance Program: The proposed maintenance plan for all stormwater control facilities shall:

a. Identify the proposed ownership entity (e.g., municipality, property owner, private corporation, homeowner's association, or other entity).

b. Identify the type of maintenance, probable frequencies, personnel and equipment requirements and estimated annual maintenance costs.

c. Provide verification of financial responsibility for continuing operation and maintenance if the facility is to be owned by other than a governmental agency.

d. Include copies of legal agreements relating to financial responsibility required to implement the maintenance program and, if applicable, copies of the maintenance agreement as required by Section 105 of this Article.

9. Financial Guarantees: Submit financial guarantees in accordance with the provisions of Section 111 of this Article.

Section 107 - Plan Review Procedures

A. Pre-Application Phase

1. Before submitting the stormwater plan, applicants are urged to consult with the Borough of Edgewood, Allegheny County Planning Department and Allegheny County Conservation District on the applicable regulations and techniques for safely managing the development site. These agencies may also be helpful in providing necessary data for the stormwater management plan.

2. Applicants are encouraged to submit a sketch plan with a narrative description of the proposed stormwater management controls for general guidance and discussion with the Borough of Edgewood and other agencies.

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

B. Stormwater Plan Reviews

1. Submission of plans: Stormwater plan applications shall be submitted with the preliminary and final subdivision/land development applications.

2. Notification of affected municipalities: The applicant shall notify municipalities upstream and downstream of the development site, which may be affected by the stormwater runoff and proposed controls for the site. The applicant shall provide documentation to the Borough that they have notified each upstream and downstream municipality. Copies of the plans will be made available to the upstream and downstream municipalities upon request. Comments received from any affected municipality will be considered by the Borough of Edgewood and county agencies in their reviews.

3. Allegheny County Planning Department Review:

a. The Borough shall forward a copy of the stormwater plan, along with all runoff calculations to the Allegheny County Planning Department. A report of the findings will be returned to the Borough within 30 days.

b. If the Allegheny County Planning Department determines that the plan fails to comply with the watershed standards and criteria or that a possibility exists for harmful downstream impacts from the development site, the applicant will be advised so that proposed stormwater management controls can be modified. The Borough shall not approve the

development site's stormwater management plan until it receives a positive review from the Allegheny County Planning Department.

4. Municipal Engineer's Review: The Borough Engineer shall review the stormwater management plan based on the requirements of the Borough Ordinances. The engineer shall submit a written report regarding their review of the stormwater management plan.

5. Status of the Borough of Edgewood's Determination: The approval/disapproval of the site's stormwater management plan by the Borough of Edgewood shall be considered final. The applicant may request modifications or alternative approaches to the stormwater management controls, provided these are agreed to by the Borough of Edgewood and the applicant's engineer.

6. Permits Required from Other Governmental Agencies: Where the proposed development requires an obstruction permit from the PA DEP or an erosion/sedimentation permit from the Allegheny County Conservation District, final stormwater management plan approval may be granted subject to the receipt of such permits. No building permit shall be issued, nor construction started, until the permits are received and copies filed with the Borough.

Section 108 - Status of the Stormwater Plan after Final Approval

A. Upon final stormwater plan approval and receipt of all necessary permits, the applicant may commence to install or implement the approved stormwater management controls.

B. If site development or building construction does not begin within five years of the date of final approval of the stormwater management plan, then before doing so, the applicant shall resubmit the stormwater management plan to verify that no condition has changed 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 five years or more, then the same requirement for resubmission of the stormwater management plan shall apply.

C. Post-Construction Stormwater Record Plan.

1. Prior to issuance of an Occupancy Permit or utilization of the proposed improvements the Applicant must provide the Borough a copy of a recorded post-constructed stormwater management plan and the proof of recording for any project containing stormwater management facilities including storm sewers and BMP's.
2. The owner shall provide a digital file, on state plain coordinate system, of the location of all BMP's constructed on the property.

Section 109 - Stormwater Plan Modifications

A. If the request for a plan modification is initiated before construction begins, the stormwater plan must be resubmitted and reviewed according to the procedures contained in Section 107 above.

B. If the request for a plan modification is initiated after construction is underway, the Borough of Edgewood shall have the authority to approve or disapprove the modification based on field review provided: (1) the requested changes in stormwater controls do not result in any modifications to other approved Borough land use/development requirements (e.g., building setbacks, yards, etc.) and (2) the performance standards in Section 102 are met. Notification of the Borough of Edgewood's action shall be sent to the applicant. The Borough may require the applicant to resubmit the plan modification for full stormwater plan review in accordance with Section 107 above.

Section 110 - Inspections of Stormwater Management Controls

A. The Borough Engineer or a designated representative may field review the construction of the temporary and permanent stormwater management system for the development site. The applicant shall notify the Borough Engineer no less than 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 and erosion 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 at such times as specified by the Borough.

4. Completion of permanent stormwater management facilities 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 plan and permit.

B. 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 Borough of Edgewood shall issue a written description of the required corrections and stipulate the time by which they must be made.

C. If during construction, the contractor or permittee identifies a site condition, such as subsurface soil conditions, alterations in surface or subsurface drainage which could

affect the feasibility of the approved stormwater facilities, they shall notify the Borough within 24 hours of the discovery of such condition and request a field meeting. The Borough of Edgewood shall determine if the condition requires a stormwater plan modification.

D. In cases where stormwater facilities are to be installed in areas of landslide-prone soils or other special site conditions exist, the Borough may require special precautions such as soil tests and core borings, full-time resident representative services and/or similar measures. All costs of any such measures shall be borne by the permittee.

Section 111 - Financial Guarantees and Dedication of Public Improvements

A. Guarantee of Completion: A completion guarantee in the form of a bond, cash deposit, certified check or other negotiable securities acceptable to the Borough, shall be filed. The guarantee shall cover all streets, sanitary sewers, stormwater management facilities, water systems, fire hydrants, sidewalks and other required improvements; it shall be in the amount and form prescribed by the Municipal Planning Code (Section 509).

B. Release of Completion Guarantee: The procedures for requesting and obtaining a release of the completion guarantee shall be in a manner prescribed by the Municipalities Planning Code (Section 510).

C. Default of Completion Guarantee: If improvements are not installed in accordance with the approved final plan, the governing body may enforce any corporate bond or other 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 governing body may at its option install 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 municipal purpose.

D. Dedication of Public Improvements:

1. When streets, sanitary sewers, stormwater management facilities, water lines or other required improvements in the development have been completed in accordance with the final approved plan, such improvements shall be deemed private until such time as they have been offered for dedication to the Borough and accepted by separate ordinance or resolution or until they have been condemned for use as a public facility.

2. Prior to acceptance of any improvements or facilities, the Borough Engineer may field review to assure that it is constructed in accordance with the approved plan.

3. The owner shall submit as-built plans for all facilities proposed for dedication. In the case of any stormwater control facility, it must be free of sediment and debris.

E. Maintenance Guarantee: Prior to acceptance of any improvements or facilities, the applicant shall provide a financial security to secure the structural integrity and functioning of the improvements. The security shall: (1) be in the form of a bond, cash, certified check or other negotiable securities acceptable to the Borough, (2) be for a term of 18 months, and (3) be in an amount equal to 15 percent of the actual cost of the improvements and facilities proposed for dedication.

Section 112 - Fee Schedule

A. The Borough of Edgewood may adopt by resolution from time to time a reasonable schedule of fees to cover the cost of plan reviews, inspections and other activities necessary to administer the provisions of this Ordinance. All fees shall be set in accordance with the applicable provisions of the Municipalities Planning Code and any dispute over the fee amount shall be resolved in the manner prescribed by the Municipalities Planning Code.

B. The review fee may include, but not be limited to, costs for the following:

1. Administrative/clerical processing.

2. Review of the SWM Site Plan by the Borough Engineer and any consultants that he may deem necessary to provide a full and complete technical review of the Plan.

3. Attendance at meetings.

4. Inspections.

5. Legal Fees incurred by the Borough, the Borough Solicitor, recording fees, and review of legal documents.

Section 113 - Enforcement Procedures and Remedies

A. Right-of-Entry: Upon presentation of proper credentials, duly authorized representatives of the Borough of Edgewood may enter at reasonable times upon any property to investigate or ascertain the condition of the subject property in regard to an aspect regulated by this Ordinance.

B. Notification: 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 violations(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 Borough, the applicant, developer, owner or his/her agent shall be subject to the enforcement remedies of this Ordinance.

C. Preventive Remedies:

1. In addition to other remedies, the Borough 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.

2. In accordance with the Municipalities Planning Code (Sec. 515.1), the Borough may refuse to issue any permit or grant approval to further improve or develop any property which has been developed in violation of this chapter.

D. Enforcement Remedies:

1. Any person, who has violated or permitted the violation of the provisions of this Ordinance shall, upon being found liable therefore in a civil enforcement proceeding commenced by the Borough of Edgewood, pay a fine of not less than $50.00 and not more than $500.00 plus court costs, including reasonable attorney fees incurred by the Borough. No judgment shall commence or be imposed, levied or be payable until the date of the determination of a violation by the District Justice.

2. If the defendant neither pays nor timely appeals the judgment, the Borough may enforce the judgment pursuant to applicable rules of civil procedure.

3. Each day that a violation continues shall constitute a separate violation unless the District Justice further determines that there was a good faith basis for the person violating the 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 a violation; thereafter each day that a violation continues shall constitute a separate violation.

4. All judgments, costs and reasonable attorney fees collected for the violation of this Ordinance shall be paid over to the Borough of Edgewood.

5. 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.

6. Nothing contained in this section shall be construed or interpreted to grant to any person or entity other than the Borough of Edgewood the right to commence any action for enforcement pursuant to this section.

E. Additional Remedies: In addition to the above remedies, the Borough of Edgewood may also seek remedies and penalties under applicable Pennsylvania statutes, or regulations adopted pursuant thereto, including but not limited to the Storm Water Management Act (32 P.S. Section 693.1-693.27) and the Erosion and Sedimentation Regulations (25 Pennsylvania Code, Chapter 102). Any activity conducted in violation of this Ordinance or any Pennsylvania approved watershed stormwater management plan may be declared a public nuisance by the Borough of Edgewood and abatable as such.

F. Suspension and Revocation

1. Any approval or permit issued by the Borough pursuant to this Ordinance may be suspended or revoked for:

   a. Non-compliance with or failure to implement any provision of the approved SWM Site Plan or O&M Agreement.

   b. A violation of any provision of this Ordinance or any other applicable law, ordinance, rule, or regulation relating to the regulated activity.

   c. The creation of any condition or the commission of any act during the regulated activity which constitutes or creates a hazard, nuisance, pollution, or endangers the life or property of others.

2. A suspended approval may be reinstated by the municipality when:
   a. The Borough has inspected and approved the corrections to the violations that caused the suspension.

   b. The Borough *is* satisfied that the violation has been corrected

3. An approval that has been revoked by the Borough cannot be reinstated. The Applicant may apply for a new approval under the provisions of this Ordinance.

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

G. Appeals

1. Any person aggrieved by any action of the Borough or its designee, relevant to the provisions of this Ordinance, may appeal to the Borough within 30 days of that action.
2. Any person aggrieved by any decision of the Borough, relevant to the provisions of this Ordinance, may appeal to the Allegheny County Court of Common Pleas within 30 days of the Borough's decision

Section 115 - Definitions

Act: The Storm Water Management Act (Act of October 4, 1978, P.L. 864 No. 167; 32 P.S. Sections 680.1-680.17, as amended by Act of May 24, 1984, No. 63).

Applicant - A landowner, developer or other person who has filed an application for approval to engage in any Regulated Earth Disturbance activity at a project site in the Municipality.

Applicant: A landowner or developer who has filed an application for development including his/her heirs, successors and assigns.

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

Borough: The Borough of Edgewood

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.

Conservation District: The Allegheny County Conservation District. County: Allegheny County, Pennsylvania

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.

Design Criteria: (1) Engineering guidelines specifying construction details and materials. (2) 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 Pond: A pond or reservoir, usually small, constructed to impound or retard surface runoff temporarily.

Developer: The person, persons, or any corporation, partnership, association, or other entity-or any responsible person therein or agent therefore that undertakes the activities associated with changes in land use. The term "developer" is intended to include by not necessarily be limited to the term "subdivider", "owner", and "builder" even though the individuals involved in successive stages of a project may vary.

Development: Any activity, construction, alteration, change in land use or practice that affects stormwater runoff characteristics.

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

Drainage: In general, the removal of surface water from a given area. Commonly applied to surface water and ground water.

Drainage Area: (1) 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. (2) 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; building construction; 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: Wearing away of the lands by running water, glaciers, winds and waves.

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

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

Ground Cover: Materials covering the ground surface.

Ground Water: Subsurface water occupying the saturation zone, from which wells and springs are fed.

Ground Water Recharge: Replenishment of ground water naturally by precipitation or runoff or artificially by spreading or injection.

Hydrologic Soil Group (HSG): Soils are classified into four HSGs designated 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.

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

Infiltration: (1) The flow or movement of water through the interstices or pores of a soil or other porous medium. (2) The absorption of liquid by the soil.

Land Development: Any of the following activities:

(1) the improvement of one lot or two or more contiguous lots, tracts or parcels or land for any purpose involving: (a) a group of two or more residential or non-residential buildings, whether proposed initially or cumulatively, or a single non-residential building on a lot or lots regardless of the number of occupants or tenure; or (b) the division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means or, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features;

(2) a subdivision of land.

Land Disturbance: Any activity involving the changing, grading, transportation, fill and any other activity which causes land to be exposed to the danger of erosion.

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

Municipalities Planning Code: Pennsylvania Municipalities Planning Code (Act of July 31, 1968, P.L. 805, No. 247; 53 P.S. § 10101 et seq., as amended).

Municipality: The Borough of Edgewood

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

Outfall: (1) The point, location or structure where drainage discharges from a sewer, drain or other conduit. (2) The conduit leading to the ultimate discharge point.

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

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.

Peak Flow: Maximum flow rate.

PA DEP: Pennsylvania Department of Environmental Protection.

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.

Project Site: The specific area of land where any regulated activities in the Borough are planned, conducted, or maintained.

Qualified Professional: Any person licensed by the Pennsylvania Department of State for the services they are providing.

Regulated Activities: Any earth disturbance activities or any activities that involve the alteration, development or redevelopment of land in a manner that may affect stormwater runoff.

Regulated Earth Disturbance Activity: Activity involving earth disturbance subject to regulation under 25 Pa. Code 92, 25 Pa. Code 102, or the Clean Streams Law

Release Rate 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.

Retention Pond: A 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.

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

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 man-made landscape alterations.

SCS: U.S. Department of Agriculture Soil Conservation Service.

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.

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

Storage Facility: (See detention pond and retention pond).

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

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 or snow or ice melt.

Stormwater Collection System: Natural or man-made 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 Plan: The plan for managing stormwater runoff adopted by Allegheny County as required by the Storm Water Management Act.

Stormwater Management Site Plan: The plan prepared by the developer or his representative indicating how stormwater runoff will be managed at the development site in accordance with this Ordinance. Stormwater Management Site Plan will be designated as SWM Plan throughout this Ordinance.

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

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

Watercourse: Any channel for conveyance of surface water having a defined bed and banks, .whether natural or artificial, with perennial or intermittent flow.

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 PA DEP and approved by the Environmental Quality Board for which counties are required to develop watershed stormwater management plans.

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

Watershed Stormwater Management Plan: The plan for managing stormwater runoff throughout a designated watershed adopted by Allegheny County as required by the Pennsylvania Storm Water Management Act.

Section 115 – Miscellaneous Provisions

A. Legality and Severability

It is the intent of Borough Council that the provisions of this Ordinance shall be interpreted to be in legal compliance with all federal, state and county laws and regulations applicable thereto. In the event that any part or provision of this Ordinance is declared, by a final order of a court of competent jurisdiction, to be illegal or unconstitutional, then it is the intent of Borough Council that the remaining parts or provisions of this Ordinance shall remain in full force and effect.

B. Repealer

Any ordinance, or any part of any ordinance, in conflict with the provisions of this Ordinance is hereby repealed to the extent of such conflict.

Section 116 – References

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

2. Pennsylvania Department of Environmental Protection. No. 363-2134-008 (April 15, 2000), as amended and updated. *Erosion and Sediment Pollution Control Program Manual.* Harrisburg, PA.

3. 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.usdagov/.*

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

ORDAINED AND ENACTED into law this 16th day of March, 2015.

ATTEST

Julie P. Bastianini
Borough Secretary

Patricia M. Schaefer
Council President

EXAMINED AND APPROVED by me this 16th day of March, 2015.

J. Edward Cook, Mayor

Standard Schedule for Maintenance of Stormwater Management Facilities

The Stormwater Management Plan developed for the Project is supplemented by this Maintenance Plan to help ensure continuing operations of all stormwater facilities.

The following is a list of items that shall be inspected and corrective action taken by the Owner:

Note: Owner refers to individual ultimately responsible for storm facility condition and function.

1. Outlet conditions in Detention Facility.
2. Storm sewer, swales, concrete gutters and other conveyance devices.
3. Catch Basins, Manholes and other stormwater catchment/transition structures.
4. Access for maintenance.

The following actions will be taken by the Owner to help ensure the facilities shown on the plan and identified above are in working order:

1. Replace or repair facilities so as to function as intended.
2. Remove silt debris and trash in catch basin/storm sewers.
3. Repair outlet structures.
4. Remove any silt, debris and trash in Detention Facility.
5. Disposal of collected silt, debris and trash in a manner which will not adversely affect the environment.
6. Replace eroded material and re-vegetate eroded areas. Seed and mulch disturbed areas.

The corrective actions to be taken are not limited to those listed above.

Stormwater Facilities
Maintenance Plan

The inspection shall be undertaken by a minimum of two (2) persons at least two (2) times per year on or before March 1st and October 1st. Additional inspections will be required if it becomes apparent facilities are not functioning properly. Corrective actions will then be taken within thirty (30) days of the discovery of the deficiencies as required to help ensure continuing operation of stormwater facilities. Any deficiencies noted in items inspected by the Owner shall be documented and corrective actions taken by the Owner. This recommended Maintenance Plan shall not be considered a guarantee as to the adequacy of the stormwater management facilities in the future.

Edgewood Borough may require other items to be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. If stormwater facilities are not maintained by Edgewood Borough, the Owner shall maintain all facilities in accordance with the approved maintenance schedule and shall keep all facilities maintained in a safe and attractive manner. The Owner shall convey to Edgewood Borough easements and/or rights-of-way to assure access for periodic inspections by Edgewood Borough and maintenance if required. The Owner shall keep on file with Edgewood Borough the name, address and telephone number of the person or company responsible for maintenance activities and an as-built drawing of all stormwater facilities. In the event of a change, new information will be submitted to Edgewood Borough within ten (10) days of the change. The Owner shall establish any special maintenance funds or other financing sources, in accordance with the approved maintenance plan. If the Owner fails to maintain the stormwater control facilities, following due notice (30 days) by Edgewood Borough to correct deficiencies, Edgewood Borough shall perform the necessary maintenance or corrective work. The Owner shall reimburse Edgewood Borough for all costs associated with the required maintenance of the stormwater control facilities.

APPENDIX A
OPERATION AND MAINTENANCE (O&M) AGREEMENT
STORMWATER MANAGEMENT BEST MANAGEMENT
PRACTICES (SWM BMPs)

THIS AGREEMENT, made and entered into this_____day of 20_, by and between (hereinafter the "Landowner"), and the Borough of Edgewood, Allegheny County. Pennsylvania;

WITNESSES

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

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

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

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

WHEREAS, the Borough requires, through the implementation of the SWM Site Plan, that SWM BMPs as required by said Plan and the Borough 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 plans and specifications identified in the SWM Site Plan.

2. The Landowner shall operate and maintain the BMPs as shown on the Plan in good working order in accordance with the specific

maintenance requirements noted on the approved SWM Site Plan.

3. The Landowner hereby grants permission to the Borough, 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 Borough 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 BMP(s). It is expressly understood and agreed that the Borough 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 Borough.

5. If the event the Borough, 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 Borough for all expenses (direct and indirect) incurred within 10 days of receipt of invoice from the Borough.

6. The intent and purpose of this Agreement is to ensure the proper maintenance of the onsite BMPs by the Landowner; provided, however, that this Agreement shall not be deemed to create or affect 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 Borough 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 BMP(s) by the Landowner or Borough.

8. The Borough shall inspect the BMPs at a minimum of once every three years to ensure their continued functioning.

This Agreement shall be recorded at the Office of the Recorder of Deeds of Allegheny 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:

(SEAL) For the Borough:

_____

For the Landowner:

_____

ATTEST:

_____(Borough)
County of Allegheny, Pennsylvania

I, _____ a Notary Public in and for the county and state aforesaid, whose commission expires on the_____day of 20_____ do hereby certify that_____whose name(s) is/are signed to the foregoing Agreement bearing date of the day of_____20__ has acknowledged the same before me in my said county and state.

GIVEN UNDER MY HAND this_____day of_____, 20_____

_____ _____

NOTARY PUBLIC (SEAL)

APPENDIX B
LOW IMPACT DEVELOPMENT PRACTICES
ALTERNATIVE APPROACH FOR MANAGING STORMWATER RUNOFF

Natural hydrologic conditions may be altered radically by poorly planned development practices, such as introducing unneeded impervious surfaces, destroying existing drainage swales, constructing unnecessary storm sewers, and changing local topography. A traditional drainage approach of development has been to remove runoff from a site as quickly as possible and capture it in a detention basin. This approach leads ultimately to the degradation of water quality as well as expenditure of additional resources for detaining and managing concentrated runoff at some downstream location.

The recommended alternative approach is to promote practices that will minimize post-development runoff rates and volumes, which will minimize needs for artificial conveyance and storage facilities. To simulate pre-development hydrologic conditions, forced infiltration is often necessary to offset the loss of infiltration by creation of impervious surfaces. The ability of the ground to infiltrate depends upon the soil types and its conditions.

Preserving natural hydrologic conditions requires careful alternative site design considerations. Site design practices include preserving natural drainage features, minimizing impervious surface area, reducing the hydraulic connectivity of impervious surfaces, and protecting natural depression storage. A well-designed site will contain a mix of all those features. The following describes various techniques to achieve the alternative approach:

- **Preserving Natural Drainage Features.** Protecting natural drainage features, particularly vegetated drainage swales and channels, is desirable because of their ability to infiltrate and attenuate flows and to filter pollutants. However, this objective is often not accomplished in land development. In fact, commonly held drainage philosophy encourages just the opposite pattern -- streets and adjacent storm sewers typically are located in the natural headwater valleys and swales, thereby replacing natural drainage functions with a completely impervious system. As a result, runoff and pollutants generated from impervious surfaces flow directly into storm sewers with no opportunity for attenuation, infiltration, or filtration. Developments designed to fit site topography also minimizes the amount of grading on site.

- **Protecting Natural Depression Storage Areas.** Depressional storage areas have no surface outlet, or drain very slowly following a storm event. They can be commonly seen as ponded areas in farm fields during the wet season or after large runoff events. Traditional

development practices eliminate these depressions by filling or draining, thereby obliterating their ability to reduce surface runoff volumes and trap pollutants. The volume and release-rate characteristics of depressions should be protected in the design of the development site. The depressions can be protected by simply avoiding the depression or by incorporating its storage as additional capacity in required detention facilities.

- **Avoiding introduction of impervious areas.** Careful site planning should consider reducing impervious coverage to the maximum extent possible. Building footprints, sidewalks, driveways and other features producing impervious surfaces should be evaluated to minimize impacts on runoff.

- **Reducing the Hydraulic Connectivity of Impervious Surfaces.** Impervious surfaces are significantly less of a problem if they are not directly connected to an impervious conveyance system (such as storm sewer). Two basic ways to reduce hydraulic connectivity are routing of roof runoff over lawns and reducing the use of storm sewers. Site grading should promote increasing travel time of stormwater runoff, and should help reduce concentration of runoff to a single point in the development.

- **Routing Roof Runoff Over Lawns.** Roof runoff can be easily routed over lawns in most site designs. The practice discourages direct connections of downspouts to storm sewers or parking lots. The practice also discourages sloping driveways and parking lots to the street. By routing roof drains and crowning the driveway to run off to the lawn, the lawn is essentially used as a filter strip.

- **Reducing the Use of Storm Sewers.** By reducing use of storm sewers for draining streets, parking lots, and back yards, the potential for accelerating runoff from the development can be greatly reduced. The practice requires greater use of swales and may not be practical for some development sites, especially if there are concerns for areas that do not drain in a "reasonable" time. The practice requires educating local citizens and public works officials, who expect runoff to disappear shortly after a rainfall event.

- **Reducing Street Widths.** Street widths can be reduced by either eliminating on-street parking or by reducing roadway widths. Municipal planners and traffic designers should encourage narrower neighborhood streets which ultimately could lower maintenance.

- **Limiting Sidewalks to One Side of the Street.** A sidewalk on one side of the street may suffice in low-traffic neighborhoods. The lost

sidewalk could be replaced with bicycle/recreational trails that follow back-of-lot lines. Where appropriate, backyard trails should be constructed using pervious materials.

- **Using Permeable Paving Materials.** These materials include permeable interlocking concrete paving blocks or porous bituminous concrete. Such materials should be considered as alternatives to conventional pavement surfaces, especially for low use surfaces such as driveways, overflow parking lots, and emergency access roads.

- **Reducing Building Setbacks.** Reducing building setbacks reduces driveway and entry walks and is most readily accomplished along low-traffic streets where traffic noise is not a problem.

- **Constructing Cluster Developments.** Cluster developments can also reduce the amount of impervious area for a given number of lots. The biggest savings is in street length, which also will reduce costs of the development. Cluster development clusters the construction activity onto less-sensitive areas without substantially affecting the gross density of development.

In summary, a careful consideration of the existing topography and implementation of a combination of the above mentioned techniques may avoid construction of costly stormwater control measures. Other benefits include reduced potential of downstream flooding, water quality degradation of receiving streams/water bodies and enhancement of aesthetics and reduction of development costs. Beneficial results include more stable baseflows in receiving streams, improved groundwater recharge, reduced flood flows, reduced pollutant loads, and reduced costs for conveyance and storage.

APPENDIX C
POLLUTANT LOADS FROM SPECIFIC LAND USE

Worksheet 11 – BMPs for Pollution Prevention		
Does the site design incorporate the following BMPs to address nitrate pollution? A summary "yes" rating is achieved if at least 2 Primary BMPs are provided across the site. "Provided across the site" is taken to mean that the specifications for that BMP set forward in Chapters 5 and 6 are satisfied.		
	Yes	**No**
BMPs for Pollution Prevention:	☐	☐
NS BMP 5.4.1 – Protect Sensitive/Special Value Features	☐	☐
NS BMP 5.4.2 – Protect/Conserve/Enhance Riparian Buffers	☐	☐
NS BMP 5.4.3 – Protect/Utilize Natural Flow Pathways in Overall Stormwater Planning and Design	☐	☐
NS BMP 5.5.1 – Cluster Uses at Each Site; Build on the Smallest Area Possible	☐	☐
NS BMP 5.6.1 – Minimize Total Disturbed Area - Grading	☐	☐
NS BMP 5.6.2 – Minimize Soil Compaction in Disturbed Areas	☐	☐
NS BMP 5.6.3 – Re-Vegetate/Re-Forest Disturbed Areas (Native Species)	☐	☐
NS BMP 5.7.1 – Reduce Street Imperviousness	☐	☐
NS BMP 5.7.2 – Reduce Parking Imperviousness	☐	☐
NS BMP 5.8.1 – Rooftop Disconnection	☐	☐
NS BMP 5.8.2 – Disconnection from Storm Sewers	☐	☐
NS BMP 5.9.15 – Street Sweeping	☐	☐
Structural BMP 6.7.1 – Riparian Buffer Restoration	☐	☐
Structural BMP 6.7.2 – Landscape Restoration	☐	☐
Structural BMP 6.7.3 – Soils Amendment and Restoration	☐	☐

Worksheet 12 – Water Quality Analysis of Pollutant Loading from All Disturbed Areas

Total Site Area (AC)	
Total Disturbed Area (AC)	
Disturbed Area Controlled by BMPs (AC)	

Total Disturbed Areas:

		Pollutant					Pollutant Load		
	Land Cover Classification	TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)	Cover (Acres)	Runoff Volume (AF)	TSS** (LBS)	TP** (LBS)	NO_3 (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.3					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low-Input	180	0.40	0.44					
	Lawn, High-Input	180	2.22	1.46					
	Golf Course Fairway/Green	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street/Highway	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic/Residential Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	60	0.46	0.47					
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
						TOTAL LOAD			
						REQUIRED REUCTION (%)	85%	85%	50%
						REQUIRED REDUCTION (LBS)			

*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7, Unit Conversion]

**TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area

Worksheet 13 – Pollutant Reduction Through BMP Applications*

*Fill this worksheet out for each BMP type with different pollutant removal efficiencies. Sum pollutant reduction achieved for all BMP types on final sheet.

BMP Type: _____

Disturbed Area Controlled by this BMPs (AC)

Disturbed Area Controlled by this BMPs:

		Pollutant					Pollutant Load**		
	Land Cover Classification	TSS EMC (mg/l)	TP EMC (mg/l)	Nitrate-Nitrite EMC (mg/l as N)	Cover (Acres)	Runoff Volume (AF)	TSS** (LBS)	TP** (LBS)	NO_3 (LBS)
Pervious Surfaces	Forest	39	0.15	0.17					
	Meadow	47	0.19	0.3					
	Fertilized Planting Area	55	1.34	0.73					
	Native Planting Area	55	0.40	0.33					
	Lawn, Low-Input	180	0.40	0.44					
	Lawn, High-Input	180	2.22	1.46					
	Golf Course Fairway/Green	305	1.07	1.84					
	Grassed Athletic Field	200	1.07	1.01					
Impervious Surfaces	Rooftop	21	0.13	0.32					
	High Traffic Street/Highway	261	0.40	0.83					
	Medium Traffic Street	113	0.33	0.58					
	Low Traffic/Residential Street	86	0.36	0.47					
	Res. Driveway, Play Courts, etc.	60	0.46	0.47					
	High Traffic Parking Lot	120	0.39	0.60					
	Low Traffic Parking Lot	58	0.15	0.39					
	TOTAL LOAD TO THIS BMP TYPE								
	POLLUTANT REMOVAL EFFICIENCIES FROM APPENDIX A. STORMWATER MANUAL (%)								
	POLLUTANT REDUCITON ACHIEVED BY THIS BMP TYPE (LBS)								

POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)			
REQUIRED REDUCTION from WS12 (LBS)			

*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7, Unit Conversion]

**TSS and TP calculations only required for projects not meeting CG1/CG2 or not controlling less than 90% of the disturbed area

Requirement for Erosion and Sediment Controls

Erosion and Sediment Control

A. No Regulated Earth Disturbance activities within the Municipality shall commence until approval by the Municipality of an Erosion and Sediment Control Plan for construction activities.

B. The Pennsylvania Department of Environmental Protection (DEP) has regulations that require an Erosion and Sediment Control Plan for any earth disturbance activity of 5,000 square feet or more, under 25 Pa. Code § 102.4(b).

C. In addition, under 25 Pa. Code Chapter 92, a DEP "NPDES Construction Activities" permit is required for any earth disturbance one acre of more with a point source discharge to surface waters or the Municipality's storm sewer system, or five acres or more regardless of the planned runoff (hereinafter collectively referred to as "Regulated Earth Disturbance Activities"). This includes earth disturbance on any portion of, part of, or during any stage of, a larger common plan of development.

D. Evidence of any necessary permit(s) for Regulated Earth Disturbance activities from the appropriate DEP regional office or County Conservation District must be provided to the Municipality. The issuance of an NPDES Construction Permit (or permit coverage under the statewide General Permit (PAG-2)) satisfies the requirements subsection A.

E. A copy of the Erosion and Sediment Control Plan and any required permit, as required by DEP regulations, shall be available at the project site at all times.

Standard Schedule for Maintenance of
Stormwater Management Facilities

The Stormwater Management Plan developed for the Project is supplemented by this Maintenance Plan to help ensure continuing operations of all stormwater facilities.

The following is a list of items that shall be inspected and corrective action taken by the Owner:

Note: Owner refers to individual ultimately responsible for storm facility condition and function.

1. Outlet conditions in Detention Facility.

2. Storm sewer, swales, concrete gutters and other conveyance devices.

3. Catch Basins, Manholes and other stormwater catchment/transition structures.

4. Access for maintenance.

The following actions will be taken by the Owner to help ensure the facilities shown on the plan and identified above are in working order:

1. Replace or repair facilities so as to function as intended.

2. Remove silt debris and trash in catch basin/storm sewers.

3. Repair outlet structures.

4. Remove any silt, debris and trash in Detention Facility.

5. Disposal of collected silt, debris and trash in a manner which will not adversely affect the environment.

6. Replace eroded material and re-vegetate eroded areas. Seed and mulch disturbed areas.

The corrective actions to be taken are not limited to those listed above.

Stormwater Facilities
Maintenance Plan

The inspection shall be undertaken by a minimum of two (2) persons at least two (2) times per year on or before March 1st and October 1st. Additional inspections will be required if it becomes apparent facilities are not functioning properly. Corrective actions will then be taken within thirty (30) days of the discovery of the deficiencies as required to help ensure continuing operation of stormwater facilities. Any deficiencies noted in items inspected by the Owner shall be documented and corrective actions taken by the Owner. This recommended Maintenance Plan shall not be considered a guarantee as to the adequacy of the stormwater management facilities in the future.

Edgewood Borough may require other items to be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. If stormwater facilities are not maintained by Edgewood Borough, the Owner shall maintain all facilities in accordance with the approved maintenance schedule and shall keep all facilities maintained in a safe and attractive manner. The Owner shall convey to Edgewood Borough easements and/or rights-of-way to assure access for periodic inspections by Edgewood Borough and maintenance if required. The Owner shall keep on file with Edgewood Borough the name, address and telephone number of the person or company responsible for maintenance activities and an as-built drawing of all stormwater facilities. In the event of a change, new information will be submitted to Edgewood Borough within ten (10) days of the change. The Owner shall establish any special maintenance funds or other financing sources, in accordance with the approved maintenance plan. If the Owner fails to maintain the stormwater control facilities, following due notice (30 days) by Edgewood Borough to correct deficiencies, Edgewood Borough shall perform the necessary maintenance or corrective work. The Owner shall reimburse Edgewood Borough for all costs associated with the required maintenance of the stormwater control facilities.