

**CHAPTER 26**

**WATER**

**Part 1  
General Provisions**

§101. Statement of Findings.....26-1-1  
§102. Purpose.....26-1-1  
§103. Statutory Authority.....26-1-1  
§104. Applicability.....26-1-2  
§105. Repealed.....26-1-2  
§106. Severability.....26-1-2  
§107. Compatibility With Other Ordinance Requirements.....26-1-2  
§108. Commonwealth of PA and Federal Regulations.....26-1-2

**Part 2  
Definitions**

§201. Definitions.....26-2-1

**Part 3  
Stormwater Management - Areas Not Covered By A Plan**

§301. Applicability.....26-3-1  
§302. General Requirements.....26-3-1  
§303. Design Considerations.....26-3-2  
§304. Other Provisions.....26-3-4

**Part 4  
Stormwater Management - Watersheds Subject To Plans**

§401. General Requirements.....26-4-1  
§402. Water Quality Requirements.....26-4-2  
§403. Ground Water Recharge (Infiltration/Recharge/Retention).....26-4-3  
§404. Stream Bank Protection Requirements.....26-4-6  
§405. Release Rate Requirements.....26-4-7  
§406. Stormwater Management District Implementation Provisions (Performance Standards).....26-4-8  
§407. Design Criteria for Stormwater Management Facilities.....26-4-11  
§408. Calculation Methodology.....26-4-11  
§409. Erosion and Sedimentation Requirements.....26-4-13

**Part 5  
Drainage Plan Requirements**

§501. General Requirements.....26-5-1  
§502. Exemptions.....26-5-1  
§503. Drainage Plan Contents.....26-5-1  
§504. Plan Submission.....26-5-4  
§505. Drainage Plan Review.....26-5-5  
§506. Modification of Plans.....26-5-6  
§507. Resubmission of Disapproved Drainage Plans.....26-5-6

**Part 6  
Inspections**

§601. Schedule of Inspections.....26-6-1

**Part 7  
Fees and Expenses**

§701. General.....26-7-1  
§702. Township Drainage Plan Review Fee.....26-7-1  
§703. Expenses Covered by Fees.....26-7-1  
§704. Township Engineer Review.....26-7-1

**Part 8  
Maintenance Responsibilities**

§801. Performance Guarantee.....26-8-1  
§802. Maintenance Responsibilities.....26-8-1  
§803. Maintenance Agreement for Privately Owned Stormwater Facilities..26-8-1  
§804. Township Stormwater Maintenance Fund.....26-8-2

**Part 9  
Enforcement and Penalties**

§901. Right-of-Entry.....26-9-1  
§902. Notification.....26-9-1  
§903. Enforcement.....26-9-1  
§904. Public Nuisance.....26-9-2  
§905. Penalties.....26-9-2  
§906. Appeals.....26-9-3

**CHAPTER 26**

**WATER**

**Part 1**

**General Provisions**

**§101. Statement of Findings.** The Board of Supervisors of East Buffalo Township, finds that:

(a) Inadequate management of accelerated storm water runoff resulting from development throughout the Township 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 storm water, 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 storm water management, including reasonable regulation of development and activities causing accelerated erosion, is fundamental to the public health, safety, welfare, and the protection of the residents and citizens of the Township and all the people of the Commonwealth, their resources, and the environment.

**§102. Purpose.** The purpose of this Chapter is to promote health, safety, and welfare within the Township by minimizing the damages described above through provisions designed to:

(a) Manage accelerated runoff and erosion and sedimentation problems at their source by regulating activities that cause these problems.

(b) Utilize and preserve the existing natural drainage systems.

(c) Encourage recharge of groundwater where appropriate and prevent degradation of groundwater quality.

(d) Maintain existing flows and quality of streams and watercourses in the Township and the Commonwealth.

(e) Preserve and restore the flood-carrying capacity of streams.

(f) Provide proper maintenance of all permanent storm water management facilities that are constructed in the Township.

(g) Provide performance standards and design criteria for storm water management and planning.

**§103. Statutory Authority.** The Township is empowered to regulate land use activities that affect runoff by the authority of the Act of October 4, 1978 32 P.S., P.L. 864 (Act 167) Section 680.1 et seq., as amended, the "Storm Water Management Act", the provisions of the Pennsylvania Municipalities Planning Code and the Second Class Township Code.

**§104. Applicability.** This Ordinance shall only apply to permanent storm water management facilities constructed as part of any of the Regulated Activities listed in this Section. Storm water management and erosion and sedimentation control during construction activities are specifically not regulated by this Ordinance, but shall continue to be regulated under existing laws and ordinances.

The following activities are defined as "Regulated Activities" and shall be regulated by this Ordinance:

- (a) Land development.
- (b) Subdivision.
- (c) Construction of new or additional impervious or semi-pervious surfaces (driveways, parking lots, etc.).
- (d) Construction of new buildings or additions to existing buildings, whether part of a subdivision, land development, subdivision/land development, storm water management plan or existing lots of record, individually or collectively. (As amended by Ordinance 320, August 25, 2008)
- (e) Diversion or piping of any natural or man-made stream channel.
- (f) Installation of storm water management facilities or appurtenances thereto.

**§105. Repealed.** Any Ordinance or ordinance provision of the Township inconsistent with any of the provisions of this Ordinance is hereby repealed to the extent of the inconsistency only.

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

**§107. Compatibility With Other Ordinance Requirements.** Approvals issued pursuant to this Ordinance do not relieve the Applicant of the responsibility to secure required permits or approvals for activities regulated by any other applicable local, state or federal code, rule, act, law, statute or ordinance.

**§108. Commonwealth of PA and Federal Regulations.** In the event there is a conflict between the provisions of this Chapter dealing with the technical requirements and any Commonwealth of PA or Federal Law, statute, rule or regulations, the Township Engineer shall determine which provision, law, statute, rule or regulation shall be applicable. (Ordinance 386, adopted January 3, 2017)

**CHAPTER 26**

**WATER**

**Part 2**

**Definitions**

**§201. Definitions.** For the purposes of this chapter, certain terms and words used herein shall be interpreted as follows:

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

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

(c) The word "person" includes an individual, firm, association, organization, partnership, trust, company, corporation, 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."

ACCELERATED EROSION - The removal of the surface of the land through the combined action of man's activity and the natural processes at 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. 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 landowner or developer who has filed an application for approval to engage in any Regulated Activities as defined in this Ordinance.

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

CHANNEL EROSION - The widening, deepening, and headwall cutting of small channels and waterways, due to erosion caused by moderate to large floods.

CISTERN - An underground reservoir or tank for storing rainwater.

CONSERVATION DISTRICT - The Union County Conservation District.

CULVERT - A structure with appurtenant works, which carries a stream 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.

DEP - The Pennsylvania Department of Environmental Protection

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

DESIGNEE - The agent of the Planning Commission and/or agent of the governing body involved with the administration, review or enforcement of any provisions of this Ordinance by contract or memorandum of understanding, employment or appointment.

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 subwatersheds in which some type of detention is required to meet the applicable requirements and the goals of Act 167.

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

DEVELOPMENT SITE - The specific tract of land for which a Regulated Activity is proposed.

DOWNSLOPE PROPERTY LINE - That portion of the property line of the lot, tract, or parcels of land being developed located such that all 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 streams, channels, swales, pipes, conduits, culverts, storm sewers, etc.

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

DRAINAGE PERMIT - A permit issued by the Township governing body after the Drainage Plan has been approved. Said permit is issued prior to or with the final Township approval.

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 this Ordinance.

EARTH DISTURBANCE - Any activity including, but not limited to, construction, mining, timber harvesting and grubbing which alters, disturbs, and exposes the existing land surface.

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

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

EROSION AND SEDIMENT POLLUTION CONTROL PLAN - A plan that is designed to minimize accelerated erosion and sedimentation.

EXISTING CONDITIONS - The initial condition of a project site prior to the proposed construction. 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, such as forested lands.

FLOOD - A general, but temporary, condition of partial or complete inundation of normally dry 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 Map as being a special flood hazard area. Also included are areas that comprise Group 13 Soils, as listed in Appendix A of the Pennsylvania Department of Environmental Protection (DEP) Technical Manual for Sewage Enforcement Officers (as amended or replaced from time to time by DEP).

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

FOREST MANAGEMENT/TIMBER OPERATIONS - Planning and activities necessary for the management of forest land. These include timber inventory and preparation of forest management plans, silvicultural treatment, cutting budgets, logging road design and construction, timber harvesting, site preparation, and reforestation.

FREEBOARD - A vertical distance between the elevation of the design high-water and the top of a dam, levee, tank, basin, or diversion ridge. 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.

GROUNDWATER RECHARGE - Replenishment of existing natural underground water supplies.

HEC-HMS MODEL (CALIBRATED) - (Hydrologic Engineering Center Hydrologic Modeling System) A computer-based hydrologic model technique adapted to the West Branch Susquehanna River Watershed for the Act 167 Plan. The model has been "calibrated" to reflect actual recorded flow values by adjusting key model input parameters.

IMPERVIOUS SURFACE - A surface that prevents the percolation of water into the ground.

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

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

INLET - A surface connection to a closed drain. A structure at the diversion end of a conduit. The upstream end of any structure through which water may flow.

LAND DEVELOPMENT - (i) the improvement of one lot or two or more contiguous lots, tracts, or parcels of land for any purpose involving (a) a group of two or more buildings, or (b) the division or allocation of land or space between or among two or more existing or prospective occupants by means of, or for the purpose of streets, common areas, leaseholds, condominiums, building groups, or other features; (ii) any subdivision of land; (iii) development in accordance with of the PA Municipalities Planning Code (as amended from time to time).

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

MAIN STEM (MAIN CHANNEL) SUSQUEHANNA RIVER - Any stream segment or other runoff conveyance facility used as a reach in the West Branch Susquehanna River hydrologic model.

MANNING EQUATION IN (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.



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

NON-STRUCTURAL BMPS - Stormwater runoff treatment techniques which use natural measures to reduce pollution levels, do not require extensive construction efforts and/or promote pollutant reduction by eliminating the pollutant source. Acceptable non-structural BMPs shall be determined by the Township Engineer

NRCS - Natural Resource Conservation Service (previously SCS).

OPEN CHANNEL - A drainage element in which stormwater flows with 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.

OUTLET STRUCTURE - A pipe, weir or other appurtenant works designed to control the required detention storm.

PARKING LOT STORAGE - Involves the use of impervious 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 (PSRM) - A computer-based hydrologic modeling technique.

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

PLAN (SUSQUEHANNA RIVER) - The plan for managing stormwater runoff in the West Branch Susquehanna River Watershed adopted by Union County as required by the Act of October 4, 1978, P.L. 864, (Act 167), and known as the "West Branch Susquehanna River Watershed Act 167 Stormwater Management Plan."

PLAN (BULL RUN) - The plan for managing stormwater runoff in the Bull Run Watershed adopted by Union County as required by the Act of October 4, 1978, P.L. 864 (Act 167) and known as the "Bull Run Watershed Act 167 Stormwater Management Plan".

PLANNING COMMISSION - The Planning Commission of East Buffalo Township, Union County, Pennsylvania.

PMF - PROBABLE 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).

PSEUDO-HYDROGRAPH - A hydrograph derived from an established formula without the need for rainfall-runoff data analysis.

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

REGULATED ACTIVITIES - Actions or proposed actions that have an impact on stormwater runoff and that are specified in this Ordinance.

RELEASE RATE - The percentage of pre-development peak rate of runoff from a site or subwatershed to which the post development peak rate of runoff must be reduced to protect downstream areas.

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

RETURN PERIOD - The average interval, in years, within which a storm event of a given magnitude can be expected to recur. For example, the 25-year return period rainfall would be expected to recur on the average of once every twenty-five years.

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.

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

SEDIMENT POLLUTION - The placement, discharge, or any other introduction of sediment into the waters of the Commonwealth occurring from the failure to design, construct, implement or maintain control measures and control facilities in accordance with the requirements of this Ordinance.

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

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 ground.

SHEET FLOW - Runoff that flows over the ground surface as a thin, even layer, not concentrated in a channel.

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).

SOIL GROUP, HYDROLOGIC - A classification of soils by the Natural Resources Conservation Service, formerly the Soil Conservation Service, into four 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.

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 total amount of precipitation reaching the ground surface.

STORMWATER HOTSPOT - A stormwater hotspot is defined as a land use or activity that generates higher concentrations of hydrocarbons, trace metals, or toxicants than are found in typical stormwater runoff, based on monitoring studies. A list of categories of typical hotspots is contained in the Plan (Susquehanna River).

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

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

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

SUBWATERSHED - The smallest drainage unit of a watershed for which stormwater management criteria have been established.

SUBDIVISION - See Subdivision and Land Development Ordinance.

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.

TOWNSHIP - East Buffalo Township, Union County, Pennsylvania.

WATERCOURSE - A stream of water, river, brook, creek, or a channel or ditch for water, whether natural or manmade.

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.

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, ferns, and similar areas.

**CHAPTER 26**

**WATER**

**Part 3**

**Stormwater Management - Areas Not Covered By A Plan**

**§301. Applicability.** This Part shall apply to all Regulated Activities occurring in areas within the Township for which a storm water study and plan has not been completed and the design standards of this Part 3 shall apply to existing lots of record or to any new lot of a minor subdivision in which no storm water infrastructure is incorporated. (As amended by Ordinance 320, August 25, 2008)

**§302. General Requirements.**

(a) The management of storm water on the site, both during and upon the completion of construction, shall be accomplished in accord with this section. The design of any temporary or permanent facilities or structures and the utilization of a natural drainage system shall be in full compliance with this section and with the interpretations of the Township.

(b) Developers are urged to consider alternative solutions for storm water management and to select the most appropriate and economical system for their development project. Applicants are urged to consult with the Union County Conservation District and the Pennsylvania Hard Book of Best Management Practices for guidance in preparing the storm water management plan.

(c) All storm water management facilities including detention basins, sewers, and culverts shall be designed by a professional engineer licensed by The Commonwealth of Pennsylvania.

(d) The anticipated peak rate of storm water runoff from the site during and after full development shall not exceed the peak rate of runoff from the site prior to development activities, measured in accordance with the standards and criteria of this section. This rule may be waived for locations where in the opinion of the Township Engineer retention of storm water would be harmful to the overall control of storm water.

(e) Storm sewers, swales, culverts, bridges, and related facilities shall be provided to:

(1) Permit the unimpeded flow of natural water courses; and

(2) Insure the drainage of all points along streets; and

(3) Intercept stormwater runoff along streets at reasonable intervals related to the extent and grade of the area drained, and to prevent the flooding of intersections and the undue concentration of storm water; and

(4) Provide storm water drainage of all points along streets; and

(5) Insure unrestricted flow of storm water under driveways, and all natural watercourses or drainage swales.

(f) The following criteria shall be utilized for computing runoff:

(1) The U.S. Department of Agriculture Soil-Cover Complex Method shall be utilized to compute runoff for the design of storm water runoff rate reduction facilities. The peak runoff rates and volumes shall be determined by using Chapter 2 of the Engineering Field Manual, August 1989 Edition, USDA, SCS, and by using Technical Release No. 55, Urban Hydrology for Small Watersheds, USDA, SCS, June 1986, as supplemented, amended and changed from time to time. To compute design flows for the sizing of storm sewers, inlets, and swales, the Rational Method may be used in lieu of the Soil Cover Complex Method. The Township may also permit the use of the Rational Method for calculation of runoff from sites of ten (10) acres or less. Any method approved by the Pennsylvania Department of Transportation or the Pennsylvania Department of Environmental Resources may be used to design the waterway areas of bridges.

(2) Where farm fields or disturbed earth is the existing natural condition, meadowland shall be used as the starting base for calculations instead of the natural condition.

(3) Storm frequencies for 2, 10, and 100 year storm events shall be evaluated and no greater runoff rate shall be permitted after development than what existed prior to development for any of these events.

(g) When existing storm sewers or drainage swales are accessible, the Developer may connect his storm water drainage system to the existing facilities provided the Township approves the connection.

### **§303. Design Considerations.**

(a) All storm sewers shall be constructed using PennDOT Form 408 specifications, as amended, unless otherwise directed by the Township.

(b) Storm water roof drains shall not discharge into any municipal sanitary sewer line or over a sidewalk.

(c) The minimum pipe size shall have a waterway opening of 1.23 square feet (15" diameter or equivalent arch pipe).

(d) Inlets shall be placed at the curb line where a curbed section is installed. Inlets required for parallel or cross drainage without a curbed section shall be set at the centerline of the ditch.

(e) Structures shall be PennDOT Type M pre-cast concrete or cast-in-place Class A concrete. Brick or block structures shall be incorporated into a structure only for grade adjustment of the casting.

(f) Bridges and culverts shall have ample waterway opening to carry expected flows, based on a minimum storm frequency of twenty-five (25) years. Bridge and culvert construction shall be in accordance with the Pennsylvania Department of Transportation specifications and shall meet the requirements of the Pennsylvania Department of Environmental Resources.

(g) Detention Basins for storm water peak discharge storage shall comply with the following criteria:

(1) Basins shall be installed prior to any earthmoving or land disturbance which they will serve. The phasing of their construction shall be noted in a narrative and on the Drainage Plan.

(2) Whenever a basin will be located in an area underlain by limestone, geologic evaluation of the proposed location may be required to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent ground water contamination and, where necessary, sinkhole formation.

(3) Soils used for the construction of basins shall have low erodibility factors ("K factors").

(4) The minimum storage capacity for a detention basin shall be determined by routing the projected post-development 25 year-24 hour storm through the basin and releasing it at a rate not to exceed the before development 10 year-24 hour discharge.

(5) Energy dissipators and/or level spreaders shall be installed at points where pipes or drainage ways discharge to or from basins. Discharge from basins shall be into a natural waterway or drainage way.

(6) Exterior slopes of compacted soil shall not exceed one foot (1') vertical in three feet (3') horizontal and may be further reduced if the soil has unstable characteristics.

(7) Interior slopes of the basin shall not exceed one foot (1') vertical in three feet (3') horizontal except with the approval of the Township Engineer. Where concrete, stone, or brick walls are used for steeper interior slopes, the basin shall be fenced with a permanent wire fence at least forty-two inches (42") in height and a ramp of durable, non-slip materials for maintenance vehicles shall be provided for basin access.

(8) Outlet structures with basins which will control peak discharge flows and distribute the flows by pipes to discharge areas shall be constructed of concrete, polymer-coated steel or aluminum and shall have childproof, non-clogging trash racks over all design openings exceeding twelve (12") inches in diameter, except those openings used to carry perennial stream flows. Small outlet structures may be constructed of Schedule 40 PVC. Where spillways will be used to control peak discharges in excess of the ten (10) year storm, the control weirs shall be constructed of concrete of sufficient mass and structural stability to withstand the pressures of impounded waters and outlet velocities. Concrete outlet aprons shall be designed as level spreaders and shall extend at a minimum to the toe of the basin slope. The incorporation of any large stone found on the site into the concrete apron to provide a more natural appearance is suggested. Construction shall comply with PennDOT Form 408 specifications.

(9) Inlet and outlet structures shall be located at maximum distance from each other. The Township may require a rock filter berm

of rock-filled gabions between inlet and outlet areas when the distance is deemed insufficient for sediment trappings.

(10) Temporary and permanent grasses or stabilization measures shall be established on the sides of all earthen basins within fifteen (15) days of initial construction.

(h) Stormwater roof drains, sump-pumps and driveway or other impervious surface stormwater runoff shall not be discharged into any sanitary sewer conveyance or treatment system or over any sidewalk nor shall the same be directed onto any adjacent lands without first being discharged upon the lands on which the same was originally generated at such distance from property lines as to permit sheet flow. The use of level spreader or energy dissipaters shall be required on a case by case basis as determined by the Township. In no case shall the runoff be discharged at a rate in excess of 110% of the pre-development runoff. (As amended by Ordinance 320, August 25, 2008)

**§304. Other Provisions.**

(1) The provisions set forth in §§401, 402, 403, 404, 406, 407, 408, and 409 shall apply to the areas of the Township subject to this Part where said provisions are applicable. In the event there is a conflict between a provision in the said sections and the provisions of this Part, the provision which, in the opinion of the Township Engineer, will produce the best overall stormwater management result shall be applicable.

(2) The first, front or face sheet of the Subdivision and/or Land Development Plan shall include the following statement:

(a) The Stormwater Management Ordinance of East Buffalo Township, Union County, Pennsylvania (Chapter 26 of the Code of East Buffalo Township) provides that prior to the installation of single lot stormwater facilities a stormwater management plan for the said stormwater management facility, must be submitted to and approved by East Buffalo Township. Single lot stormwater management plans have not been prepared for the lots within this Subdivision and/or Land Development Plan. The preparation and approval of the single lot stormwater management plan for the individual lot within the plan shall be the responsibility of the person, persons, or entity erecting improvements upon the lot in the Subdivision and/or Land Development Plan and the same to be in compliance with Stormwater Management Ordinance of East Buffalo Township.



**CHAPTER 26**

**WATER**

**Part 4**

**Stormwater Management - Watersheds Subject To Plans**

**§401. General Requirements.**

(a) All Regulated Activities in an area of the Township for which a Plan has been completed, and which do not fall under the exemption criteria in this Ordinance, shall submit a Drainage Plan consistent with the Plan for the watershed in which the area is located to the Township for review. These provisions shall apply to the total proposed development even if development is to take place in stages. Impervious cover shall include, but not be limited to, any roof, parking or driveway areas, and any new streets and sidewalks. Any areas designed to initially be gravel or crushed stone shall be assumed to be impervious for the purposes of comparison to the exemption criteria.

(b) 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 Ordinance.

(c) The existing points of concentrated drainage that discharge onto adjacent property shall not be altered without permission of the affected property owner(s) and shall be subject to any applicable discharge criteria specified in this Ordinance or in other ordinances, laws, statutes and regulations.

(d) 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 Ordinance or in other ordinances, laws, statutes or regulations. If diffused flow is proposed to be concentrated and discharged onto adjacent property, the developer must document that adequate downstream conveyance facilities exist to safely transport the concentrated discharge, or otherwise prove that no erosion, sedimentation, flooding, or other harm will result from the concentrated discharge.

(e) Where watercourses traverse a development site, drainage easements shall be provided conforming to the line of such watercourses. The terms of the easement shall prohibit excavation; the placing of fill or structures; and any alterations, including the growth of stiff or woody vegetation, that may adversely affect the flow of stormwater within any portion of the easement.

(f) When it can be shown that, due to topographic conditions, natural drainage ways on the site cannot adequately provide for drainage, open channels may be constructed conforming substantially to the line and grade of such natural drainage ways. Work within natural drainage ways shall be subject to approval by DEP and the appropriate permits shall be obtained.

(g) Any stormwater management facilities regulated by this Ordinance that would be located in or adjacent to waters of the Commonwealth or

wetlands shall be subject to approval by DEP and the United States Army Corps of Engineers and the appropriate permits shall be obtained. When there is a question whether wetlands may be involved, it is the responsibility of the Developer or his agent to show that the land in question cannot be classified as wetlands, otherwise approval to work in the area must be obtained from DEP and the United States Army Corps of Engineers.

(h) Minimization of impervious surfaces and infiltration of runoff through seepage beds, infiltration trenches, etc. are encouraged, where soil conditions permit, to reduce the size or eliminate the need for detention facilities.

(i) Roof drains must not be connected to streets, sanitary or storm sewers, or roadside ditches.

(j) Developers are encouraged to incorporate designs to take advantage of the stormwater credits presented in the Plans for the various watersheds.

**§402. Water Quality Requirements.**

(a) In addition to the performance standards and design criteria requirements of this Ordinance, the Developer SHALL comply with the following water quality requirements of this Article unless otherwise exempted by provisions of this Ordinance.

For water quality, the objective is to provide adequate storage to capture and treat the runoff from 90% of the average annual rainfall.  $P_{90}$  represents the depth of rain associated with 90% of the total rainfall events over 0.11-inches.

(1) The size of the water quality facility shall be based upon the following equation:

$$WQ_v = \frac{(P_{90})(R_v)(A)}{12} \quad P_{90} = 1.2 \text{ inches of rainfall}$$

Where:  $WQ_v$  = water quality volume (in ac-ft)  
 $R_v = 0.05 + 0.009(I)$  where  $I$  = the impervious area expressed as a percentage (i.e. 50% = 50)  
 $A$  = area in acres

(2) Treatment of the  $WQ_v$  shall be provided at all developments where stormwater management is required. A minimum  $WQ_v$  of 0.2-inches per acre shall be met at sites or in drainage areas that have less than 15% impervious cover.

(3) Drainage areas having no impervious cover and no proposed disturbance during development may be excluded from the  $WQ_v$  calculations. Designers are encouraged to use these areas as non-structural BMPs for  $WQ_v$  treatment.

(4) The design of the facility shall consider and minimize the chances of clogging and sedimentation potential. Orifices smaller than 3-inches in diameter are not recommended. However, if the Developer can provide proof that the smaller orifices are protected from clogging by use of trash racks, etc., smaller orifices may be permitted.

(b) To accomplish subsection (a) above, the Developer MAY submit original and innovative designs to the Township Engineer for review and approval. Such designs may achieve the water quality objectives through a combination of BMPs.

(c) In selecting the appropriate BMPs or combinations thereof, the Developer 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

(d) The following additional factors SHOULD be considered when evaluating the suitability of BMPs used to control water quality at a given development site:

- (1) Peak discharge and required volume control
- (2) Stream Bank erosion
- (3) Efficiency of the BMPs to mitigate potential water quality problems
- (4) The volume of runoff that will be effectively treated
- (5) The nature of the pollutant being removed
- (6) Maintenance requirements

**§403. Ground Water Recharge (Infiltration/Recharge/Retention).**

(a) General. The ability to retain and maximize the ground water recharge capacity of the area being developed is encouraged. 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 paved and roofed over. These measures are encouraged, particularly in hydrologic soil groups A and B and shall be utilized wherever feasible. Soils used for the construction of basins shall have low-erodibility factors ("K" factors).

The criteria for maintaining recharge is based on the USDA average annual recharge volume per soil type divided by the annual rainfall in Union County (40-inches per year) and multiplied by 90%. This keeps the recharge calculation consistent with the WQ<sub>v</sub> methodology. Thus, an annual recharge volume requirement shall be specified for a site as follows:

- (1) Percent Volume Method.

$$Re_v = [(S) (R_v) (A)] / 12$$

where:  $Re_v$  = Groundwater Recharge Volume  
 $R_v = 0.05 + 0.009(I)$  where I is percent impervious cover  
A = site area in acres  
S = Soil Specific Recharge Factor

(2) Percent Area Method.

$$Re_v = (S) (A_i)$$

where:  $A_i$  = the measured impervious cover

| <u>Hydrologic Soil Group</u> | <u>Soil Specific Recharge Factor (S)</u> |
|------------------------------|--|
| A                            | 0.40                                     |
| B                            | 0.27                                     |
| C                            | 0.14                                     |
| D                            | 0.07                                     |

The recharge volume is considered part of the total  $WQ_v$  that must be provided at a site and can be achieved either by a structural practice (e.g., infiltration, bioretention), a non-structural BMP as shown in the appropriate Plan, or a combination of both.

Drainage areas having no impervious cover and no proposed disturbance during development may be excluded from the  $Re_v$  calculations. Designers are encouraged to use these areas as non-structural BMPs for  $Re_v$  treatment.

**Note:**  $Re_v$  and  $WQ_v$  are inclusive. When treated separately, the  $Re_v$  may be subtracted from the  $WQ_v$  when sizing the water quality BMP.

(b) Basis for Determining Recharge Volume.

(1) If more than one HSG is present at a site, a composite soil specific recharge factor shall be computed based on the proportion of total site area within each HSG. **The recharge volume provided at the site shall be directed to the most permeable HSG available.**

(2) **The "percent volume" method is used to determine the  $Re_v$  treatment requirement when structural practices are used to provide recharge.** These practices must provide seepage into the ground and may include infiltration and exfiltration structures (e.g., infiltration, bioretention, dry swales, or sand filters with storage below the under drain). Structures that require impermeable liners, intercept groundwater, or are designed for trapping sediment (e.g., forbays) may not be used. In this method, the volume of runoff treated by structural practices shall meet or exceed the computed recharge volume.

(3) **The "percent area" method is used to determine the  $Re_v$  treatment requirements when non-structural BMPs are used.** Under this method, the recharge requirements are evaluated by mapping the percent of impervious area that is effectively treated by an acceptable non-structural practice and comparing it to the minimum recharge requirements.

(4) Acceptable non-structural BMPs as determined by the Township Engineer.

(5) The recharge volume criterion does not apply to any portion of a site designated as a stormwater hotspot or any project considered as redevelopment. In addition, the Township Engineer may alter or eliminate the recharge volume requirement if the site is situated on unsuitable soils (e.g., marine clays, karst, or in an urban redevelopment area). In this situation, non-structural BMPs (percent

area method) shall be implemented to the maximum extent practicable and the remaining or untreated  $Re_v$  included in the  $WQ_v$  treatment.

(6) If  $Re_v$  is treated by structural or non-structural BMPs, separate and upstream of the  $WQ_v$  treatment, the  $WQ_v$  is adjusted accordingly.

(c) Soils Evaluation.

(1) **A detailed soils evaluation of the project site shall be performed to determine the suitability of recharge facilities.** The evaluation shall be performed by a qualified professional, and at a minimum, address soil permeability, depth to bedrock, susceptibility to sinkhole formation, and subgrade stability. Advanced testing methods such as the double ring test are encouraged. The Township Engineer may require an additional soils evaluation when it is believed that test results are not reasonable.

(2) **Extreme caution shall be exercised where infiltration is proposed in geologically susceptible areas such as strip mine or limestone areas.** Extreme caution shall also be exercised where salt or chloride would be a pollutant since soils do little to filter this pollutant and it may contaminate the groundwater. It is also extremely important that the design professional evaluates the possibility of groundwater contamination from the proposed infiltration/recharge facility and recommend a hydrogeologic justification study be performed if necessary. Whenever a basin will be located in an area underlain by limestone, a geological evaluation of the proposed location shall be conducted to determine susceptibility to sinkhole formations. The design of all facilities over limestone formations shall include measures to prevent ground water contamination and, where necessary, sinkhole formation.

(a) The Township may require the installation of an impermeable liner in detention basins. A detailed hydrogeologic investigation may be required by the Township. The Township may require the Developer to provide safeguards against groundwater contamination for uses, which may cause groundwater contamination, should there be a mishap or spill.

(b) It shall be the developer's responsibility to verify if the site is underlain by limestone. The following note shall be attached to all Drainage Plans and signed and sealed by the Developer's engineer/surveyor/landscape architect/geologist:

I, \_\_\_\_\_, certify that the proposed detention basin (circle one) is/is not underlain by limestone.

(3) Where pervious pavement is permitted for parking lots, recreational facilities, non-dedicated streets, or other areas, pavement construction specifications shall be noted on the plan.

(4) Recharge/infiltration facilities may be used in conjunction with other innovative or traditional BMPs, stormwater control facilities, and non-structural BMPs.

(5) All recharge/infiltration facilities shall be designed to completely drain within 72-hours of reaching maximum capacity.

**§404. Stream Bank Protection Requirements.**

(a) Stream bank protection shall be considered in implementing performance standards pursuant to this Ordinance. If a stormwater storage facility needs to be constructed, then, to protect channels from erosion, the outflow structure shall be designed to provide the **24-hour extended detention of the one-year, 24-hour storm event**. The method for determining the  $C_{pv}$  requirement is detailed in Appendix D of the Plan (Susquehanna River).

For discharges to streams having verified naturally reproducing wild trout or that is stocked with trout, only 12-hours of extended detention shall be provided. The rationale for this criterion is that runoff will be stored and released in such a gradual manner that critical erosive velocities during bankfull and near-bankfull events will seldom be exceeded in downstream channels.

(b) Basis for Determining Channel Protection Storage Volume.

(1) The models HEC-HMS, TR-55, and TR-20 (or an equivalent approved by the Township Engineer) shall be used for determining peak discharge rates.

(2) Rainfall depth for the one-year, 24-hour storm event in Union County is 2.2-inches.

(3) Off-site areas shall be modeled as present land use in good condition for the one-year storm event.

(4) The length of overland flow used in time of concentration ( $t_c$ ) calculations is limited to no more than 150-feet.

(5)  $C_{pv}$  is not required at sites where the one-year post development peak discharge ( $q_i$ ) is less than or equal to 2.0-cfs. A  $C_{pv}$  orifice diameter ( $d_o$ ) of less than 3.0-inches is subject to approval by the Township Engineer and is not recommended unless an internal control for orifice protection is used.

(6)  $C_{pv}$  shall be addressed for the entire site. If a site consists of multiple drainage areas,  $C_{pv}$  may be distributed proportionately to each drainage area.

(7) Extended detention storage provided for the  $C_{pv}$  does not meet the  $WQ_v$  requirement (i.e.,  $C_{pv}$  and  $WQ_v$  shall be treated separately).

(8) The stormwater storage needed for the  $C_{pv}$  may be provided above the  $WQ_v$  storage in stormwater ponds and wetlands; thereby meeting all storage criteria except  $Re_v$  in a single facility with appropriate hydraulic control structures for each storage requirement.

(9) Infiltration is not recommended for  $C_{pv}$  control because of large storage requirements.

**§405. Release Rate Requirements.**

(a) The watersheds for which plans have been prepared have been divided into subwatersheds (stormwater management districts) as identified in the Plans.

In addition to the requirements specified below, the Erosion & Sedimentation Control Requirements, Water Quality, Ground Water Recharge, and Stream Bank Protection, as provided herein, shall be implemented.

All controls designed to meet the requirements of this Article shall apply the release rate as specified in the following tables for the two (2-) year, ten (10-) year, twenty-five (25-) year, and one hundred (100-) year return period storms.

**Table 405.1: West Branch Susquehanna River Release Rates**

| <b>Subwatershed</b>     | <b>Release Rate (%)</b> |
|-------------------------|-------------------------|
| 3-37                    | 90                      |
| 3-38                    | 60                      |
| 5-3                     | 50                      |
| All other Subwatersheds | 100                     |

**Table 405-2: Bull Run Watershed Release Rates**

| <b>Subareas<br/>Bull Run<br/>Watershed</b> | <b>Release Rate (%)</b> |
|--|-------------------------|
| 1  | 80                      |
| 2  | 50                      |
| 3  | 100                     |
| 4  | 100                     |
| 5  | 60                      |
| 6  | 60                      |
| 7  | 100                     |
| 8  | 70                      |
| 9  | 50                      |
| 10   | 60                      |
|  |                         |
| <b>Subareas<br/>Miller Run</b>             | <b>Release Rate (%)</b> |
| 37-40                                      | 100                     |
| 42-45                                      | 100                     |
| 46   | 75                      |
| 47   | 100                     |
| 49-51                                      | 100                     |

(b) For sites that discharge directly to the Susquehanna River, the requirements of Section 406 may be waived. However, safe conveyance of runoff must be demonstrated for the 2-, 10-, 25- and 100-year storms. The Township reserves the right to require that Section 406 be met.

**§406. Stormwater Management District Implementation Provisions (Performance Standards).**

(a) To utilize the appropriate release rate for a particular site in a watershed the Developer shall follow the following general sequence of actions:

(1) Compute the pre-development and post-development runoff for the specific site using an approved method for the 2-, 10-, 25-, and 100-year storms, using no stormwater management techniques. If the post-development peak rate is less than or equal to the pre-development rate and time to peak of post and pre-development rates are identical, the requirements of this Ordinance, Act 167 and the Plan have been met. If the post-development runoff rate exceeds the pre-development rate, proceed to Step 2.

(2) Apply on-site stormwater management techniques to provide for  $WQ_v$ ,  $Re_v$ , and  $Cp_v$ . Recompute the post-development runoff rate for the 2-, 10-, 25-, and 100-year storms; and if the resulting post-development peak runoff rate is less than or equal to the pre-development peak runoff rate, the requirements of the Plan have been met. Otherwise additional stormwater management measures, possibly detention or retention, will be required and the developer should proceed to Step 3.

(3) Design the necessary facilities to meet the pre-development peak runoff rate.

It should be noted that stormwater storage can be provided on or off-site. The possibility for regional or off-site facilities is an option, which can be considered as a means to more efficiently provide the needed facilities, in terms of both cost and land requirement considerations. In many areas, the best solution may be for several development sites to share a joint facility.

Municipalities may also benefit from this approach. They may maximize development in prime development areas by providing regional or distributed storage through the use of natural or artificial lakes, floodplains, and steep sloped valleys, which are unsuitable for development. However, where off-site storage is to be used, the Developer must ensure that no flooding or harm will be caused by runoff between the new development and the off-site storage area. This may require the protection of the stream channel or the construction of a storm sewer to convey runoff to the storage site.

(b) District Boundaries. The boundaries of the Stormwater Management Districts are shown on maps that are available for inspections at the Township office. 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 topographic contours (or most accurate data required) provided as part of the Drainage Plan.



(c) 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.

(d) 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.

(e) "No Harm" Option. For any proposed development, the Developer has the option of using a less restrictive runoff control (including no detention) if the Developer can prove that "no harm" would be caused by discharging at a higher runoff rate than that specified by the Plan. The "no harm" option is used when a Developer can prove that the post-development hydrographs can match pre-development hydrographs, or if it can be proved that the post-development conditions will not cause increases in peaks at all points downstream. Proof of "no harm" would have to be shown based upon the following "Downstream Impact Evaluation" which shall include a "downstream hydraulic capacity analysis" consistent with this Section to determine if adequate hydraulic capacity exists. The Developer shall submit to the Township this evaluation of the impacts due to increased downstream stormwater flows in the watershed.

(1) 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 stream flow, or any stream channel section, established with the concurrence of the Township.

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

(3) The peak flow values to be used for downstream areas for the design return period storms (1-, 2-, 5-, 10-, 25-, 50-, and 100-year) shall be the values from the calibrated model for the appropriate watershed. These flow values can be obtained from the Plans where applicable. In all other cases the values utilized shall be subject to the approval of the Township Engineer.

(4) Developer-proposed runoff controls which would generate increased peak flow rates at storm drainage problem areas would, by definition, be precluded from successful attempts to prove "no-harm," except in conjunction with proposed capacity improvements for the problem areas consistent with this Section.

(5) A financial distress shall not constitute grounds for granting a "no-harm" exemption.

(6) Capacity improvements may be provided as necessary to implement the "no harm" option, which proposes specific capacity improvements to provide that a less stringent discharge control would not create any harm downstream.

(7) Any "no harm" justifications shall be submitted by the Developer as part of the Drainage Plan submission.

(f) "Downstream Hydraulic Capacity Analysis". Any downstream capacity hydraulic analysis conducted in accordance with this Ordinance shall use the following criteria for determining adequacy for accepting increased peak flow rates:

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

(2) Natural or man-made channels or swales must be able to convey increased 25-year return period runoff without creating any hazard to persons or property.

(3) 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 regulations (if applicable) and, at a minimum, pass the increased 25-year return period runoff.

(g) Regional Detention Alternatives. For certain areas within the study area, it may be more cost-effective to provide one control facility for more than one development site than to provide an individual control facility for each development site. The initiative and funding for any regional runoff control alternatives are the responsibility of prospective developers. The design of any regional control basins must incorporate reasonable development of the entire upstream watershed. The peak outflow of a regional basin would be determined on a case-by-case basis using the hydrologic model of the watershed consistent with protection of the downstream watershed areas. "Hydrologic model" refers to the calibrated model as developed for the Plans. For those areas not part of the Plans the methods applied to determine peak outflow are subject to the approval of the Township Engineer.

(h) Hardship Option. The development of the Plans and their standards and criteria was designed to maintain existing peak flows throughout a watershed as the watershed becomes developed. The same is true for the provisions of this Ordinance affecting areas not part of the said watershed. There may be certain instances, however, where the standards and criteria established are too restrictive for a particular landowner or developer. 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 a developer or landowner is not be able to meet the stormwater standards due to lot conditions or if conformance would become a hardship to an owner, this hardship option may be applied. The landowner shall present his/her case to the Township Supervisors with the final determination being made by the Township Supervisors. Any landowner presenting the "hardship option" will assume all liabilities that may arise due to exercising this option, economic hardship alone will not be sufficient to warrant the application of this hardship option.

**§407. Design Criteria for Stormwater Management Facilities.**

(a) Any stormwater facility located on State highway rights-of-way shall be subject to approval by the Pennsylvania Department of Transportation (PENNDOT).

(b) Any stormwater management facility (i.e., detention basin) designed to store runoff and requiring a berm or earthen embankment required or regulated by this Ordinance shall be designed to provide an emergency spillway to handle flow up to and including the 100-year post-development conditions. The height of embankment must be set as to provide a minimum 1.0-foot of freeboard above the maximum pool elevation computed when the facility functions for the 100-year post-development inflow. Should any stormwater management facility require a dam safety permit under DEP regulations, the facility shall be designed in accordance with and meet the said regulations.

(c) Any facilities that constitute water obstructions (e.g., culverts, bridges, outfalls, or stream enclosures), and any work involving wetlands as directed in DEP regulations (as amended or replaced from time to time by DEP and the United States Army Corps of Engineers), shall be designed in accordance with said regulations and all required permits shall be obtained. Any other water obstruction that does not fall under said regulations must be able to convey, without damage to the drainage structure or roadway, runoff from the 25-year design storm with a minimum. Any facility that constitutes a dam as defined in DEP and the United States Army Corps of Engineers regulations may require a permit under dam safety regulations. Any facility located within PENNDOT rights-of-way must meet PENNDOT minimum design standards and permit submission requirements.

(d) Storm sewers and manmade channels (i.e. swales) must be able to convey post-development runoff from a 10-year design storm without surcharging inlets, where appropriate. When connecting to an existing stormsewer system the applicant must demonstrate that the proposed system will not exacerbate any existing stormwater problems.

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

(f) The design of all stormwater management facilities shall incorporate sound engineering principles and practices. The Township shall disapprove any design that would result in the occupancy or continuation of an adverse hydrologic or hydraulic condition within the watershed.

**§408. Calculation Methodology.** Stormwater runoff from all development sites shall be calculated using either the rational method or a soil-cover-complex methodology.

(a) Any stormwater runoff calculations shall use a generally accepted calculation technique that is based on the NRCS soil cover complex method. Table 408-1 summarizes acceptable computation methods. It is assumed that all methods will be selected by the design professional based on the individual limitations and suitability of each method for a particular site. The Township may allow the use of the Rational Method to estimate **peak discharges** from drainage areas that contain 200-acres or less. However, the rational method shall not be used to generate **pseudo-hydrographs** for drainage areas greater than 10-acres.

(b) All calculations consistent with this Ordinance using the soil cover complex method shall use the appropriate design rainfall depths for the various return period storms according to the region for which they are located as presented in the Plans, if applicable. If a hydrologic computer model such as PSRM or HEC-HMS is used for stormwater runoff calculations, then the duration of rainfall shall be 24-hours. The SCS 'S' curve shown in Figure B-1, Appendix B of the Plan (Susquehanna River) shall be used for the rainfall distribution.

(c) For the purposes of pre-development 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 (i.e., forest), as determined by the Township Engineer.

(d) 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 Department of Transportation Design Rainfall Curves (1986). 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.

(e) Runoff Curve Numbers (CN) for both existing and proposed conditions to be used in the soil cover complex method shall be obtained from the Plans or determined by the Township Engineer.

(f) Runoff coefficients (C) for both existing and proposed conditions for use in the Rational method shall be obtained from the Township Engineer.

(g) Where uniform flow is anticipated, the Manning's equation shall be used for hydraulic computations, and to determine the capacity of open channels, pipes, and storm sewers. Manning's equation should not be used for analysis of pipes under pressure flow or for analysis of culverts. Values for Manning's roughness coefficient (n) shall be obtained from the Township Engineer.

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

(h) The design of any stormwater detention facilities intended to meet the performance standards of this Ordinance shall be verified by routing the design storm hydrograph through these facilities using the Storage-Indication Method. For drainage areas greater than 200-acres in size, the design storm hydrograph shall be computed using a calculation method that produces a full hydrograph. The Township 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.

**TABLE 408-1: Acceptable Computation Methodologies For Stormwater Management Plans**

| METHOD  | METHOD DEVELOPED BY        | APPLICABILITY   |
|---|----------------------------|---|
| TR-20<br>(or commercial computer package based on TR-20)                  | USDA NRCS                  | Applicable where use of full hydrology computer model is desirable or necessary       |
| TR-55<br>(or commercial computer package based in TR-55)                  | USDA NRCS                  | Applicable for land development plans within limitations described in TR-55           |
| HEC-1, HEC-HMS  | US Army Corps of Engineers | Applicable where use of full hydrologic computer model is desirable or necessary      |
| PSRM  | Penn State University      | Applicable where use of a hydrologic computer model is desirable or necessary         |
| Rational Method (or commercial computer package based on Rational Method) | Emil Kuichling (1889)      | For sites less than 10-acres, or as approved by the Township and/or Township Engineer |
| Other Methods   | Varies                     | Other computation methodologies approved by the Township and/or Township Engineer     |

**§409. Erosion and Sedimentation Requirements.**

(a) Whenever the vegetation and topography are to be disturbed, such activity must be in conformance with applicable state, federal and local ordinances, laws, statutes, rules and regulations and in accordance with the Union County Conservation District.

(b) Additional erosion and sedimentation control design standards and criteria that must be applied where infiltration BMPs are proposed shall include the following:

(1) Areas proposed for infiltration BMPs shall be protected from sedimentation and compaction during the construction phase, so as to maintain their maximum infiltration capacity.

(2) Constructed infiltration BMPs shall be protected from receiving sediment-laden runoff.

CHAPTER 26

WATER

Part 5

Drainage Plan Requirements

**§501. General Requirements.** For any of the activities regulated by this Ordinance, the preliminary or final approval of subdivision and/or land development plans, the issuance of any zoning, building, or occupancy permit, or the commencement of any land disturbance activity, may not proceed until the property owner or developer or his/her agent has received written approval of a Drainage Plan from the Township.

**§502. Exemptions.**

(a) Any Regulated Activity on parcels generating less than 5,000-square feet of total impervious area may be granted a waiver of the Sections dealing with Release Rate, Requirements and Stormwater Management District Implementation Provisions. This criterion shall apply to the total development even if development is to take place in phases. The date of the adoption of this Ordinance 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. Exemptions shall be at discretion of the Township Board of Supervisors consistent with the findings of the Township Engineer upon review of site conditions, topography, soils, and other factors as deemed appropriate.

(b) Prior to the granting of a waiver, the Applicant must provide documentation that the increased flows from the site leaves the site in the same manner as the pre-development condition, and that there will be no adverse effects to properties along the path of flow(s), or that the increased flow(s) will reach a natural watercourse or an existing stormwater management structure before adversely affecting any property along the path of the flow(s). This documentation must include a signed statement under oath by the landowner indicating the total impervious area constructed since the date of adoption of this Ordinance.

(c) Under no circumstances may the provisions of Sections dealing with Water Quality Requirements, Ground Water Recharge, and Stream Bank Protection Requirements be waived.

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

(a) General.

- (1) General description of project.

(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.

(b) Map(s) of the project area shall be submitted on 24-inch x 36-inch sheets and shall be prepared in a form that meets the requirements for recording at the offices of the Recorder of Deeds of Union County which shall include a statement signed by the owner of the land attesting to the ownership of the land, the same to be acknowledged by a notary public or other person authorized by law to take acknowledgements. The contents of the maps(s) shall include, but not be limited to:

(1) The location of the project relative to highways, Municipalities, or other identifiable landmarks.

(2) Existing contours at intervals of no greater than two foot. In areas of steep slopes (greater than 15-percent), five-foot contour intervals may be used.

(3) Existing streams, lakes, ponds, field delineated wetlands, or other bodies of water within the project area.

(4) Other physical features including flood hazard boundaries, sinkholes, streams, 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 50-feet of property lines.

(6) An overlay showing soil names and boundaries.

(7) Proposed changes to the land surface and vegetative cover, including the type and amount of impervious area that would be added.

(8) Proposed structures, roads, paved areas, and buildings.

(9) Final contours at intervals no greater than two foot. In areas of steep slopes (greater than 15- percent), five-foot contour intervals may be used.

(10) The name of the development, the name and address of the owner of the property, and the name of the individual or firm preparing the plan who shall be a professional engineer or architect licensed by the Commonwealth of Pennsylvania and who shall affix his or her seal and signature to 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) Horizontal and vertical profiles of all open channels, including hydraulic capacity.

(18) Overland drainage paths.

(19) A minimum twenty feet wide access easement around and to all stormwater management facilities that would provide ingress to and egress from a public right-of-way. The twenty feet shall extend from the top of bank of any channel or berm of any basin. The said easement shall remain unobstructed at all times.

(20) 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 Ordinance.

(21) A construction detail of any improvements made to sinkholes.

(22) Design details for stormwater infiltration, water quality, and detention/retention facilities including operation and maintenance requirements.

(23) A statement, signed by the landowner, acknowledging the stormwater management system to be a permanent fixture that can be altered or removed only after Township approval of a revised plan.

(24) The location of all erosion and sedimentation control facilities.

(25) Signature blocks shall be provided for the approval of the Township Board of Supervisors. Signature blocks shall be provided for the review by the East Buffalo Township Planning Commission and the Union County Planning Department. In the case of single lot individual stormwater management plan, signature blocks shall be provided for approval by the Township Engineer and the Township Zoning Officer. (Ordinance 386, adopted January 3, 2017)

(c) Supplemental Information.

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

(a) The overall stormwater management concept for the project.

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



(c) Existing and proposed drainage area maps.

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

(e) Expected project time schedule.

(2) A soil erosion and sedimentation control plan, where applicable, including all reviews and approvals, as required by DEP.

(3) A geologic assessment of the effects of runoff on sinkholes as specified in this Ordinance.

(4) The effect of the project (in terms of runoff volumes and peak flows) on adjacent properties and on any existing Township stormwater collection system that may receive runoff from the project site.

(5) A Declaration of Adequacy and Highway Occupancy Permit from the PENNDOT District Office when utilization of a PENNDOT storm drainage system is proposed.

(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.

**§504. Plan Submission.** For all activities regulated by this Ordinance, the steps below shall be followed for submission. For any activities that require a permit under applicable state or federal laws, statutes or regulations, the proof of application for said permit(s) shall be part of the plan. The plan shall be coordinated with the state and federal permit process.

(a) The Drainage Plan shall be submitted by the developer as part of the Preliminary and Final Plan submission for the Regulated Activity where such plans are required otherwise as a separate submission.

(b) Eight (8) copies of the Drainage Plan shall be submitted to the Township when not submitted as part of a subdivision or land development plan. The number of plans required with the submission of a subdivision or land development plan shall be as required in the Township Subdivision and Land Development Ordinance.

(c) Distribution of the Drainage Plan will be as follows:

(1) One (1) copy for the Township Engineer.

(2) One (1) copy for the County Conservation District.

(3) One copy for the Union County Planning Department.

(4) The remaining copies shall be for the Townships approval and review process accompanied by the requisite Township Review Fee. The Township shall retain three (3) copies for their file and the remaining copies shall be returned to the applicant.

**§505. Drainage Plan Review.**

(a) The Township Engineer or other designated person shall review the Drainage Plan for consistency with the adopted Plan or as otherwise provided in this Ordinance. The Township shall require receipt of a complete plan, as specified in this Ordinance.

(b) For activities regulated by this Chapter, the Township Engineer shall notify the Township in writing, within 15 calendar days, whether the Drainage Plan is consistent with this Chapter. Should the Drainage Plan be determined to be consistent with this Chapter, the Township Engineer will forward a letter recommending approval to the Township Planning Director or Township Zoning Officer. (Ordinance 386, adopted January 3, 2017)

(c) Should the Drainage Plan be determined to be inconsistent with this Chapter, the Township Engineer will forward a letter recommending disapproval to the Township Planning Director and/or Township Zoning Officer citing the reason(s) for the disapproval. (Ordinance 386, adopted January 3, 2017)

(d) For Regulated Activities specified in this Chapter, the Township Planning Director and/or Township Zoning Officer shall notify the Township Building Code and Township Zoning Officers in writing, within a time frame consistent with the Township Building Codes and Zoning Ordinance or Township Subdivision/Land Development Chapter, whether the Drainage Plan is consistent with this Ordinance and forward a copy of the approval/disapproval letter to the Developer. (Ordinance 386, adopted January 3, 2017)

(e) For Regulated Activities requiring a DEP permit, the Township Planning Director or Township Zoning Officer shall notify DEP whether the Drainage Plan is consistent with this Chapter and forward a copy of the review letter to the Developer. (Ordinance 386, adopted January 3, 2017)

(f) The Township shall not approve any subdivision or land development for Regulated Activities specified in this Ordinance if the Drainage Plan has been found to be inconsistent with this Ordinance, as determined by the Township. All required permits from DEP must be obtained prior to approval of any subdivision or land development.

(g) The Township Building Codes and Township Zoning Officers shall not issue building and/or zoning permits for any Regulated Activity specified in this Ordinance if the Drainage Plan has been found to be inconsistent with this Ordinance, as determined by the Township Engineer. All required permits from DEP must be obtained prior to issuance of a Building Permit or Zoning Permit.

(h) The Developer shall be responsible for completing record drawings (as built 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 Township for

review by the Township Engineer or other designated person for final approval. In no case shall the Township approve the record drawings until the Township receives a copy all applicable state and federal permits.

(i) The Township's approval of a Drainage Plan shall be valid for a period not to exceed five (5) years. This 5-year time period shall commence on the date that the Township signs the approved Drainage Plan. 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 5-year time period, then the Township may consider the Drainage Plan disapproved and may revoke any and all permits. Drainage Plans that are considered disapproved by the Township shall be resubmitted in accordance with this Ordinance.

(j) Approval of the Drainage Plan on behalf of the Township shall be by the Board of Supervisors in those cases where Developer is required to submit a Subdivision or Land Development Plan pursuant to the Township's Subdivision and Land Development Ordinance. In those cases where the Developer is not required to submit a Subdivision or Land Development Plan approval of the Drainage Plan on behalf of the Township shall be by the Township Planning Director or Township Zoning Officer. (Ordinance 386, adopted January 3, 2017)

**§506. Modification of Plans.** A modification to a submitted Drainage Plan 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 Township Engineer, shall require a resubmission of the modified Drainage Plan consistent with this Ordinance and be subject to review as specified in this Ordinance.

A modification to an already approved or disapproved Drainage Plan shall be submitted to the Township, accompanied by the applicable Township Review Fee. Modification to a Drainage Plan for which a formal action has not been taken by the Township shall be submitted to the Township, accompanied by the applicable Township Review Fee.

**§507. Resubmission of Disapproved Drainage Plans.** A disapproved Drainage Plan may be resubmitted, with the revisions addressing the Township Engineer's concerns documented in writing, to the Township in accordance with this Ordinance and distributed accordingly and be subject to review as specified in this Ordinance. The applicable Township Review Fee must accompany a resubmission of a disapproved Drainage Plan.

**CHAPTER 26**

**WATER**

**Part 6**

**Inspections**

**§601. Schedule of Inspections.**

(a) The Township Planning Director or a person designated by the Township shall inspect all phases of the installation of the permanent stormwater management facilities as deemed appropriate by the Township.

(b) During any stage of the work, if the Township Planning Director or Township designee determines that the permanent stormwater management facilities are not being installed in accordance with the approved Drainage Plan, the Township shall revoke any existing permits and issue a cease and desist stop work order until the work is brought into compliance with the approved plan or a revised Drainage Plan is submitted and approved, as specified in this Ordinance.

CHAPTER 26

WATER

Part 7

Fees and Expenses

**§701. General.** The fee required by this Township Ordinance is the Township Review Fee. The Township Review fee shall be established by the Township to defray review costs incurred by the Township and the Township Engineer. All fees shall be paid by the Applicant.

**§702. Township Drainage Plan Review Fee.** The Township shall establish a Review Fee Schedule by resolution of the Board of Supervisors based on the size of the Regulated Activity and based on the Township's costs for reviewing Drainage Plans. The Township shall periodically update the Review Fee Schedule to ensure that review costs are adequately reimbursed.

**§703. Expenses Covered by Fees.** The fees required by this Ordinance shall at a minimum cover:

- (a) Administrative costs.
- (b) The review of the Drainage Plan by the Township Planning Director and/or Township Zoning Officer. (Ordinance 386, adopted January 3, 2017)
- (c) Post and pre-development site inspection by the Planning Director and/or Township Zoning Officer. (Ordinance 386, adopted January 3, 2017)
- (d) The preparation of the Improvements Guarantee and Stormwater Maintenance Agreement by the Township Solicitor. (Ordinance 386, adopted January 3, 2017)

**§704. Township Engineer Review.** The cost of the Township Engineer's site review and inspection shall be borne by the Owner/Developer in the form of reimbursement of actual costs to the Township. (Ordinance 386, adopted January 3, 2017)

CHAPTER 26

WATER

Part 8

**Maintenance Responsibilities**

**§801. Performance Guarantee.** The Applicant shall provide a financial guarantee to the Township for the timely installation and proper construction of all stormwater management controls as required by the approved stormwater plan and this Ordinance equal to the 110% of the construction cost of the required controls in a form acceptable by the Township.

**§802. Maintenance Responsibilities.**

(a) The Drainage Plan for the development site shall contain an operation and maintenance plan prepared by the Developer and approved by the Township. The operation and maintenance plan shall outline required routine maintenance actions and schedules necessary to insure proper operation of the facility(ies).

(b) The Drainage Plan for the development site shall establish responsibilities for the continuing operating and maintenance of all proposed stormwater control facilities, consistent with the following principals:

(1) If a development consists of structures or lots which are to be separately owned and in which streets, sewers, and other public improvements are to be dedicated to the Township, stormwater control facilities shall also be offered for dedication to the Township (the Township is not obligated to accept ownership).

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

(c) The governing body, upon recommendation of the Township Engineer, and/or Township Planning Director or Township Zoning Officer, shall make the final determination on the continuing maintenance responsibilities prior to the final approval of the Drainage Plan. The governing body reserves the right to accept or reject the ownership and operating responsibility for any or all of the stormwater management controls. Developer/Owner shall enter into an Agreement with the Township and acceptable to the Township providing for the maintenance, repair and modification of the said system. Said Agreement shall bind Developer/Owner his/her/its successors, assigns and heirs. (Ordinance 386, adopted January 3, 2017)

**§803. Maintenance Agreement for Privately Owned Stormwater Facilities.**

(a) Prior to final approval of the site's Drainage Plan, the property owner shall sign the maintenance agreement set forth above and upon approval Developer shall record the same in the office of the Recorder of Deeds in and for Union County, Pennsylvania.

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

**§804. Township Stormwater Maintenance Fund.**

(a) Persons installing stormwater storage facilities shall be required to pay a fee to the Township Stormwater Maintenance Fund to help defray costs of periodic inspections and maintenance expenses. The amount of the deposit shall be determined as follows:

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

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

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

(c) 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 will be returned to the depositor.

**CHAPTER 26**

**WATER**

**Part 9**

**Enforcement and Penalties**

**§901. Right-of-Entry.** Upon presentation of proper credentials, duly authorized representatives of the Township may enter at reasonable times upon any property within the Township to inspect the condition of the stormwater structures and facilities in regard to any aspect regulated by this Ordinance.

**§902. Notification.** In the event that a person fails to comply with the requirements of this Ordinance or fails to conform to the requirements of any permit issued hereunder, the Township 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 Ordinance. All such penalties shall be deemed cumulative. It shall be the responsibility of the Owner 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 Ordinance.

**§903. Enforcement.** The Board of Supervisors is hereby authorized and directed to enforce all of the provisions of this Ordinance. All inspections regarding compliance with the Drainage Plan shall be the responsibility of the Township Engineer, Township Planning Director, or other qualified persons designated by the Township.

(a) A set of design plans approved by the Township shall be on file at the site throughout the duration of the construction activity. The Township or designee may make periodic inspections during construction.

(b) It shall be unlawful for any person, firm, or corporation to undertake any Regulated Activity on any property except as provided for in the approved Drainage Plan and pursuant to the requirements of this Ordinance. It shall be unlawful to alter or remove any control structure required by the Drainage Plan pursuant to this Ordinance or to allow the property to remain in a condition which does not conform to the approved Drainage Plan.

(c) At the completion of the project, and as a prerequisite for the release of the performance guarantee, the owner or his representatives shall:

(1) 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.

(2) Provide a set of as-built (record) drawings.

(d) After receipt of the certification by the Township, a final inspection shall be conducted by the Township Engineer, Township Planning



Director, or designated representative to certify compliance with this Ordinance.

(e) Suspension and Revocation of Permits.

(1) Any permit issued under this Ordinance may be suspended or revoked by the Board of Supervisors for:

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

(b) A violation of any provision of this Ordinance 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.

(2) A suspended permit shall be reinstated by the Board of Supervisors or its designee when:

(a) The Township Engineer or Township 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, and/or;

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

(3) A permit that has been revoked by the Board of Supervisors cannot be reinstated. The Applicant may apply for a new permit under the procedures outlined in this Ordinance.

(f) Occupancy Permit. An occupancy permit shall not be issued unless the certification of completion has been secured. The occupancy permit shall be required for each lot owner and/or developer for all subdivisions and land development in the Township.

**§904. Public Nuisance.**

(a) The violation of any provision of this Ordinance is hereby deemed a Public Nuisance.

(b) Each day that a violation continues shall constitute a separate violation.

**§905. Penalties.**

(a) Violations of this Chapter shall be enforced by an action brought before a District Judge in the same manner provided for the enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure. The Township Solicitor may assume charge of the prosecution without the consent of the District Attorney as required by Pennsylvania Rule of Criminal Procedure No. 83(c). The fine for a violation of this Chapter shall not

exceed \$1,000.00 and/or imprisonment to the extent allowed by law for the punishment of summary offenses. (Ordinance 289, December 14, 2006)

(b) In addition, the Township, through its solicitor, may institute injunctive, mandamus, or any other appropriate action or proceeding at law or in equity for the enforcement of this Ordinance. 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.

**§906. Appeals.** Any person aggrieved by any action of the Township may appeal the action in accordance with applicable law.

(Ordinance 282, adopted March 13, 2006)