#147

UNION DALE BOROUGH
LACKAWANNA RIVER WATERSHED
ACT 167 STORMWATER MANAGEMENT ORDINANCE

ARTICLE I
GENERAL PROVISIONS

The Lackawanna River Watershed Act 167 Stormwater Management Plan and Appendices are hereby a part of this ordinance.

SECTION 101. STATEMENT OF FINDINGS

The Council of the Borough of Union Dale finds that:

A. Inadequate management of accelerated runoff of storm water resulting from development throughout a watershed increases flood flows and velocities, contributes to erosion and sedimentation, overtakes the carrying capacity of streams and storm sewers, greatly increases the costs of public facilities to carry and control storm water, undermines floodplain management and flood control efforts in downstream communities, reduces groundwater recharge, and threatens public health and safety.

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

SECTION 102. PURPOSE

The purpose of this Ordinance is to promote the public health, safety and welfare within the Lackawanna River Watershed by minimizing the damages described in Section 101(A) of this Ordinance by provisions designed to:

A. Control accelerated runoff and erosion and sedimentation problems at their source by regulating activities which cause such problems.

B. Utilize and preserve the desirable existing natural drainage systems.

C. Encourage recharge of groundwaters where appropriate.

D. Maintain the existing flows and quality of streams and watercourses in Union Dale Borough and the Commonwealth.

E. Preserve and restore the flood carrying capacity of streams.

F. Provide for proper maintenance of all permanent storm water management structures which are constructed in Union Dale Borough.

SECTION 103. STATUTORY AUTHORITY

The Borough of Union Dale is empowered to regulate these activities by the authority of the Act of October 4, 1978, P.L. 864 (Act 167), the "Storm Water Management Act" and the

SECTION 104. APPLICABILITY

This Ordinance shall only apply to those areas of Union Dale Borough which are located within the Lackawanna River Watershed as delineated on an official map available for inspection at the Borough office. A map of the Lackawanna River Watershed is included in Appendix J under separate cover.

This Ordinance shall only apply to permanent storm water management facilities constructed as part of any of the activities listed in this Section. Storm water management and erosion and sedimentation control measures undertaken during construction which may involve non-permanent facilities are not regulated by this Ordinance but shall continue to be regulated under existing laws and ordinances.

This Ordinance contains only those storm water runoff control criteria and standards which are necessary or desirable from a total watershed perspective. Additional storm water management design criteria (i.e. inlet spacing, inlet type, collection system details, etc.) which represent sound engineering practice may be regulated either by separate storm water ordinance provisions or as part of the general responsibilities of the Borough engineer.

The following activities are defined as Regulated Activities and shall be regulated by this Ordinance, except those which meet the waiver specifications presented in Section 407:

A. Land development.
B. Subdivision.
C. Construction of new or additional impervious surfaces (driveways, parking lots, etc.)
D. Construction of new buildings or additions to existing buildings.
E. Diversion or piping of any natural or man-made stream channel.
F. Installation of storm water systems or appurtenances thereto.

For development taking place in stages, the entire development plan must be used in determining conformance with this criteria. Additional impervious cover shall include, but not be limited to, any roof, parking or driveway areas and any new streets and sidewalks constructed as part of or for the proposed regulated activity.

Any areas which may be designed to initially be semi-previous (e.g. gravel, crushed stone, porous pavement, etc.) shall be considered impervious areas for the purpose of waiver evaluation. No waiver shall be provided for Regulated Activities as defined in Section 104.E and 104.F.

Subdivisions and land developments approved before the date of adoption shall be exempt from the provisions of this ordinance.

SECTION 105. EXEMPTIONS

In addition to those activities in section 402 and 407, any proposed Regulated Activity, except those defined in Section 104.E and 104.F, which would create 10,000 square feet or less of additional impervious cover would be exempt from meeting the provisions of this Ordinance. Such exemptions include, but are not limited to, single family residential structures, private garages and other residentially related outbuildings.

SECTION 106. REPEALER

Any ordinance of the Union Dale Borough inconsistent with any of the provisions of this Ordinance is hereby repealed to the extent of the inconsistency only.

SECTION 107. SEVERABILITY

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

SECTION 108. COMPATIBILITY WITH OTHER ORDINANCE REQUIREMENTS

Approvals issued pursuant to this Ordinance do not relieve the applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable code, rule, act or ordinance.

ARTICLE II

DEFINITIONS

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

A. Words used in the present tense include the future tense; the singular number includes the plural, and the plural number includes the singular; words of masculine gender include feminine gender; and words of feminine gender include masculine gender.

B. The word "includes" or "including" shall not limit the term to the specific example but is intended to extend its meaning to all other instances of like kind and character.

C. The word "person" includes and individual, firm, association, organization, partnership, trust, company, corporation, or any other similar entity.

D. The words "shall" and "must" are mandatory; the "may" and "should" are permissive.

E. The words "used or occupied" include the words "intended, designed, maintained, or arranged to be used or occupied."

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

APPLICATION - A landowner or developer who had filed an application for approval to engage in any Regulated Activities as defined in Section 104 of this Ordinance.

Cistern - An underground reservoir or tank for storing rainwater.

Conservation District - The Lackawanna County Conservation District (or applicable conservation district for those watershed municipalities located outside of Lackawanna County.)

Culvert - A pipe, conduit or similar structure including appurtenant works which carries surface water.

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

DER - The Pennsylvania Department of Environment Resources.

Design Storm - the magnitude of precipitation from a storm event measured in probability of occurrence (e.g. 50-year storm and duration (e.g. 24-hour), and used in computing storm water management control systems.

DETAILED STUDY AREA - Study areas outside of the Lackawanna River Boundaries themselves for which plans have been prepared previously by the United States Army Corps of Engineers and/or DER. Modeling for these areas was undertaken with the Penn State Runoff Model.

Detention Basin - A basin designed to retard storm water runoff by temporarily storing the runoff and releasing it at a predetermined rate.

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

Development Plan - A detailed narrative with related mapping outlining the proposed project along with the storm water runoff measures proposed to comply with this ordinance.

Development Site - The specific tract of land for which a Regulated Activity is proposed.

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

Drainage Plan - The documentation of the proposed storm water management controls, if any, to be used for a given development site, the contents of which are established in Section 403.

Erosion - The removal of soil particles by the action of water, wind, ice, or other geological agents.

Floodplain - Any land area susceptible to inundation by water from any natural source or delineated by applicable Department of Housing and Urban Development, Federal Insurance Administration Flood Hazard Boundary Maps as being a special flood hazard area. Also included are areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania Department of Environmental Resources (PA DER) Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time to PA DER).

Freeboard - The incremental depth in a storm water management structure, provided as a safety factor of design, above that required to convey the design runoff event.

Governing Body - The municipal entity empowered to review and/or approve of storm water management plans, development site plans, facilities and maintenance agreements. The governing body may authorize the municipal planning commission or other appropriate body to undertake any or all of the above responsibilities.

Groundwater Recharge - Replenishment of existing natural underground water supplies.

Impervious Surface - A surface which prevents the percolation of water into the ground.

Infiltration Structure - A structure designed to direct runoff into the ground, e.g. french drain, seepage pit or seepage trench.

Land Development - Any of the following activities: (i) the improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving: (a) a group of two or more residential or non-residential buildings 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 of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups or other features; (ii) a subdivision of land; (iii) any lot improvements regulated under the Municipal Zoning Regulations.

Land Disturbance - Any activity involving grading, tilling, digging, or filling of ground or stripping of vegetation or any other activity that causes an alteration to the natural condition of the land.

LCRPC - The Lackawanna County Regional Planning Commission.

Mainstem (main channel) - Any stream segment or other runoff conveyance facility used as a reach in the Lackawanna River hydrologic model.

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

Municipality - The Borough of Union Dale.

Municipal Engineer - Person or firm engaged by the municipality to undertake engineering type reviews for projects within the municipal boundaries.

Municipal Planning Commission - That body charged with planning related functions on the municipal level as defined in Act 247, the Pennsylvania Municipalities Planning Code.

NRCS - Natural Resources Conservation Service, U.S.D.A.

Open Channel - A drainage element in which storm water flows with open surface. Open channels include, but shall not be limited to, natural and man-made drainageways, swales, streams, ditches, canals, and pipes flowing partly full.

Peak Discharge - The maximum rate of flow of storm runoff at a given point and time resulting from a specified storm event.

Penn State Runoff Model (calibrated) - The computer based hydrologic modeling technique adapted to the Lackawanna River Watershed for the Act 167 Plan. The model has been "calibrated" to reflect actual recorded flow values by adjusting key model input parameters.

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

Plan Administrator - the entity set up specifically to review Act 167 Drainage Plans, inspect storm water management structures, and otherwise enforce all regulations as outlined in the " Watershed Act 167 Storm Water Management Ordinance."

Rational Method - A method of peak runoff calculation using a standardize runoff coefficient (rational "c") acreage of tract and rainfall intensity determined by return period and by the time necessary for the entire tract to contribute runoff. The rational formula is stated as follows: Q=ciA, where "Q" is the calculated peak flow rate in cubic feet per second, "c" is the dimensionless runoff coefficient (see Appendix B under separate cover), "i" is the rainfall intensity in inches per hour, and "A" is the area of the tract in acres.

Reach - Any of the natural or man-made runoff conveyance channels used for modeling purposes to connect the subareas and transport flows downstream.

Regulated Activities - Actions and proposed actions which impact upon proper management of storm water runoff and which are governed by this Ordinance, as specified in Section 104.

Release Rate - The percentage of the predevelopment peak rate of runoff for a development site to which the post-development peak rate of runoff must be controlled to protect downstream areas.

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

Return Period - The average interval in years over which a storm event of a given magnitude can be expected to recur. For example, the twenty five (25) year return period rainfall or runoff event would be expected to recur on the average once every twenty five years.

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

SCPC - Susquehanna County Planning Commission.

SCS - Soil conservation Service, U.S. Department of Agriculture.

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

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

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

Soil-Cover-Complex Method - A method of runoff computation developed by SCS which is based upon relating soil type and land use/cover to a runoff parameter called a Curve Number.

Storage Indication Method - A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage for a given time interval) and based on outflow being a unique function of storage volume.

Storm Sewer - A system of pipes or other conduits which carries intercepted surface runoff, street water and other wash waters, or drainage, but excludes domestic sewage and industrial wastes.

Storm water - The total amount of precipitation reaching the ground surface.

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

Storm Water Management Plan - The plan for managing storm water runoff adopted by Lackawanna River County and the for the Lackawanna River Watershed as required by the Act of October 4, 1978, P.L. 864, (Act 167) and known as the "Storm Water Management Act".

Stream - A watercourse.

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

Subarea - The smallest unit of watershed breakdown for hydrologic modeling purposes for which the runoff control criteria have been established in the Storm Water Management Plan.

Subdivision - The division or redivision 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 devises, transfer of ownership of building of lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten acres, not involving any new street or easement of access or any residential dwelling, shall be exempted.

Subwatershed - A segment or portion of the larger watershed encompassing a tributary or tributaries to the Lackawanna River.

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

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

Wetland - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marches, bogs, ferns, and similar areas.

Any term not defined in this section shall be as defined (within the latest edition of "Webster's New Collegiate Dictionary.") by a recent dictionary of general public acceptance.

ARTICLE III

STORMWATER MANAGEMENT REQUIREMENTS

SECTION 301. GENERAL REQUIREMENTS

A. Storm drainage systems shall be provided in order to permit unimpeded flow of natural watercourses except as modified by storm water detention facilities or open channels consistent with this Ordinance.

B. The existing points of concentrated drainage discharge onto adjacent property shall not be altered without written approval of the affected property owner(s) and should remain subject to any applicable release rate criteria specified in this Ordinance.

C. Areas of existing diffused drainage discharge onto adjacent property shall be managed such that, at minimum, the peak diffused flow does not increase in the general direction of discharge, except as otherwise provided in this Ordinance. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the developer must document that there are adequate downstream conveyance facilities to safely transport the concentrated discharge or otherwise prove that no harm will result from the concentrated discharge. Areas of existing diffused drainage discharge shall be subject to any applicable

release rate criteria in the general direction of existing discharge whether they are proposed to be concentrated or maintained as diffused drainage areas.

D. Where a subdivision or land development is traversed by watercourses other than permanent streams, there shall be provided a drainage easement conforming substantially with the mine of such watercourse. The width of the easement shall be adequate to provide for unimpeded flow of storm runoff based on calculations made in conformance with Section 304 for the 100-year return period runoff and to provide a freeboard allowance of one-half (0.5) foot above the design water surface level. The terms of the easement shall prohibit excavation, the placing of fill or structures, and any alterations which may adversely affect the flow of storm water within any portion of the easement. Also, periodic maintenance of the easement to ensure proper runoff conveyance shall be required.

E. Any drainage facilities required by this Ordinance that are located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation.

F. When it can be shown that, due to topographic conditions, natural drainageways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainageways. Work within natural drainageways shall be subject to approval by PA DER through the Joint Permit Application process, or, where deemed appropriate by PA DER, through the General Permit process.

G. Stormdrainage facilities and appurtenances shall be so designed and provided as to minimize erosion in watercourse channels and at all points of discharge.

H. Consideration should be given to the design and use of volume controls for storm water management, where geology permits.

I. Any storm water management facilities regulated by this Ordinance that would be located in or adjacent to waters or the Commonwealth or potential wetlands shall be subject to approval by PA DER through the Joint Permit Application process, or, where deemed appropriate by PA DER, the General Permit process. When there is a question whether wetlands may be involved it is the responsibility of the Developer or his agent to show that the land in question cannot be classified as wetlands, otherwise approval to work in the area must be obtained from PA DER.

STORM 302. STORM WATER MANAGEMENT STUDY AREAS

A. Mapping of Storm Water Management Detail Study Areas - in order to implement the provisions of the Lackawanna River Storm Water Management Plan, the Lackawanna River Watershed is hereby divided into 9 Detailed Study Areas (Subareas) consistent with the Lackawanna River Watershed Map presented in the Plan. The boundaries of the Subarea cross individual municipal

boundaries as shown on the official map which is available for inspection at the Union Dale Borough office.

B. Determination of Applicable Release Rate - All areas of the Lackawanna River watershed are subject to a release rate control/criteria. The release rate criteria only applies to the 100-year storm event. Additional control requirements for the mean-annual and 25-year events are post-to-pre control as defined in Section 303A. All portions of the watershed outside the nine detailed study areas have a release rate of 100 percent or post-to-pre development control, but remain subject to individual municipal approval as discussed in #3 below. These areas are designated on Plate 4 in the Appendices as areas numbered 10. Prior to proceeding with preparation of stormwater control calculations or drainage plans preparation, the plan preparer/developer should first determine the release rate as follows:

1. Locate the proposed development property using Plate 4 of "The Plan".

2. If the site is located within Area 10 and not near the border of detailed study areas 1 through 9, or within a municipality listed in Table 4-1 of the plan, the applied release rate is to be 100 percent.

3. If the site is located within Area 10 on the Plate 4 but is within any part of a municipality listed in Table 4-1 of the Plan, the municipality must be contacted to verify that the release rate is 100 percent. The Table 4-1 municipalities may have portions of priority areas (subwatershed 1 through 9) and non-priority areas (area 10) within their borders. Each municipality also has the ability to impose stricter rate criteria for those Area 10 developments for each of municipal-wide implementation.

(As example, a Table 4-1 municipality may have one third of its municipal area designated as non-priority, Area 10, with 100 percent release rate. The other two thirds could be in a priority watershed area which has an additional range release rates (based on subarea identifications) from 100 percent down to 75 percent. The municipality may impose a municipal-wide release rate of 75 percent, which would meet the minimum criteria of "The Plan". The plan preparer/developer must verify with each municipality that an Area 10 site has not been assigned an alternative release rate using the municipality's ordinance.)

4. If the site as identified from Place 4 is located near the border of a detailed subwatershed, its location shall be verified by the associated detailed study area map in Appendix I. Upon verification, release rate shall be determined by #3 above or #5 below.

5. If the site is located within a detailed subwatershed 1 through 9, the exact site location shall be determined and drawn

on the appropriate map from Appendix I. All subareas and their release rates which overlap the site shall be identified from the map and the Appendix F tables. The map and release rate identification should be confirmed by the municipality's ordinance. A copy of the site location on the section of the Appendix I map shall be included as part of the drainage plan submission.

Once the release rate is defined and confirmed, stormwater analysis and design of control measures can proceed in accordance with the plan.

SECTION 303. STORM WATER MANAGEMENT DISTRICT IMPLEMENTATION PROVISIONS

A. Any storm water management controls required by this Ordinance and subject to release rate criteria shall meet the applicable release rate criteria, consistent with the calculation methodology specified in Section 304. as follows:

1. New land development controls are to incorporate infiltration of the first 1.5 inches of runoff (i.e., one-half of the mean-annual event) from impervious surfaces. At a minimum, infiltration facilities design/overflow capacity should be for the 10 year event. Post-to-pre flow control should be provided for the design capacity of the receiving storm sewer systems, but in no case less that the 10 year storm event. This design criteria applies to small infold type developments (i.e., up to two single-family homes), or new driveways, additions or impervious surfaces less than 2,000 square feet total.

Where infiltration is not feasible, based on demonstration of site constraints and approved by the reviewing agency, post-t-pre control of the mean annual and 10-year events is required. Where the receiving storm sewer system is designed for the 25-year event, post-to-pre control for the mean annual and 25-year event shall prevail.

2. Unless qualified under #1 above, 100-year control with applied release rates is required in addition to the previous requirements.

B. The exact location of the Storm Water Management Detailed Area boundaries as they apply to a given development site shall be determined by mapping the boundaries using the two-foot topographic contours provided as part of the Drainage Plan (Refer to subarea maps in Appendix I under separate cover). The Area boundaries as originally drawn coincide with topographic divides or, in certain instances, are drawn from the intersection of the watercourse and a physical feature (such as the confluence with another watercourse of a potential flow obstruction e.g. road, culvert, bridge, etc.) to the topographic divide consistent with topography.

C. Any downstream capacity analysis conducted in accordance with this Ordinance shall use the following criteria for determining adequacy for accepting increased peak flow rates:

1. Natural or man-made channels or swales must be able to convey the increased runoff associated with a 2 year return period event within their banks at velocities consistent with protection of the channels from erosion. Acceptable velocities shall be cased upon criteria included in the DER Soil Erosion and Sedimentation Control Manual (February, 1985) and presented in Appendix B under separate cover.

2. Natural or man-made channels or swales must be able to convey the increased 25-year return period runoff peak within their banks or otherwise not create any hazard to persons or property.

3. Any facilities that constitute water obstructions (e.g. culverts, bridges, outfalls, or stream enclosures), as described in PA DER Chapter 105 regulations (as amended or replaced from time to time by PA DER), shall be designed in accordance with Chapter 105 regulations must be able to convey, without damage to the drainage structures or roadway, runoff from the 25-year design storm with a minimum of 1.0 foot of freeboard measured below the lowest point along the top of the roadway. Roadway crossings located within designated flood plain areas must be able to convey runoff from a 100-year design storm with a minimal 1.1 foot of freeboard measured below the lowest point along the top of the roadway. Any capacity that constitutes a dam as defined in PA DER Chapter 105 regulations may require a permit under dam safety regulations. Any facility located within a PA DOT right-of-way must meet PA DOT minimum design standards and permit submission requirements.

4. Storm sewers must be able to convey post-development runoff from a 25-year design storm without surcharging inlets.

D. For a proposed development site located within only one release rate category area, the total runoff from the site shall meet the applicable release rate criteria. For development sites with multiple points concentrated runoff discharge, individual drainage points may be designed for up to a 100% release rate so long as the total runoff from the site is controlled to the applicable release rate.

E. For a proposed development site located within two or more release rate category areas, the maximum peak rate of runoff that may be discharged at any point is limited to the predevelopment peak rate of runoff at that point multiplied by the applicable release rate. The control rates shall apply regardless of any grading modifications which may change the drainage area which discharges at a given point.

F. For proposed development sites located partially within a release rate category area and partially within a provisional no

detention area, in no event shall a significant portion of the site area subject to the release rate control be drained to the discharge point(s) located in the no detention area.

G. Regional or Sub-Regional Detention Alternatives - For certain areas within the watershed, it may be more cost effective to provide one control facility for an entire subarea, group of subareas, or portion of a subarea incorporating more than one development site than to provide an individual control facility for each development site. The initiative and funding for any regional or sub-regional runoff control alternatives are the responsibility of prospective developers. The design of any regional control business must incorporate reasonable development of the entire upstream watershed. The peak out-flow of a regional basin would be determined on a case-by-case basis using the hydrologic model of the watershed consistent with protection of the downstream watershed areas. "Hydrologic model" refers to the calibrated Lackawanna River version of the Penn State Runoff Model as developed for the Storm Water Management Plan.

H. Capacity Improvements - In certain instances, primarily within the provisional no detention areas, local drainage conditions may dictate more stringent levels of runoff control than those based upon protection of the entire watershed. In these instances, if the developer could provide that it would be feasible to provide capacity improvements to relieve the capacity deficiency in the local drainage network, then capacity improvements could be provided by the developer in lieu of runoff controls on the development site. Any capacity improvements would be designed based upon development of all areas tributary to the proposed improvements and the capacity criteria specified in Section 303. C. In addition, all new development upstream of a proposed capacity improvement shall be assumed to implement the applicable; runoff controls consistent with this Ordinance except that all development upstream of a proposed capacity improvement shall be assumed to implement the applicable runoff controls consistent with this Ordinance except that all new development within the subarea(s) within the proposed development site is located shall be assumed to implement the developer's proposed discharge control, if any.

Capacity improvements may also be provided as necessary to implement any regional or subregional detention to alternatives or to implement a modified "no harm" option which proposes specific capacity improvements to document the validity of a less stringent discharge control which would not create nay harm downstream.

I. Waiver of Runoff Control Based on Minimum Additional Impervious Cover - Any proposed Regulated Activity, except those defined in Sections 104.E and 104.F., additional impervious cover would be exempt from meeting the runoff control provisions of this Ordinance. For developments which are to take place in stages, the entire development plan must be used in determining conformance to this criteria. Additional impervious cover shall

include, but not be limited to, any roof, parking or driveway areas and any new streets and sidewalks constructed as part of or for the proposed development. Any areas which may be designed to initially be semi-pervious (e.g. gravel, crushed stone, porous pavement, etc.) shall be considered impervious areas for the purposes of waiver evaluation.

No waiver shall be provided for any Regulated Activities as defined in Sections 194.E and 104.F, except for agricultural activities covered under Section 402.B., C., D., E. and F.

J. Any storm water management facility required or regulated by this Ordinance shall be designed to provide a minimum 1.0 foot of freeboard above the maximum 100-year surface evaluation for post-development conditions. Should any storm water management facility qualify as a dam under PA DER Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of the Chapter concerning dam safety.

SECTION 304. CALCULATION METHODOLOGY

A. Any storm water runoff calculations involving drainage areas greater that 20 acres, including on and off site areas, shall use any generally accepted calculation technique that is based on the SCS soil cover complex method. Table 1 below summarizes acceptable computation methods. It is assumed that all methods will be selected by the design professional based on the individual limitations and suitability of each method for a particular site.

The Plan Administrator may approve the use of the Rational Method to estimate peak discharges from drainage areas that contain less than 20 acres.

TABLE I

ACCEPTABLE COMPUTATION METHODOLOGIES FOR STORM WATER MANAGEMENT PLANS

METHOD	METHOD DEVELOPED BY	APPLICABILITY
TR-20 (or commercial package based on TR-20)	USDA SCS	Applicable where use of full hydrology computer model is desirable or necessary.
TR-55 (or commercial package based on TR-55)	USDA SCS	Applicable for land development plans within limitations described in TR-55.
HEC-1	US Army Corps of Engineers	Applicable where use of full hydrologic computer model is desirable or necessary.
PSRM	Penn State University	Applicable where use of a hydrologic computer model is desirable or necessary; simpler than TR-20 or HEC-1.
Rational Method (or commercial computer package based on Rational Method)	Emil Kuichling (1889)	For sites less than 20 acres, or as approved by the Plan Administrator and Municipal Engineer.
x Other Methods	Varies	Other computation methodologies approved by the Plan Administrator and Municipal Engineer.

B. the design of any detention basin intended to meet requirements of this Ordinance shall be verified by routing the design storm hydrograph through the proposed basin. For basins designed using the modified rational method technique, the detention volume shall, at minimum, equal the volume derived from the approximate routing process as contained in SCS Technical Release Number 55 (TR55, 1986) Chapter 6 (Figure 6-1).

C. All calculations using the soil-cover complex method shall use the Soil Conservation Service Type II 24-hour rainfall distribution. The 24-hour rainfall depths for the various return period to be used consistent with this Ordinance are taken from the PennDOT Intensity - Duration - Frequency Field Manual (May 1986).

D. All calculations using the Rational Method shall use rainfall intensities consistent with appropriate times of concentration and return periods and the Intensity - Duration - Frequency Curves as presented in Appendix B under separate cover.

E. Runoff Curve Numbers (CN's) to be used in the soil-cover complex method shall be based upon the matrix presented in Appendix B under separate cover.

F. Runoff coefficients for use in the Rational Method shall be based upon table presented in Appendix A under separate cover.

G. The Manning equation shall be used to calculate the capacity of watercourses. Manning 'n' values used in the calculations shall be consistent with the table presented in Appendix A under separate cover. Pipe capacities shall be determined by methods acceptable to the municipal engineer.

H. Any detention basin, or other structure, intended to meet the requirements of this Ordinance which required a Dam Safety Permit from DER shall be designed consistent with the provisions of the Dam Safety and Encroachments Act and the DER Chapter 105 Rules and Regulations.

ARTICLE IV
DRAINAGE PLAN REQUIREMENTS

SECTION 401. GENERAL REQUIREMENTS

For any of the Regulated Activities of this Ordinance, prior to the final approval of subdivision and/or land development plans, or the issuance of any permit, or the commencement of any land disturbance activity, the owner, subdivider, developer or his agent shall submit a Drainage Plan for approval.

SECTION 402. EXEMPTIONS

A. Any Regulated Activity which would create 10,000 square feet or less of additional impervious cover is exempt from the Drainage Plan preparation provisions of this Ordinance. This criteria shall apply to the total proposed development even if development is to take place in stages (i.e. the impervious cover associated with the total development shall be used to compare to the waiver minimum, not merely the individual stage impervious cover). Additional impervious cover shall include, but not be limited to, any roof, parking or driveway areas and any new streets and sidewalks, constructed as part of or for the proposed Regulated Activity. Any areas designed to initially be gravel, crushed stone, porous pavement, etc. shall be assumed to be impervious for the purposes of comparison to the waiver criteria.

B. Land disturbance associated with existing one and two family dwellings, subject to conditions described in A. of this Section.

C. Use of land for gardening for home consumption.

D. Agriculture, Quarrying, when operated in accordance with a conservation plan or erosion and sedimentation control plan prepared by a qualified individual in accordance with guidelines of the Conservation District and or the USDA by the Conservation District. The agricultural activities such as growing crops, rotating crops, filling of soil and grazing animals and other such activities are specifically exempt from complying with the requirements of this Ordinance when such activities are conducted in accordance with a conservation plan prepared by a qualified individual in accordance with guidelines of the Conservation District and or the USDA. The construction of buidlings, parking lots or any activity that may result in impervious surface which increases the rate and volume of storm water runoff should comply with the requirements of this Ordinance.

E. Forest Management operations which are following the Department of Environmental Resources' management practices contained in its publication "Soil Erosion and Sedimentation

Control Guidelines for Forestry" and are operating under an erosion and sedimentation control plan.
No exemption shall be provided for Regulated Activities as defined in Section 104.E of this Ordinance.

F. The creation of more than three lots irrespective of size for which new construction of buildings or impervious surface could occur now or in the future will be considered to have an impervious surface greater than 10,000 square feet.

SECTION 403. DRAINAGE PLAN CONTENTS

The Drainage Plan shall consist of all applicable calculations, maps and plans. A note on the maps shall refer to the associated computations and erosion and sedimentation control plan by title and date. The cover sheet of the computations and erosion and sedimentation control plan shall refer to the associated maps by title and date. All Drainage Plan materials shall be submitted to the Plan Administrator in a format that is clear, concise, legible, neat and well organized; otherwise, the Drainage Plan shall be disapproved and returned to the Applicant.

The following items shall be included in the Drainage Plan:

A. General:

1. Completed application form.
2. Written description of the project, either as a separate document or as notes on the site plan.
3. Written description of proposed permanent storm water controls, either as a separate document or as notes on the plan sheet.
4. Construction staging schedule, listing the beginning and completion of any earth disturbance by staging or phases, and including all erosion and sedimentation, and other, controls.

B. Map(s) of the project area showing:

1. the location of the project relative to highways, municipalities or other identifiable landmarks, normally the base map should be the appropriate United States Geologic Survey Quadrangle map or portion thereof.
2. Existing contours at intervals of two (2) feet. In areas of steep slopes (greater than 15%), five foot contour intervals may be used, at the direction of the reviewing agency.
3. Streams, lakes, ponds, wetlands, or other bodies of water within the project are, including the average surface height or top of impoundment.
4. Other physical features including existing drainage swales and areas of natural vegetation to be preserved.
5. Locations of proposed underground utilities, sewers and water lines.
6. An overlay showing soil types and boundaries.
7. Proposed locations and extents of changes to land surface and vegetative cover.

8. Proposed locations of structures, roads, paved areas and buildings.

9. Final contours at intervals of two (2) feet. In areas of steep slopes (greater than 15%), five foot contour intervals may be used, at the direction of the reviewing agency.

10. Subwatershed boundaries applicable to the site.

All maps drawn as part of this section shall be at a scale of no less than one inch to 50 feet and no greater than 1 inch to 200 feet, with the exception of item 1, and shall be displayed on sheets no smaller than 11 inches by 17 inches and no greater than 24 inches by 36 inches.

C. Storm water management controls:

1. All storm water management controls must be shown on a map and described, including:

a. Ground water recharge methods such as seepage pits, beds or trenches. When these structures are used, the locations of septic tank infiltration areas and wells must be shown.

b. Other control devices or methods such as roof-top storage, semi-pervious paving materials, grass swales, parking lot ponding, vegetated strips, detention or retention ponds, storm sewers, etc.

2. All controls which are permanent and all which are temporary.

3. All calculations, assumptions and criteria used in the design of the control devise or method must be shown.

D. Maintenance Program - A maintenance program for all storm water management control facilities must be included.

This program must include the proposed ownership of the control facilities, the maintenance requirements for the facilities, and the financial responsibilities for the required maintenance.

It must be signed and dated by the municipal officials as to their acceptance of the plan.

SECTION 404. PLAN SUBMISSION

A. For Regulated Activities specified in Sections 104.A and 104.B: After review by the Union Dale Borough engineer

1. The Drainage Plan shall be submitted by the developer {to the municipal secretary (or other appropriate person)} as part of the Preliminary Plan submission for the subdivision or land development.

2. {Six (6)} Eight (8) copies of the Drainage Plan shall be submitted.

3. {Distribution of the Drainage Plan will be as follows:

a. One (1) copy to the governing body.

b. One (1) copy to the borough engineer.

c. Two (2) copies to the borough planning commission.
d. Two (2) copies to the Lackawanna County Regional Planning Commission, or applicable county planning agency for municipalities outside of Lackawanna County.

Plan distribution will be the same as that for other subdivision and/or land development plans, with the addition of one (1) plan to the engineer.

B. For Regulated Activities specified in Sections 104.C and 104.D after review by the municipal engineer, the Drainage Plan shall be submitted by the developer to the Union Dale Borough building permit officer as part of the building permit application.

C. For regulated Activities specified in Sections 104.E and 104.F:

1. After review by the municipal engineer the Drainage Plan shall be submitted by the developer to the county planning agency for coordination with the DER permit application process under Chapter 105 (Dam Safety and Waterway Management) or Chapter 106 (Flood Plain Management) of DER's Rules and Regulations.
2. Two (2) copies of the Drainage Plan shall be submitted.

SECTION 405. DRAINAGE PLAN REVIEW

A. The Union Dale Borough engineer shall review the Drainage Plan for consistency with the adopted Lackawanna River Storm Water Management Plan as embodied by this ordinance and against any additional storm drainage provisions contained in the Union Dale Borough subdivision and land development or zoning ordinance, as applicable, and provide his or her findings to the Union Dale Borough planning commission within 30 days of receipt of the Drainage Plan.

B. For Regulated Activities specified in Sections 104.A and 104.B , the county planning agency consistent with established procedures under Act 247, as to whether the Drainage Plan has been found to be consistent with the Storm Water Management Plan.

C. {For Regulated Activities specified in Sections 104.E and 104F., the county planning agency shall notify DER whether the Drainage Plan is consistent with the Storm Water Management Plan and forward a copy of the review letter to the Union Dale Borough developer and any other interested party(ies).}

D. The Union Dale Borough or county planning commission shall not approve any subdivision or land development (Regulated Activities 104.A and 104.B) or building permit application (Regulated Activities 104.C or 104.D) if the Drainage Plan has been found to be inconsistent with the Storm Water Management Plan as determined by the Union Dale Borough engineer.

The Union Dale Borough shall provide the developer with a written approval or denial of the proposal no later than 90 days following the date of the regular meeting of the governing body, consistent with established procedures under Act 247.

SECTION 406. MODIFICATION OF PLANS

A modification to a submitted Drainage Plan for a proposed development site which involves a change in control methods or techniques, or which involves the relocation or redesign of control measures, or which is necessary because soil or other conditions are not as stated on the Drainage Plan (as determined by the Union Dale Borough engineer) shall require a resubmission of the modified Drainage Plan consistent with Section 404 subject to review per Section 405 of this Ordinance.

SECTION 407. HARDSHIP WAIVER PROCEDURE

The Borough of Union Dale may hear requests for waivers where it is alleged that the provisions of this Ordinance inflict unnecessary hardship upon the applicant. The waiver request shall be in writing on an application from promulgated by the Borough of Union Dale and accompanied by the requisite fee based upon a fee schedule adopted by the Borough of Union Dale. A copy of the completed application form shall be provided to each of the following: The Union Dale Borough solicitor and the county planning agency. The application shall fully document the nature of the alleged hardship.

The Borough of Union Dale may grant a waiver provided that all of the following findings are made in the given case:

1. That there are unique physical circumstances or conditions, including irregularity of lot size or shape, or exceptional topographical or other physical conditions peculiar to the particular property, and that the unnecessary hardship is due to such conditions, and not the circumstances or conditions generally created by the provisions of this Ordinance in the in which the property is located:

2. That because of such physical circumstances or conditions, there is no possibility that the property can be developed in strict conformity with the provisions of this Ordinance, including the "no harm" provisions, and that the authorization of a waiver is therefore necessary to enable the reasonable use of the property;

3. That such unnecessary hardship has not been created by the applicant; and

4. That the waiver, if authorized, will represent the minimum waiver that will afford relief and will represent the least modification possible of the regulation in issue.

In granting any waiver, the Borough of Union Dale may attach such reasonable conditions and safeguards as it may deem necessary to implement the purposes of Act 167 and this Ordinance.

SECTION 501. SCHEDULE OF INSPECTIONS

A. The Union Dale Borough engineer of his designee shall inspect all phases of the installation of the permanent storm water control facilities and the complete installation as outlined under Section 403. [A]. Inspection of all phases of installation of the control facilities and the completed install ation shall be conducted by the engineer or his designee within 30 days after written notification of the completion by the developer.

B. If at any stage of the work the Union Dale Borough engineer determines that the permanent storm water control facilities are not being installed in accordance with the approved development plan, the Union Dale Borough shall revoke any existing permits until the work is brought into compliance with the approved plan or a revised development plan is submitted and approved as required by Section 406.

ARTICLE VI
FEES AND EXPENSES

SECTION 601. GENERAL

A drainage plan fee schedule shall be established by resolution of the governing body of the Borough of Union Dale. The purpose of the fees will be to defer municipal costs for Drainage Plan review and processing.

SECTION 602. EXPENSES COVERED BY FEES

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

A. The review of the Drainage Plan by the municipal engineer.

B. The site inspection.

C. The inspection of required controls and improvements during construction.

D. The final inspection upon completion of the controls and improvements required in the Plan.

E. Any additional work required to enforce any permit provisions, regulated by this Ordinance, correct violations and assure the completion of stipulated remedial actions.

ARTICLE VII
MAINTENANCE RESPONSIBILITIES

SECTION 701. MAINTENANCE RESPONSIBILITIES

A. The storm water management plan for the development site shall contain an operation and maintenance plan prepared by the developer and approved by the municipal engineer. The operation and maintenance plan shall outline require routine maintenance actions and schedules necessary to insure proper operation of the facility(ies).

B. The storm water management plan for the development site shall establish responsibilities for the continuing operating and maintenance of all proposed storm water control facilities, consistent with the following principals:

1. If a development consists of structures or lots which are to be separately owned and in which streets, sewers and other public improvements are to be dedicated to the municipality, storm water control facilities should also be dedicated to and maintained by the municipality.

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

C. The governing body, upon recommendation of the municipal engineer, shall make the final determination on the continuing maintenance responsibilities prior to final approval of the storm water management plan. The governing body reserves the right to accept the ownership and operating responsibility for any or all of the storm water management controls.

SECTION 702. MAINTENANCE AGREEMENT FOR PRIVATELY OWNED STORM WATER FACILITIES

A. Prior to final approval of the site's storm water management plan, the property owner shall sign and record a maintenance agreement covering all storm water control facilities which are privately owned. The agreement shall stipulate that:

1. The owner shall maintain all facilities in accordance with the approved maintenance schedule and shall keep all facilities in a safe and attractive manner.

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

3. The owner shall keep on file with the municipality the name, address, and telephone number of the person or company responsible for maintenance activities; in the event of a change, new information will be submitted to the municipality within ten (10) days of the change.

4. If the owner fails to maintain the storm water control facilities following due notice by the municipality to correct the problem(s), the municipality may perform the necessary maintenance work or corrective work and the owner shall reimburse the municipality for all costs.

B. Other items may be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. The maintenance agreement shall be subject to the review and approval of the municipal solicitor and governing body.

SECTION 703. MUNICIPAL STORM WATER MAINTENANCE FUND

(NOTE: This provision is an example of one way that a municipality could establish a special fund to finance its maintenance and inspection activities for storm water retention/detention facilities. It is an optional provision of this ordinance. If a municipality is interested in establishing such a fund, it is recommended that it consult with its solicitor for legal requirements and procedures.)

A. Persons installing storm water storage facilities shall be required to pay a specified amount to the Municipal Storm Water Maintenance Fund to help defray costs of periodic inspections and maintenance expenses. The amount of the deposit shall be determined as follows:

1. If the storage facility is to be privately owned and maintained, the deposit shall cover the cost of periodic inspections performed by the municipality for a period of ten (10) years, as estimated by the municipal engineer. After that period of time, inspections will be performed at the expense of the municipality.

2. If the storage facility is to be owned and maintained by the municipality, the deposit shall cover the estimated costs for maintenance and inspections for ten (10) years. The municipal engineer will establish the estimated costs utilizing information submitted by the applicant.

3. The amount of the deposit to the fund shall be converted to present worth of the annual series values. The municipal engineer shall determine the present worth equivalents which shall be subject to the approval of the governing body.

B. If a storage facility is proposed that also serves as a recreation facility (e.g., ballfield, lake), the municipality may reduce or waive the amount of the maintenance fund deposit based upon the value of the land for public recreation purposes.

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

SECTION 704. RIGHT OF ENTRY

Upon presentation of the proper credentials, duly authorized representatives of the Union Dale Borough may enter at reasonable times upon any property within the Union Dale Borough to investigate or ascertain whether proper maintenance is being provided for any storm water management facilities for which the Union Dale Borough is not directly responsible for maintenance, as provided in Section 701.

ARTICLE VIII
ADOPTION

SECTION 801. ADOPTION

This Storm Water Management Ordinance shall take full force and effect from the date of passage. This ordinance, however, shall have no effect on subdivision and/or land development plans pending at the time of passage of this ordinance or within sixty (60) days of said passage as long as the plans were on file with the municipal planning commission.

SECTION 802. PUBLIC HEARING

The public hearing for this ordinance was held on Nov 6, 1995.

SECTION 803. ADOPTION DATE

The date of adoption of this ordinance was Dec. 4 1995

Robert E Adams
President of Council or
Chairman of Supervisors

Ronald E Foster
Municipal Secretary

Municipal Solicitor

APPENDIX A

Table 1b. - Runoff curve numbers for cultivated agricultural lands

Cover description			Curve numbers for hydrologic soil group--			
Cover type	Treatment	Hydrologic condition	A	B	C	D
Fallow	Bare soil	--	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
	C&T + CR	Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T + CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

From - Urban Hydrology for Small Watersheds, USDA, Soil Conservation Service, TR-55, June, 1986.

Table 2. - Runoff coefficients for use with the Rational Equation

Description of Area	Runoff Coefficients
Business	
Downtown areas	0.70-0.95
Neighborhood areas	0.50-0.70
Residential	
Single-family areas	0.30-0.50
Multiunits, detached	0.40-0.60
Multiunits, attached	0.60-0.75
Residential (suburban)	0.25-0.40
Apartment dwelling areas	0.50-0.70
Industrial	
Light areas	0.50-0.80
Heavy areas	0.60-0.90
Parks, cemeteries	0.10-0.25
Playgrounds	0.20-0.35
Railroad yard areas	0.20-0.40
Unimproved areas	0.10-0.30
Streets	
Asphaltic	0.70-0.95
Concrete	0.80-0.95
Brick	0.70-0.85
Drives and walks	0.75-0.85
Roofs	0.75-0.95
Lawns: Sandy soil	
Flat 2%	0.05-0.10
Average 2-7%	0.10-0.15
Steep 7%	0.15-0.20
Lawns: Heavy soil	
Flat 2%	0.13-0.17
Average 2-7%	0.18-0.22
Steep 7%	0.25-0.35

From ASCE [1972] and Viessman et al. [1977].

APPENDIX B

DRAINAGE PLAN PERMIT APPLICATION

DRAINAGE PLAN PERMIT APPLICATION

Application is hereby made for review of the stormwater management plan and related data as submitted herewith in accordance with the _____ Watershed Stormwater Management Ordinance.

Date of Submission_____

Submission No._____

Local Governing Body_____ (Name of Township or Borough)

1. Name of Subdivision or Development_____

2. Name of Applicant_____

_____

Telephone No._____

(If Corporation,list the Corporations name and the names of two officers of the Corporation).

Corporation_____
Name_____
Name_____
Telephone No._____
Address_____
_____
_____

Applicant's interest in subdivision or development
(If other than property owner give owners name and address).

3. Name of Property Owner_____
Telephone No._____
Address_____
_____
_____

4. Name of Engineer_____
Telephone No._____
Address_____
_____
_____

5. Type of subdivision or development proposed:

_____ Single-family lots	_____ Mobile-home park
_____ Two-family lots	_____ Campground
_____ Multi-family lots	_____ Other (_____)
_____ Cluster type lots	_____ Commercial (multi-lot)
_____ Planned residential development	_____ Commercial (one-lot)
_____ Townhouses	_____ Industrial (multi-lot)
_____ Garden apartments	_____ Industrial (one-lot)

6. Lineal feet of new road proposed?_____L.F.

7. Area of existing and proposed impervious area on entire tract.

   A. Existing (to remain) _____ S.F.

   B. Proposed _____ S.F.

8. Stormwater

   A. Does the peak rate of runoff from proposed conditions exceed that flow which occurred for pre-development conditions for the designated design storm? _____

   B. Method of determining runoff rates. _____

   C. Is the proposed runoff reduced to the allowable release rate for the subarea in which the site is located for the 2-, 10-, and 25-year design storm? _____

   D. Subarea Number from Appendix _____ of the Watershed Stormwater Management Ordinance. _____

   E. Type of proposed runoff control facilities or infiltration measures. _____

   F. Does the proposed stormwater control criteria meet the requirements/guidelines of the stormwater ordinances? _____

   G. Does the plan meet the requirements of Article III and IV of the stormwater ordinance? _____

   H. Is a hydraulic routing through the stormwater control structure submitted? _____

   I. Is a construction schedule or staging attached? _____

   J. Is a recommended maintenance program attached? _____

   K. Who will have the maintenance responsibility of the stormwater control facilities? _____

9. EROSION AND SEDIMENTATION POLLUTION CONTROL (E&SC)

   A. Has the Erosion and Sedimentation Control Plan been submitted to the county conservation district? _____

   B. Total area of earth disturbance _____

C. Is the Erosion and Sedimentation Pollution Control Plan approval letter attached?_____

10. WETLANDS

A. Are wetlands encountered on the site?_____

B. Have the wetlands been delineated by someone trained in wetland delineation?_____

(If yes, list the names and addresses of persons delineating the wetlands)

Name_____
Telephone No._____
Address_____

C. Have the wetlands been verified by a state or federal permitting authority?_____

D. Have the wetlands been surveyed?_____

E. Total acreage of wetlands within the property._____

F. Additional Supporting Documentation_____

11. FILING

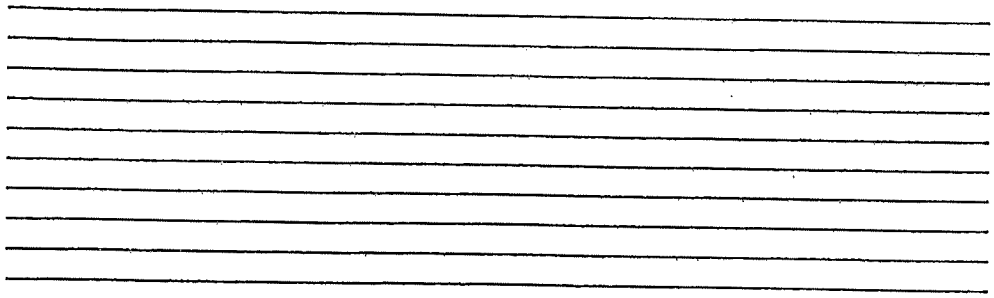
A. Has the requirement fee been submitted?_____

Amount_____

B. Has the proposed Schedule of Construction and Inspections to be performed by the applicant or their engineer been submitted?_____

C. Name of individual(s) who will be making the inspections_____

12. ADDITIONAL COMMENTS



CERTIFICATE OF OWNERSHIP AND ACKNOWLEDGEMENT OF APPLICATION

On this _________ day of ______________, 19________, before me, the undersigned officer, the applicant verifies that this application was made with knowledge and direction of the ____________ Watershed Act 167 Stormwater Management Plan and the provisions set forth within the ____________ Stormwater Management Ordinance.

____
Signature of Property Owner Date

____
Signature of Property Owner Date

____
Signature of Applicant Date

____
Signature of Local Governing Body Official Date

= =

INFORMATION BELOW THIS LINE TO BE COMPLETED BY
THE LOCAL GOVERNING BODY

Date complete application received______________________________________

Plan Number______________________________________

Fees______________________________________

Date Fees Paid______________________________________

Check Number______________________________________

Received By______________________________________

SCHEDULE OF FEES

Stormwater Management Plan Name_____
Submission Number_____
Owner_____
Engineer_____ Date_____

1. FILING FEE

$_____

2. LAND USE

Residential Subdivisions, Campgrounds, Mobile Home Parks, Multi-Family Dwelling Units, and Special Single Family Residence $_____

Commercial or Industrial $_____

3. TYPE OF DEVELOPMENT AND AMOUNT OF IMPERVIOUS AREAS CREATED (optional)

Residential

Less than 10,000 s.f. $_____
10,000 s.f. - 50,000 s.f. $_____
50,000 s.f. - 100,000 s.f. $_____
100,000 s.f. - 150,000 s.f. $_____
150,000 s.f. and up $_____

Commercial or Industrial and Other $_____

4. STORMWATER CONTROL MEASURES (optional)

Detention facilities which require hydraulic routing ($_____ / Facility). $_____

Infiltration facilities $_____ / Facility). $_____

5. SITE INSPECTION (if governing body determines necessary)

$_____ / Inspection) $_____

TOTAL $_____

All subsequent reviews shall be the amount of the initial review fee unless a new application is required as per Section _____ of the Watershed Stormwater Management Ordinance.

STORMWATER MANAGEMENT OCCUPANCY PERMIT

Date_____
Plan Number_____
Local Governing Body_____

Property Owner_____
Address_____

Location_____
Type of Use_____

Name of Business (If applicable)_____
Address_____

The applicant attests that he/she has complied with all of the Township/Borough ordinances prior to construction of the proposed development.

The engineer attests that he/she has complied with all of the Township/Borough ordinances prior to construction of the proposed development.

The following ordinances have been complied with:

Subdivisions Ordinance	YES	NO	DO NOT APPLY
Land Development Ordinance	YES	NO	DO NOT APPLY
Zoning Ordinance	YES	NO	DO NOT APPLY
Building Permit Ordinance	YES	NO	DO NOT APPLY
Stormwater Management Ordinance	YES	NO	DO NOT APPLY
Street and Road Occupancy Permit	YES	NO	DO NOT APPLY

Has the Erosion and Sedimentation Control Plan been approved by the county conservation district?

YES NO PENDING

_____
Signature of Applicant Date

_____
Signature of Engineer Date

_____
Signature of Issuing Agent Date