CHAPTER 26
WATER

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Part 1

Brodhead and McMichael Creeks Stormwater Management Ordinance

A. General Provisions.

§101. Statement of Findings.

The governing body of the Borough of Stroudsburg finds that:

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

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

C. Inadequate management of accelerated stormwater runoff resulting from development throughout a watershed poses a threat to surface and groundwater quality.

D. Through project design, impacts from stormwater runoff can be minimized to maintain the natural hydrologic regime, and sustain high water quality, groundwater recharge, stream baseflow and aquatic ecosystems. The most cost effective and environmentally advantageous way to manage stormwater runoff is through nonstructural project design, minimizing impervious surfaces and sprawl, avoiding sensitive areas (i.e., buffers, floodplains, steep slopes), and designing to topography and soils to maintain the natural hydrologic regime.

(Ord. 906, 7/16/2009, §101)

§102. Purpose.

The purpose of this Part is to promote the public health, safety, and welfare within the Brodhead/McMichaels Creek Watersheds by maintaining the natural hydrologic regime by minimizing the impacts described in §101 of this Part through provisions designed to:

A. Promote alternative project designs and layout that minimizes impacts to surface and ground water.
B. Promote nonstructural BMP's.
C. Minimize increases in stormwater volume.
D. Minimize impervious surfaces.
E. Manage accelerated runoff and erosion and sedimentation problems at their source by regulating activities that cause these problems during construction.
F. Utilize and preserve the existing natural drainage systems.
G. Encourage recharge of groundwater where appropriate and prevent degradation of groundwater quality.
H. Address the quality and quantity of stormwater discharges from the development site.
I. Maintain existing baseflow and quality of streams and watercourses in the Borough and the Commonwealth.
J. Preserve and restore the flood-carrying capacity of streams.
K. Provide proper maintenance of all permanent stormwater management facilities that are constructed in the Borough.
L. Provide performance standards and design criteria for watershed-wide stormwater management and planning.

(Ord. 906, 7/16/2009, §102)

§103. Statutory Authority.


(Ord. 906, 7/16/2009, §103)

§104. Applicability/Regulated Activities.

1. This Part shall apply to all of Stroudsburg Borough, which is located within the Brodhead/McMichaels Creek Watershed, as delineated in Appendix D, which is hereby adopted as part of this Part.
2. This Part shall only apply to permanent nonstructural and structural stormwater management best management practices (BMP's) constructed as part of any of the regulated activities listed in this Section.

3. This Part contains only the stormwater management performance standards and design criteria that are necessary or desirable from a watershed-wide perspective. Local stormwater management design criteria (e.g., inlet spacing, inlet type, collection system design and details, outlet structure design, etc.) shall continue to be regulated by the applicable Borough ordinances and applicable State regulations.

4. The Borough may, after consultation with DEP, approve alternative methods for meeting the State water quality requirements other than those in this Part, provided that they meet the minimum requirements of, and do not conflict with, State law, including but not limited to the Clean Streams Law and the Pennsylvania Stormwater BMP Manual as revised.

5. The following activities are defined as “regulated activities” and shall be regulated by this Part:

   A. Land development.
   B. Subdivisions.
   C. Alteration of the natural hydrologic regime.
   D. Construction of/or additional impervious or semi-pervious surfaces (driveways, parking lots, roads).
   E. Construction of new buildings or additions to existing buildings.
   F. Redevelopment of a site which will increase runoff or change a discharge point. Any redevelopment that does not increase the runoff must still comply with §123 (Water Quality and Streambank Erosion) and §124 (Ground Water Recharge).
   G. Diversion piping or encroachments in any natural or man-made channel.
   H. Nonstructural and structural stormwater management BMP's or appurtenances thereto.
   I. Stream enhancement or restoration projects.

(Ord. 906, 7/16/2009, §104)

§105. Repealer.

Any ordinance or ordinance provision of the Borough inconsistent with any of the provisions of this Part is hereby repealed to the extent of the inconsistency only.
§106. Severability.

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

(Ord. 906, 7/16/2009, §106)

§107. Compatibility with Other Ordinance Requirements.

Approvals issued pursuant to this Part 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.

(Ord. 906, 7/16/2009, §107)
B. Definitions.

§111. Interpretation.

For the purposes of this Part, 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 an individual, firm, association, organization, partnership, trust, company, corporation, unit of government, or any other similar entity.

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

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

(Ord. 906, 7/16/2009, §201)

§112. Definitions.

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

AGRICULTURAL ACTIVITIES–The work of producing crops and raising livestock including tillage, plowing, disking, harrowing, pasturing and installation of conservation measures. For purposes of regulation by this Part, construction of new buildings or impervious area is not considered an agricultural activity.

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

APPLICANT–A person who has filed an application for approval to engage in any regulated activities as defined in §104 of this Part.

AS-BUILT DRAWINGS–Those maintained by the contractor as he constructs the project and upon which he documents the actual locations of the building components and changes
to the original contract documents. These, or a copy of same, are turned over to the applicant’s engineer at the completion of the project.

BANKFULL—The channel at the top-of-bank or point where water begins to overflow onto a floodplain.

BASE FLOW—The portion of stream flow that is sustained by groundwater discharge.

BIORETENTION—A stormwater retention area which utilizes woody and herbaceous plants and soils to remove pollutants before infiltration occurs.

BMP (BEST MANAGEMENT PRACTICE)—Stormwater structures, facilities and techniques to control, maintain or improve the quantity and quality of surface runoff and groundwater recharge.

BOROUGH—The Borough of Stroudsburg, Monroe County, Pennsylvania.

BUFFER—The area of land immediately adjacent to any wetland, lake, pond, vernal pond, or stream, measured perpendicular to and horizontally from the delineated edge of the wetland, lake, pond, or vernal pond, or the top-of-bank on both sides of a stream. The inner buffer is located nearest to the feature being protected and surrounded by the outer buffer, where applicable.

CHANNEL EROSION—The widening, deepening, and headward cutting of small channels and waterways, caused by stormwater runoff or bankfull flows.

CISTERN—An underground reservoir or tank for storing rainwater.

CONSERVATION DISTRICT—The Monroe County Conservation District.

CONSUMPTIVE WATER USE—That part of water removed from the immediate water environment not available for other purposes such as water supply, maintenance of stream flows, water quality, fisheries and recreation, as opposed to water that is used non-consumptively, which is returned to surface water, where practicable, and groundwater.

CULVERT—A structure with appurtenant works, which carries water under or through an embankment or fill.

DAM—An artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or 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.

DEPARTMENT—The Pennsylvania Department of Environmental Protection (DEP).

DESIGNEE—The agent of the Monroe County Planning Commission, Monroe County Conservation District and/or agent of the governing body involved with the administration, review or enforcement of any provisions of this Part by contract or memorandum of understanding.
DESIGN PROFESSIONAL (QUALIFIED)–A Pennsylvania registered professional engineer, trained to develop stormwater management plans.

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

DETENTION BASIN–An impoundment structure designed to manage stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate.

DETENTION DISTRICT–Those subareas in which some type of detention is required to meet the plan requirements and the goals of Act 167.

DEVELOPMENT SITE–The specific tract of land for which a regulated activity is proposed.

DIFFUSED DRAINAGE DISCHARGE–Drainage discharge not confined to a single point location or channel, such as sheet flow or shallow concentrated flow.

DISTURBED AREAS–Land area where an earth disturbance activity is occurring or has occurred.

DOWNSLOPE PROPERTY LINE–That portion of the property line of the lot, tract, or parcels of land being developed located such that overland or pipe flow from the site would be directed towards it.

DRAINAGE CONVEYANCE FACILITY–A stormwater management facility designed to transmit stormwater runoff and shall include channels, swales, pipes, conduits, culverts, storm sewers, etc.

DRAINAGE EASEMENT–A right granted by a grantor to a grantee, allowing the use of private land for stormwater management purposes.

DRAINAGE PERMIT–A permit issued by the Borough governing body after the drainage plan has been approved.

DRAINAGE PLAN–The documentation of the stormwater management system, if any, to be used for a given development site, the contents of which are established in §133.

EARTH DISTURBANCE–A construction or other human activity which disturbs the surface of land including, but not limited to, clearing and grubbing, grading, excavations, embankments, agricultural plowing or tilling, timber harvesting activities, road maintenance activities, mineral extraction, and the moving, depositing, stockpiling, or storing of soil, rock or earth materials.

EMERGENCY SPILLWAY–A conveyance area that is used to pass peak discharge greater than the maximum design storm controlled by the stormwater facility.

ENCROACHMENT–A structure or activity that changes, expands or diminishes the course,
current or cross section of a watercourse, floodway or body of water.

EROSION–The movement of soil particles by the action of water, wind, ice, or other natural forces.

EROSION AND SEDIMENT CONTROL PLAN–A site specific plan that is designed to minimize accelerated erosion and sedimentation during construction.

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

EXISTING CONDITIONS–The initial condition of a project site prior to the proposed alteration. If the initial condition of the site is undeveloped land, the land use shall be considered as “meadow” unless the natural land cover is proven to generate lower curve numbers or Rational “C” value.

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

FLOODPLAIN–Any land area susceptible to inundation by water from any natural source or delineated by applicable Department of Housing and Urban Development, Federal Insurance Administration Flood Hazard Boundary - Mapped as being a special flood hazard area.

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

FOREST MANAGEMENT/TIMBER OPERATIONS–Planning and activities necessary for the management of forest land with no change of land use proposed. These include timber inventory and preparation of forest management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting and reforestation.

FREEBOARD–A vertical distance between the elevation of the design high-water and the top of a dam, levee, tank, basin, swale, or diversion berm. The space is required as a safety margin in a pond or basin.

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

GRASSED WATERWAY–A natural or constructed waterway, usually broad and shallow, covered with erosion-resistant grasses, used to convey surface water.
GROUNDWATER RECHARGE—Replenishment of existing natural underground water supplies without degrading groundwater quality.

HEC-HMS—The U.S. Army Corps of Engineers, Hydrologic Engineering Center (HEC) - Hydrologic Modeling System (HMS) computer program.

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

HYDROLOGIC REGIME (NATURAL)—The hydrologic cycle or balance that sustains quality and quantity of stormwater, baseflow, storage, and groundwater supplies under natural conditions.

HYDROLOGIC SOIL GROUP—A classification of soils by the Natural Resources Conservation Service, formerly the Soil Conservation Service, into four (4) runoff potential groups. The groups range from A soils, which are very permeable and produce little runoff, to D soils, which are not very permeable and produce much more runoff.

IMPERVIOUS SURFACE—A surface that prevents the percolation of water into the ground such as rooftops, pavement, sidewalks, driveways, gravel drives, roads and parking, and compacted fill, earth or turf to be used as such.

IMPOUNDMENT—A retention or detention basin designed to retain stormwater runoff and release it at a controlled rate.

INFILL—Development that occurs on smaller parcels that remain undeveloped but are within or very close proximity to urban areas. The development relies on existing infrastructure and does not require an extension of water, sewer or other public utilities.

INFILTRATION—For stormwater to pass through the soil from the surface.

INFILTRATION STRUCTURES—A structure designed to direct runoff into the underground water (e.g., French drains, seepage pits, seepage trench).

INLET—The upstream end of any structure through which water may flow.

LAND DEVELOPMENT—(A) the improvement of one (1) lot or two (2) or more contiguous lots, tracts, or parcels of land for any purpose involving: (1) a group of two (2) or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure or (2) the division or allocation of land or space, whether initially or cumulatively, between or among two (2) or more existing or prospective occupants by means of, or for the purpose of, streets, common areas, leaseholds, condominiums, building groups, or other features; (B) A subdivision of land; (C) development in accordance with §503(1.1) of the Pennsylvania Municipalities Planning Code. Excluded from review and approval as a land development are the addition of the first accessory building on a lot or lots subordinate to an existing principal residential building on a residential use lot.
LIMITING ZONE–A soil horizon or condition in the soil profile or underlying strata which includes one (1) of the following:

A. A seasonal high water table, whether perched or regional, determined by direct observation of the water table or indicated by soil mottling.

B. A rock with open joints, fracture or solution channels, or masses of loose rock fragments, including gravel, with insufficient fine soil to fill the voids between the fragments.

C. A rock formation, other stratum or soil condition which is so slowly permeable that it effectively limits downward passage of water.

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

MAIN STEM (MAIN CHANNEL)–Any stream segment or other runoff conveyance facility used as a reach in the Brodhead/McMichaels 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–Stroudsburg Borough, Monroe County, Pennsylvania.

NATURAL HYDROLOGIC REGIME–See “hydrologic regime.”

NON-POINT SOURCE POLLUTION–Pollution that enters a water body from diffuse origins in the watershed and does not result from discernible, confined, or discrete conveyances.

NONSTRUCTURAL BMPs–Methods of controlling stormwater runoff quantity and quality, such as innovative site planning, impervious area and grading reduction, protection of natural depression areas, temporary ponding on site and other techniques.

NRCS–Natural Resource Conservation Service (previously SCS).

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

OUTFALL–Point where water flows from a conduit, stream, or drain.

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

PARENT TRACT–The parcel of land from which a land development or subdivision originates existing as of the date of Borough adoption of this Part.
PARKING LOT STORAGE—Involves the use of parking areas as temporary impoundments with controlled release rates during rainstorms.

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

PENN STATE RUNOFF MODEL (CALIBRATED)—The computer-based hydrologic modeling technique adapted to the Brodhead/McMichaels Watershed for the Act 167 Plan. The model has been “calibrated” to reflect actual recorded flow values by adjoining key model input parameters.

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

PLANNING COMMISSION—The Planning Commission of the Borough of Stroudsburg.

PMF - PROBABLY MAXIMUM FLOOD—The flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in any area. The PMF is derived from the probable maximum precipitation (PMP) as determined based on data obtained from the National Oceanographic and Atmospheric Administration (NOAA).

PRACTICABLE ALTERNATIVE—An alternative that is available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.

PREDEVELOPMENT—Undeveloped/natural condition.

PRETREATMENT—Techniques employed in structural and nonstructural stormwater BMPs to provide storage or filtering to help trap coarse materials and other pollutants before they enter the system, but not necessarily meet the water quality volume requirements of §123.

RATIONAL FORMULA—A rainfall-runoff relation used to estimate peak flow.

RECHARGE AREA—Undisturbed surface area or depression where stormwater collects, and a portion of which infiltrates and replenishes the underground and groundwater.

RECORD DRAWINGS—Original documents revised to suit the as-built conditions and subsequently provided by the applicant’s engineer to the applicant. The applicant’s engineer takes the contractor’s as-builts, reviews them in detail with his/her own records for completeness, then either turns these over to the applicant or transfers the information to a set of reproducibles, in both cases for the applicant’s permanent records.

REDEVELOPMENT—Any construction, alteration, or improvement exceeding five thousand (5,000) square feet of impervious surface on sites where existing land use is commercial, industrial, institutional, or multifamily residential.

REGULATED ACTIVITIES—Actions or proposed actions that have an impact on stormwater runoff quality and quantity and that are specified in §104 of this Part.
RELEASE RATE–The percentage of existing conditions peak rate of runoff from a site or subarea to which the post development peak rate of runoff must be reduced to protect downstream areas.

RETENTION BASIN–A structure in which stormwater is stored and not released during the storm event. Retention basins do not have an outlet other than recharge and must infiltrate stored water in no more than three (3) days.

RETURN PERIOD–The average interval, in years, within which a storm event of a given magnitude can be expected to recur.

RISER–A vertical pipe extending from the bottom of a pond that is used to control the discharge rate from the pond for a specified design storm.

ROOFTOP DETENTION–Temporary ponding and gradual release of stormwater falling directly onto flat roof surfaces by incorporating controlled-flow roof drains into building designs.

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

SALDO–Subdivision and Land Development Ordinance [Chapter 22].

SEDIMENT BASIN–A barrier, dam, retention or detention basin located and designed to retain rock, sand, gravel, silt, or other material transported by water during construction.

SEDIMENT POLLUTION–The placement, discharge or any other introduction of sediment into the waters of the Commonwealth.

SEDIMENTATION–The process by which mineral or organic matter is accumulated or deposited by the movement of water or air.

SEEPAGE PIT/SEEPAGE TRENCH–An area of excavated earth filled with loose stone or similar coarse material, into which surface water is directed for infiltration into the underground water.

SHEET FLOW–Runoff that flows over the ground surface as a thin, even layer.

SOIL-COVER COMPLEX METHOD –A method of runoff computation developed by the NRCS that is based on relating soil type and land use/cover to a runoff parameter called curve number (CN).

SOURCE WATER PROTECTION AREAS (SWPA)–The zone through which contaminants, if present, are likely to migrate and reach a drinking water well or surface water intake.

SPECIAL PROTECTION SUBWATERSHEDS–Watersheds for which the receiving waters are exceptional value (EV) or high quality (HQ) waters.

SPILLWAY–A conveyance that is used to pass the peak discharge of the maximum design storm controlled by the stormwater facility.
STORAGE INDICATION METHOD—A reservoir routing procedure based on solution of the continuity equation (inflow minus outflow equals the change in storage) with outflow defined as a function of storage volume and depth.

STORM FREQUENCY—The number of times that a given storm “event” occurs or is exceeded on the average in a stated period of years. See “return period.”

STORM SEWER—A system of pipes and/or open channels that convey intercepted runoff and stormwater from other sources, but excludes domestic sewage and industrial wastes.

STORMWATER—The surface runoff generated by precipitation reaching the ground surface.

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

STORMWATER MANAGEMENT PLAN—The plan for managing those land use activities that will influence stormwater runoff quality and quantity and that would impact the Brodhead/McMichaels Watershed adopted by the Monroe County Commissioners as required by the Act of October 4, 1978, P.L. 864, (Act 167), and known as the “Brodhead/McMichaels Watershed Act 167 Stormwater Management Plan.”

STORMWATER MANAGEMENT SITE PLAN—The plan prepared by the applicant or his representative indicating how stormwater runoff will be managed at the particular site of interest according to this Part.

STREAM—A natural watercourse.

STREAM ENCLOSURE—A bridge, culvert or other structure in excess of one hundred (100) feet in length upstream to downstream which encloses a regulated water of this Commonwealth.

SUBAREA (SUBWATERSHED)—The smallest drainage unit of a watershed for which stormwater management criteria have been established in the stormwater 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 devisees, transfer of ownership, or building or lot development; provided, however, that the subdivision by lease of land for agricultural purposes into parcels of more than ten (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.
TIMBER OPERATIONS—See “forest management.”

TIME-OF-CONCENTRATION (TC)—The time for surface runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed. This time is the combined total of overland flow time and flow time in pipes or channels, if any.

VERNAL POOL—An isolated, contained basin depression that holds water for at least two (2) months in the spring and summer, critical to several amphibian, reptile and invertebrate species. It also provides important storage for stormwater runoff and spring snowmelt that would otherwise contribute to down stream flooding. A vernal pond is typically no bigger than three hundred (300) feet long and one hundred twenty (120) feet wide and is often much smaller.

WATERCOURSE—A channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

WATERS OF THE COMMONWEALTH—Any and all rivers, streams, creeks, rivulets, 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.

WELLHEAD—The point at which a groundwater well bore hole meets the surface of the ground.

WELLHEAD PROTECTION AREA—The surface and subsurface area surrounding a water supply well, well field, spring or infiltration gallery supplying a public water system, through which contaminants are reasonably likely to move toward and reach the water source.

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, marshes, bogs, fens, and similar areas.

(Ord. 906, 7/16/2009, §202)
C. Stormwater Management.

§121. General Requirements.

1. Applicants proposing regulated activities in Brodhead/McMichaels Creek Watershed which do not fall under the exemption criteria shown in §132 shall submit a drainage plan consistent with the Brodhead/McMichaels Creek Watershed Stormwater Management Plan to the Borough for review. These criteria shall apply to the total proposed development even if development is to take place in stages.

2. The applicant is required to perform an alternatives analysis to find practicable alternatives to the surface discharge of stormwater, the creation of impervious surfaces and the degradation of waters of the Commonwealth, and must maintain as much as possible the natural hydrologic regime.

3. The drainage plan must be designed through an alternatives analysis consistent with the sequencing provisions of §122 to ensure maintenance of the natural hydrologic regime and to promote groundwater recharge and protect groundwater and surface water quality and quantity. The drainage plan designer must proceed sequentially in accordance with Part 1C.

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

5. The existing points of concentrated drainage that discharge onto adjacent property shall not be altered in any manner which could cause property damage without permission of the affected property applicant(s) and shall be subject to any applicable discharge criteria specified in this Part.

6. Areas of existing diffused drainage discharge shall be subject to any applicable discharge criteria in the general direction of existing discharge, whether proposed to be concentrated or maintained as diffused drainage areas, except as otherwise provided by this Part. If diffused drainage discharge is proposed to be concentrated and discharged onto adjacent property, the applicant must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding or other impacts will result from the concentrated discharge.

7. Where a development site is traversed by existing watercourses, drainage easements shall be provided conforming to the line of such watercourses. The terms of the easement shall conform to the stream buffer requirements contained in §123.I(8) of this Part.

8. Any stormwater management facilities regulated by this Part that would be located in or adjacent to waters of the Commonwealth or wetlands shall be subject to approval by PA DEP through the Joint Permit Application process, or, where deemed appropriate by PA DEP, the General Permit process. When there is a question whether wetlands may be involved, it is the responsibility of the applicant 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 DEP.

9. Any stormwater management facilities regulated by this Part that would be located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PennDOT).

10. Infiltration of runoff through seepage beds, infiltration trenches, etc., where soil conditions permit, and minimization of impervious surfaces to the extent permitted by the Borough’s Zoning Ordinance are encouraged to reduce the size or eliminate the need for detention facilities or other structural BMPs.

11. Roof drains shall not be connected to streets, sanitary or storm sewers or roadside ditches in order to promote overland flow and infiltration/percolation of stormwater where advantageous to do so. Considering potential pollutant loading, roof drain runoff in most cases will not require pretreatment.

12. All stormwater runoff, other than roof top runoff discussed in subsection 11 above, shall be treated for water quality prior to discharge to surface or groundwater.

(Ord. 906, 7/16/2009, §301)

§122. Nonstructural Project Design (Sequencing to Minimize Stormwater Impacts).

1. The design of all regulated activities shall include the following steps in sequence to minimize stormwater impacts.

   A. The applicant is required to find practicable alternatives to the surface discharge of stormwater, the creation of impervious surfaces and the degradation of waters of the Commonwealth, and must maintain as much as possible the natural hydrologic regime of the site.

   B. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.

   C. All practicable alternatives to the discharge of stormwater are presumed to have less adverse impact on quantity and quality of waters of the Commonwealth unless otherwise demonstrated.

2. The applicant shall demonstrate that they designed the regulated activities in the following sequence to minimize the increases in stormwater runoff and impacts to water quality:

   A. Prepare an Existing Resource and Site Analysis Map (ERSAM), showing environmentally sensitive areas including, but not limited to, steep slopes, ponds, lakes, streams, wetlands, hydric soils, vernal ponds, floodplains, buffer
areas, hydrologic soil groups A and B (areas conducive to infiltration), any existing recharge areas and any other requirements outlined in the Borough Subdivision and Land Development Ordinance [Chapter 22].

B. Establish buffers according to §123.

C. Prepare a draft project layout avoiding earth disturbance in sensitive areas identified in subsection 2A and minimizing total site earth disturbance as much as possible. The ratio of the disturbed area to the entire site area and measures taken to minimize earth disturbance shall be included on the ERSAM.

D. Identify site specific predevelopment drainage areas, discharge points, recharge areas to be preserved and hydrologic soil groups A and B to be utilized for recharge.

E. Evaluate nonstructural stormwater management alternatives.
   (1) Minimize earth disturbance.
   (2) Minimize impervious surfaces.
   (3) Break up large impervious surfaces.

F. Satisfy water quality and streambank erosion protection objective (§123).

G. Satisfy groundwater recharge (infiltration) objective (§124) and provide for stormwater treatment prior to infiltration.

H. Determine what Management District the site falls into (Appendix D) and conduct a predevelopment runoff analysis.

I. Prepare final project design to maintain predevelopment drainage areas and discharge points, to minimize earth disturbance and impervious surfaces, and to reduce runoff to the maximum extent possible.

J. Conduct a post development runoff analysis based on the final design and to meet the release rate and in turn the overbank flow and extreme event requirements (§125).

K. Manage any remaining runoff through treatment prior to discharge, as part of detention, bioretention, direct discharge or other structural control.

(Ord. 906, 7/16/2009, §302)

§123. Water Quality and Streambank Erosion Requirements.

In addition to the performance standards and design criteria requirements of this Part, the
applicant shall comply with the following water quality requirements of this subpart.

A. For water quality and streambank erosion, the objective is to design a water quality BMP to detain the proposed conditions two (2) year, twenty-four (24) hour design storm to the existing conditions one (1) year flow using the SCS Type II distribution. Additionally, provisions shall be made (such as adding a small orifice at the bottom of the outlet structure) so that the proposed conditions one (1) year storm takes a minimum of twenty-four (24) hours to drain from the facility from a point where the maximum volume of water from the one (1) year storm is captured. (i.e., the maximum water surface elevation is achieved in the facility.) At the same time, the objective is not to attenuate the larger storms in “no detention” areas (District C) only. This can be accomplished by configuration of the outlet structure not to control the larger storms, or by a bypass or channel to divert only the two (2) year flood into the basin or divert flows in excess of the two (2) year storm away from the basin.

Where practicable, wet basins shall be utilized for water quality control and shall meet the requirements found in the PA Stormwater BMP Manual as revised.

Release of water can begin at the start of the storm (i.e., the invert of the water quality orifice is at the invert of the facility). The design of the facility shall consider and minimize the chances of clogging and sedimentation. Orifices smaller than three (3) inches diameter are not recommended. However, if the design engineer can provide proof that the smaller orifices are protected from clogging by use of trash racks, etc., smaller orifices may be permitted.

B. In selecting the appropriate BMPs or combinations thereof, the applicant shall consider the following:

(1) Total contributing area.
(2) Permeability and infiltration rate of the site soils.
(3) Slope and depth to bedrock.
(4) Seasonal high water table.
(5) Proximity to building foundations and well heads.
(6) Erodibility of soils.
(7) Land availability and configuration of the topography.
(8) Peak discharge and required volume control.
(9) Stream bank erosion.
(10) Efficiency of the BMPs to mitigate potential water quality problems.

(11) The volume of runoff that will be effectively treated.

(12) The nature of the pollutant being removed.

(13) Maintenance requirements.

(14) Creation/protection of aquatic and wildlife habitat.

(15) Recreational value.

C. For areas within defined special protection subwatersheds which includes exceptional value (EV) and high quality (HQ) waters, the temperature and quality of water and streams shall be maintained through the use of temperature sensitive BMPs and stormwater conveyance systems.

D. The applicant shall consider the guidelines found in the references specified in the DEP Stormwater BMP Manual, for constructed wetlands, where proposed.

E. Pretreatment in accordance with §§121.11 and 121.12 shall be provided prior to infiltration.

F. Streambank restoration projects shall include the following:

(1) No restoration or stabilization projects may be undertaken without examining the fluvial geomorphology of stable reaches above and below the unstable reach.

(2) Restoration project design must then consider maintenance of stability in the adjacent stable reaches of the stream channel.

(3) An erosion and sediment control plan approved by the Conservation District must be provided by the applicant.

(4) All applicable State and Federal permits must be obtained.

G. Biology shall be incorporated into the design of all wet basins in accordance with the West Nile Virus Guidance found in Appendix E.

H. To accomplish the above, the applicant shall submit original and innovative designs to the Borough Engineer for review and approval. Such designs may achieve the water quality objectives through a combination of BMPs (best management practices).

I. Buffers.

(1) In addition to the other restrictions of this Section, buffers shall be
provided in accord with this subsection I.

(2) Where resource buffers overlap, the more restrictive requirements shall apply.

(3) Outer buffers are not required for any portion of the required buffer area that does not drain to the resource requiring the buffer.

(4) Pre-existing Lots or Parcels/Development in Buffers. In the case of legally preexisting lots or parcels (approved prior to the effective date of this Part) where the useable area of a lot or parcel lies within a buffer area, rendering the lot or parcel unable to be developed in accordance with the allowable use per Borough zoning, the development may only be permitted by modification as provided by subpart H of this Part.

(5) Improvements to Existing Structures in Outer Buffers. The provisions of this subsection I do not require any changes or improvements to be made to lawfully existing structures in buffers. However, when any substantial improvement to a structure is proposed which results in a horizontal expansion of that structure, the improvement may only be permitted by modification as provided by subpart H of this Part.

(6) Wetlands and Vernal Ponds.

(a) Wetland Identification. Wetlands shall be identified in accord with the 1987 U.S. Army Corps of Engineers Manual for Identifying and Delineating Wetlands, and properly flagged and surveyed on site to ensure they are protected.

1) Wetlands in an Artificial Watercourse. Wetlands contained within the banks of an artificial watercourse shall not be considered for buffer delineation purposes.

2) Wetlands in a Natural Watercourse. Wetlands contained within the banks of a natural watercourse, only the stream buffer shall apply.

(b) Wetland and Vernal Pond Buffer Delineation. A fifty (50) foot inner buffer and twenty-five (25) foot outer buffer, measured perpendicular to and horizontally from the edge of the delineated wetland or vernal pond for a total distance of seventy-five (75) feet, shall be maintained for all wetlands and vernal ponds.

1) Inner Buffer. Measured perpendicular to and horizontally from the edge of the delineated wetland or vernal pond, for a distance of fifty (50) feet.

a) Stormwater conveyance required by the Borough, buffer maintenance and restoration, the correction
of hazardous conditions, stream crossings permitted by DEP and passive unpaved stable trails shall be permitted. No other earth disturbance, grading, filling, buildings, structures, new construction, or development shall be permitted.

b) The area of the inner buffer altered by activities permitted in accord with subsection I(6)(b)1) shall be minimized to the greatest extent practicable.

2) Outer Buffer. Measured perpendicular to and horizontally from the outer edge of the inner buffer for a distance of twenty-five (25) feet resulting in a total buffer of seventy-five (75) feet.

a) Stormwater conveyance required by the Borough, buffer maintenance and restoration, the correction of hazardous conditions, stream crossings permitted by DEP, parking areas or roads constructed on or above existing grade, unpaved trails, and limited forestry activities that do not clear cut the buffer (e.g., selective regeneration, harvest) in accord with a forestry management plan shall be permitted provided no buildings are involved, and those activities permitted under subsections I(4) and I(5).

b) No more than twenty (20) percent of the cumulative outer buffer on the subject parcel shall be altered by the activities permitted in accord with subsection I(6)(b)2).

(7) Lakes and Ponds.

(a) There is no outer buffer around lakes and ponds.

(b) Lake and Pond Buffer Delineation. A fifty (50) foot buffer measured perpendicular to and horizontally from the edge of any water body, shall be maintained around any water body.

(c) Permitted Activities/Development. Stormwater conveyance required by the Borough, buffer maintenance and restoration, the correction of hazardous conditions, lake front views, boat docks, swimming areas, patios, decks, and unpaved trails shall be permitted provided no buildings are involved.

(d) The area of the buffer impacted by activities permitted in subsection I(7)(c) shall not exceed thirty-five (35) percent of the buffer on the subject parcel.
(8) Streams.

(a) Stream Buffer Delineation. A fifty (50) foot inner buffer and twenty-five (25) foot outer buffer, measured perpendicular to and horizontally from the top-of-bank on both sides of any stream, for a total distance of seventy-five (75) feet, shall be maintained on both sides of any stream. See Figure 123.1.

1) Inner Buffer. Measured perpendicular to and horizontally from the top-of-bank of the stream for a distance of fifty (50) feet. However, in no case shall the inner buffer be less than a FEMA defined floodway.

   a) Stormwater conveyance required by the Borough, buffer maintenance and restoration, the correction of hazardous conditions, stream crossings permitted by DEP, fish hatcheries, wildlife sanctuaries and boat launch sites constructed so as not to alter the floodplain cross section, and unpaved trails shall be permitted providing no buildings are involved. No other earth disturbance, grading, filling, buildings, structures, new construction, or development shall be permitted.

   b) The area of the inner buffer altered by activities permitted in accord with subsection I(8)(a)1) shall be minimized to the greatest extent practicable.

2) Outer Buffer. Measured perpendicular to and horizontally from the outer edge of the inner buffer for a distance of twenty-five (25) feet resulting in a total buffer of seventy-five (75) feet.

   a) Stormwater conveyance required by the Borough, buffer maintenance and restoration, the correction of hazardous conditions, agricultural activities, plant nurseries, roads or parking lots constructed on or above existing grade, temporary fairs and carnivals, accessory uses for residential purposes, private sportsmen’s club activities, athletic facilities, orchards, wildlife sanctuaries, boat launch sites, roads constructed to existing grade, stream crossings permitted by DEP and unpaved trails and limited forestry activities that do not clear cut the buffer (e.g., selective regeneration harvest) in accord with a forestry management plan shall be permitted provided no buildings are involved.

   b) In areas of the outer buffer which are not wetlands,
ernal ponds or slopes of more than fifteen (15) percent, stormwater management facilities which improve water quality of stormwater discharge shall be permitted unless prohibited by other Borough or state requirements. No other earth disturbance, grading, filling buildings, structures, new construction, or development shall be permitted.

c) No more than twenty (20) percent of the cumulative outer buffer on the subject parcel shall be altered by the activities permitted in accord with subsection I(8)(b).

Figure 123.1 Stream Buffer

(Ord. 906, 7/16/2009, §303)


Maximizing the ground water recharge capacity of the area being developed is required. Design of the infiltration/recharge stormwater management facilities shall give consideration to providing ground water recharge to compensate for the reduction in the percolation that occurs when the ground surface is disturbed or impervious surface is created. It is recommended that roof runoff be directed to infiltration BMPs which may be designed to compensate for the runoff from parking areas. These measures are required to be consistent with §102, and take advantage of utilizing any existing recharge areas.

A. Infiltration BMPs shall meet the following minimum requirements:

1) Maximum Infiltration Requirements:

a) Regulated activities will be required to recharge (infiltrate), where practicable, a portion of the runoff created by the develop-
ment as part of an overall stormwater management plan designed for the site. The volume of runoff to be recharged shall be determined from subsections A(2)(a) or A(2)(b), depending upon demonstrated site conditions.

(2) Infiltration BMPs intended to receive runoff from developed areas shall be selected based on suitability of soils and site conditions and shall be constructed on soils that have the following characteristics:

(a) A minimum depth of twenty-four (24) inches between the bottom of the BMP and the limiting zone. Modifications of this requirement for at systems proposing at grade infiltration systems will be considered with adequate water quality provisions.

(b) An infiltration and/or percolation rate sufficient to accept the additional stormwater load and drain completely as determined by field tests conducted by the applicant’s design professional.

(c) The recharge facility shall be capable of completely infiltrating the recharge volume within three (3) days.

(d) Pretreatment in accordance with §§121.11 and 121.12 shall be provided prior to infiltration.

(3) The size of the recharge facility shall be based upon the following volume criteria:

(a) NRCS curve number equation.

The NRCS runoff shall be utilized to calculate infiltration requirements (P) in inches.

For zero runoff: \[ P = I \text{ (Infiltration)} \text{ (in.)} = \frac{200}{CN} - 2 \] Eqn: 124.1

Where: \( CN = \text{SCS (NRCS) curve number of existing conditions contributing to the recharge facility.} \)

This equation is displayed graphically in, and the infiltration requirement can be determined from, Figure 124.1.

The recharge volume required would therefore be computed as:

\[ R_e = I \% \text{ impervious area} \] Eqn: 124.2

Where: \( I = \text{infiltration requirements (in.)} \)
Figure 124.1. Infiltration requirement based upon NRCS curve number.

(b) Annual Recharge—Water Budget Approach.

It has been determined that infiltrating six-tenths (0.6) inch of runoff from the impervious areas will aid in maintaining the hydrologic regime of the watershed. If the goals of subsections A(2)(a) cannot be achieved, then six-tenths (0.6) inch of rainfall shall be infiltrated from all impervious areas, up to an existing site condition curve number of seventy-seven (77). Above a curve number of seventy-seven (77), Equation 124.1 or the curve in Figure 124.1 should be used to determine the Infiltration requirement.

The recharge volume \( R_{e_v} \) required would therefore be computed as: \( R_{e_v} = 0.6 \) or \( 1 \times \% \) impervious area (whichever is less)

B. Soils. A detailed soils evaluation of the project site shall be required where practicable to determine the suitability of recharge facilities. The evaluation shall be performed by a qualified design professional, and at a minimum, address soil permeability, depth to bedrock and subgrade stability. The general process for designing the infiltration BMP shall be:

(1) Analyze hydrologic soil groups as well as natural and man-made features within the watershed to determine general areas of suitability
for infiltration practices.

(2) Provide site-specific infiltration test results (at the level of the proposed infiltration surface) in accord with ASTM Guide No. D 5126 to determine the appropriate hydraulic conductivity rate.

(3) Design the infiltration structure for the required storm volume based on field determined capacity at the level of the proposed infiltration surface.

(4) If on-lot infiltration structures are proposed by the applicant’s design professional, it must be demonstrated to the Borough that the soils are conducive to infiltrate on the lots identified.

C. Stormwater Hotspots. A stormwater hotspot is defined as a land use activity that generates higher concentrations of hydrocarbons, trace metals or toxicants than are found in typical stormwater runoff, based on monitoring studies. Table 124.1 provides samples of designated hotspots. If a site is designated as a hotspot, it has important implications for how stormwater is managed. First and foremost, untreated stormwater runoff from hotspots cannot be allowed to infiltrate into groundwater where it may contaminate water supplies. Therefore, the Re requirement is not applied to development sites that fit into the hotspot category (the entire WQ, must still be treated). Second, a greater level of stormwater treatment may be needed at hotspot sites to prevent pollutant washoff after construction. EPA’s NPDES stormwater program requires some industrial sites to prepare and implement a stormwater pollution prevention plan.

| Table 124.1 |
| Classification of Stormwater Hotspots |

The following land uses and activities are samples of stormwater hotspots:

- Vehicle salvage yards and recycling facilities
- Fleet storage areas (bus, truck, etc.)
- Public works storage areas
- Facilities that generate or store hazardous materials

Extreme caution shall be exercised where salt or chloride would be a pollutant since soils do little to filter this pollutant and it may contaminate the groundwater. The qualified design professional shall evaluate the possibility of groundwater contamination from the proposed infiltration/recharge facility and perform a hydrogeologic justification study if necessary. The infiltration requirement in high quality/exceptional value waters shall be subject to the Department’s Chapter 93 Antidegradation Regulations. The Borough may require the installation of an impermeable liner in detention basins where the possibility of groundwater contamination exists. A detailed hydrogeologic investigation may be required by the Borough.
The Borough shall require the applicant to provide safeguards against groundwater contamination for uses which may cause groundwater contamination, should there be a mishap or spill.

D. Extreme caution shall be exercised where infiltration is proposed in source water protection areas or that may affect a wellhead or surface water intake.

E. Recharge/infiltration facilities shall be used in conjunction with other innovative or traditional BMPs, stormwater control facilities, and nonstructural stormwater management alternatives.

(Ord. 906, 7/16/2009, §304)

§125. Stormwater Management Districts.

1. The Brodhead/McMichaels Watershed has been divided into stormwater management districts as shown on the Watershed Map in Appendix D.

Standards for managing runoff from each subarea in the Brodhead/McMichaels Watershed for design storms are shown in Table 125.1. Development sites located in each of the A, B, or C Districts must control proposed conditions runoff rates to existing conditions runoff rates for the design storms in accord with Table 125.1.

In addition to the requirements specified in Table 125.1 below, the water quality and streambank erosion (§123), groundwater recharge (§124), and erosion control (§128) requirements shall be implemented.

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<th>District</th>
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<th>(reduce to)</th>
<th>Existing conditions</th>
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Table 125.1
Water Quantity Requirements

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<td>Provisional Direct Discharge District. Development sites which can discharge directly to the main channel or major tributaries or indirectly to the main channel through an existing stormwater drainage system (i.e., storm sewer or tributary) which meets the “Downstream Hydraulic Capacity Analysis” in subsection 8 and is shown by the design professional to not cause a downstream problem, may allow an increase in flow as long as no downstream harm is demonstrated. However, sites in District C shall comply with the criteria for water quality and streambank erosion (§123); and groundwater recharge (§124). If the proposed conditions runoff is intended to be conveyed by an existing stormwater drainage system to the main channel, assurance must be provided that such system has adequate capacity to convey the increased peak flows or will be provided with improvements to furnish the required capacity. When adequate capacity of the downstream system does not exist and will not be provided through improvements, the proposed conditions peak rate of runoff must be controlled to the existing conditions peak rate as required in District A provisions (i.e., ten (10) year proposed conditions flows to ten (10) year existing conditions flows) for the specified design storms.</td>
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2. General. Proposed conditions rates of runoff from any regulated activity shall not exceed the peak release rates of runoff prior to development for the design storms specified on the Stormwater Management District Watershed Map (Appendix D) and §122 of this Part.

3. District Boundaries. The boundaries of the Stormwater Management Districts are shown on an official map that is available for inspection at the Borough office. A copy of the official map at a reduced scale is included in the Appendix D. The exact location of the Stormwater Management District boundaries as they apply to a given development site shall be determined by mapping the boundaries using the two (2) foot topographic contours (or most accurate data required) provided as part of the drainage plan.

4. Sites Located in More than One District. For a proposed development site located within two or more stormwater management district category subareas, the peak
discharge rate from any subarea shall be the existing conditions peak discharge for that subarea as indicated in §122. The calculated peak discharges shall apply regardless of whether the grading plan changes the drainage area by subarea. An exception to the above may be granted by the Borough if discharges from multiple subareas recombine in proximity to the site. In this case, peak discharge in any direction may be a one hundred (100) percent release rate if the overall site discharge meets the weighted average release rate.

5. Off-Site Areas. Off-site areas that drain through a proposed development site are not subject to release rate criteria when determining allowable peak runoff rates. However, on-site drainage facilities shall be designed to safely convey off-site flows through the development site.

6. Site Areas. Where the site area to be impacted by a proposed development activity differs significantly from the total site area, only the proposed impact area utilizing stormwater management measures shall be subject to the management district criteria. In other words, unimpacted areas bypassing the stormwater management facilities would not be subject to the management district criteria.

7. “No Harm” Option. For any proposed development site not located in a provisional direct discharge district, the applicant has the option of using a less restrictive runoff control (including no detention) if the applicant can prove that “no harm” would be caused by discharging at a higher runoff rate than that specified by the stormwater management plan. The “no harm” option is used when an applicant can prove that the proposed hydrographs can match existing hydrographs, or if it can be proved that the proposed conditions will not cause increases in peaks at all points downstream. Proof of “no harm” must be shown based upon the following “downstream impact evaluation” which shall include a “downstream hydraulic capacity analysis” consistent with subsection 8 to determine if adequate hydraulic capacity exists. The applicant shall submit to the Borough this evaluation of the impacts due to increased downstream stormwater flows in the watershed.

A. The hydrologic regime of the site must be maintained.

B. The “downstream impact evaluation” shall include hydrologic and hydraulic calculations necessary to determine the impact of hydrograph timing modifications due to the proposed development upon a dam, highway, structure, natural point of restricted streamflow or any stream channel section, established with the concurrence of the Borough.

C. The evaluation shall continue downstream until the increase in flow diminishes due to additional flow from tributaries and/or stream attenuation.

D. The peak flow values to be used for downstream areas for the design return period storms (two (2), five (5), ten (10), twenty-five (25), fifty (50), and one hundred (100) year) shall be the values from the calibrated model for the Brodhead/McMichaels Watershed. These flow values can be obtained from the original Act 167 Watershed Stormwater Management Plans.
E. Applicant-proposed conditions runoff controls which would generate increased peak flow rates at storm drainage problem areas would, by definition, are precluded from successful attempts to prove “no-harm,” except in conjunction with proposed capacity improvements for the problem areas consistent with subsection 8.

F. A financial distress shall not constitute grounds for the Borough to approve the use of the “no-harm” option.

G. Downstream capacity improvements may be provided as necessary to achieve the “no harm” option.

H. Any “no harm” justifications shall be submitted by the applicant as part of the drainage plan submission per Part 1D.

8. “Downstream Hydraulic Capacity Analysis.” Any downstream hydraulic capacity analysis conducted in accordance with this Part shall use the following criteria for determining adequacy for accepting increased peak flow rates:

A. Existing natural or man-made channels or swales must be able to convey the increased runoff associated with a two (2) year return period event within their banks at velocities consistent with protection of the channels from erosion. Acceptable velocities shall be based upon criteria included in the DEP Erosion and Sediment Pollution Control Program Manual.

B. Existing natural or man-made channels or swales must be able to convey increased twenty-five (25) year return period runoff without creating any hazard to persons or property.

C. Culverts, bridges, storm sewers or any other facilities which must pass or convey flows from the tributary area must be designed in accordance with DEP Chapter 105 regulations (if applicable) and, at minimum, pass the increased twenty-five (25) year return period runoff.

9. Hardship Option. The stormwater management plan and its standards and criteria are designed to maintain existing conditions peak flows and volumes throughout the Brodhead/McMichaels Watershed as the watershed becomes developed. There may be certain instances, however, where the standards and criteria established are too restrictive for a particular applicant. The existing drainage network in some areas may be capable of safely transporting slight increases in flows without causing a problem or increasing flows elsewhere. If an applicant cannot meet the stormwater standards due to lot conditions or if conformance would become a hardship to an applicant, the hardship option may be applied. A financial distress shall not constitute grounds for the Borough to approve the use of the hardship option. The applicant would have to plead his/her case to the governing body with the final determination made by the Borough. Any applicant’s pleading the “hardship option” will assume all liabilities that may arise due to exercising this option. A financial distress shall not constitute grounds for the Borough to approve the use of the “no-harm” option.
§126. Calculation Methodology.

1. Stormwater runoff from all development sites with a drainage area of greater than two hundred (200) acres shall be calculated using a generally accepted calculation technique that is based on the NRCS Soil Cover Complex Method. Table 126.1 summarizes acceptable computation methods and the method selected by the design professional shall be based on the individual limitations and suitability of each method for a particular site. The Borough may allow the use of the Rational Method to estimate peak discharges from drainage areas that contain less than two hundred (200) acres. The Soil Cover Complex Method shall be used for drainage areas greater than two hundred (200) acres.

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<th>METHOD</th>
<th>METHOD DEVELOPED BY</th>
<th>APPLICABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR-20 (or commercial computer package based on TR-20)</td>
<td>USDA NRCS</td>
<td>Applicable where use of full hydrology computer model is desirable or necessary.</td>
</tr>
<tr>
<td>TR-55 (or commercial computer package based on TR-55)</td>
<td>USDA NRCS</td>
<td>Applicable for land development plans within limitations described in TR-55.</td>
</tr>
<tr>
<td>HEC-1/HEC-HMS</td>
<td>US Army Corps of Engineers</td>
<td>Applicable where use of full hydrologic computer model is desirable or necessary.</td>
</tr>
<tr>
<td>PSRM</td>
<td>Penn State University</td>
<td>Applicable where use of a hydrologic computer model is desirable or necessary; simpler than TR-20 or HEC-1.</td>
</tr>
<tr>
<td>Rational Method (or commercial computer package based on rational method)</td>
<td>Emil Kuichling (1889)</td>
<td>For sites less than 200 acres, or as approved by the Borough and/or Borough Engineer.</td>
</tr>
<tr>
<td>Other methods</td>
<td>Varies</td>
<td>Other computation methodologies approved by the Borough and/or Borough Engineer.</td>
</tr>
</tbody>
</table>

2. All calculations consistent with this Part using the Soil Cover Complex Method shall use the appropriate design rainfall depths for the various return period storms according to the region in which they are located as presented in Table B-1 in Appendix B of this Part. If a hydrologic computer model such as PSRM or HEC-1 is used for stormwater runoff calculations, then the duration of rainfall shall be twenty-four (24) hours. The SCS ‘S’ curve shown in Figure B-1, Appendix B, of this Part shall be used for the rainfall distribution.

3. For the purposes of existing conditions flow rate determination, undeveloped land
shall be considered as “meadow” in good condition, unless the natural ground cover
generates a lower curve number or rational ‘C’ value, as listed in Table B-2 or B-3 in
Appendix B of this Part.

4. All calculations using the Rational Method shall use rainfall intensities consistent
with appropriate times-of-concentration for overland flow and return periods from
the design storm curves from PA Department of Transportation Design Rainfall
Curves (1986) (Figures B-2 to B-4). Times-of-concentration for overland flow shall be
calculated using the methodology presented in Chapter 3 of Urban Hydrology for
Small Watersheds, NRCS, TR-55 (as amended or replaced from time to time by
NRCS). Times-of-concentration for channel and pipe flow shall be computed using
Manning’s equation.

5. Runoff curve numbers (CN) for both existing and proposed conditions to be used in
the Soil Cover Complex Method shall be obtained from Table B-2 in Appendix B of
this Part.

6. Runoff coefficients (c) for both existing and proposed conditions for use in the
Rational Method shall be obtained from Table B-3 in Appendix B of this Part.

7. The designer shall consider that the runoff from proposed sites graded to the subsoil
will not have the same runoff conditions as the site under existing conditions, even
after topsoiling or seeding. The designer may increase his proposed condition “CN”
or “C” to better reflect proposed soil conditions.

8. Where uniform flow is anticipated, the Manning equation shall be used for hydraulic
computations, and to determine the capacity of open channels, pipes, and storm
sewers. Values for Manning’s roughness coefficient (n) shall be consistent with Table
B-4 in Appendix B of this Part.

9. Outlet structures for stormwater management facilities shall be designed to meet the
performance standards of this Part using any generally accepted hydraulic analysis
technique or method.

10. The design of any stormwater detention facilities intended to meet the performance
standards of this Part shall be verified by routing the design storm hydrograph
through these facilities using the storage-indication method. The design storm
hydrograph shall be computed using a calculation method that produces a full
hydrograph. The Borough may approve the use of any generally accepted full
hydrograph approximation technique that shall use a total runoff volume that is
consistent with the volume from a method that produces a full hydrograph.

(Ord. 906, 7/16/2009, §306)

§127. Other Requirements.

1. Any stormwater facility located on State highway rights-of-way shall be subject to
approval by the Pennsylvania Department of Transportation (PennDOT).
2. Pretreatment in accordance with §§121.11 and 121.12 shall be provided prior to infiltration.

3. All wet basin designs shall incorporate biologic controls consistent with the West Nile Guidance found in Appendix E.

4. Any stormwater management facility (i.e., BMP, detention basin) designed to store runoff and requiring a berm or earthen embankment required or regulated by this Part shall be designed to provide an emergency spillway to handle flow up to and including the one hundred (100) year proposed conditions. The height of embankment must provide a minimum one (1.0) foot of freeboard above the maximum pool elevation computed when the facility functions for the one hundred (100) year proposed conditions inflow. Should any stormwater management facility require a dam safety permit under PA DEP Chapter 105, the facility shall be designed in accordance with Chapter 105 and meet the regulations of Chapter 105 concerning dam safety which may be required to pass storms larger than the one hundred (100) year event.

5. Any facilities that constitute water obstructions (e.g., culverts, bridges, outfalls, or stream enclosures), and any work involving wetlands governed by PA DEP Chapter 105 regulations (as amended or replaced from time to time by PA DEP), shall be designed in accordance with Chapter 105 and will require a permit from PA DEP.

6. Any other drainage conveyance facility that does not fall under Chapter 105 regulations must be able to convey, without damage to the drainage structure or roadway, runoff from the twenty-five (25) year design storm with a minimum one (1.0) foot of freeboard measured below the lowest point along the top of the roadway. Any facility that constitutes a dam as defined in PA DEP Chapter 105 regulations may require a permit under dam safety regulations. Any facility located within a PennDOT right-of-way must meet PennDOT minimum design standards and permit submission requirements.

7. Any drainage conveyance facility and/or channel not governed by Chapter 105 regulations, must be able to convey, without damage to the drainage structure or roadway, runoff from the twenty-five (25) year design storm. Conveyance facilities to or exiting from stormwater management facilities (i.e., detention basins) shall be designed to convey the design flow to or from that structure. Roadway crossings located within designated floodplain areas must be able to convey runoff from a one hundred (100) year design storm. Any facility located within a PennDOT right-of-way must meet PennDOT minimum design standards and permit submission requirements.

8. Storm sewers must be able to convey proposed conditions runoff from a twenty five (25) year design storm without surcharging inlets, where appropriate.

9. Adequate erosion protection shall be provided along all open channels, and at all points of discharge.

10. The design of all stormwater management facilities shall incorporate sound
engineering principles and practices, such as the design standards found in the DEP BMP Manual, as amended. The Borough reserves the right to disapprove any design that would result in the construction of or continuation of a stormwater problem area.

11. Drainage easements shall be incorporated into lots or established separately and shown on the plan. When easements are not incorporated into lots but are established separately, future ownership and maintenance responsibility shall be stated on the plan.

12. All proposed surface and subsurface structures shall be indicated on the stormwater management plans. The designer of these structures shall demonstrate the structural adequacy of the facility. Fencing shall be required for the protection of the public when facilities are proposed to store open water.

13. Stormwater management plans shall include all appropriate design details and dimensions necessary to clearly explain and show all proposed construction materials, grades and elevations.

14. When the property to be developed is composed of more than one (1) watershed, and discharges from the watersheds do not occur at a common point, each watershed shall be managed separately so that no uncontrolled runoff may occur from any major portion of the developed total site.

15. It shall be the responsibility of the applicant to obtain any and all stormwater easements on, over or through other properties when such easements are required.

16. Storm sewer outfalls shall be so designed, with respect to the elevation of the invert, installation of pumps or other features, that when the receiving stream is flooded, the storm sewer will continue to drain the area it is designed to serve.

17. An easement to allow maintenance crews access to the basin and outlet areas shall be established around all basins to be maintained. The limits of such easements shall be fifteen (15) feet from the outside toe of all dams and embankments and top of all pond side slopes and shall be connected to a public right-of-way.

18. Basin emergency spillways shall be constructed in undisturbed virgin soil and stabilized accordingly. Outlets shall be designed to function without manual, electric, or mechanical controls where possible.

19. All earth fill shall be free from brush, roots, and other organic material subject to decomposition. The fill material in all earth dams and embankments shall be compacted to at least ninety-five (95) percent of the maximum density obtained from compaction tests performed by appropriate methodology.

(Ord. 906, 7/16/2009, §307)

§128. Erosion and Sediment Control Requirements.
1. Any earth disturbance must be conducted in conformance with PA Title 25, Chapter 102, “Erosion and Sediment Control.”

2. Additional erosion and sediment control design standards and criteria that must be or are recommended to be applied where infiltration BMPs are proposed shall include the following:

   A. Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase to maintain maximum infiltration capacity.

   B. Infiltration BMPs shall not be constructed nor receive runoff until the entire contributory drainage area to the infiltration BMP has achieved final stabilization.

(Ord. 906, 7/16/2009, §308)
D. **Drainage Plan Requirements.**

§131. **General Requirements.**

For any of the activities regulated by this Part, the preliminary or final approval of subdivision and/or land development plans, the issuance of any building or occupancy permit, or the commencement of any earth disturbance may not proceed until the applicant or his/her agent has received written approval of a drainage plan from the Borough and an adequate erosion and sediment control plan review by the Conservation District.

(Ord. 906, 7/16/2009, §401)

§132. **Exemptions.**

1. Exemptions. The following land use activities are exempt from the drainage plan submission and buffer requirements of this Part:

   A. Use of land for gardening for home consumption.

   B. Agriculture when operated in accordance with a conservation plan or erosion and sediment control plan (E & S) found adequate by the Conservation District.

   C. Forest management operations which are following the Department of Environmental Protection’s management practices contained in its publication “Soil Erosion and Sedimentation (E & S) Control Guidelines for Forestry” and are operating under an approved E & S plan and must comply with stream buffer requirements in §123 and floodplain management requirements.

   D. Impervious Surface. Any regulated activity that has less than 5,000 square feet of impervious surface and/or meets the following exemption criteria is exempt from the plan submittal and buffer provisions of this Part. These criteria shall apply to the total development even if development is to take place in phases. Impervious areas existing on the “parent tract” prior to adoption of this Part shall not be considered in cumulative impervious area calculations for exemption purposes.

2. Additional exemption criteria include:

   A. Exemption Responsibilities. An exemption shall not relieve the applicant from implementing such measures as are necessary to protect the public health, safety, and property. An exemption shall not relieve the applicant from providing adequate stormwater management for regulated activities to meet the purpose of this Part; however, drainage plans will not have to be submitted to the Borough.

   B. This exemption shall not relieve the applicant from meeting the special requirements for watersheds draining to exceptional value (EV) waters and
source water protection areas (SWPA): requirements for nonstructural project
design sequencing (§122) water quality and streambank erosion (§123), and
groundwater recharge (§124).

C. Drainage Problems. If a drainage problem is documented or known to exist
downstream of, or expected from the proposed activity, then the Borough may
require a drainage plan submittal.

D. Parent Tracts. Ordinance criteria shall apply to the total development even if
development is to take place in phases. The date of the Borough ordinance
adoption of this Part shall be the starting point from which to consider tracts
as “parent tracts” in which future subdivisions and respective impervious area
computations shall be cumulatively considered.

(Ord. 906, 7/16/2009, §402)

§133. Drainage Plan Contents.

The drainage plan shall consist of a general description of the project including sequencing
items described in §122, calculations, maps, and plans A note on the maps shall refer to the
associated computations and erosion and sediment control plan by title and date. The cover
sheet of the computations and erosion and sediment control plan shall refer to the
associated maps by title and date. All drainage plan materials shall be submitted to the
Borough in a format that is clear, concise, legible, neat, and well organized; otherwise, the
drainage plan shall not be accepted for review and shall be returned to the applicant.

The following items shall be included in the drainage plan:

A. General.

(1) General description of the project including those areas described in
§122.

(2) General description of permanent stormwater management techniques,
including construction specifications of the materials to be used for
stormwater management facilities.

(3) Complete hydrologic, hydraulic, and structural computations for all
stormwater management facilities.

(4) An erosion and sediment control plan, including all reviews and letters
of adequacy obtained by the Conservation District.

(5) A general description of nonpoint source pollution controls.

B. Maps. Map(s) of the project area shall be submitted on twenty-four (24) inch
x thirty-six (36) inch sheets and/or shall be prepared in a form that meets the
requirements for recording at the offices of the Recorder of Deeds of Monroe
County. If the Subdivision and Land Development Ordinance (SALDO) [Chapter 22] has more stringent criteria then the more stringent criteria shall apply. The contents of the map(s) shall include, but not be limited to:

1. The location of the project relative to highways, municipalities, or other identifiable landmarks.

2. Existing and final contours at intervals of two (2) feet. In areas of steep slopes (greater than fifteen (15) percent), five (5) foot contour intervals may be used.

3. Existing streams, lakes, ponds or other waters of the Commonwealth within the project area.

4. Other physical features including flood hazard boundaries, buffers, existing drainage courses, areas of natural vegetation to be preserved, and the total extent of the upstream area draining through the site.

5. The locations of all existing and proposed utilities, sanitary sewers, and water lines within fifty (50) feet of property lines.

6. The location(s) of public water supply wells and surface water intakes as well as their source water protection areas.

7. Soil names and boundaries.

8. Limits of earth disturbance, including the type and amount of impervious area that would be added.

9. Proposed structures, roads, paved areas, and buildings.

10. The name of the development, the name and address of the applicant of the property, and the name of the individual or firm preparing the plan.

11. The date of submission.

12. A graphic and written scale of one (1) inch equals no more than fifty (50) feet; for tracts of twenty (20) acres or more, the scale shall be one (1) inch equals no more than one hundred (100) feet.

13. A north arrow.

14. The total tract boundary and size with distances marked to the nearest foot and bearings to the nearest degree.

15. Existing and proposed land use(s).

16. A key map showing all existing man-made features beyond the property boundary that would be affected by the project.
(17) Location of all open channels.

(18) Overland drainage patterns and swales.

(19) A fifteen (15) foot wide access easement to and around all stormwater management facilities that would provide ingress to and egress from a public right-of-way.

(20) The location of all erosion and sediment control facilities.

(21) A note on the plan indicating the location and responsibility for maintenance of stormwater management facilities that would be located off-site. All off-site facilities shall meet the performance standards and design criteria specified in this Part.

(22) A statement, signed by the applicant, acknowledging that any revision to the approved drainage plan must be approved by the Borough and that a revised E & S plan must be submitted to the Conservation District for a determination of adequacy.

(23) The following signature block for the Design Engineer:

“I, (Design Engineer), on this date (date of signature), hereby certify that the drainage plan meets all design standards and criteria of the Brodhead/McMichaels Watershed Act 167 Stormwater Management Ordinance.”

C. Supplemental Information.

(1) A written description of the following information shall be submitted.

(a) The overall stormwater management concept for the project designed in accordance with §122.

(b) Stormwater runoff computations as specified in this Part.

(c) Stormwater management techniques to be applied both during and after development.

(d) Expected project time schedule.

(e) Development stages (project phases) if so proposed.

(f) An operation and maintenance plan in accordance with §162 of this Part.

(2) An erosion and sediment control plan.

(3) The effect of the project (in terms of runoff volumes and peak flows) on
D. Stormwater Management Facilities.

(1) All stormwater management facilities must be located on a plan and described in detail.

(2) When groundwater recharge methods such as seepage pits, beds or trenches are used, the locations of existing and proposed septic tank infiltration areas and wells must be shown.

(3) All calculations, assumptions, and criteria used in the design of the stormwater management facilities must be shown.

(Ord. 906, 7/16/2009, §403)

§134. Plan Submission.

The Borough shall require receipt of a complete plan, as specified in this Part.

For any activities that require an NPDES permit for stormwater discharges from construction activities, or a PA DEP joint permit application, or a PennDOT highway occupancy permit, or any other permit under applicable State or Federal regulations, or are regulated under Chapter 105 (Dam Safety and Waterway Management) or Chapter 106 (Floodplain Management) of PA DEP’s rules and regulations, the proof of application for said permit(s) or approvals shall be part of the plan. The plan shall be coordinated with the state and federal permit process and the Borough SALDO review process.

A. For those regulated activities which require SALDO approval, the drainage plan and ERSAM shall be submitted by the applicant as part of the preliminary plan submission.

B. For those regulated activities that do not require SALDO approval, see §131, “General Requirements.”

C. Six (6) copies of the drainage plan shall be submitted and distributed as follows:

(1) Two (2) copies to the Borough accompanied by the requisite Borough review fee, as specified in this Part.

(2) Two (2) copies to the Conservation District.
WATER

(3) One (1) copy to the Borough Engineer.

(4) One (1) copy to the County Planning Commission.

D. Any submissions found incomplete shall not be accepted for review and shall be returned to the applicant with a notification in writing of the specific manner in which the submission is incomplete.

(Ord. 906, 7/16/2009, §404)

§135. Drainage Plan Review.

1. The Borough Engineer shall review the drainage plan for consistency with the adopted Brodhead/McMichaels Watershed Act 167 Stormwater Management Plan.

2. The Borough Engineer shall review the drainage plan for any subdivision or land development against the Borough Subdivision and Land Development Ordinance [Chapter 22] provisions not superseded by this Part.

3. The E & S plan shall be reviewed by the County Conservation District and found adequate to meet the requirements of PA DEP’s Chapter 102 regulations prior to Borough of the drainage plan.

4. For regulated activities specified in §104 of this Part, the Borough Engineer shall notify the Borough in writing, within forty-five (45) calendar days, whether the drainage plan is consistent with the stormwater management plan.

A. Should the drainage plan be determined to be consistent with the stormwater management plan, the Borough Engineer will forward a letter of consistency to the Borough Secretary, who will then notify the developer.

B. Should the drainage plan be determined to be inconsistent or noncompliant with the stormwater management plan, the Borough Engineer shall forward a letter to the Borough Secretary with a copy to the applicant citing the reason(s) and specific ordinance sections for the inconsistency or noncompliance. Inconsistency or noncompliance may be due to inadequate information to make a reasonable judgment as to compliance with the stormwater management plan. Any drainage plans that are inconsistent or noncompliant may be revised by the applicant and resubmitted consistent with this Part. The Borough Secretary shall then notify the developer of the Borough Engineer’s findings. Any disapproved drainage plans may be revised by the developer and resubmitted consistent with this Part.

5. For regulated activities specified in §104 of this Part, which require a building permit, the Borough Engineer shall notify the Enforcement Officer in writing, whether the drainage plan is consistent with the stormwater management plan and forward a copy of the approval/disapproval letter to the applicant. Any disapproved drainage plan may be revised by the applicant and resubmitted consistent with this Part.
Part.

6. For regulated activities specified in §104 of this Part that require an NPDES permit application, the applicant shall forward a copy of the Borough Engineer’s letter stating that the drainage plan is consistent with the stormwater management plan to the Conservation District. PA DEP and the Conservation District may consider the Borough Engineer’s review comments in determining whether to issue a permit.

7. The Borough shall not grant approval or grant preliminary approval to any subdivision or land development for regulated activities specified in §104 of this Part if the drainage plan has been found to be inconsistent with the stormwater management plan, as determined by the Borough Engineer. All required permits from PA DEP must be obtained prior to approval of any subdivision or land development.

8. No Borough permits shall be issued for any regulated activity specified in §104 of this Part if the drainage plan has been found to be inconsistent with the stormwater management plan, as determined by the Borough Engineer, or without considering the comments of the Borough Engineer shall be issued. All required permits from PA DEP must be obtained prior to issuance of a building permit.

9. The applicant shall be responsible for completing record drawings of all stormwater management facilities included in the approved drainage plan. The record drawings and an explanation of any discrepancies with the design plans shall be submitted to the Borough Engineer for final approval. In no case shall the Borough approve the record drawings until the Borough receives a copy of an approved declaration of adequacy and/or highway occupancy permit from the PennDOT District Office, NPDES permit, and any applicable permits or approvals, from PA DEP or the Conservation District. The above permits and approvals must be based on the record drawings.

10. The Borough’s approval of a drainage plan shall be valid for a period not to exceed five (5) years commencing on the date that the Borough signs the approved drainage plan or approves the land development or subdivision plan accompanying the drainage plan application. If stormwater management facilities included in the approved drainage plan have not been constructed, or if constructed, and record drawings of these facilities have not been approved within this five (5) year time period, then the Borough may consider the drainage plan disapproved and may revoke any and all permits. Drainage plans that are considered disapproved by the Borough shall be resubmitted in accordance with §137 of this Part.

(Ord. 906, 7/16/2009, §405)

§136. Modification of Plans.

1. A modification to a drainage plan under review by the Borough for a development site that involves a change in stormwater management facilities or techniques, or that involves the relocation or re-design of stormwater management facilities, or that
is necessary because soil or other conditions are not as stated on the drainage plan as determined by the Borough Engineer, shall require a resubmission of the modified drainage plan consistent with §134 of this Part and be subject to review as specified in §135 of this Part.

2. A modification to an already approved or disapproved drainage plan shall be submitted to the Borough, accompanied by the applicable Borough review and inspection fee. A modification to a drainage plan for which a formal action has not been taken by the Borough shall be submitted to the Borough, accompanied by the applicable Borough review and inspection fee.

(Ord. 906, 7/16/2009, §406)

§137. Resubmission of Disapproved Drainage Plans.

A disapproved drainage plan may be resubmitted, with the revisions addressing the Borough Engineer’s concerns documented in writing and addressed to the Borough Secretary in accordance with §134 of this Part and distributed accordingly and be subject to review as specified in §135 of this Part. The applicable Borough review and inspection fee must accompany a resubmission of a disapproved drainage plan.

(Ord. 906, 7/16/2009, §407)
E. Inspections.

§141. Schedule of Inspections.

1. The Borough Engineer or his Borough designee shall inspect all phases of the installation of the permanent stormwater management facilities as deemed appropriate by the Borough Engineer.

2. During any stage of the work, if the Borough Engineer or his Borough designee determines that the permanent stormwater management facilities are not being installed in accordance with the approved stormwater management plan, the Borough shall revoke any existing permits or other approvals and issue a cease and desist order until a revised drainage plan is submitted and approved, as specified in this Part.

3. A final inspection of all stormwater management facilities shall be conducted by the Borough Engineer or his Borough designee and to confirm compliance with the approved drainage plan prior to the issuance of any occupancy permit.

(Ord. 906, 7/16/2009, §501)
F. Fees and Expenses.

§151. Borough Drainage Plan Review and Inspection Fee.

Fees shall be established by the Borough to defray plan review and construction inspection costs incurred by the Borough. All fees shall be paid by the applicant at the time of drainage plan submission. Review and inspection fee schedule shall be established by resolution of the Borough governing body based on the size of the regulated activity and based on the Borough's costs for reviewing drainage plans and conducting inspections pursuant to §141. The Borough shall periodically update the review and inspection fee schedule to ensure that review costs are adequately reimbursed.

(Ord. 906, 7/16/2009, §601)

§152. Expenses Covered by Fees.

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

A. Administrative costs.

B. The review of the drainage plan by the Borough and the Borough Engineer.

C. The site inspections.

D. The inspection of stormwater management facilities and drainage improvements during construction.

E. The final inspection upon completion of the stormwater management facilities and drainage improvements presented in the drainage plan.

F. Any additional work required to enforce any permit provisions regulated by this Part, correct violations, and assure proper completion of stipulated remedial actions.

(Ord. 906, 7/16/2009, §602)
G. Construction and Maintenance Responsibilities.

§161. Performance Guarantee.

1. For subdivisions and land developments the applicant shall provide a financial guarantee to the Borough for the timely installation and proper construction of all stormwater management controls as: (A) Required by the approved drainage plan equal to or greater than the full construction cost of the required controls or (B) in the amount and method of payment provided for in the Subdivision and Land Development Ordinance [Chapter 22].

2. For other regulated activities, the Borough may require a financial guarantee from the applicant.

3. At the completion of the project, and as a prerequisite for the release of the performance guarantee, the applicant or his representatives shall:
   
   A. Provide a certification of completion from an engineer, architect, surveyor or other qualified person verifying that all permanent facilities have been constructed according to the plans and specifications and approved revisions thereto.
   
   B. Provide a set of record drawings.

4. After the Borough receives the certification, a final inspection shall be conducted by the Borough Engineer or designee to certify compliance with this Part.

(Ord. 906, 7/16/2009, §701)

§162. Maintenance Responsibilities.

1. The drainage plan for the development site shall contain an operation and maintenance plan prepared by the applicant and approved by the Borough Engineer. The operation and maintenance plan shall outline required routine maintenance actions and schedules necessary to insure proper operation of the facility(ies).

2. The drainage plan for the development site shall establish responsibilities for the continuing operation and maintenance of all proposed stormwater control facilities, consistent with the following principles:

   A. If a development consists of structures or lots which are to be separately owned and in which streets, sewers or other public improvements are to be dedicated to the Borough, stormwater control facilities may also be dedicated to and maintained by the Borough (the Borough is not obligated to accept ownership).

   B. If a development site is to be maintained in a single ownership or if streets, sewers or other public improvements are to be privately owned and main-
tained, then the ownership and maintenance of stormwater control facilities may be the responsibility of the applicant or private management entity.

3. The governing body, upon recommendation of the Borough Engineer, shall make the final determination on the continuing maintenance responsibilities prior to approval of the drainage plan. The governing body reserves the right to accept the ownership and operating responsibility for any or all of the stormwater management controls.

(Ord. 906, 7/16/2009, §702)

§163. Maintenance Agreement for Privately Owned Stormwater Facilities.

1. Prior to approval of the site’s drainage plan, the applicant shall sign and record the maintenance agreement contained in Appendix A which is attached and made part hereof, covering all stormwater control facilities that are to be privately owned.

2. 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 Borough solicitor and governing body.

(Ord. 906, 7/16/2009, §703)


1. Persons installing stormwater storage facilities shall be required to pay a specified amount to the Borough stormwater maintenance fund to help defray costs of periodic inspections and maintenance expenses. The amount of the deposit shall be determined as follows:

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

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

   C. The amount of the deposit to the fund shall be converted to present worth of the annual series values. The Borough Engineer shall determine the present worth equivalents, which shall be subject to the approval of the governing body.

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

3. If at 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.

4. Long-Term Maintenance. The Borough may require applicants to pay a fee to the Borough stormwater maintenance fund to cover long term maintenance of stormwater control and best management practices.

5. Stormwater Related Problems. The Borough may require applicants to pay a fee to the Borough stormwater maintenance fund to cover stormwater related problems which may arise from the land development and earth disturbance.

(Ord. 906, 7/16/2009, §704)
H. Modifications.

§171. Modifications.

1. In order to permit the reasonable utilization of property, the Borough Council may grant a modification of the requirements of one or more provisions of this Part if literal compliance will result in undue hardship or be unreasonable as it is applied to a particular property, or if the applicant establishes to the satisfaction of the Borough Council that an alternative proposal will allow for equal or better results, provided that such modification will not be contrary to the public interest and fulfills the purpose and intent of this Part.

2. In granting any requested modification, the Borough Council may impose such conditions as will, in its judgment, secure substantially the objectives of the standards and requirements of this Part.

3. All requests for modification shall be made in writing, shall be signed by the applicant, shall accompany the submission of the drainage plan, and shall include:
   A. The specific provision of this Part with respect to which a modification is desired.
   B. The specific modification desired and the proposed alternative.
   C. The applicant’s justification for the modification, including the full basis and facts of the alleged unreasonableness or undue hardship, and an explanation of how the requested modification is the minimum modification necessary to permit the reasonable utilization of the property but still achieves the purposes and objectives of this Part.

4. The Borough Council shall maintain a written record of the action taken on all requests for modification. Any modifications that are granted or approved shall be set forth on the approved drainage plan and on the record plan. Modifications granted in accordance with these provisions shall be considered to be consistent with this Part.

(Ord. 906, 7/16/2009, §801)
I. Enforcement and Penalties.

§181. Right-of-Entry.

Upon presentation of proper credentials, duly authorized representatives of the Borough may enter at reasonable times upon any property within the Borough to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Part.

(Ord. 906, 7/16/2009, §901)

§182. Notification.

In the event that a person fails to comply with the requirements of this Part, or fails to conform to the requirements of any permit issued hereunder, the Borough shall provide written notification of the violation. Such notification shall set forth the nature of the violation(s) and establish a time limit for correction of these violation(s). Failure to comply within the time specified shall subject such person to the penalty provisions of this Part. All such penalties shall be deemed cumulative and shall not prevent the Borough from pursuing any and all remedies. It shall be the responsibility of the applicant of the real property on which any regulated activity is proposed to occur, is occurring, or has occurred, to comply with the terms and conditions of this Part.

(Ord. 906, 7/16/2009, §902)

§183. Enforcement.

The Borough governing body is hereby authorized and directed to enforce all of the provisions of this Part. All inspections regarding compliance with the drainage plan shall be the responsibility of the Borough Engineer or other qualified persons designated by the Borough.

A. Design Plans. A set of design plans approved by the Borough shall be on file at the site throughout the duration of the construction activity. Periodic inspections may be made by the Borough or designee during construction.

B. Adherence to Approved Plan. It shall be unlawful for any person, firm or corporation to undertake any regulated activity under §104 on any property except as provided for in the approved drainage plan and pursuant to the requirements of this Part. It shall be unlawful to alter or remove any control structure required by the drainage plan pursuant to this Part or to allow the property to remain in a condition which does not conform to the approved drainage plan.

C. Hearing. Prior to revocation or suspension of a permit and at the request of the applicant, the governing body will schedule a hearing to discuss the non-compliance if there is no immediate danger to life, public health or property.
The expense of a hearing shall be the applicant’s responsibility.

D. Suspension and Revocation of Permits.

(1) Any permit issued by the Borough may be suspended or revoked for:

(a) Non-compliance with or failure to implement any provision of the permit.

(b) A violation of any provision of this Part or any other applicable law, ordinance, rule or regulation relating to the project.

(c) The creation of any condition or the commission of any act during construction or development which constitutes or creates a hazard or nuisance, pollution or which endangers the life or property of others, or as outlined in this subpart I.

(2) A suspended permit shall be reinstated by the governing body when:

(a) The Borough Engineer or his Borough designee has inspected and approved the corrections to the stormwater management and erosion and sediment pollution control measure(s), or the elimination of the hazard or nuisance.

(b) The governing body is satisfied that the violation of the ordinance, law, or rule and regulation has been corrected.

(3) A permit that has been revoked cannot be reinstated. The applicant may apply for a new permit under the procedures outlined in this Part.

E. Occupancy Permit. An occupancy permit shall not be issued unless the certification of completion pursuant to §161.1 has been approved by the Borough. The occupancy permit shall be required for each lot owner and/or applicant for all subdivisions and land development in the Borough.

(Ord. 906, 7/16/2009, §903)


1. The violation of any provision of this Part is hereby deemed a public nuisance.

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

(Ord. 906, 7/16/2009, §904)

§185. Penalties.
1. Anyone violating the provisions of this Part shall be subject to a fine of not more than $1,000 for each violation, recoverable with costs, or imprisonment of not more than 30 days, or both. Each day that the violation continues shall be a separate offense.

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

(Ord. 906, 7/16/2009, §905)

§186. Appeals.

1. Any person aggrieved by any action of the Borough or its designee may appeal to the Borough Council [within] thirty (30) days of that action.

2. Any person aggrieved by any decision of the Borough Council may appeal to the County Court of Common Pleas in the County where the activity has taken place within thirty (30) days of the Borough decision.

(Ord. 906, 7/16/2009, §906)
Appendix A

Standard Stormwater Facilities Maintenance and Monitoring Agreement

THIS AGREEMENT, made and entered into this ____ day of ____________, 20__, by and between __________________________, (hereinafter the “Landowner”), Stroudsburg Borough Monroe County; Pennsylvania, (hereinafter “Borough”);

WITNESSETH

WHEREAS, the Landowner is the owner of certain real property as recorded by deed in the land records of Monroe County, Pennsylvania, Deed Book _____ at Page ________, (hereinafter “Property”).

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

WHEREAS, the Subdivision or Land Development or Stormwater Management Plan (hereinafter “Plan”) for the Project which is expressly made a part hereof, as approved or to be approved by the Borough, provides for detention or retention of stormwater within the confines of the Property; and

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

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

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

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

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

3. The Landowner, his successors and assigns, hereby grants permission to the Borough, his authorized agents and employees, upon presentation of proper identification, to enter upon the Property at reasonable times, and to inspect the stormwater management facilities whenever the Borough deems necessary. The
purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structures, pond areas, access roads, etc. When inspections are conducted, the Borough shall give the Landowner, his successors and assigns, copies of the inspection report with findings and evaluations. At a minimum, maintenance inspections shall be performed in accordance with the following schedule:

- Annually for the first 5 years after the construction of the stormwater facilities,
- Once every 2 years thereafter, or
- During or immediately upon the cessation of a 100 year or greater precipitation event.

4. All reasonable costs for said inspections shall be born by the Landowner and payable to the Borough.

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

6. In the event the Landowner, his successors and assigns, fails to maintain the stormwater management facilities in good working condition acceptable to the Borough, the Borough may enter upon the Property and take such necessary and prudent action to maintain said stormwater management facilities and to charge the costs of the maintenance and/or repairs to the Landowner, his successors and assigns. This provision shall not be construed as to allow the Borough to erect any structure of a permanent nature on the land of the Landowner, outside of any easement belonging to the Borough. 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.

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

8. In 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 on account of the Landowner’s or his successors’ and assigns’ failure to perform such work, the Landowner, his successors and assigns, shall reimburse the Borough upon demand, within 30 days of receipt of invoice thereof, for all costs incurred by the Borough hereunder. If not paid within said 30-day period, the Borough may enter a lien against the property in the amount of such costs, or may proceed to recover his costs through proceedings in equity or at law as authorized under the provisions of the Borough Code.

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

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

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

This Agreement shall be recorded among the land records of Monroe 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:

__________________________

(SEAL) For the Landowner:

__________________________

ATTEST:

__________________________ (City, Borough, Township)
County of Monroe, Pennsylvania
WATER

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
Stormwater Management Design Criteria

Table B-1
Design Storm Rainfall Amount (Inches)
Source: “Field Manual of Pennsylvania Department of Transportation”
STORM INTENSITY-DURATION-FREQUENCY CHARTS
PDT-IDF May 1986.

Figure B-1
NRCS (SCS) Type II Rainfall Distribution - S-Curve

Figure B-2
PennDOT Delineated Regions
Source: “Field Manual of Pennsylvania Department of Transportation”
STORM INTENSITY-DURATION-FREQUENCY CHARTS
PDT-IDF May 1986.

Figure B-3
PennDOT Storm Intensity-Duration-Frequency Curve - Region 4
Source: “Field Manual of Pennsylvania Department of Transportation”
STORM INTENSITY-DURATION-FREQUENCY CHARTS
PDT-IDF May 1986.

Figure B-4
PennDOT Storm Intensity-Duration-Frequency Curve - Region 5
Source: “Field Manual of Pennsylvania Department of Transportation”
STORM INTENSITY-DURATION-FREQUENCY CHARTS
PDT-IDF May 1986.

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

Table B-3
Rational Runoff Coefficients

Table B-4
Roughness Coefficients (Manning’s “n”) for Overland Flow
Roughness Coefficients (Manning’s “n”) for Channel Flow

Table B-5
24-Hour Storm Values Representing 90% of Annual Rainfall

Table B-6
Nonstandard Stormwater Management
Stormwater Credits for Computing Proposed Conditions Hydrograph
Table B-1
Design Storm Rainfall Amount (Inches)

The design storm rainfall amount chosen for design should be obtained from the PennDOT region in which the site is located according to Figure B-2.

Source: “Field Manual of Pennsylvania Department of Transportation”
STORM INTENSITY-DURATION-FREQUENCY CHARTS
PDT-IDF May1986.

<table>
<thead>
<tr>
<th>Duration</th>
<th>1 Yr</th>
<th>2 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>25 Yr</th>
<th>50 Yr</th>
<th>100 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 min</td>
<td>0.30</td>
<td>0.35</td>
<td>0.41</td>
<td>0.45</td>
<td>0.50</td>
<td>0.55</td>
<td>0.61</td>
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<tr>
<td>15 min</td>
<td>0.58</td>
<td>0.68</td>
<td>0.80</td>
<td>0.93</td>
<td>1.03</td>
<td>1.13</td>
<td>1.25</td>
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<tr>
<td>1 hr</td>
<td>1.01</td>
<td>1.22</td>
<td>1.48</td>
<td>1.70</td>
<td>1.91</td>
<td>2.16</td>
<td>2.41</td>
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<tr>
<td>2 hrs</td>
<td>1.24</td>
<td>1.50</td>
<td>1.84</td>
<td>2.14</td>
<td>2.46</td>
<td>2.80</td>
<td>3.18</td>
</tr>
<tr>
<td>3 hrs</td>
<td>1.38</td>
<td>1.71</td>
<td>2.10</td>
<td>2.43</td>
<td>2.82</td>
<td>3.24</td>
<td>3.69</td>
</tr>
<tr>
<td>6 hrs</td>
<td>1.68</td>
<td>2.04</td>
<td>2.52</td>
<td>3.06</td>
<td>3.60</td>
<td>4.14</td>
<td>4.74</td>
</tr>
<tr>
<td>12 hrs</td>
<td>2.04</td>
<td>2.52</td>
<td>3.00</td>
<td>3.84</td>
<td>4.56</td>
<td>5.16</td>
<td>6.00</td>
</tr>
<tr>
<td>24 hrs</td>
<td>2.40</td>
<td>2.88</td>
<td>3.60</td>
<td>4.56</td>
<td>5.76</td>
<td>6.48</td>
<td>7.44</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration</th>
<th>1 Yr</th>
<th>2 Yr</th>
<th>5 Yr</th>
<th>10 Yr</th>
<th>25 Yr</th>
<th>50 Yr</th>
<th>100 Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 min</td>
<td>0.33</td>
<td>0.38</td>
<td>0.45</td>
<td>0.50</td>
<td>0.58</td>
<td>0.63</td>
<td>0.68</td>
</tr>
<tr>
<td>15 min</td>
<td>0.64</td>
<td>0.75</td>
<td>0.90</td>
<td>1.00</td>
<td>1.15</td>
<td>1.35</td>
<td>1.50</td>
</tr>
<tr>
<td>1 hr</td>
<td>1.10</td>
<td>1.35</td>
<td>1.61</td>
<td>1.85</td>
<td>2.15</td>
<td>2.60</td>
<td>2.98</td>
</tr>
<tr>
<td>2 hr</td>
<td>1.34</td>
<td>1.66</td>
<td>2.00</td>
<td>2.34</td>
<td>2.70</td>
<td>3.26</td>
<td>3.76</td>
</tr>
<tr>
<td>3 hr</td>
<td>1.50</td>
<td>1.86</td>
<td>2.28</td>
<td>2.67</td>
<td>3.09</td>
<td>3.69</td>
<td>4.29</td>
</tr>
<tr>
<td>6 hr</td>
<td>1.86</td>
<td>2.28</td>
<td>2.82</td>
<td>3.36</td>
<td>3.90</td>
<td>4.62</td>
<td>5.40</td>
</tr>
<tr>
<td>12 hr</td>
<td>2.28</td>
<td>2.76</td>
<td>3.48</td>
<td>4.20</td>
<td>4.92</td>
<td>5.76</td>
<td>6.72</td>
</tr>
<tr>
<td>24 hr</td>
<td>2.64</td>
<td>3.36</td>
<td>4.32</td>
<td>5.28</td>
<td>6.24</td>
<td>7.20</td>
<td>8.40</td>
</tr>
</tbody>
</table>
Figure B-1
NRCS (SCS) Type II Rainfall Distribution - S Curve
Figure B-2
PennDOT Delineated Regions
Figure B-3
PennDOT Storm Intensity-Duration-Frequency Curve
Figure B-4
PennDOT Storm Intensity-Duration-Frequency Curve
Table B-2
Runoff Curve Numbers
(From NRCS (SCS) TR-55)

<table>
<thead>
<tr>
<th>LAND USE DESCRIPTION</th>
<th>HYDROLOGIC SOIL GROUP</th>
<th>Hydrologic Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Open Space</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grass cover &lt; 50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grass cover 50% to 75%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grass cover &gt; 75%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meadow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture, grassland, or range Continuous forage for grazing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture, grassland, or range Continuous forage for grazing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture, grassland, or range Continuous forage for grazing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brush-brush-weed-grass mixture with brush the major element.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brush-brush-weed-grass mixture with brush the major element.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brush-brush-weed-grass mixture with brush the major element.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fallow Bare soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crop residue cover (CR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woods - grass combination (orchard or tree farm)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial (85% Impervious)</td>
<td>89</td>
<td>92</td>
</tr>
<tr>
<td>Industrial (72% Impervious)</td>
<td>81</td>
<td>88</td>
</tr>
<tr>
<td>Institutional (50% Impervious)</td>
<td>71</td>
<td>82</td>
</tr>
<tr>
<td>Residential districts by average lot size:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Impervious</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAND USE DESCRIPTION</td>
<td>HYDROLOGIC SOIL GROUP</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hydrologic Condition</td>
<td>A</td>
</tr>
<tr>
<td>¹⁄₄ acre or less (town houses)</td>
<td>65</td>
<td>77</td>
</tr>
<tr>
<td>¹⁄₂ acre</td>
<td>38</td>
<td>61</td>
</tr>
<tr>
<td>¼ acre</td>
<td>30</td>
<td>57</td>
</tr>
<tr>
<td>¾ acre</td>
<td>25</td>
<td>54</td>
</tr>
<tr>
<td>1 acre</td>
<td>20</td>
<td>51</td>
</tr>
<tr>
<td>2 acres</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>Farmstead</td>
<td>59</td>
<td>74</td>
</tr>
<tr>
<td>Smooth Surfaces (Concrete, Asphalt, Gravel or Bare Compacted Soil)</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Water</td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>Mining/Newly Graded Areas (Pervious Areas Only)</td>
<td>77</td>
<td>86</td>
</tr>
</tbody>
</table>

* Includes Multi-Family Housing unless justified lower density can be provided.

Note: Existing site conditions of bare earth or fallow ground shall be considered as meadow when choosing a CN value.
## Table B-3
### Rational Runoff Coefficients

<table>
<thead>
<tr>
<th>LAND USE DESCRIPTION</th>
<th>HYDROLOGIC SOIL GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Cultivated Land: without conservation treatment</td>
<td>.49</td>
</tr>
<tr>
<td>: with conservation treatment</td>
<td>.27</td>
</tr>
<tr>
<td>Pasture or range land: poor condition</td>
<td>.38</td>
</tr>
<tr>
<td>: good condition</td>
<td>---*</td>
</tr>
<tr>
<td>Meadow: good condition</td>
<td>---*</td>
</tr>
<tr>
<td>Wood or Forest Land: thin stand, poor cover, no mulch</td>
<td>---*</td>
</tr>
<tr>
<td>: good cover</td>
<td>---*</td>
</tr>
<tr>
<td>Open Spaces, lawns, parks, golf courses, cemeteries</td>
<td></td>
</tr>
<tr>
<td>Good condition: grass cover on 75% or more of the area</td>
<td>---*</td>
</tr>
<tr>
<td>Fair condition: grass cover on 50% to 75% of the area</td>
<td>---*</td>
</tr>
<tr>
<td>Commercial and business areas (85% impervious)</td>
<td>.84</td>
</tr>
<tr>
<td>Industrial districts (72% impervious)</td>
<td>.67</td>
</tr>
<tr>
<td>Residential:</td>
<td></td>
</tr>
<tr>
<td>Average lot size</td>
<td></td>
</tr>
<tr>
<td>$\frac{3}{4}$ acre or less</td>
<td>65</td>
</tr>
<tr>
<td>$\frac{1}{2}$ acre</td>
<td>38</td>
</tr>
<tr>
<td>$\frac{1}{4}$ acre</td>
<td>30</td>
</tr>
<tr>
<td>$\frac{1}{8}$ acre</td>
<td>25</td>
</tr>
<tr>
<td>1 acre</td>
<td>20</td>
</tr>
<tr>
<td>Paved parking lots, roofs, driveways, etc.</td>
<td>.99</td>
</tr>
<tr>
<td>Streets and roads:</td>
<td></td>
</tr>
<tr>
<td>Paved with curbs and storm sewers</td>
<td>.99</td>
</tr>
<tr>
<td>Gravel</td>
<td>.57</td>
</tr>
<tr>
<td>Dirt</td>
<td>.49</td>
</tr>
</tbody>
</table>

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

**Source:** New Jersey Department of Transportation, Technical Manual for Stream Encroachment, August, 1984
Table B-4
Roughness Coefficients (Manning’s “n”) For Overland Flow
(U.S. Army Corps of Engineers, HEC-1 Users Manual)

<table>
<thead>
<tr>
<th>Surface Description</th>
<th>n</th>
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</thead>
<tbody>
<tr>
<td>Dense Growth</td>
<td>0.4 - 0.5</td>
</tr>
<tr>
<td>Pasture</td>
<td>0.3 - 0.4</td>
</tr>
<tr>
<td>Lawns</td>
<td>0.2 - 0.3</td>
</tr>
<tr>
<td>Bluegrass Sod</td>
<td>0.2 - 0.5</td>
</tr>
<tr>
<td>Short Grass Prairie</td>
<td>0.1 - 0.2</td>
</tr>
<tr>
<td>Sparse Vegetation</td>
<td>0.05 - 0.13</td>
</tr>
<tr>
<td>Bare Clay-Loam Soil (eroded)</td>
<td>0.01 - 0.03</td>
</tr>
<tr>
<td>Concrete/Asphalt - very shallow depths (less than ¼ inch)</td>
<td>0.10 - 0.15</td>
</tr>
<tr>
<td>- small depths</td>
<td>0.05 - 0.10</td>
</tr>
<tr>
<td>(¼ inch to several inches)</td>
<td></td>
</tr>
</tbody>
</table>

Roughness Coefficients (Manning’s “n”) For Channel Flow

<table>
<thead>
<tr>
<th>Reach Description</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural stream, clean, straight, no rifts or pools</td>
<td>0.03</td>
</tr>
<tr>
<td>Natural stream, clean, winding, some pools or shoals</td>
<td>0.04</td>
</tr>
<tr>
<td>Natural stream, winding, pools, shoals, stony with some weeds</td>
<td>0.05</td>
</tr>
<tr>
<td>Natural stream, sluggish deep pools and weeds</td>
<td>0.07</td>
</tr>
<tr>
<td>Natural stream or swale, very weedy or with timber underbrush</td>
<td>0.10</td>
</tr>
<tr>
<td>Concrete pipe, culvert or channel</td>
<td>0.012</td>
</tr>
<tr>
<td>Corrugated metal pipe</td>
<td>0.012-0.027(1)</td>
</tr>
<tr>
<td>High Density Polyethylene (HDPE) Pipe</td>
<td></td>
</tr>
<tr>
<td>Corrugated</td>
<td>0.021-0.029(2)</td>
</tr>
<tr>
<td>Smooth Lined</td>
<td>0.012-0.020(2)</td>
</tr>
</tbody>
</table>

(1) Depending upon type, coating and diameter
(2) Values recommended by the American Concrete Pipe Association, check Manufacturer’s recommended value.
Table B-5
24-Hour Storm Values Representing 90% of Annual Rainfall

<table>
<thead>
<tr>
<th>PennDOT Rainfall Region</th>
<th>P Inches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.13</td>
</tr>
<tr>
<td>2</td>
<td>1.48</td>
</tr>
<tr>
<td>3</td>
<td>1.60</td>
</tr>
<tr>
<td>4</td>
<td>1.95</td>
</tr>
<tr>
<td>5</td>
<td>2.04</td>
</tr>
</tbody>
</table>
Table B-6
Nonstandard Stormwater Management
Stormwater Credits for Computing Proposed Conditions Hydrograph

The developer may, subject to approval of the Borough Engineer, use the stormwater credits, described in the following table, in computing proposed conditions hydrograph:

<table>
<thead>
<tr>
<th>Nonstructural Stormwater Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Area Conservation</td>
<td>Conservation of natural areas such as forest, wetlands, or other sensitive areas in a protected easement thereby retaining their existing hydrologic and water quality characteristics.</td>
</tr>
<tr>
<td>Disconnection of Rooftop Runoff</td>
<td>Rooftop runoff is disconnected and then directed over a pervious area where it may either infiltrate into the soil or filter over it. This is typically obtained by grading the site to promote overland flow or by providing bioretention on single-family residential lots.</td>
</tr>
<tr>
<td>Disconnection of Non-Rooftop Runoff</td>
<td>Disconnect surface impervious cover by directing it to pervious areas where it is either infiltrated or filtered through the soil.</td>
</tr>
<tr>
<td>Buffers</td>
<td>Buffers effectively treat stormwater runoff. Effective treatment constitutes capturing runoff from pervious and impervious areas adjacent to the buffer and treating the runoff through overland flow across a grass or forested area.</td>
</tr>
<tr>
<td>Grass Channel (Open Section Roads)</td>
<td>Open grass channels are used to reduce the volume of runoff and pollutants during smaller storms.</td>
</tr>
<tr>
<td>Environmentally Sensitive Rural Development</td>
<td>Environmental site design techniques are applied to low density or rural residential development.</td>
</tr>
</tbody>
</table>
Appendix C

Drainage Plan Application and Fee Schedule

(To be attached to the “land subdivision plan or development plan review application or “minor land subdivision plan review application”)

Application is hereby made for review of the stormwater management and erosion and sedimentation control plan and related data as submitted herewith in accordance with the Stroudsburg Borough Stormwater Management Ordinance.

______ Final Plan ________ Preliminary Plan ________ Sketch Plan

Date of Submission __________________ Submission No. __________________

1. Name of subdivision or development _________________________________

2. Name of applicant ___________________________ Telephone No. __________
   (if corporation, list the corporation’s name and the names of two officers of the corporation)
   ________________________________ ________________________________
   Officer 1 Officer 2

   Address __________________________________________________________
   Zip ____________________________

   Applicants interest in subdivision or development
   (if other than property owner give owners name and address)

3. Name of property owner ___________________________ Telephone No. __________
   Address __________________________________________________________
   Zip ____________________________

4. Name of engineer or surveyor ___________________________ Telephone No. __________
   Address __________________________________________________________
   Zip ____________________________

5. Type of subdivision or development proposed:
   ___ Single-family lots  ___ Townhouses  ___ Commercial (multi-lot)
   ___ Two-family lots  ___ Garden apartments  ___ Commercial (one-lot)
   ___ Multi-family lots  ___ Mobile home park  ___ Industrial (multi-lot)
   ___ Cluster type lots  ___ Campground  ___ Industrial (one-lot)
   ___ Planned Residential Development  ___ Other (_______________________)
6. Lineal feet of new road proposed _____________________________ L.F.

7. Area of proposed and existing impervious area on entire tract.
   a. Existing (to remain) ___________________ S.F. ____________% of Property
   b. Proposed ____________________________ S.F. ____________% of Property

8. Stormwater
   a. Does the peak rate of runoff from proposed conditions exceed that flow which occurred for existing conditions for the designated design storm? ______
   b. Design storm utilized (on-site conveyance systems) (24 hr.) ____________
      No. of Subarea ______________________________
      Watershed Name ______________________________

      Explain: ______________________________________
      ______________________________________________
      ______________________________________________
      ______________________________________________
      ______________________________________________

   c. Does the submission and/or district meet the criteria for the applicable subarea? ________________________________
   d. Number of subarea(s) from Appendix D of the Brodhead and McMichaels Creek Watershed Stormwater Management Plan. ______________
   e. Type of proposed runoff control. ________________________________
   f. Does the proposed stormwater control criteria meet the requirement/guidelines of the Stormwater Ordinance? ______________

      If not, what variances/waivers are requested? ________________________________
      ________________________________

      Reasons __________________________________________
      ______________________________________________
      ______________________________________________
      ______________________________________________

   g. Does the plan meet the requirements of subpart C of the Stormwater Ordinances? ______

      If not, what variances/waivers are requested? ________________________________
      ________________________________

      Reasons why __________________________________________
      ______________________________________________
      ______________________________________________
      ______________________________________________

   h. Was TR-55, June 1986 utilized in determining the time of concentration? __
      ________________________________

   i. What hydrologic method was used in the stormwater computations? ______
      ________________________________
j. Is a hydraulic routing through the stormwater control structure submitted? 

k. Is a construction schedule or staging attached? 

l. Is a recommended maintenance program attached? 

9. Erosion and Sediment Pollution Control (E&S): 
   a. Has the stormwater management and E&S plan, supporting documentation, and narrative been submitted to the Monroe County Conservation District? 
   b. Total area of earth disturbance ________________ S.F. 

10. Wetlands 
   a. Have the wetlands been delineated by someone trained in wetland delineation? 
   b. Have the wetland lines been verified by a State or Federal permitting authority? 
   c. Have the wetland lines been surveyed? 
   d. Total acreage of wetland within the property 
   e. Total acreage of wetland disturbed 
   f. Supporting documentation 

11. Filing 
   a. Has the required fee been submitted? 
      Amount 
   b. Has the proposed schedule of construction inspection to be performed by the applicant’s engineer been submitted? 
   c. Name of individual who will be making the inspections 
   d. General comments about stormwater management at the development 

CERTIFICATE OWNERSHIP AND ACKNOWLEDGMENT OF APPLICATION:

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF MONROE

On this the _____ day of ________________, 20__, before me, the undersigned officer, personally appeared __________________ who, being duly sworn, according to law, deposes and says that __________________ owners of the property described in this application and that the application was made with __________________ knowledge and/or direction and does hereby agree with the said application and to the submission of the same.

_____________________________ Property Owner

My Commission Expires_________________________ 20_______

Notary Public _________________________________

THE UNDERSIGNED HEREBY CERTIFIES THAT TO THE BEST OF HIS KNOWLEDGE AND BELIEF THE INFORMATION AND STATEMENTS GIVEN ABOVE ARE TRUE AND CORRECT.

SIGNATURE OF APPLICANT ________________________________

(Information below this Line to Be Completed by the Borough)

Stroudsburg Borough official submission receipt:

Date complete application received ______________ Plan Number ___________

Fees _____________ date fees paid ______________ received by ________________

Official submission receipt date ________________________________

Received by ________________________________

_________________________________________________

Borough
## Drainage Plan
### Proposed Schedule Of Fees

<table>
<thead>
<tr>
<th>Subdivision name</th>
<th>Submittal No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>Date</td>
</tr>
<tr>
<td>Engineer</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. Filing fee</th>
<th>$_________</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Land use</td>
<td></td>
</tr>
<tr>
<td>2a. Subdivision, campgrounds, mobile home parks, and multi-family dwelling where the units are located in the same local watershed.</td>
<td>$_________</td>
</tr>
<tr>
<td>2b. Multi-family dwelling where the designated open space is located in a different local watershed from the proposed units.</td>
<td>$_________</td>
</tr>
<tr>
<td>2c. Commercial/industrial.</td>
<td>$_________</td>
</tr>
<tr>
<td>3. Relative amount of earth disturbance</td>
<td></td>
</tr>
<tr>
<td>3a. Residential</td>
<td></td>
</tr>
<tr>
<td>road &lt;500 l.f.</td>
<td>$_________</td>
</tr>
<tr>
<td>road 500-2,640 l.f.</td>
<td>$_________</td>
</tr>
<tr>
<td>road &gt;2,640 l.f.</td>
<td>$_________</td>
</tr>
<tr>
<td>3b. Commercial/industrial and other impervious area</td>
<td></td>
</tr>
<tr>
<td>impervious area &lt;3,500 s.f.</td>
<td>$_________</td>
</tr>
<tr>
<td>impervious area 3,500-43,460 s.f.</td>
<td>$_________</td>
</tr>
<tr>
<td>impervious area &gt;43,560 s.f.</td>
<td>$_________</td>
</tr>
<tr>
<td>4. Relative size of project</td>
<td></td>
</tr>
<tr>
<td>4a. Total tract area</td>
<td></td>
</tr>
<tr>
<td>&lt;1 ac</td>
<td>$_________</td>
</tr>
<tr>
<td>1-5 ac</td>
<td>$_________</td>
</tr>
<tr>
<td>5-25 ac</td>
<td>$_________</td>
</tr>
<tr>
<td>25-100 ac</td>
<td>$_________</td>
</tr>
<tr>
<td>100-200 ac</td>
<td>$_________</td>
</tr>
<tr>
<td>&gt;200 ac</td>
<td>$_________</td>
</tr>
<tr>
<td>5. Stormwater control measures</td>
<td></td>
</tr>
<tr>
<td>5a. Detention basins &amp; other controls which require a review of hydraulic routings ($ per control).</td>
<td>$_________</td>
</tr>
<tr>
<td>5b. Other control facilities which require storage volume calculations but no hydraulic routings. ( $ per control)</td>
<td>$_________</td>
</tr>
<tr>
<td>6. Site inspection ($ per inspection)</td>
<td>$_________</td>
</tr>
<tr>
<td>Total</td>
<td>$_________</td>
</tr>
</tbody>
</table>

All subsequent reviews shall be ¼ the amount of the initial review fee unless a new application is required as per §136 of the stormwater ordinance. A new fee shall be submitted with each revision in accordance with this schedule.
Appendix D

Stormwater Management District Watershed Map
Appendix E

West Nile Virus Guidance

Monroe County Conservation District Guidance: Stormwater Management and West Nile Virus

The Monroe County Conservation District recognizes the need to address the problem of non-point source pollution impacts caused by runoff from impervious surfaces. The new stormwater policy being integrated into Act 167 Stormwater Management regulations by the PA Department of Environmental Protection (DEP) will make non-point pollution controls an important component of all future plans and updates to existing plans. In addition, to meet post-construction anti-degradation standards under the state National Pollution Discharge Elimination System (NPDES) permitting program, applicants will be required to employ Best Management Practices (BMPs) to address non-point pollution concerns.

Studies conducted throughout the United States have shown that wet basins and in particular constructed wetlands are effective in traditional stormwater management areas such as channel stability and flood control, and are one of the most effective ways to remove stormwater pollutants (United States Environmental Protection Agency 1991, Center for Watershed Protection 2000). From Maryland to Oregon, studies have shown that as urbanization and impervious surface increase in a watershed, the streams in those watersheds become degraded (CWP 2000). Although there is debate over the threshold of impervious cover when degradation becomes apparent (some studies show as little as 6% while others show closer to 20%), there is agreement that impervious surfaces cause nonpoint pollution in urban and urbanizing watersheds, and that degradation is ensured if stormwater BMPs are not implemented.

Although constructed wetlands and ponds are desirable from a water quality perspective there may be concerns about the possibility of these stormwater management structures becoming breeding grounds for mosquitoes. The Conservation District feels that although it may be a valid concern, Municipalities should not adopt ordinance provisions prohibiting wet basins for stormwater management.

Mosquitoes

The questions surrounding mosquito production in wetlands and ponds have intensified in recent years by the outbreak of the mosquito-borne West Nile Virus. As is the case with all vector-borne maladies, the life cycle of West Nile Virus is complicated, traveling from mosquito to bird, back to mosquito and then to other animals including humans. *Culex pipiens* was identified as the vector species in the first documented cases from New York in 1999. This species is still considered the primary transmitter of the disease across its range. Today there are some 60 species of mosquitoes that inhabit Pennsylvania. Along with *C. pipiens*, three other species have been identified as vectors of West Nile Virus while four more have been identified as potential vectors.

The four known vectors in NE Pennsylvania are *Culex p. pipiens*, *C. restuans*, *C.
WATER

salinarius and Ochlerotatus japonicus. All four of these species prefer, and almost exclusively use, artificial containers (old tires, rain gutters, birdbaths, etc.) as larval habitats. In the case of C. pipiens, the most notorious of the vector mosquitoes, the dirtier the water the better they like it. The important factor is that these species do not thrive in functioning wetlands where competition for resources and predation by larger aquatic and terrestrial organisms is high.

The remaining four species, Aedes vexans, Ochlerotatus Canadensis, O. triseriatus and O. trivittatus are currently considered potential vectors due to laboratory tests (except the O. trivittatus, which did have one confirmed vector pool for West Nile Virus in PA during 2002). All four of these species prefer vernal habitats and ponded woodland areas following heavy summer rains. These species may be the greatest threat of disease transmission around stormwater basins that pond water for more than four days. This can be mitigated however by establishing ecologically functioning wetlands.

Stormwater Facilities

If a stormwater wetland or pond is constructed properly and a diverse ecological community develops, mosquitoes should not become a problem. Wet basins and wetlands constructed as stormwater management facilities, should be designed to attract a diverse wildlife community. If a wetland is planned, proper hydrologic soil conditions and the establishment of hydrophytic vegetation will promote the population of the wetland by amphibians and other mosquito predators. In natural wetlands, predatory insects and amphibians are effective at keeping mosquito populations in check during the larval stage of development while birds and bats prey on adult mosquitoes.

The design of a stormwater wetland must include the selection of hydrophytic plant species for their pollutant uptake capabilities and for not contributing to the potential for vector mosquito breeding. In particular, species of emergent vegetation with little submerged growth are preferable. By limiting the vegetation growing below the water surface, larvae lose protective cover and there is less chance of anaerobic conditions occurring in the water.

Stormwater ponds can be designed for multiple purposes. When incorporated into an open space design a pond can serve as a stormwater management facility and a community amenity. Aeration fountains and stocked fish should be added to keep larval mosquito populations in check.

Publications from the PA Department of Health and the Penn State Cooperative Extension concerning West Nile Virus identify aggressive public education about the risks posed by standing water in artificial containers (tires, trash cans, rain gutters, bird baths) as the most effective method to control vector mosquitoes.

Conclusion

The Conservation District understands the pressure faced by municipalities when dealing with multifaceted issues such as stormwater management and encourages the incorporation of water quality management techniques into stormwater designs. As Monroe County continues to grow, conservation design, groundwater recharge and constructed
wetlands and ponds should be among the preferred design options to reduce the impacts of increases in impervious surfaces. When designed and constructed appropriately, the runoff mitigation benefits to the community from these design options will far out weigh their potential to become breeding grounds for mosquitoes.
Part 3

Water Connections

A. General Provisions.

§301. Short Title.

This Part shall be known as the "Borough of Stroudsburg Mandatory Water Connection Ordinance."

(Ord. 856, 11/16/2005, §101)

§302. Purpose.

This Part is adopted for the following purposes:

A. To protect and provide for the public health, safety and general welfare of the citizens of the Borough.

B. To adopt rules and regulations pertaining to the making of connections to the regional water supply and distribution system of the Brodhead Creek Regional Authority (the "Authority") serving portions of the Borough, which is a member of the Authority.

C. To insure an adequate and safe water supply for the people of the Borough.

D. To further define the relationship between the Borough and the Authority.

(Ord. 856, 11/16/2005, §102)

§303. Application.

This Part applies to all buildings, presently existing and later constructed, abutting Authority water distribution mains.

(Ord. 856, 11/16/2005, §103)

§304. Legal Conflicts.

1. All ordinances or parts of ordinances in conflict this Part are repealed.

2. The invalidity of any section or provision of this Part shall not affect the validity of any other part of this Part which can be given effect without the invalid parts.
The Borough intends that this Part would have been adopted had an invalid provision not been included.

(Ord. 856, 11/16/2005, §104)

B. Definitions.

§311. General Interpretation.

For the purpose of this Part, the present tense shall include the future tense; the singular shall include the plural; words used in masculine gender shall include the feminine and the neuter; the word "shall" is always mandatory; the word "may" is always permissive.

(Ord. 856, 11/16/2005, §201)

§312. Specific Words and Phrases.

The following terms shall have the meanings set forth below when used herein:

ABUTS AND ABUTTING -- any property whose boundary line is adjacent to a distribution line of the Water System and which contains a building any part of which is located within 200 feet of such line.


AUTHORITY -- Brodhead Creek Regional Authority.

AUTHORITY ENGINEER -- a registered professional engineer in Pennsylvania designated by the Authority, as the Authority engineer.

BOROUGH -- the Borough of Stroudsburg, Monroe County.

BUILDING -- each single or multiple residential structure or unit or apartment unit, store, shop, office, business, commercial or industrial unit, or family unit contained within any structure in the Borough intended for continuous or periodic habitation, which contains facilities for use of water for human consumption.

COUNCIL -- Council of the Borough of Stroudsburg.

DEP -- the Pennsylvania Department of Environmental Protection.

PERSON -- an individual, partnership, corporation, private or governmental, or other legally recognized entity.
WATER SYSTEM – the water supply and distribution system owned and operated by the Authority.

(Ord. 856, 11/16/2005, §202)

C. Water System Connection Requirements.

§321. Connection Required.

All persons holding legal title or an interest therein (the "owner") to real property in the Borough containing a building which abuts a main of the water system must make connections to such main, shall use exclusively water from such main as their water supply for human consumption, except as hereinafter provided, and shall be responsible to pay for all related connection costs.

(Ord. 856, 11/16/2005, §301)

§322. Unlawful to Maintain Private Supply System.

It shall be unlawful for any owner who is required to connect to the water system pursuant to this Part to construct or maintain any other supply system from wells or other private sources, except as provided in 53 P.S. § 67603. Such private facilities shall be disconnected in the manner required by regulations of the Authority and DEP.

(Ord. 856, 11/16/2005, §302)

§323. Application Required.

All owners required to connect to the water system shall file with the Authority an application for connection in the form provided by the Authority and shall pay the tapping fee and connection charge, if any, then in effect. Thereafter, the Authority shall issue a connection permit, tap its main and provide water service from the main to the curb for all such new connections.

(Ord. 856, 11/16/2005, §303)

§324. Use of Contractors.

Any owner who has applied for permission to connect to the Authority’s main, who has paid the tapping fee, and connection charge, if any, and received a connection permit from the Authority may construct a connection to the water system, at the curb, utilizing his own contractor. Such connection shall be made in strict conformity with the Rules and Regulations of the Authority, and the owner will indemnify and hold harmless the Borough and the Authority from all loss and damage arising from construction by such owner.
§325. Borough or Authority as its Agent May Perform Uncompleted Connection.

In the event that any owner fails to make the required connection within ninety (90) days of receiving notice by personal service or registered mail of the connection requirement, the Borough, or the Authority as the Borough's agent, shall be empowered to enter the subject property and perform the necessary work.

§326. Billing of Property Owners.

Where the Borough or the Authority as its agent constructs a connection because of a property owner's failure to do so, the Borough, or the Authority, as applicable, shall submit an itemized bill to the owner for the completed work, which shall be immediately payable. In case of neglect or refusal by such owner to pay said bill within thirty (30) days thereafter, it shall be the duty of the Borough or the Authority as its agent to file municipal liens for the amount of such bill, or collect such bill by an action in assumpsit. In the alternative, the Borough or the Authority as the Borough's agent, may authorize the payment of the cost of construction in equal monthly installments, to bear interest at the rate not exceeding six percent (6%) per annum, due and payable in full in one (1) year pursuant to the provisions of 53 P.S. §68303.

§327. Powers and Authority of Inspectors.

The Authority and/or Authority Engineer and other duly authorized representatives or employees of the Authority bearing proper credentials and identification shall be permitted, at all reasonable times, to enter upon any premises connected or about to be connected or required to be connected to the water system for the purpose of inspection and testing in accordance with the provisions of this Part and the Act.

§328. Rates and Charges Payable by Those Required to Connect.

The owner of property required to connect shall be responsible for paying the tapping fee, connection charge and water rates, in accordance with the Authority's applicable resolution, beginning on the date such owner is required to connect to the water system. This responsibility shall continue whether or not the property is actually connected.
§329. Required Permits.

No person shall connect to the water system or otherwise use, alter or disturb said system in any manner without first filing an application for and obtaining a permit, in writing, from the Authority.

(Ord. 856, 11/16/2005, §309)

D. Penalties for Violation of this Part.

§331. Notice and Correction of Violations.

Any person who violates any provision of this Part shall be served by the Borough with written notice stating the nature of the violation and providing a time limit of sixty (60) days or other period specified in the notice for the satisfactory correction of the violation. The offender shall correct all violations within such period of time stated in the notice.

(Ord. 856, 11/16/2005, §401)

§332. Continuing Violation.

Any person who continues any violation beyond the specific time limit shall be subject to a civil penalty in an amount not exceeding $600 per violation. A new and separate violation shall be deemed to have been committed for each day the violation continues beyond the specific time limit. The provisions of this Part may also be enforced by an action in equity.

(Ord. 856, 11/16/2005, §402)

§333. Use of Penalties.

All penalties imposed for violation of any provision of this Part shall be paid to the Treasurer of the Borough for the Borough's use.

(Ord. 856, 11/16/2005, §403)
§334. Additional Penalties.

Any person violating any of the provisions of this Part, in addition to being liable for a penalty, shall be liable to the Borough and the Authority for any expense, loss or damage suffered by the Borough or the Authority by reason of the violation.

(Ord. 856, 11/16/2005, §404)

§335. Enforcement by Authority.

The Council hereby authorizes and directs the Authority to act as agent for the Borough to enforce the provisions of this Part.

(Ord. 856, 11/16/2005, §405)

E. Requirements for Imposing Water Tapping Fees.

§341. Tapping Fees.

All tapping fees, connection charges and similar fees charges by the Authority for the Water System shall be calculated in accordance with the applicable provisions of the Act.

(Ord. 856, 11/16/2005, §501)

§342. Reimbursement of Property Owners Expansions.

Where a property owner or owners construct or cause to be constructed any addition, expansion or extension to or of the water system which provides capacity to accommodate future development upon the lands of others, the Authority shall provide for reimbursement to the property owner or owners in accordance with the provisions of the Act.

(Ord. 856, 11/16/2005, §502)