

## TITLE 18

### WATER AND STORM SEWERS<sup>1</sup>

#### CHAPTER

1. WATER
2. STORMWATER MANAGEMENT

#### CHAPTER 1

#### WATER<sup>2</sup>

#### SECTION

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**18-101. Definitions.** For the purpose of this chapter, the following terms, phrases, words, and their derivation, shall have the meanings given herein:

- (1) "Certified mail:" "Certified mail" may be used instead of registered mail whenever this chapter requires a notice to be given by Registered Mail.
- (2) "City:" "City", when used herein shall mean the City of Hendersonville, Sumner County, Tennessee.
- (3) "Erosion Control Enforcement Officer:" The "erosion control enforcement officer" shall be and mean that person designated as **such by the mayor**, or the erosion control enforcement officer's designated representative.

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<sup>1</sup>Municipal code references

Building, utility and housing codes: title 12.  
Refuse disposal: title 17.

<sup>2</sup>Municipal code reference

Plumbing code: title 12, chapter 2.

(4) "Computation of time:" The time within which any act is to be done shall be computed by excluding the first and including the last day, unless the last day is a Saturday, a Sunday, or a legal holiday, and then it shall also be excluded.

(5) "Gender:" Words importing the masculine gender shall include the feminine and neuter.

(6) "Number:" Words used in the singular include the plural and the plural includes the singular number.

(7) "Obstruction to the natural flow of water:" The term "obstruction to the natural flow of water", as used in this chapter, is hereby defined to mean and include any bridges, culverts, drainage structures, pipes, dams, spans, trestles, viaducts, causeways, artificial or man-made drains, or any other such or similar structure, and the depositing or dumping of any material, waste, refuse, garbage, or any other such or similar acts, that impede, impair, or hinder the natural flow of water so that injury or imminent danger, annoyance, hurt, harm, inconvenience, or damage to the general public or its property is likely to ensue, or the rights of the public generally or a considerable number of persons or inhabitants of this city are infringed, impaired, endangered, or placed in jeopardy, or threatened to be placed in jeopardy of harm, damage, or injury.

(8) "Person:" "Person" means any individual, firm, partnership, corporation, company, association, or joint stock association, and includes any trustee, receiver, assignee, or other similar representative thereof.

(9) "Shall; may:" The word "shall" is mandatory. The word "may" is permissive. (Ord. #1975-19, July 1975, modified)

(10) "Design Storm" shall be referred to as a 24 hour event.

**18-102. Public nuisance declared.** Any obstruction to the natural flow of water is hereby declared and proclaimed to be a public nuisance. (Ord. #2017-19, January 2017)

**18-103. Prohibition.** It shall be unlawful for any person to cause or to permit the construction, maintenance, or the existence of any obstruction to the natural flow of water within the area of this city or within this city's jurisdiction. (Ord. #2017-19, January 2017)

**18-104. Abatement.** (1) Whenever the erosion control enforcement officer inspects or causes to be inspected any drains, streams, ditches, creeks, or any other bodies of water, or any places where water accumulates, or any structures, man-made or artificial, that affect the flow of any water by any means, directly or indirectly, when such structures are in, upon, near, or contiguous to the drains, streams, ditches, creeks, or any other bodies of water or any other places where water accumulates, and whenever the erosion control enforcement officer shall find and be of the opinion that any bridge, dam, culvert, pipe, span, trestle, viaduct, causeway, artificial or man-made drain, or any such or similar structure, or the natural depositing or dumping of any material, sediment waste, refuse, garbage, or any other such or similar acts, are in a state of nuisance and that any such conation, structure, or activity, as aforesaid, obstructs the natural flow of water, as herein defined, he shall notify or cause to be notified the person causing or permitting the

construction, maintenance, or existence of said nuisance; and such person shall have such nuisance or the cause of such nuisance removed and abated within a reasonable time as prescribed in such written notice. Such notice shall be served by Registered Mail or Personal Service upon such person. Such notice may state that the condition has been declared to be a nuisance, and that such obstruction must be removed, or remedied by repairing, altering, or demolishing the same; and that in any event, the condition must be abated within the time prescribed herein. Such notice may set forth facts to show that the condition complained of constitutes a nuisance of a public character and that it is an "obstruction to the natural flow of water", as herein defined. Such notice may be given by citation or Notice of Violation or both:

(2) If such person or his agents shall neglect or refuse to comply with the terms of such notice or citation and this chapter, the erosion control enforcement officer, upon the expiration of the terms as set out in the said notice, is hereby empowered to remove such nuisance or the cause of such nuisance, utilizing either the services of some agency of this city or some private agency, at the expense of such person who is causing or responsible for said nuisance; such person's liability, if more than one, shall be joint and several. If the nuisance is abated by the city or its agents, public or private, the person causing or permitting the construction, maintenance, or existence of such nuisance shall be required to pay all of the reasonable expenses and costs of such abatement; such expenses and costs may be determined by the City court.

In the event that such person should feel aggrieved by any decision of the erosion control enforcement officer in this regard, such aggrieved party shall, within seventy-two (72) hours from the receipt of the written or personal notice and demand for the abatement of the nuisance, file at the offices of the erosion control enforcement officer and the city recorder, a request for a hearing by the City court, which request shall be in written form and shall contain the contentions of the aggrieved party. The City court shall hold a hearing to review the action of the erosion control enforcement officer, and the City court shall affix a time and place for such hearing and shall notify such aggrieved person who is requesting a hearing. The City court, at such hearing or after such hearing, may affirm, amend, or set aside such action of the said erosion control enforcement officer. No implementation of the order of the erosion control enforcement officer for the abatement of the nuisance shall be effected, pending such hearing by the City court.

None of the remedies for the abatement of nuisances as set out in this chapter shall be deemed to be exclusive, or as precluding the city from seeking injunctive relief in equity or from seeking any other relief.

Nothing contained in this chapter shall be construed to affect, suspend, or delay any cause or right of action or actions that any other citizen or third party may have against such person causing such nuisance, nor will any action taken by the city affect any duty of such persons causing the nuisance to other citizens or third parties. (Ord. #2017-19, January 2017)

**18-105. Appeals to the city court.** The City court shall hear and act upon such complaints filed by persons affected by decisions of the erosion control enforcement officer, and may amend or set aside such decisions if contrary to the provisions of this chapter and the purpose and intent of this chapter. Such an appeal shall only be perfected by the filing of an informal written request for a hearing before the City court and setting forth in such written request the contentions of the aggrieved party and explaining why the actions of the erosion control enforcement officer should be set aside, modified, or vacated. Upon the perfecting of an appeal, the aggrieved party shall be granted a public hearing before the City court, as prescribed above, and he may appear on his own behalf or be represented by counsel. The aggrieved person's side of the matter shall first be heard, and subsequently, the erosion control enforcement officer and the city attorney shall present their side, and both sides shall be permitted to introduce any relevant and competent evidence bearing on the issue. The notice of such hearing to which the aggrieved person shall be entitled shall be mailed to the said aggrieved person at least seven (7) days prior to the hearing date, unless in specific instances a shorter period of time is specified and agreed upon by the City court and the aggrieved person. (Setting up Administrative Court Date to meet regularly and separate from Traffic Court) Such notice of hearing shall be sent by Registered Mail to the address that shall be given by the aggrieved person in his written request for a hearing. The following disposition of any such complaint shall be in the form of a resolution, which shall affirm, amend, or set aside the decision of the erosion control enforcement officer. No request to grant a rehearing of such decision of the City court shall be entertained unless new evidence is submitted that could not reasonably have been presented at the previous hearing. If justifiable grounds for a rehearing are alleged, they shall be made known, by a written communication to the City court, of which a copy of the same shall be filed with the city recorder; and if a motion to grant a rehearing shall receive the number of affirmative votes that is required to amend or set aside any decisions of the said erosion control enforcement officer, as hereinabove prescribed, then a date for a rehearing shall be set. Such rehearing shall be conducted by the City court in substantially the same manner as required for the former hearing. (Ord. #2017-19, January 2017)

**18-106. Compliance required.** In lieu of enforcement of this chapter by way of prosecution, recovery of remedies, revocation of permits, condemnation, and other compulsory means, the erosion control enforcement officer and the City court, either one or both, may seek to obtain the voluntary compliance with this chapter by way of notice, warning, or other educational means. This section does not, however, require that such non-compulsory methods be used before proceeding by way of a compulsory enforcement. (Ord. #1975-19, July 1975)

**18-107. Obstruction of erosion control enforcement officer.** No person shall interfere with or obstruct the erosion control enforcement officer or any of his designated representatives in carrying out any inspection, survey, or examination or the performance of any other duty for the office of the erosion control enforcement officer. (Ord. #2017-19, January 2017)

**18-108. Violation and penalty.** Any person violating any provision of this chapter or permitting or causing any obstruction to the natural flow of water, as herein defined, shall be fined not more than fifty dollars (\$50.00) for each offense for each offense; and a separate offense shall be considered committed upon each day during or on which a violation occurs or continues. (Ord. #2017-19, January 2017)

## CHAPTER 2

### STORMWATER MANAGEMENT

#### SECTION

18-201	General Provisions.
18-202	Definitions.
18-203	Land Disturbance Permits.
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18-205	Stormwater System Design and Management Standards.
18-206	Buffer Zones.
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18-209	Illicit Discharges
18-210	Enforcement.
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**18-201. General provisions.** (1) Purpose. It is the purpose of this ordinance to:

(a) Protect, maintain, and enhance the environment of the City of Hendersonville and the public health, safety and the general welfare of the citizens of the city, by controlling discharges of pollutants to the City's stormwater system and to maintain and improve the quality of the receiving waters into which the stormwater outfalls flow including, without limitation, lakes, rivers, streams, ponds, wetlands, and groundwater of the city.

(b) Enable the City to comply with the National Pollution Discharge Elimination System (NPDES) General Permit for discharges from Small Municipal Separate Storm Sewer Systems (TNS000000) and applicable regulations, 40 CFR 122.26 for stormwater discharges.

(c) Allow the City to exercise the powers granted in Tennessee Code Annotated §68-221-1105, which provides that, among other powers municipalities have with respect to stormwater facilities, is the power by ordinance or resolution to:

(1) Exercise general regulation over the planning, location, construction, and operation and maintenance of stormwater facilities in the municipality,

whether or not owned and operated by the municipality;

(2) Adopt any rules and regulations deemed necessary to accomplish the purposes of this statute, including the adoption of a system of fees for services and permits;

(3) Establish standards to regulate the quantity of stormwater discharged and to regulate stormwater contaminants as may be necessary to protect water quality;

(4) Review and approve plans and plats for stormwater management in proposed subdivisions or commercial developments;

(5) Issue permits for stormwater discharges, or for the construction, alteration, extension, or repair of stormwater facilities;

(6) Suspend or revoke permits when it is determined that the permittee has violated any applicable ordinance, resolution, or condition of the permit;

(7) Regulate and prohibit discharges into stormwater facilities of sanitary, industrial, or commercial sewage or waters that have otherwise been contaminated; and

(8) Expend funds to remediate or mitigate the detrimental effects of contaminated land or other source of stormwater contamination, whether public or private.

(9) In the case of conflicting Ordinances, this ordinance shall prevail.

(2). Administering entity. The Director of Public Works shall administer the provisions of this ordinance.

(3) Stormwater management ordinance. The intended purpose of this ordinance is to safeguard property and public welfare by regulating stormwater drainage and requiring temporary and permanent provisions for its control. It should be used as a planning and engineering implement to facilitate the necessary control of stormwater and subdivision regulations which shall conform to the current Construction General Permit.

**18-202. Definitions.** For the purpose of this chapter, the following definitions shall apply: Words used in the singular shall include the plural, and the plural shall include the singular; words used in the present tense shall include the future tense. The word “shall” is mandatory and not discretionary. The word “may” is permissive. Words not defined in this section shall be construed to have the meaning given by common and ordinary use as defined in the latest edition of Webster's Dictionary.

(1) “Administrative Penalties” Under the authority provided in Tennessee Code Annotated §68-221-1106, the city declares that any person violating the provisions of this chapter may be assessed an administrative penalty by the city of not less than fifty dollars (\$50.00) and not more than five thousand dollars (\$5,000.00) per day for each day of violation. Each day of violation shall constitute a separate violation. Administrative Fees etc., may also be applied per the fee schedule provided from the Public Works Department.

(2) “Authorized Enforcement Agency”: The Hendersonville Director of Public Works shall administer, and the City Design Engineer shall enforce the provisions of this ordinance.

(3) “As built plans” means drawings depicting conditions as they were actually constructed.

(4) “Best management practices” or “BMPs” means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMP’s also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs could be incorporated by reference into this ordinance as if fully set out therein.

(5) “Buffer Zone” means a setback from the top of water body’s bank of undisturbed vegetation, including trees, shrubs and herbaceous vegetation; enhanced or restored vegetation; or the reestablishment of native vegetation bordering streams, ponds, wetlands, springs, reservoirs or lakes, which exists or is established to protect those water bodies. Buffer zones are measured from the top of bank also referred to as the “ordinary high water mark”. If no top of bank is readily defined, the top of bank should be set at the elevation of the 2-year 24-hour storm event.

(6) “Channel” means a natural or artificial watercourse with a definite bed and banks that conveys flowing water continuously or periodically.

(7) “Clean Water Act”: The federal Water Pollution Control Act (33 U.S.C.



' 1251 et seq.), and any subsequent amendments thereto.

(8) “Community water” means any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wetlands, wells and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the City.

(9) “Construction Activity”: activities subject to NPDES Construction Permits. These include construction projects resulting in land disturbance. Such activities include but are not limited to clearing and grubbing, grading, excavating, and demolition.

(10) “Contaminant” means any physical, chemical, biological, or radiological substance or matter in water.

(11) “Days” or “Daily” shall mean calendar days.

(12) “Design storm event” means a hypothetical storm event, of a given frequency interval and duration, used in the analysis and design of a stormwater facility. The estimated design rainfall amounts, for any return period interval (i.e., 2-yr, 5-yr, 25-yr, etc.) in terms of either 24-hour depths or intensities for any duration, can be found by accessing the NOAA National Weather Service Atlas 14 data for Tennessee. Other data sources may be acceptable with prior written approval by TDEC Water Pollution Control.

(13) “Discharge” means dispose, deposit, spill, pour, inject, seep, dump, leak or place by any means, or that which is disposed, deposited, spilled, poured, injected, seeped, dumped, leaked, or placed by any means including any direct or indirect entry of any solid or liquid matter into the municipal separate storm sewer system.

(14) “Easement” means an acquired privilege or right of use or enjoyment that a person, party, firm, corporation, municipality or other legal entity has in the land of another.

(15) “Erosion” means the removal of soil particles by the action of water, wind, ice or other geological agents, whether naturally occurring or acting in conjunction with or promoted by anthropogenic activities or effects.

(16) “Erosion prevention and sediment control plan (EPSC)” means a written plan (including drawings or other graphic representations) that is designed to minimize the accelerated erosion and sediment runoff at a site during construction activities.

(17) “Hazardous Materials”: Any material, including any substance, waste, or combination thereof, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, a substantial present or potential hazard to human health, safety, property, or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

(18) “Hotspot” or “priority area” means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater.

(19) “Illicit connection” means illegal and/or unauthorized connections to the municipal separate stormwater system whether or not such connections result in discharges into that system.

(20) “Illicit discharge” means any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater and not specifically exempted under §18-209 (2).

(21) “Industrial Activity” means activities subject to NPDES Industrial Permits as defined in 40 CFR, Section 122.26 (b)(14).

(22) “Inspector” An inspector is a person that has successfully completed (has a valid certification from) the “Fundamentals of Erosion Prevention and Sediment Control Level I” course or equivalent course. An inspector performs and documents the required inspections, paying particular attention to time-sensitive permit requirements such as stabilization and maintenance activities. An inspector may also have the following responsibilities:

(a) oversee the requirements of other construction-related permits, such as Aquatic Resources Alteration Permit (ARAP) or Corps of Engineers permit for construction activities in or around waters of the state;

(b) direct contractor to update the field Stormwater Pollution Prevention Plan(s) (SWPPP);

(c) conduct the pre-construction inspection to verify that undisturbed areas have been properly marked and initial measures have been installed; and

(d) inform the permit holder of activities that may be necessary to gain or remain in compliance with the Construction General Permit (CGP) and other environmental permits.

(e) issue citations to ensure compliance.

(23) “Land disturbing activity” means any activity on property that results in a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land-disturbing activities include, but are not limited to, development, re-development, demolition, construction, reconstruction, clearing, grading, filling, trench, and excavation.

(24) “Maintenance” means any activity that is necessary to keep a stormwater facility in good working order so as to function as designed. Maintenance shall include complete reconstruction of a stormwater facility if reconstruction is needed in order to restore the facility to its original operational design parameters. Maintenance shall also include the correction of any problem on the site property that may directly impair the functions of the stormwater facility including natural sedimentation or deposition of materials from off-site runoff.

(25) “Maintenance agreement” means a document recorded in the land records that acts as a property deed restriction, and which provides for long term maintenance of stormwater management practices. The City of Hendersonville Maintenance Agreement for Stormwater Facilities is in the Subdivision Regulations.

(26) “Municipal separate storm sewer system (MS4)” (“Municipal separate stormwater system”) means the conveyances owned or operated by the municipality for the collection and transportation of stormwater, including the roads and streets and their drainage systems, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.

(27) “National Pollutant Discharge Elimination System permit” or “NPDES permit” means a permit issued pursuant to 33 U.S.C. 1342.

(28) “Non-Storm Water Discharge”: Any discharge to the storm drain system that is not composed entirely of storm water.

(29) “Off-site facility” means a structural BMP located outside the subject property boundary described in the permit application for land development activity.

(30) “On-site facility” means a structural BMP located within the subject property boundary described in the permit application for land development activity.

(31) “Ordinary high water mark” means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear,

natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Both of these terms are of a highly technical nature and the division realizes that, in practice, a certain degree of best professional judgement will be used to establish buffer boundaries.

(32) “Peak flow” means the maximum instantaneous rate of flow of water at a particular point resulting from a storm event.

(33) “Person” means any and all persons, natural or artificial, including any individual, firm or association and any municipal or private corporation organized or existing under the laws of this or any other state or country.

(34) “Pollutant”: Anything which causes or contributes to pollution. Pollutants may include, but are not limited to: paints, varnishes, and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, and accumulations, so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure; and noxious or offensive matter of any kind.

(35) “Premises”: Any building, lot, parcel of land, or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

(36) “Priority area” means "hot spot" as defined in §18-202(13).

(37) “Runoff” means that portion of the precipitation on a drainage area that is discharged from the area into the municipal separate stormwater system.

(38) “Sediment” means solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

(39) “Sedimentation” means soil particles suspended in stormwater that can settle in stream beds and disrupt the natural flow of the stream.

(40) “Soils Report” means a study of soils on a subject property with the primary purpose of characterizing and describing the soils. The soils report shall be prepared by a qualified soils engineer licensed in the State of Tennessee, who shall be directly involved in the soil characterization either by performing the

investigation or by directly supervising employees.

(41) “Stabilization” means providing adequate measures, vegetative and/or structural, that will prevent erosion from occurring. Stabilization may be used as a temporary or permanent measure.

(42) “Stormwater” means stormwater runoff, snow melt runoff, surface runoff, infiltration and drainage.

(43) “Stormwater design or BMP manual”: The City defines its stormwater design and best management practices (BMP) manual as the most current edition of the following publications, which are incorporated by reference in the Land Disturbance Ordinance as is fully set out herein: TDEC Sediment and Erosion Control Manual; TDEC Manual for Post Construction Runoff Control and Hendersonville Subdivision Regulations. This manual includes a list of acceptable BMPs including the specific design performance criteria and operation and maintenance requirements for each stormwater practice. Stormwater facilities that are designed, constructed, operated and maintained in accordance with these BMP criteria will be presumed to meet the minimum water quality performance standards. Failures to properly design, install, or maintain BMPs shall constitute a violation of this ordinance.

(44) “Stormwater management” means the programs to maintain quality and quantity of stormwater runoff to or below pre-development levels.

(45) “Stormwater management facilities” means the drainage structures, conduits, ditches, combined sewers, sewers, and all appurtenances by means of which stormwater is collected, transported, pumped, treated or disposed of.

(46) “Stormwater management plan” means the set of drawings, calculations and other documents that comprise all the information and specifications for the programs, drainage systems, structures, BMPs, concepts and techniques intended to maintain or restore quality and quantity of stormwater runoff to pre-development levels.

(47) “Stormwater Pollution Prevention Plan (SWPPP)” means a written plan that includes site map(s), an identification of construction/contractor activities that could cause pollutants to enter the stormwater, and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins. In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMPs) must be designed, installed, and maintained during land disturbing activities. The SWPPP should be prepared in accordance with the current Tennessee Erosion and Sediment Control Handbook. The handbook is intended for use during the design and construction of projects

that require erosion and sediment controls to protect waters of the state. It also aids in development of SWPPPs and other reports, plans, or specifications required when participating in Tennessee's water quality regulations. All SWPPPs shall be prepared and updated in accordance with Section 3 of the Tennessee's Construction General Permit (CGP) .

(48) "Stormwater runoff" means flow on the surface of the ground, resulting from precipitation.

(49) "Stormwater utility" means the Public Works Department that administers the stormwater management ordinance, and other stormwater rules and regulations adopted by the municipality.

(50) "Structural BMPs" means devices that are constructed to provide control of stormwater runoff.

(51) "Surface water" includes waters upon the surface of the earth in bounds created naturally or artificially including, but not limited to, streams, other water courses, lakes and reservoirs.

(52) "Water Quality Buffer" see "Buffer Zone".

(53) "Watercourse" means a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.

(54) "Watershed" means all the land area that contributes runoff to a particular point along a waterway.

(55) "Waters" or "Waters of the state" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

### **18-203. Land disturbance permits.**

(1). When required every person will be required to obtain a land disturbance permit from the City in the following cases:

(a) Land disturbing activity disturbs one (1) or more acres of land

(b) Land disturbing activity of less than one (1) acre of land if such activity is part of a larger common plan of development that affects one

(1) or more acre of land;

(c) Land disturbing activity of less than one (1) acre of land, if in the discretion of the City Design Engineer such activity poses a unique threat to water, or public health or safety;

(d) Land disturbing activity of less than one (1) acre of land, if in the discretion of the City Design Engineer such activity is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;

(e) Land disturbing activity of less than one (1) acre of land, if in the discretion of the City Design Engineer such activity is likely to be a significant contributor of pollutants to waters of the state;

(f) The creation and use of borrow pits.

(2). Building permit. No building permit shall be issued until the applicant has obtained a land disturbance permit where the same is required by this ordinance.

(3). Exemptions. The following activities are exempt from the permit requirement:

(a) Any emergency activity that is immediately necessary for the protection of life, property, or natural resources.

(b) Existing nursery and agricultural operations conducted as a permitted main or accessory use, not including construction of structures for commercial, industrial, or residential use. This does not, however, give allowance for nursery or agricultural operations to deposit dirt in the right of way or on roads or alter ditches in public right of way or streams.

(c) Any logging or agricultural activity that is consistent with an approved farm conservation plan or a timber management plan prepared or approved by appropriate state or federal agency. Construction of structures for commercial, industrial, or residential use are not included. This does not, however, give allowance for nursery, logging, or agricultural operations to deposit dirt in the right of way or on roads or alter ditches in public right of way or streams.

(d) Additions or modifications to existing single family structures disturbing less than 500 square-feet.

(e) Repairs to any stormwater treatment facility deemed necessary by the City.

(4). Application for a land disturbance permit. (can we just refer to the permit? And remove most of item 4. )

(a) Each application shall include the following:

(1) Name of owner;

(2) Business or residence address of applicant;

(3) Name, address and telephone number of the owner of the property of record in the office of the assessor of property;

(4) Address of subject property including the tax reference number and parcel number of the subject property;

(5) Name, address and telephone number of the contractor and any subcontractor(s) available on 24-hour call who shall perform the land disturbing activity and certified person who shall implement the SWPPP;

(6) A statement indicating the nature, extent and purpose of the land disturbing activity including the size of the area for which the permit shall be applicable and a schedule for the starting and completion dates showing phasing of the land disturbing activity.

(7) Where the property includes a sinkhole, the applicant shall obtain from the Tennessee Department of Environment and Conservation appropriate permits.

(8) The applicant shall obtain from any other state or federal agency any other appropriate permits that pertain to the property. However, the inclusion of those permits in the application shall not foreclose the City from imposing additional development requirements and conditions, commensurate with this ordinance, on the development of property covered by those permits.

(b) Each application shall be accompanied by:

(1) A Stormwater Pollution Prevention Plan as described



in §18-205 (5).

(2) A stormwater management plan as described in §18-205 (4), providing for stormwater management during the land disturbing activity and after the activity has been completed.

(3) Each application for a land disturbance permit shall be accompanied by payment of land disturbance permit fee and other stormwater management fees. Fees schedule shall be available at the Public Works Department.

(5). Review and approval of application.

(a) The City will review each application for a land disturbance permit and determine its conformance with the provisions of this ordinance. Construction site plan reviewers must receive a valid certificate of completion from the Tennessee Erosion Prevention and Sediment Control Design Course, Level Two (2). Within thirty (30) days after receiving an application, the City shall provide one of the following responses in writing:

(1) Approval of the permit application;

(2) Approval of the permit application, subject to such reasonable conditions as may be necessary to secure substantially the objectives of this ordinance, and issue the permit subject to these conditions; or

(3) Denial of the permit application, indicating the reason(s) for the denial.

(b) If the City has granted conditional approval of the permit, the applicant shall submit a revised plan that conforms to the conditions established by the City. However, the applicant shall be allowed to proceed with his land disturbing activity so long as it conforms to the conditions established by the City.

(c) No development plans will be released until the land disturbance permit has been approved, erosion and sediment control measures are in place and a pre-construction meeting has occurred.

(6). Permit duration. Every land disturbance permit shall expire and become null and void if substantial work authorized by such permit has not commenced within ninety (90) calendar days of issuance, or is not complete within

twelve (12) months from the date of the commencement of construction. Renewal fees are due by the end of the month of the one year period when issued. Failure to renew will result in a stop work order.

(7). Notice of construction. The applicant must notify the City ten (10) working days in advance of the commencement of construction. The City shall conduct regular inspections of the stormwater management system BMP's, at least once per month. All inspections shall be documented and written reports prepared that contain the following information:

(a) The date and location of the inspection;

(b) Whether construction is in compliance with the approved stormwater management plan;

(c) Variations from the approved construction specifications;

(d) Any violations that exist.

(8). Land Disturbance Surety.

(a) The City may, at its discretion, require the submittal of a performance surety in the form of a letter of credit or cashier's check prior to issuance of a permit in order to ensure that the permanent stormwater practices are installed by the permit holder as required by the approved stormwater management plan. The amount of the installation land disturbance surety shall be the total estimated construction cost of the structural post-construction BMPs approved under the permit, the cost any temporary BMPs, plus any reasonably foreseeable additional related costs (e.g., for damages or enforcement) as determined by the City Design Engineer. The performance surety shall contain forfeiture provisions for failure to complete work specified in the stormwater management plan.

(b) The land disturbance surety shall be released in full only upon: 1) submission of as-built plans to the City Engineer for final street acceptance, 2) written detailed certification by a registered professional engineer licensed to practice in Tennessee that the structural post-construction BMPs have been installed in accordance with the approved plan and other applicable provisions of this ordinance, and 3) the City Design Engineer or designee will make a final inspection of the structural post-construction BMPs to ensure that it is in compliance with the approved plan and provisions of this ordinance. Provisions for a partial pro-rata release of the performance surety based on the completion of various

development stages can be made at the discretion of the City Design Engineer.

**18-204. Waivers.**

(1). General. No waivers will be granted to any construction or site work project, including existing or on-going construction or site work projects. No sites are “grand-fathered”. All construction and site work shall provide for stormwater management as required by this ordinance. However, alternatives to the primary requirement(s) for on-site permanent stormwater management may be considered, if:

(a) Management measures cannot be designed, built and maintained to infiltrate, evapotranspire, harvest and/or use, at a minimum, the first inch of every rainfall event preceded by 72 hours of no measurable precipitation. This first inch of rainfall must be 100% managed with no discharge to surface waters.

(b) It can be demonstrated that the proposed development will not discharge, during or after construction, stormwater runoff that contains contaminants or will otherwise not affect, impair or degrade adjacent or downstream properties, conveyances, or streams.

(c) Alternative minimum requirements for on-site management of stormwater discharges have been established in a stormwater management plan that has been approved by the city.

(2). Downstream damage, etc. prohibited. In order to receive a waiver, the applicant must demonstrate to the satisfaction of the City that the waiver will not lead to any of the following conditions downstream:

(a) Deterioration of existing culverts, bridges, dams, and other structures;

(b) Degradation of biological functions or habitat;

(c) Accelerated stream bank or stream bed erosion or siltation;

(d) Increased threat of flood damage to public health, life or property.

(3). Land disturbance permit not to be issued where waiver requested. No land disturbance permit shall be issued where a waiver has been requested until the waiver is granted. If no waiver is granted, the plans must be resubmitted with a stormwater management plan. Decisions regarding waivers and alternatives will

be made by the Public Works Director.

**18-205. Stormwater system design and management standards.**

(1) Applicability This section shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, land disturbance applications and grading applications. The requirements in this section shall apply to any new development or redevelopment site that meets one or more of the following criteria:

(a) One (1) acre or more;

(1) New development that involves land disturbance activities of one (1) acre or more;

(2) Redevelopment that involves other land disturbance activity of one (1) acre or more;

or,

(b) Developments and redevelopments less than one acre of total land disturbance if the City court has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard (i.e., construction adjacent to the lake that is disturbing soil).

(2) Stormwater design or BMP manual.

(a) Adoption. The municipality adopts as its stormwater design and best management practices (BMP) manual the following publications, which are incorporated by reference in this ordinance as is fully set out herein:

(1) TDEC Erosion Prevention and Sediment Control Handbook, most current edition

(2) Tennessee Permanent Stormwater Management and Design Guidance Manual, most current edition

(3) Hendersonville Subdivision Regulations

(b) These publications include a list of acceptable BMPs including the specific design performance criteria and operation and

maintenance requirements for each stormwater practice. The manual may be updated and expanded from time to time by the City Design Engineer, based on improvements in engineering, science, monitoring and local maintenance experience. Stormwater facilities that are designed, constructed, operated and maintained in accordance with these BMP criteria will be presumed to meet the minimum water quality performance standards. Failures to properly design, install, or maintain BMPs shall constitute a violation of this ordinance. BMPs not listed may be considered and approved by the City Design Engineer.

(3). General performance criteria for stormwater management. Unless granted a waiver or judged by the City Engineer to be exempt, the following performance criteria shall be addressed for stormwater management at all sites:

(a) Runoff reduction performance standard. The first inch of rainfall on the development or redevelopment shall be one-hundred percent (100%) managed with no discharge to surface waters or the public storm sewer system. This standard shall be met using measures, alone or in combination, designed, built and maintained to infiltrate, evapotranspire or harvest and use the rainfall, in accordance with the site design layout practices and stormwater control measures provided in the Tennessee Permanent Stormwater Management and Design Guidance Manual, most current edition.

(1) The pre-development infiltrative capacity of soils at the development or redevelopment must be taken into account in selection of infiltration-based stormwater control measures.

(2) The Tennessee Runoff Reduction Assessment Tool (TN-RRAT) shall be used by the site designer to determine compliance with the runoff reduction requirement.

(3) Incentive standard: The following types of development or redevelopment shall receive a ten percent (10%) reduction in the volume of rainfall to be managed for any of the following types of development. Such incentives are additive such that a maximum reduction of 50% of the runoff reduction performance standard is possible for a project that meets all 5 development types:

(a) Redevelopment;

(b) Brownfield redevelopment;

(c) High density developments having greater than 7 units per acre;

(d) Vertical density developments having a floor to area ratio (FAR) of 2 or greater than 18 units per acre; and

(e) Mixed use and transit oriented development that is located within ½ mile of a mass transit station.

(b) Runoff Reduction performance standard compliance. Developments and redevelopments that achieve 100% of the runoff reduction performance standard (or incentive standard if applicable) using only site design layout practices and/or stormwater control measures that are designed, built and maintained to infiltrate, evapotranspire or harvest and use the rainfall shall be exempt from compliance with the 80% TSS Removal performance standard.

(c) Runoff reduction limitations. Limitations to the application of runoff reduction requirements may prevent a development or redevelopment from meeting 100% of the runoff reduction requirement. Such limitations may include, but are not limited to:

(1) Natural physical conditions exist at the development or redevelopment that preclude or highly limit the use of infiltration practices. Such conditions include, but are not limited to, the following circumstances:

(a) the presence of sinkholes or other karst features;

(b) a high prevalence of shallow bedrock;

(c) a high prevalence of poorly-drained soils (i.e., hydrologic soil group D), such that soil amendments to promote infiltration must be extensive;

(d) a high prevalence of contractive/expansive soils and their proximity to on-site or off-site structures;

(e) slopes greater than the maximums identified for the appropriate application of stormwater control measures;

(f) the presence of a high water table.

(2) the development lacks the available area to create the

necessary hydraulic capacity to fully achieve the runoff reduction requirement through infiltration or evapotranspiration; and,

(3) the proposed use for the development is inconsistent with the capture and reuse of stormwater;

(4) soil or topographic conditions at the development dictate that stormwater control measures which rely on infiltration to reduce stormwater volumes would be located in close proximity to on-site or off-site subsurface foundations, basements or crawlspaces where wet conditions or flooding is known or suspected to occur;

(5) conditions exist at the development that create a potential for introducing pollutants into the groundwater, unless pre-treatment is provided;

(6) pre-existing soil contamination is present in areas that are or could be subject to contact with infiltrated stormwater;

(6) the placement of on-site or off-site utilities precludes the use of stormwater control measures that infiltrate, evapotranspire or harvest and use rainfall;

(7) the site has a historic or archeological significance that cannot be disturbed as determined by the State Historic Preservation Office.

(d) 80% TSS removal performance standard: Developments and redevelopments that cannot meet one hundred percent (100%) of the runoff reduction performance standard using the site design layout practices and stormwater control measures provided in the Tennessee Permanent Stormwater Management and Design Guidance Manual must treat the remainder of the stipulated amount of runoff prior to discharge from the development or redevelopment with a technology documented to remove eighty percent (80%) total suspended solids (TSS), unless an alternative provided under this Ordinance is approved. The treatment technology must be designed, installed and maintained to continue to meet this performance standard.

(e) New development shall meet a stormwater quantity level of service defined by the following unless TDOT has jurisdiction on the roadway. If this is the case, the TDOT's drainage criteria shall be met, otherwise all designs for new development are to be approved by the City Engineer to include the following:

(1) Designing road catch basins and connecting culverts to convey the 25-year design-storm runoff.

(2) Designing bridges, culverts, channels and cross-drains to pass the 25- year design-storm runoff.

(f) Stormwater infrastructure shall be designed in a way that:

(1) Collector roads and arterials are not inundated by a 100-year design-storm event.

(2) Other existing roads (as impacted by new or existing development) shall be designed to have no overtopping of the road under a 25-year design-storm event.

(3) Other new roads shall be designed to have no overtopping at the 25-year design-storm event.

(g) It can be demonstrated that multiple criteria (not based solely on the difficulty or cost of implementing measures) rule out an adequate combination of infiltration, evapotranspiration, and reuse such as lack of available area to create the necessary infiltrative capacity; a site use that is inconsistent with capture and reuse of stormwater; physical conditions that preclude use of these practices.

(h) To protect stream channels from degradation, specific channel protection criteria shall be provided as prescribed in the BMP manual.

(i) The City may apply incentives for floodplain management strategies applied beyond those required by this ordinance.

(1) Strategies beyond those required may include, but not limited to:

(a) Greenways that are dedicated to the City

(b) Eroding waterways are restored or stabilized with approved bioengineering or “green” approaches

(c) New and innovative technologies are applied to address water quantity or quality.

(2) If the above management strategies are applied in a manner acceptable to the City Engineer, then the City may apply incentives including, but not limited to: modification to the



drainage plan or other development requirements acceptable to the City Engineer.

(j) Stormwater discharges to critical areas with sensitive resources (i.e., cold water fisheries, shellfish beds, swimming beaches, recharge areas, water supply reservoirs) may be subject to additional performance criteria, or may need to utilize or restrict certain stormwater management practices.

(k) Stormwater discharges from “hot spots” may require the application of specific structural post-construction BMPs and pollution prevention practices.

(l) Prior to or during the site design process, applicants for land disturbance permits shall consult with the City Engineer to determine if they are subject to additional stormwater design requirements.

(m) The calculation method for determining peak flows shall be used for sizing all stormwater facilities as follows:

- 1) Rational Method-flow rate only for areas up 30 acres.
- 2) SCS Method- flow rate and volume for all drainage areas.

(n) Stormwater discharges from private property onto a site (e.g., from roof drains) shall be a private matter and not addressed by the City Engineer or City Design Engineer.

(4). Minimum control requirements.

(a) Design of stormwater facilities shall meet the multi-stage storm frequency storage requirements during construction and post-development such that the peak flows are equal to or less than the pre-development peak flows for the 2-year, 5-year, 10-year, 25-year and 100-year 24 hour design storms unless the City has granted the applicant a full or partial waiver for a particular BMP under §18-204. Pre-development site conditions shall be utilized to calculation pre-development peak flows.

(b) If hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the City may impose any and all additional requirements deemed necessary to control the volume, timing, and rate of runoff.

(5). Post Construction / Permanent Stormwater management plan requirements. The stormwater management plan shall include sufficient information to allow the City Engineer to evaluate environmental characteristics of the project site, the potential impacts of all proposed development of the site, both present and future, on the water resources, and the effectiveness and acceptability

of the measures proposed for managing stormwater generated at the project site. To accomplish this goal the stormwater management plan shall include the following:

(a) Topographic Base Map: A one (1) inch equals one hundred (100) topographic base map of the basin containing the site which extends a minimum of one hundred (100) feet beyond the limits of the basin of the proposed development. The map should have two-feet (2') contour intervals for the site and may have five-feet (5') contour intervals for the basin beyond the limits of the site. The map shall indicate:

(1) Existing surface water drainage including stream buffers as required by the city, floodplains and floodways, streams, ponds, culverts, ditches, sink holes, and wetlands; and the type, size, elevation, etc., of the two (2) nearest upstream and downstream drainage structures;

(2) Current land use including all existing structures, locations of utilities, roads, and easements;

(3) All other existing significant natural and artificial features;

(4) Proposed land use with tabulation of the percentage of surface area to be adapted to various uses; drainage patterns; locations of utilities, roads and easements; the limits of clearing and grading;

(5) Proposed structural BMPs;

(6) A written description of the site plan and justification of proposed changes in natural conditions may also be required.

(b) Calculations: Hydrologic and hydraulic design calculations prepared by a Tennessee Licensed Engineer for the pre-development, during development, and post-development conditions for the design storms specified in the BMP manual. These calculations must show that the proposed stormwater management measures are capable of controlling the quantity and quality of runoff from the site in compliance with this ordinance and guidelines of the BMP manual. Such calculations shall include:

(1) A description of the design storm frequency, duration, and intensity where applicable;

- (2) Time of concentration;
  - (3) Soil curve numbers or runoff coefficients including assumed pre-developed conditions being before any land alteration, i.e., grass or wooded, post-developed conditions and soil moisture conditions;
  - (4) Peak runoff rates and total runoff volumes for each watershed area;
  - (5) Infiltration rates, where applicable;
  - (6) Culvert, storm sewer, ditch and/or other stormwater conveyance capacities;
  - (7) Flow velocities;
  - (8) Data on the increase in rate and volume of runoff for the design storms referenced in the BMP manual;
  - (9) Documentation of sources for all computation methods and field test results.
- (c) Soils Information: If a permanent stormwater management control measure depends on the hydrologic properties of soils (e.g., infiltration basins) because it relies on infiltration (i.e., a bioswale), then a soils report shall be submitted. The soils report shall be based on on-site boring logs or soil pit profiles and soil survey reports. The number and location of required soil borings or soil pits shall be determined based on what is needed to determine the suitability and distribution of soil types present at the location of the control measure.
- (d) Long Term Maintenance Plan: The design and planning of all stormwater management facilities shall include detailed operation, inspection, and maintenance procedures to ensure their continued performance. These plans will identify the parts or components of a stormwater management facility that need to be maintained and the equipment and skills or training necessary. Provisions for the periodic review and evaluation of the effectiveness of the maintenance program and the need for revisions or additional maintenance procedures shall be included in the plan. The plan shall also include the party responsible for providing maintenance.

(e) Landscaping Plan: The applicant must present a detailed plan for management of vegetation at the site after construction is finished, including who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved. Where it is required by the BMP, a registered landscape architect licensed in Tennessee must prepare this plan.

(g) Maintenance Easements: The applicant must ensure access to the site for the purpose of inspection and repair by securing all needed maintenance easements. These easements must be binding on the current property owner and all subsequent owners of the property and must be properly recorded in the land record.

(h) Maintenance Agreement:

(1) The owner of property to be served by an on-site stormwater management facility must execute an inspection, operation and maintenance agreement consistent with the maintenance agreement and stormwater control checklist included in the Hendersonville Subdivision Regulations that shall operate as a deed restriction binding on the current property owner and all subsequent property owners.

(2) The maintenance agreement shall:

(a) Assign responsibility for the maintenance and repair of the stormwater facility to the owner of the property upon which the facility is located and be recorded as such on the plat for the property by appropriate notation.

(b) Provide for a periodic inspection by the property owner for the purpose of documenting maintenance and repair needs and ensure compliance with the purpose and requirements of this ordinance. The property owner will arrange for this inspection to be conducted by a registered professional engineer licensed to practice in the State of Tennessee who will submit a sealed report of the inspection to the City Design Engineer. It shall also grant permission to the City to enter the property at reasonable times and inspect the stormwater facility to ensure that it is being properly maintained.

(c) Provide that the minimum maintenance and repair needs include, but are not limited to: removal of silt, litter and other debris, cutting of grass, removal of grass cuttings and vegetation, and replacement of landscape vegetation in detention and retention basins, inlets, drainage pipes, and any other stormwater facilities. It shall also provide that the property owner shall be responsible for additional maintenance and repair needs consistent with the needs and standards outlined in the BMP manual.

(d) Provide that maintenance needs must be addressed in a timely manner, on a schedule to be determined by the City Design Engineer.

(e) Provide that if the property is not maintained or repaired within the prescribed schedule, the City shall perform the maintenance and repair at its expense, and bill the same to the property owner. The maintenance agreement shall also provide that the City's cost of performing the maintenance shall be a lien against the property.

(f) The City shall have the discretion to accept the completion of any existing or future stormwater management facility, provided such facility meets the requirements of this ordinance, and includes adequate and perpetual access and sufficient areas, by easement or otherwise, for inspection and regular maintenance. Any stormwater facility must also meet the City's construction standards and any other standards and specifications that apply to the particular stormwater facility in question.

(g) Stormwater Pollution Prevention Plan: The applicant must prepare a stormwater pollution prevention plan for all construction activities. The plan must comply with Section 18-205 (5) of this ordinance.

(5). Stormwater Pollution Prevention Plan (SWPPP) requirements. The SWPPP shall accurately describe the potential for soil erosion and sedimentation problems resulting from land disturbing activity and shall explain and illustrate the measures that are to be taken to control these problems. The length and complexity

of the plan is to be commensurate with the size of the project, severity of the site condition, and potential for off-site damage. A registered professional engineer, licensed in the state of Tennessee, who has obtained a valid certificate of completion from the Tennessee Erosion Prevention and Sediment Control Design Course, Level Two (2), shall seal the plan. The plan shall also conform to the requirements found in the General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000), and shall include at least the following:

(a) Project Description - Briefly describe the intended project and proposed land disturbing activity including number of units and structures to be constructed and infrastructure required.

(b) A topographic map of the basin with contour intervals of five (5) feet or less and site contours of two (2) feet showing present conditions and proposed contours resulting from land disturbing activity.

(c) All existing drainage conveyances, including intermittent and wet-weather. Include any designated floodways or flood plains and buffers.

(d) A general description of existing land cover. Individual trees and shrubs do not need to be identified unless requested. Stands of existing trees, as they are to be preserved upon project completion, shall be identified and their general location on the property specified. Differentiation shall be made between existing trees to be preserved, trees to be removed and proposed planted trees. Tree protection measures must be identified, and diameter of the area involved must also be identified on the plan and shown to scale. Information shall be supplied concerning the proposed destruction of exceptional and historic trees in setbacks and buffer strips. Complete landscape plans may be submitted separately. The plan must include the sequence of implementation for tree protection measures.

(e) Approximate limits of proposed clearing, grading and filling.

(f) Approximate flows of existing stormwater leaving any portion of the site.

(g) A general description of existing soil types and characteristics and any anticipated soil erosion and sedimentation problems resulting from existing characteristics.

(h) Location, size and layout of proposed stormwater and sedimentation control improvements.

- (i) Proposed drainage network.
- (j) Proposed drain tile or waterway sizes.
- (k) Approximate flows leaving site after construction and incorporating water runoff mitigation measures. The evaluation must include projected effects on property adjoining the site and on existing drainage facilities and systems. The plan must address the adequacy of outfalls from the development: when water is concentrated, what is the capacity of waterways, if any, accepting stormwater off-site; and what measures, including infiltration, sheeting into buffers, etc., will to be used to prevent the scouring of waterways and drainage areas off-site, etc.
- (l) The projected sequence of work represented by the grading, drainage and sedimentation and erosion control plans as related to other major items of construction, beginning with the initiation of excavation and including the construction of any sediment basins or retention facilities or any other structural BMPs.
- (m) Specific remediation measures to prevent erosion and sedimentation run-off. Plans shall include detailed drawings of all control measures used; stabilization measures including vegetation and non-vegetation measures, both temporary and permanent, will be detailed. Detailed construction notes and a maintenance schedule shall be included for all control measures in the plan.
- (n) Specific details for: the construction of construction entrances, wash down pads, and sediment basins for controlling erosion; road access points; eliminating or keeping soil, sediment, and debris on streets and public ways at a level acceptable to the City. Soil, sediment, and debris brought onto streets and public ways must be removed by the end of the workday by machine, broom or shovel to the satisfaction of the City Design Engineer or Erosion Control Enforcement Officer. Failure to remove the sediment, soil or debris shall be deemed a violation of this ordinance.
- (o) Proposed structures; location (to the extent possible) and identification of any proposed additional buildings, structures or development on the site.
- (p) A description of on-site measures to be taken to recharge surface water into the ground water system through infiltration.

(q) Specific details for construction waste management. Construction site operators shall control waste such as discarded building materials, concrete truck washout, petroleum products and petroleum related products, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. When the material is erodible such as soil, the site must be treated as a construction site.

### **18-206. Buffer Zones**

(1). Purpose - The goal of the water quality buffer is to preserve undisturbed vegetation that is native to the streamside habitat in the area of the project. Vegetated, preferably native, water quality buffers protect water bodies by providing structural integrity and canopy cover, as well as stormwater infiltration, filtration and evapotranspiration. Buffer width depends on the size of a drainage area. The minimum buffer widths are listed in Section 18-206 (2)(b)(2) of this ordinance. The MS4 must develop and apply criteria for determining the circumstances under which these averages will be available. A determination that standards cannot be met may not be based solely on the difficulty or cost associated with implementation. Every attempt should be made for development and redevelopment activities not to take place within the permanent buffer zone. If water quality buffer widths as defined above cannot be fully accomplished on-site, the MS4 must develop and apply criteria for determining the circumstances under which alternative buffer widths will be available. A determination that water quality buffer widths cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria, such as: type of project, existing land use and physical conditions that preclude use of these practices. All buffer zones will be surveyed and BMP's installed before a Land Disturbance Permit shall be issued.

#### (2). Buffer Zone Requirements

(a) "Construction Buffer Zones" applies to all streams adjacent to construction sites, with an exception for streams designated as impaired or Exceptional Tennessee waters, as designated by the Tennessee Department of Environment and Conservation. Construction Buffer Zones shall meet current requirements of the MS4 Permit. Permit shall be posted and readily available.

(b) "Permanent" new development and significant redevelopment sites are required to preserve water quality buffers along waters within the MS4. Buffers shall be clearly marked on site development plans, Grading Permit applications, and/or concept plans.



(1) Stormwater discharges should enter the permanent water quality buffer as sheet flow, not as concentrated flow, where site conditions allow.

(2) Permanent water quality buffers must have the following minimum widths, based upon drainage area of the receiving stream adjacent to the project, unless site specific conditions necessitate alternative widths,

<b>Drainage Area of stream (square miles)</b>	<b>Minimum total buffer width (ft)</b>	<b>Minimum inner zone (ft)</b>
<b>&lt;1</b>	<b>30</b>	<b>30</b>
<b>1-2</b>	<b>45</b>	<b>30</b>
<b>&gt;2</b>	<b>60</b>	<b>40</b>

The buffer requirement may be fulfilled with a combination of an inner and an outer zone. The predominant vegetation in the inner zone of the buffer (adjacent to the stream) should be trees. The outer zone (adjacent to the development) of 45-60 foot buffers may be composed of herbaceous cover or infiltration-based stormwater control measures.

(3) Permanent water quality buffer widths are measured from the top of bank also referred to as the ordinary high water mark. If no top of bank is readily defined, the top of bank should be set at the elevation of the 2-year storm event.

#### **18-207. Post Construction and Inspection**

(1). As built plans - All applicants are required to submit actual as built plans for any structures located on-site after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be sealed by a registered professional engineer licensed to practice in Tennessee. A final detailed inspection report by the engineer of record is required before any performance security will be released. The City Engineer shall have the discretion to adopt provisions for a partial pro-rata release of the performance security on the completion of various stages of development. In addition, occupation permits shall not be granted until corrections to all Post Construction BMPs have been made and accepted by the City Engineer.

(2). Land Cover and stabilization requirements.

(a) Any area of land from which the natural vegetative cover has been either partially or wholly cleared by development activities shall be revegetated according to a schedule approved by the City Design Engineer. The following criteria shall apply to revegetation efforts:

(1) Reseeding must be done with an annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until such time as the cover crop is established over ninety percent (90%) of the seeded area.

(2) Replanting with native woody and herbaceous vegetation must be accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.

(3) Any area of revegetation must exhibit survival of a minimum of ninety percent (90%) of the cover crop throughout the year immediately following revegetation. Revegetation as required by Property Maintenance must be repeated in successive years until the minimum ninety percent (90%) survival for one (1) year is achieved.

(b) In addition to the above requirements, a landscaping plan must be submitted with the final design describing the vegetative stabilization and management techniques to be used at a site after construction is completed. This plan will not only describe how the site will be stabilized after construction, but will specify who will be responsible for the maintenance of vegetation at the site and what practices will be employed to ensure that adequate vegetative cover is preserved.

(3) Inspection of Stormwater Facilities. Inspection programs may be established on any reasonable basis, including but not limited to: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of state or federal water or sediment quality standards or the NPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling

discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other stormwater treatment practices.

(4). Right-of-Entry for Inspection. When any new drainage control facility is installed on private property, or when any new connection is made between private property and a public drainage control system or sanitary sewer, the property owner shall grant to the City the right to enter the property at reasonable times and in a reasonable manner for the purpose of inspection. This includes the right to enter a property when it has a reasonable basis to believe that a violation of this ordinance is occurring or has occurred, and to enter when necessary for abatement of a public nuisance or correction of a violation of this ordinance.

(5). Inspection of stormwater management facilities. Periodic inspections of facilities shall be performed as provided for in §18-207 of this ordinance and the Hendersonville Subdivision Regulations.

(6). Records of installation and maintenance activities. Parties responsible for the operation and maintenance of a stormwater management facility shall make weekly records during construction and yearly records after acceptance of the installation of the stormwater facility, and of all maintenance and repairs to the facility, and shall retain the records for at least three (3) years. These records shall be made available to the City during inspection of the facility and at other reasonable times upon request or be subject to an administrative penalty.

(7). Failure to meet or maintain design or maintenance standards. If a responsible party fails or refuses to meet the design or maintenance standards required for stormwater facilities under this ordinance, the City Design Engineer, after twenty days (20) notice, may correct a violation of the design standards or maintenance needs by performing all necessary work to place the facility in proper working condition. In the event that the stormwater management facility becomes a danger to public safety or public health, the City Design Engineer shall notify in writing the party responsible for maintenance of the stormwater management facility. Upon receipt of that notice, the responsible person shall have ten (10) days to effect maintenance and repair of the facility in an approved manner. In the event that corrective action is not undertaken within that time, the City Design Engineer may take necessary corrective action. The cost of any action by the City under this section shall be charged to the responsible party and/or impose a minimum fine of fifty (50) dollars per day up including any administrative penalties and re-inspection fees.

**18-208. Existing locations and developments.**

(1). Requirements for all existing locations and developments. The requirements of this ordinance shall apply to all locations and development at which land disturbing activities have occurred prior to the enactment of this ordinance including:

(a) Denuded areas must be vegetated or covered under the standards and guidelines specified in the BMP manual and on a schedule acceptable to the City Design Engineer.

(b) Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed.

(c) Drainage ways shall be properly covered in vegetation or secured with rip-rap, channel lining, etc., to prevent erosion.

(d) Trash, junk, rubbish, etc. shall be cleared from drainage ways.

(e) Stormwater runoff shall be controlled to the extent reasonable to prevent pollution of local waters and runoff abatement. Control measures shall comply with the current requirements of current MS4 permit.

(2). Requirements for existing problem locations. The City Design Engineer shall, in writing, notify the owners of existing locations and developments of specific drainage, erosion or sediment problems affecting such locations and developments and the specific actions required to correct those problems. The notice shall also specify a minimum of twenty (20) days for compliance.

(3). Inspection of existing facilities. The City Design Engineer may, to the extent authorized by state and federal law, establish inspection programs to verify that all stormwater management facilities, including those built before as well as after the adoption of this ordinance, are functioning within design limits. These inspection programs may be established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of the municipality's NPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling

discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other BMPs.

(4). Corrections of problems subject to appeal. Corrective measures imposed by the City are subject to appeal under this ordinance.

**18-209. Illicit discharges**

(1). Scope. This section shall apply to all water generated on developed or undeveloped land entering the municipality's separate storm sewer system.

(2). Prohibition of illicit discharges. No person shall introduce or cause to be introduced into the municipal separate storm sewer system any discharge that is not composed entirely of stormwater or any discharge that flows from stormwater facility that is not inspected in accordance with section 14-506 shall be an illicit discharge. Non-stormwater discharges shall include, but shall not be limited to, sanitary wastewater, car wash wastewater, radiator flushing disposal, spills from roadway accidents, carpet cleaning wastewater, effluent from septic tanks, improper oil disposal, laundry wastewater/gray water, improper disposal of auto and household toxics. The commencement, conduct or continuance of any non-stormwater discharge to the municipal separate storm sewer system is prohibited except as described as follows:

- (a) Uncontaminated discharges from the following sources:
- (1) Water line flushing or other potable water sources,
  - (2) Landscape irrigation or lawn watering with potable water,
  - (3) Diverted stream flows,
  - (4) Rising ground water,
  - (5) Groundwater infiltration to storm drains,
  - (6) Pumped groundwater,
  - (7) Foundation or footing drains,
  - (8) Crawl space pumps,
  - (9) Air conditioning condensation,
  - (10) Springs,
  - (11) Non-commercial washing, for example vehicles
  - (12) Natural riparian habitat or wet-land flows,
  - (13) Swimming pools (if dechlorinated – typically less than one PPM chlorine),
  - (14) Fire fighting activities, and
  - (15) Any other uncontaminated water source.

(b) Discharges specified in writing by the City as being necessary to protect public health and safety.

(c) Dye testing is an allowable discharge if the City Engineer pre-approves it in writing and only by obtaining proper state permits.

(d) Discharges authorized by the Construction General Permit (CGP), which comply with Section 3.5.9 of the same:

(1) dewatering of work areas of collected stormwater and ground water (filtering or chemical treatment may be necessary prior to discharge);

(2) waters used to wash vehicles (of dust and soil, not process materials such as oils, asphalt or concrete) where detergents are not used and detention and/or filtering is provided before the water leaves site;

(3) water used to control dust in accordance with CGP section 3.5.5;

(4) potable water sources including waterline flushings from which chlorine has been removed to the maximum extent practicable;

(5) routine external building washdown that does not use detergents or other chemicals;

(6) uncontaminated groundwater or spring water; and

(7) foundation or footing drains where flows are not contaminated with pollutants (process materials such as solvents, heavy metals, etc.)

(3). Prohibition of illicit connections.

(a) The construction, use, maintenance or continued existence of illicit connections to the separate municipal storm sewer system is prohibited.

(b) This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(c) A person is considered to be in violation of this ordinance if the person connects a line conveying sewage to the MS4, or allows such a connection to continue.

(4). Reduction of stormwater pollutants by the use of best management practices. Any person responsible for a property or premises which is, or may be, the source of an illicit discharge, may be required to implement, at the person's expense, the BMPs necessary to prevent the further discharge of pollutants to the municipal separate storm sewer system. Compliance with all terms and conditions of a valid NPDES permit authorizing the discharge of stormwater associated with industrial activity, to the extent practicable, shall be deemed compliance with the provisions of this section

(5). Notification of spills. Notwithstanding other requirements of law, as soon as any person responsible for a facility or operation, or responsible for emergency response for a facility or operation has information of any known or suspected release of materials which are resulting in, or may result in, illicit discharges or pollutants discharging into stormwater, the municipal separate storm sewer system, the person shall take all necessary steps to ensure the discovery, containment, and cleanup of such release. In the event of such a release of hazardous materials the person shall immediately notify emergency response agencies of the occurrence via emergency dispatch services. In the event of a release of non-hazardous materials, the person shall notify the City Design Engineer in person or by telephone immediately. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the City Engineer within three (3) business days of the telephone notice. If the discharge of prohibited materials emanates from a commercial or industrial establishment, the owner or operator of such establishment shall also retain an on-site written record of the discharge and the actions taken to prevent its recurrence. Such records shall be retained for at least five (5) years.

(6) No illegal dumping allowed. No person shall dump or otherwise deposit outside an authorized landfill, convenience center or other authorized garbage or trash collection point, any trash or garbage of any kind or description on any private or public property, occupied or unoccupied, inside the city.

(7). Suspension of MS4 Access.

(a) Suspension due to Illicit Discharges in Emergency Situations. The City may, without prior notice, suspend MS4 discharge access to a person when such suspension is necessary to stop an actual or threatened discharge which presents or may present imminent and substantial danger to the environment, or to the health or welfare of persons, or to the MS4 or Waters of the United States. If the violator fails to comply with a suspension order issued in an emergency, the authorized enforcement agency may take such steps as deemed necessary to prevent or minimize damage to the MS4 or Waters of the United States, or to minimize danger to persons.

(b) Suspension due to the Detection of Illicit Discharge. Any person

discharging to the MS4 in violation of this ordinance may have their MS4 access terminated. The authorized enforcement agency will notify a violator of the proposed termination of its MS4 access. The violator may petition the authorized enforcement agency for reconsideration and hearing as outlined in the Land Disturbance Ordinance. A person commits an offense if the person reinstates MS4 access to premises terminated pursuant to this Section, without the prior approval of the authorized enforcement agency.

(8). Industrial or construction activity discharge. Any person subject to an industrial or construction activity NPDES storm water discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City prior to the allowing of discharges to the MS4.

(9). Monitoring of discharges.

(a) Applicability. This section applies to all facilities that have storm water discharges associated with industrial activity, including construction activity.

(b) Access to Facilities.

(1) The City shall be permitted to enter and inspect facilities subject to regulation under this ordinance as often as may be necessary to determine compliance with this ordinance. If a discharger has security measures in force which require proper identification and clearance before entry into its premises, the discharger shall make the necessary arrangements to allow access to representatives of the authorized enforcement agency.

(2) Facility operators shall allow the City ready access to all parts of the premises for the purposes of inspection, sampling, examination and copying of records that must be kept under the conditions of an NPDES permit to discharge storm water, and the performance of any additional duties as defined by state and federal law.

(3) The City shall have the right to set up on any permitted facility such devices as are necessary in the opinion of the authorized enforcement agency to conduct monitoring and/or sampling of the facility's storm water discharge.

(4) The City has the right to require the discharger to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the discharger at its own expense. All devices used to measure stormwater flow and quality shall be



calibrated to ensure their accuracy.

(5) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the operator at the written or oral request of the City and shall not be replaced unless otherwise notified by the City. The costs of clearing such access shall be borne by the operator.

(6) Unreasonable delays in allowing the City access to a permitted facility are a violation of a storm water discharge permit and of this ordinance. A person who is the operator of a facility with an NPDES permit to discharge storm water associated with industrial activity commits an offense if the person denies the authorized enforcement agency reasonable access to the permitted facility for the purpose of conducting any activity authorized or required by this ordinance.

(7) If the City has been refused access to any part of the premises from which stormwater is discharged, and is able to demonstrate probable cause to believe that there may be a violation of this ordinance, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program designed to verify compliance with this ordinance or any order issued hereunder, or to protect the overall public health, safety, and welfare of the community, then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction.

**18-210. Enforcement**

(1). Enforcement authority. The City Design Engineer or his/her designees shall have the authority to issue notices of violation and citations, and to impose the penalties provided in this section. Measures authorized include:

(a) Verbal Warnings – At a minimum, verbal warnings must specify the nature of the violation and required corrective action.

(b) Written Notices – Written notices must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.

(c) Citations with Administrative Penalties – The City has the authority to assess monetary penalties, which may include administrative penalties.

(d) Stop Work Orders – Stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate control measures.

(e) Withholding of Plan Approvals or Other Authorizations – Where a facility is in noncompliance, the City's own approval process affecting the facility's ability to discharge to the City can be used to abate the violation.

(f) Additional Measures – The City may also use other escalated measures provided under local legal authorities. The City may perform work necessary to improve erosion control measures and collect the funds from the responsible party in an appropriate manner, such as collecting against the project's bond or directly billing the responsible party to pay for work and materials.

(2) Notification of violation:

(a) Verbal warning. Verbal warning may be given at the discretion of the inspector when it appears the condition can be corrected by the violator within a reasonable time, which time shall be approved by the inspector.

(b) Written notice. Whenever the Erosion Control Enforcement Officer finds that any permittee or any other person discharging stormwater has violated or is violating this ordinance or a permit or order issued hereunder, the enforcement officer may serve upon such person written notice of the violation. The notice shall be an explanation of the violation to include specific required actions, and shall also be submitted to the City court. Submission of this notice in no way relieves the discharger of liability for any violations occurring before or after receipt of the notice of violation.

(c) Consent orders. The Erosion Control Enforcement Officer is empowered to enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the person responsible for the noncompliance. Such orders will include specific action to be taken by the person to correct the noncompliance within a time period also specified by the order. Consent orders shall have the same force and effect as administrative orders issued pursuant to paragraphs (d) and (e) below.

(d) Show cause hearing. The City court may order any person who violates this chapter or permit or order issued hereunder, to show cause why a proposed enforcement action should not be taken. Notice shall be served on the person specifying the time and place for the meeting, the proposed enforcement action and the reasons for such action, and a request that the violator show cause why this proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least ten (10) days prior to the hearing.

(e) Compliance order. When the Erosion Control Enforcement Officer finds that any person has violated or continues to violate this chapter or a permit or order issued thereunder, he may issue an order to the violator directing that, following a specific time period, adequate structures or devices be installed and/or procedures implemented and properly operated. Orders may also contain such other requirements as might be reasonably necessary and appropriate to address the noncompliance, including the construction of appropriate structures, installation of devices, self-monitoring, and management practices.

(f) Cease and desist and stop work orders. When the Erosion Control Enforcement Officer finds that any person has violated or continues to violate this chapter or any permit or order issued hereunder, the City court may issue a stop work order or an order to cease and desist all such violations and direct those persons in noncompliance to:

(1) Comply forthwith; or

(2) Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation; including halting operations except for terminating the discharge and installing appropriate control measures.

(g) Suspension, revocation or modification of permit. The City court may suspend, revoke or modify the permit authorizing the land development project or any other project of the applicant or other responsible person within the city. A suspended, revoked or modified permit may be reinstated after the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein, provided such permit may be reinstated upon such conditions as the City court may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.

(3). Conflicting standards. Whenever there is a conflict between any

standard contained in this ordinance and in the BMP manual adopted by the municipality under this ordinance, the strictest standard shall prevail.

**18-211. Penalties.** Redundant or needs clarifications?

(1). Violations. Any person who shall commit any act declared unlawful under this ordinance, who violates any provision of this ordinance, who violates the provisions of any permit issued pursuant to this ordinance, or who fails or refuses to comply with any lawful communication or notice to abate or take corrective action by the City, shall be guilty of an administrative offense.

(2). Penalties. Under the authority provided in Tennessee Code Annotated Section 68-221-1106, the municipality declares that any person violating the provisions of this ordinance may be assessed an administrative penalty by the City Engineer of not less than fifty dollars (50) and not more than five thousand dollars (5,000) per day for each day of violation. Each day of violation shall constitute a separate violation.

(3). Measuring penalties. In assessing a penalty, the City Engineer may consider:

- (a) The harm done to the public health or the environment;
- (b) Whether the penalty imposed will be a substantial economic deterrent to the illegal activity;
- (c) The economic benefit gained by the violator;
- (d) The amount of effort put forth by the violator to remedy this violation;
- (e) Any unusual or extraordinary enforcement costs incurred by the municipality;
- (f) The amount of penalty established by ordinance or resolution for specific categories of violations; and
- (g) Any equities of the situation that outweigh the benefit of imposing any penalty or damage assessment.

(4). Recovery of damages and costs. In addition to the penalty in §18-211(2) above, the City may recover;

- (a) all damages proximately caused by the violator to the City, which may include any reasonable expenses incurred in investigating violations

of, and enforcing compliance with, this ordinance, or any other actual damages caused by the violation.

(b) The costs of the City's maintenance of stormwater facilities when the user of such facilities fails to maintain them as required by this ordinance.

(5). Other remedies. The City may bring legal action to enjoin the continuing violation of this ordinance, and the existence of any other remedy, at law or equity, shall be no defense to any such actions.

(6). Remedies cumulative. The remedies set forth in this section shall be cumulative, not exclusive, and it shall not be a defense to any action that one (1) or more of the remedies set forth herein has been sought or granted.