TITLE

AN ORDINANCE TO AMEND TITLE 14, TITLED "ZONING AND LAND USE CONTROL," OF THE CODE OF ORDINANCES, CITY OF OAK RIDGE, TENNESSEE, BY DELETING CHAPTER 5, TITLED "EROSION CONTROL AND STORMWATER MANAGEMENT," IN ITS ENTIRETY AND SUBSTITUTING THEREFOR A NEW CHAPTER 5, TITLED "STORMWATER MANAGEMENT," FOR THE PURPOSE OF COMPLIANCE WITH THE STATE OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROGRAM.

WHEREAS, City Code Title 14, Chapter 5, contains provisions pertaining to erosion control and stormwater management; and

WHEREAS, the provisions are in need of updating for compliance with the State of Tennessee Department of Environment and Conservation (TDEC) Municipal Separate Storm Sewer System (MS4) Program; and

WHEREAS, as a Phase II MS4 community, the City is charged with reducing the discharge of stormwater pollutants, protecting water quality, and satisfying the appropriate water quality requirements of the Clean Water Act.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF OAK RIDGE, TENNESSEE:

Section 1. Title 14, titled “Zoning and Land Use Control,” of the Code of Ordinances, City of Oak Ridge, Tennessee, is hereby amended by deleting Chapter 5, titled “Erosion Control and Stormwater Management,” in its entirety and substituting therefor a new Chapter 5, titled “Stormwater Management,” which new chapter shall read as follows:

Section 14-501. General provisions.

(1) Purpose. It is the purpose of this chapter to:

(a) Protect, maintain, and enhance the environment of the City 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 permit (NPDES) and applicable regulations, 40 CFR 122.26 for stormwater discharges; and

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

(i) Exercise general regulation over the planning, location, construction, and operation and maintenance of stormwater facilities in the City, whether or not owned and operated by the City;

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

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

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

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

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

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

(2) Administering Entity. The City Manager or the City Manager's designee shall administer the provisions of this chapter.

(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.

Section 14-502. 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 or Civil 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 a civil 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.

(2) "As built plans" means drawings depicting conditions as they were actually constructed.

(3) "Best Management Practices" (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. BMPs 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.

(4) "Borrow Pit" is an excavation from which erodible material (typically soil) is removed to be fill for another site. There is no processing or separation of erodible material conducted at the site. Given the nature of activity and pollutants present at such excavation, a borrow pit is considered a construction activity for the purpose of this permit.
“Buffer Zone” means a strip of dense undisturbed perennial native vegetation, either original or reestablished, that borders each bank of a stream, river, pond, lake, wetland, etc. Buffer zones are established for the purpose of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the upland area and reaching surface waters. Buffer zones are primarily established for the purpose of protecting water quality and maintaining a healthy aquatic ecosystem in receiving waters.

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

“City” means the City of Oak Ridge, Tennessee.

“City Manager” means the City Manager of Oak Ridge who has the authority to delegate to designated staff, which includes, but is not limited to, staff engineers and stormwater inspectors.

“Clearing” typically refers to the removal of vegetation and disturbance of soil prior to grading or excavation in anticipation of construction activities. Clearing may also cover a wide variety of uses, many of which may not be regulated with the scope of stormwater management.

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

“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.

“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.

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

“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 human activities or effects.

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

“Hotspot” means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. Hotspots include, but are not limited to: garages, repair shops, junk yards, detailing shops, car wash waste water, restaurants (where grease traps are maintained), commercial properties with large paved parking areas, factories, retail facilities, manufacturing plants, storage lots, maintenance areas, sanitary wastes water, effluent from septic tanks and alternate sewer systems, carpet cleaning waste water, laundry waste water/gray water, and household toxics.
"Illicit connections" means illegal and/or unauthorized connections to the municipal separate stormwater system whether or not such connections result in discharges into that system.

"Illicit discharge" means any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater and not specifically exempted under Section 14-507(2).

"Improved sinkhole" is a natural surface depression that has been altered in order to direct fluids into the hole opening. Improved sinkhole is a type of injection well regulated under TDEC's Underground Injection Control (UIC) program. Underground injection constitutes an intentional disposal of waste waters in natural depressions, open fractures, and crevices (such as those commonly associated with weathering of limestone).

"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) Update field stormwater pollution prevention plan (SWPPP);

(c) Conduct 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.

"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, and excavation.

"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.

"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.

"Municipal separate storm sewer system" (MS4) means the conveyances owned or operated by the City 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, and where the context indicates, it means the municipality that owns the separate storm sewer system.
(25) "National Pollutant Discharge Elimination System Permit" or a "NPDES permit" means a permit issued pursuant to 33 U.S.C. 1342.

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

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

(28) "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.

(29) "Priority Construction Activity" means any construction activities discharging directly into or immediately upstream of waters of the state recognizes as impaired (for siltation or habitat alteration) or Exceptional Tennessee Waters.

(30) "Planning Commission" means the City of Oak Ridge Municipal Planning Commission.

(31) "Runoff" means that portion of the precipitation on a drainage area that is discharged from the area into the municipal separate storm sewer system.

(32) "Sediment" means solid material, both inorganic 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.

(33) "Sedimentation" means soil particles suspended in stormwater that can settle in stream beds.

(34) "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, who shall be directly involved in the soil characterization either by performing the investigation or by directly supervising employees conducting the investigation.

(35) "Stabilization" means providing adequate measures, vegetative and/or structural, that will prevent erosion from occurring.

(36) "Stormwater" means stormwater runoff, snow melt runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration and drainage.

(37) "Stormwater entity" means the entity designated by the City to administer the stormwater management ordinance, and other stormwater rules and regulations adopted by the City.

(38) "Stormwater management" means the programs to maintain quality and quantity of stormwater runoff to pre-development levels.

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

(40) "Stormwater management plan" means the set of drawings 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.
(41) "Stormwater pollution prevention plan" (SWPPP) means a written plan that includes site map(s), an identification of construction/contractor activities that could cause pollutants in 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 the 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 General NPDES Permit for Discharges of Stormwater Associated with Construction Activities.

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

(43) "Stream" means a surface water that is not a wet weather conveyance as defined herein.

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

(45) "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.

(46) "TDEC manuals" means the current Sediment and Erosion Control and Post Construction manuals approved by the State of Tennessee Department of Environment and Conservation (TDEC) for stormwater system design and installation.

(47) "Turbidity" means the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air.

(48) "Waste site" means an area where waste material from a construction site is deposited. When the material is erodible, such as soil, the site must be treated as a construction site.

(49) "Water Quality Buffer" see "Buffer".

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

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

(52) "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.

(53) "Wetland(s)" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands include, but are not limited to, swamps, marshes, bogs, and similar areas.
"Wet weather conveyances" are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that flow only in direct response to precipitation runoff in their immediate locality and whose channels are above the groundwater table and are not suitable for drinking water supplies; and in which hydrological and biological analyses indicate that, under normal weather conditions, due to naturally occurring ephemeral or low flow, there is not sufficient water to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months. (Rules and Regulations of the State of Tennessee, Chapter 1200-4-3-.04(3)).

Section 14-503. Land disturbance permits.

(1) When required.

(a) Every person will be required to obtain a land disturbance permit from the City Manager or the City Manager’s designee in the following cases:

(i) Land disturbing activity that disturbs one (1) or more acres of land;

(ii) 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 or more acre of land;

(iii) Land disturbing activity of less than one (1) acre of land, as provided below, or if in the discretion of the City Manager or the City Manager’s designee such activity poses a unique threat to water, or public health or safety. Projects or developments of less than one (1) acre of total land disturbance may also be required to obtain authorization under this permit if:

(a) The City Manager or the City Manager’s designee 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 violation.

(b) The City Manager or the City Manager’s designee has determined that a stormwater discharge is, or is likely to be a significant contributor of pollutants to waters of the state.

(c) Changes in state or federal rules require sites of less than one (1) acre that are not part of a larger common plan of development or sale to obtain a stormwater permit.

(d) Any new development or redevelopment, regardless of size, that is defined by the City Manager or the City Manager’s designee to be a hot spot land use.

(iv) The creation and use of borrow pits where material is excavated and relocated offsite, and fill sites where materials or earth is deposited by mechanized methods resulting in an increase elevation or grade.

(v) Land disturbance for single or duplex residential lots of any size are required to obtain a land disturbance permit. As determined by the City Manager or the City Manager’s designee, lots that have karst features, adjoining lakes or streams, slopes exceeding fifteen percent (15%), floodplains or streams to cross are required to submit an erosion control
and stormwater management plan. Depending on site specific conditions the requirement that the plan be developed by a qualified licensed professional engineer or architect may be waived by the City Manager or the City Manager's designee. Minimal plan requirements shall include pre- and post-stormwater runoff directions, construction access, erosion/sediment control measures, roof downspout direction and termination, swales and temporary and/or permanent soil stabilization.

(vi) Land disturbance activities in a City Floodway Zoning Districts require a permit and shall provide evidence of obtaining appropriate licenses/permits that may be required by federal or state laws and regulations, or written waivers from such permits and licenses prior to the issuance of a land disturbance permit by the City Manager or the City Manager's designee.

(vii) If the City Manager or the City Manager's designee determines that construction activity is ongoing, but is not permitted, the City Manager or the City Manager's designee must notify TDEC of this situation by supplying the following information to the Knoxville Environmental Field Office:

(a) Construction project or industrial facility location.

(b) Name of the operator or owner.

(c) Estimated construction project or size or type industrial activity (including the Standard Industrial Classification (SIC) code, if known).

(d) Records of communications with the owner or operator.

(2) Existing Areas with Soil Erosion Problems. Upon written notification from the City Manager or the City Manager's designee, the owner of any parcel of land which exhibits unstable or eroding soil conditions and impacts downstream properties or any stream shall correct the problem within a sixty (60) calendar day period. Upon written request to the City Manager or the City Manager's designee, the period for construction may be extended upon request if seasonal conditions warrant and temporary control measures are installed. Slopes which are found to be eroding excessively shall be provided stabilizing measures until the problem is corrected. Minimum corrective measures may include stabilizing slopes and revegetating all exposed soil surfaces. Before commencing corrective measures, the owner shall consult with the City Manager or the City Manager's designee to determine an acceptable method of correction. A plan for soil erosion control shall be submitted to the City Manager or the City Manager's designee for final review and approval prior to initiation of corrective measures.

(3) 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.

(4) 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) Any installation, maintenance or repair of any underground public utility provided that all erosion control and stormwater management requirements of this ordinance are met.
(c) Existing nursery and agricultural operations conducted as a permitted main or accessory use.

(d) Any logging or agricultural activity that is consistent with an approved farm conservation plan or a timber management plan prepared or approved by the appropriate federal or state agency.

(e) The owner or developer whose land disturbing activity has been exempted from requirements for registration shall nevertheless be responsible for otherwise conducting such activity in accordance with the provisions of this ordinance and other applicable laws including responsibility for controlling erosions and sedimentation.

(f) Any construction of foundation drains, french drains, extension of roof drains and minor building additions if not otherwise required in this section and unless the possibility of erosion, stream siltation or impact to downstream properties is such to necessitate a permit as determined by the City Manager or the City Manager's designee.

(g) Any home gardens, home landscaping, or land preparation unless the possibility of erosion or stream siltation is such to necessitate a permit as determined by the City Manager or the City Manager's designee.

(5) Limitations. The City Manager or the City Manager's designee shall not grant land disturbance coverage for discharges into waters that are designated by the Water Quality Control Board as "Outstanding National Resource Waters" (ONRW). An individual permit is required for land disturbance activities and is available from TDEC.

(6) Application for a Land Disturbance Permit. Each application shall include the following:

(a) Name of applicant;

(b) Business or residence address of applicant;

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

(d) Address and legal description of subject property including the tax reference number and parcel number of the subject property;

(e) Name, address and telephone number of the contractor and any subcontractor(s) who shall perform the land disturbing activity and who shall implement the erosion and sediment control plan;

(f) 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 of the land disturbing activity;

(g) Where the property includes a sinkhole, the applicant shall obtain appropriate permits from the TDEC;

(h) The applicant shall obtain from any other state or federal agency any other appropriate environmental permits that pertain to the property. If Aquatic Resource Alteration Permits (ARAP) are required for a site in areas proposed for active construction, the Notice of Coverage (NOC) will not be issued until ARAP
application(s) are submitted and deemed by TDEC to be complete. The treatment and disposal of wastewater (including, but not limited to sanitary wastewater) generated during and after the construction must also be addressed. The issuance of the Notice of Coverage (NOC) may be delayed until adequate wastewater treatment and accompanying permits are issued. The inclusion of any such permits in the application shall not prevent the City from imposing additional development requirements and regulations of the City on the development of property covered by those permits; however, the inclusion of those permits in the application shall not prevent the City Manager or the City Manager's designee from imposing additional development requirements and conditions, commensurate with this ordinance, on the development of property covered by those permits; and

(i) Each application shall be accompanied by:

(i) A commercial or residential land disturbance permit application.

(ii) A sediment and erosion control plan that meets the criteria set forth by this ordinance and/or the City Manager or the City Manager's designee. Single family or duplex residential land disturbance of less than one acre is exempt from submission of the sediment and erosion control plan unless otherwise required in this ordinance.

(iii) A stormwater management plan approved by the City Manager or the City Manager's designee.

(iv) Each application for a land disturbance permit shall be accompanied by payment of land disturbance permit and other stormwater management fees, which shall be set by the City Manager or the City Manager's designee as provided for under City Code §1-203. No permit or amendment to a permit shall be valid until such fees have been paid.

(7) Review and Approval of Application.

(a) The City Manager or the City Manager's designee, within a reasonable amount of time after receipt, will review each application for a land disturbance permit to determine its conformance with the provisions of this ordinance. After the review of an application, the City Manager or the City Manager's designee shall provide one of the following responses:

(i) Approval of the permit application;

(ii) Conditional 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

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

(b) If the City Manager or the City Manager's designee has granted conditional approval of the permit, the applicant shall submit a revised plan that conforms to the conditions established by the City Manager or the City Manager's designee. The applicant may be allowed to proceed with his land disturbing activity so long as it conforms to conditions established by the City Manager or the City Manager's designee.
(c) No development plans will be released until the land disturbance permit has been approved.

(d) Disclaimer of liability. Neither the submission of a plan under the provisions herein, nor compliance with the provisions of these regulations shall relieve any person from responsibility for damages to any person or property otherwise imposed by law, nor impose any liability upon the City of Oak Ridge or its representatives for damages to any person or property.

(8) Permit Duration. Every land disturbance permit may expire and become null and void if in the judgment of the City Manager or the City Manager's designee substantial work authorized by such permit has not commenced within one-hundred eighty (180) calendar days of issuance, or has not been completed within an amount of time deemed reasonable by the City Manager or the City Manager's designee.

(9) Notice of Construction. The applicant must notify the City Manager or the City Manager's designee at least three (3) working days in advance of the commencement of construction.

(10) Performance Bonds.

(a) The City Manager or the City Manager's designee may require the submittal of a performance security or performance bond, if greater than 2.5 acres of land disturbance, prior to issuance of a permit in order to ensure that the stormwater practices are installed and maintained by the permit holder as required by the approved stormwater management plan. The bond provider shall be responsible to keep the bond in effect until such time the bond is released by the City Manager or the City Manager's designee. In the event the bond provider allows the bond to expire, the bond provider shall be responsible for the cost of completion of the work required by the permit and be responsible for any damages resulting from non-completion of the work. The amount of the installation performance security or performance bond shall be the total estimated construction cost for the structural BMPs and associated maintenance cost for the duration of the project, approved under the permit plus any reasonably foreseeable additional related costs, e.g., for damages or enforcement [or plus a certain percentage of the total estimated costs]. The performance security shall contain forfeiture provisions for failure to complete work specified in the stormwater management plan. The applicant shall provide an itemized construction cost estimate complete with unit prices which shall be subject to acceptance, amendment or rejection by the City Manager or the City Manager's designee. Alternately, the City Manager or the City Manager's designee shall have the right to require that a professional engineer prepare the cost or to calculate the cost estimates.

(b) The performance security or performance bond shall be released in full only upon approval of the City Manager or the City Manager's designee. Submission of as-built plans and written certification by a registered professional engineer licensed to practice in Tennessee that the structural BMP has been installed in accordance with the approved plan and other applicable provisions of this ordinance may be required at the discretion of the City Manager or the City Manager's designee. The City Manager or the City Manager's designee may make a final inspection of the structural BMP to ensure that it is in compliance with the approved plan and the provisions of this ordinance. Provisions for a partial pro-rata release of the performance security or performance bond based on the completion of various development stages may be made at the discretion of the City Manager or the City Manager's designee. It shall be the responsibility
of the applicant to secure and renew the bond as necessary. Failure to obtain a timely renewal of bond shall result in revocation of the permit and/or the issuance of a stop work order.

(11) Transfer of Ownership.

(a) Some construction projects are subdivided, such as residential or commercial subdivisions and/or developments or industrial parks. Subdivided lots are sometimes sold to new owners prior to completion of construction. The site wide developer/owner must describe erosion control and sediment prevention measures implemented at those lots. Once the property is sold, the new operator must obtain coverage under this permit.

(b) If the transfer of ownership is due to foreclosure or a permittee filing for bankruptcy proceedings, the new owner (including but not limited to a lending institution) must obtain permit coverage if the property is inactive, but is not stabilized sufficiently. If the property is sufficiently stabilized permit coverage may not be necessary, unless and until construction activity at the site resumes.

(12) Inspections.

(a) The permit holder shall perform inspections of erosion prevention and sediment control practices on all construction sites as indicated by the current, "NPDES Permit for Discharges Associated with Construction Activities" twice weekly and at least seventy-two (72) hours apart (3.5.8.2). This standard is the same for "priority construction sites." Based on the results of the inspections, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible. Inspections should be documented. Quality assurance of erosion prevention and sediment controls shall be done by performing site assessment at a construction site. The site assessment shall be conducted at each outfall involving drainage totaling ten (10) acres or more (of disturbed and undisturbed acreage combined) or five (5) or more acres if draining to impaired or exceptional quality waters, within 1 month of construction commencing. The site assessment shall be performed by individuals with one or more of the following qualifications:

(i) A licensed professional engineer or landscape architect;

(ii) A Certified Professional in Erosion and Sediment Control (CPESC); or

(iii) A person that has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

As a minimum, a site assessment should be performed to verify the installation, functionality and performance of the erosion prevention and sediment control measures described in the SWPPP. The site assessment findings shall be documented and the documentation kept with the SWPPP on site. The site assessment should be performed with the site inspector, and should include a review and update (if applicable) of the SWPPP. Modifications of plans and specifications for any building or structure, including the design of sediment basin or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be performed by a licensed engineer or landscape architect and stamped and certified in accordance with state law. The site assessment can take the place of one of the twice weekly inspections.
The City Manager or the City Manager's designee shall perform inspections on priority construction sites, and other construction sites as warranted by site location and complaints. If the City Manager or the City Manager's designee finds that the permit holder has failed to properly install, maintain, or use proper structural and/or vegetative erosion and sediment control practices as specified in the erosion and sediment control plan and the post construction design and maintenance plan, the permit holder may be subject to a notice of violation order or additional penalties as set forth in this chapter.

The City Manager or the City Manager's designee may require an inspection by a registered Engineer licensed in the State of Tennessee, if deemed necessary, for any erosion and sediment control measure or post construction stormwater management facility to ensure they meet the design standards as described in the construction site and post construction site plans.

If the City Manager or the City Manager's designee determines that significant erosion and/or sedimentation is occurring on a graded site despite approved structural and/or vegetative erosion and sediment control practices, the City Manager or the City Manager's designee shall require the permit holder to take additional corrective action to protect the adversely affected area. The additional corrective action required shall be part of an amended erosion and sediment control plan.

Where sites or portions of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice) or due to extreme drought, such inspection only has to be conducted one (1) per month until thawing or precipitation results in runoff or construction activity resumes. Inspection requirements do not apply to definable areas that have been finally stabilized.

Inspections and maintenance for post construction stormwater facilities shall be performed as required in Section 14-506 for permanent construction design and maintenance.

Section 14-504. Waivers.

(1) General. No waivers will be granted any construction or site work project. All construction and site work shall provide for stormwater management as required by this ordinance. However, alternatives to the 2010 NPDES General Permit for Discharges from MS4s primary requirement for onsite 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 seventy-two (72) hours of no measurable precipitation. This first inch of rainfall must be one-hundred percent (100%) managed with no discharge to surface waters.

(b) It can be demonstrated that the proposed development is not likely to impair attainment of the objectives of this chapter. Alternative minimum requirements for onsite management of stormwater discharges have been established in a stormwater management plan that has been approved by the City Manager or the City Manager's designee.
(2) Downstream Damage, Etc. Prohibited. In order to receive consideration, the applicant must demonstrate to the satisfaction of the City Manager or the City Manager's designee that the proposed alternative 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 streambank or streambed erosion or siltation; and
(d) Increased threat of flood damage to public health, life or property.

(3) Grading permit not to be issued where alternatives requested. No grading permit shall be issued where an alternative has been requested until the alternative is approved. If no alternative is approved, the plans must be resubmitted with a stormwater management plan that meets the primary requirement for onsite stormwater management.

Section 14-505. Stormwater system design: Construction and Permanent stormwater management.

(1) MS4 Stormwater Design or BMP Manuals.

(a) Adoption. The City adopts as its MS4 stormwater design and best management practices (BMP) manuals for stormwater management, construction and permanent, the following publications, which are incorporated by reference in this ordinance as if fully set out herein:


(iii) This manual includes a list of acceptable BMPs including the specific design performance criteria and operation and maintenance requirements for each stormwater practice. These include City approved BMPs for permanent stormwater management including green infrastructure BMPs.

(b) The City manual(s) may be updated and expanded from time to time, at the discretion of the governing body of the City, upon the recommendation of the City Manager or the City Manager's designee, based on improvements in engineering, science, monitoring and local maintenance experience, or changes in federal or state law or regulation.

(c) Stormwater facilities that are designed, constructed and maintained in accordance with these BMP criteria will be presumed to meet the minimum water quality performance standards.

(2) Submittal of a Copy of the NOC, SWPPP and Notice of Termination to the City Manager or the City Manager’s Designee. Permittees who discharge stormwater through an NPDES-permitted municipal separate storm sewer system (MS4) who are not exempted in section 1.4.5 (Permit Coverage through Qualifying Local Program) of the Construction General Permit (CGP) must provide proof of coverage under the Construction General Permit (CGP); submit a copy of the Notice of Coverage (NOC); submit a copy of the Stormwater Pollution Prevention Plan (SWPPP); and at project completion, a copy of the
signed notice of termination to the City Manager or the City Manager's designee. Permitting status of all permittees covered (or previously covered) under this general permit as well as the most current list of all MS4 permits is available at the TDEC's DataViewer web site. Copies of additional applicable local, state or federal permits (i.e.: ARAP, etc.) must also be provided upon request. If requested, these permits must be provided before the issuance of any land disturbance permit or the equivalent.

(3) Stormwater Pollution Prevention Plan (SWPPP) for Construction Stormwater Management. The applicant must prepare a stormwater pollution prevention plan for all construction activities that complies with Subsection (4) below. The purpose of this plan is to identify construction/contractor activities that could cause pollutants in the stormwater, and to describe measures or practices to control these pollutants during project construction.

(4) Stormwater Pollution Prevention Plan (SWPPP) Requirements. The erosion prevention and sediment control plan component of 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. If necessary, the plan shall be phased so that changes to the site during construction that alter drainage patterns or characteristics will be addressed by an appropriate phase of the plan. The plan shall be sealed by a registered professional engineer or landscape architect licensed in the State of Tennessee. The plan shall also conform to the requirements found in the most current TDEC Erosion Prevention and Sediment Control Handbook, 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 with contour intervals of five (5) feet or less showing present conditions and proposed contours resulting from land disturbing activity.

(c) The plan shall be at a minimal scale of one (1) inch equals one-hundred (100) feet.

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

(e) A general description of existing land cover. Individual trees and shrubs do not need to be identified.

(f) Stands of existing trees as they are to be preserved upon project completion, specifying their general location on the property. 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 the 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, where they exist. Complete landscape plans may be submitted separately. The plan must include the sequence of implementation for tree protection measures.

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

(h) Approximate flows of existing stormwater leaving any portion of the site.
(i) A general description of existing soil types and characteristics and any anticipated soil erosion and sedimentation problems resulting from existing characteristics.

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

(k) Existing and proposed drainage network including land depressions and sinkholes.

(l) Proposed drain tile or waterway sizes. All swales, roads, etc., shall be designed to prevent flood damage to nearby buildings and other structures by being overtopped during a 24-hour duration storm of a 100-year frequency or to structurally carry the equivalent storm event.

(m) Approximate flows leaving site after construction and incorporating water run-off 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., are going to be used to prevent the scouring of waterways and drainage areas off-site, etc.

(n) 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/detention facilities or any other structural BMPs.

(o) 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.

(p) Specific details for: (1) the construction of stabilized construction entrance/exits, concrete washouts, and sediment basins for controlling erosion; road access points; (2) 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 work day to the satisfaction of the City. Failure to remove the sediment, soil or debris shall be deemed a violation of this ordinance.

(q) Proposed structures: location and identification of any proposed additional buildings, structures or development on the site.

(r) A description of onsite measures to be taken to recharge surface water into the ground water system through runoff reduction practices.

(s) 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.

(t) The plan shall include detailed drawings of all structural and non-structural controls and stabilization measures which shall be designed to minimize erosion and maximize sediment removal resulting in storm discharge associated with the two (2) year, twenty-four (24) hour design storm event as a minimum, from total rainfall in the designed period. These specific details for constructing stabilized construction entrance/exits, concrete washouts, sediment basins for controlling erosion, and road access points should be designed to eliminate or keep soils, sediment, and/or debris to a minimum.

(u) When land disturbance activities are proposed along 303(d) listed streams impaired for siltation or a known high quality waterway, the erosion and sediment control plan shall be designed at a minimum to control the discharge of a five (5) year (24) twenty-four hour storm event along with other additional minimum standards outlined in the current Tennessee Construction General Permit.

(5) Development near Karst Features. Development that has or is near karst features shall include in the land disturbance permit plan or comply with the following:

(a) Pre-development natural drainage courses shall be maintained as much as feasible.

(b) No structures shall be built with the contour line within the post-development contour line calculated for each sinkhole present on the property for a 24-hour rain event duration storm of the 100-year frequency as if the sinkhole was completely filled.

(c) Removal of overburden in areas with karst features shall be minimized.

(d) Existing healthy mature trees whose drip line canopy covers a karst feature should be protected during grading whenever possible. Removal of trees should be replaced in kind by trees in the same locale and maintained as required to ensure healthy growth.

(e) Changes to terrain, including the remediation of a sinkhole shall not move this 100-year contour line onto adjacent property nor increase stormwater runoff onto adjacent properties without written permission from the relevant adjacent property owner(s).

(f) All exposed karst features exposed by cutting of overburden must be examined by a qualified licensed professional for appropriate mitigation procedures and the Erosion and Control and Stormwater Management Plan shall be amended accordingly.

(6) Development within City Floodway Zoning Districts. Land may be filled within the 100-year flood boundary limits provided such fill extends twenty-five (25) feet beyond all limits of any structures erected. If such fill areas occurs, then the 100-year flood elevation contour shall be established on finished contours. No fill shall be placed in established buffer area as define in by this ordinance.

(7) General Design Performance Criteria for Permanent Stormwater Management. The following performance criteria shall be addressed for permanent stormwater management at all development sites:
(a) Site design standards for all new and redevelopment require, in combination or alone, management measures that are designed, built and maintained to infiltrate, evapotranspire, harvest and/or use, at a minimum, the first inch of every rainfall event preceded by seventy-two (72) hours of no measurable precipitation. This first inch of rainfall must be one-hundred percent (100%) managed with no discharge to surface waters.

(b) Limitations to the application of runoff reduction requirements include, but are not limited to:

(i) Where a potential for introducing pollutants into the groundwater exists, unless pretreatment is provided;

(ii) Where pre-existing soil contamination is present in areas subject to contact with infiltrated runoff;

(iii) Presence of sinkholes or other karst features.

(c) Pre-development infiltrative capacity of soils at the site must be taken into account in selection of runoff reduction management measures.

(d) Incentive Standards for re-developed sites: a ten percent (10%) reduction in the volume of rainfall to be managed for any of the following types of development. Such credits are additive such that a maximum reduction of fifty percent (50%) of the standard in the paragraph above is possible for a project that meets all five (5) criteria:

(i) Redevelopment;

(ii) Brownfield redevelopment;

(iii) High density (>7 units per acre);

(iv) Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre); and

(v) Mixed use and Transit Oriented Development (within ½ mile of transit).

(e) For projects that cannot meet one-hundred percent (100%) of the runoff reduction requirement unless subject to the incentive standards, the remainder of the stipulated amount of rainfall must be treated prior to discharge 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.

(f) For projects that cannot meet one-hundred percent (100%) of the runoff reduction requirements, the City Manager or the City Manager's designee may allow runoff reduction measures to be implemented at another location within the same USGS 12-digit hydrologic unit code (HUC) as the original project. Off-site mitigation must be a minimum of 1.5 times the amount of water not managed on site. The off-site mitigation location (or alternative location outside the 12-digit HUC) and runoff reduction measures must be approved by the City Manager or the City Manager's designee. The City Manager or the City Manager's designee shall identify priority areas within the watershed in which mitigation projects can be completed. The City Manager or the City Manager's designee must create an
inventory of appropriate mitigation projects, and develop appropriate institutional standards and management systems to value, evaluate and track transactions. Mitigation can be used for retrofit or redevelopment projects, but should be avoided in areas of new development.

(g) To protect stream channels from degradation, specific channel protection criteria shall be provided as prescribed in the MS4 BMP manual.

(h) 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.

(i) Stormwater discharges from hot spots may require the application of specific structural BMPs and pollution prevention practices. In addition, stormwater from a hot spot land use may not be infiltrated.

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

(k) The calculations for determining peak flows shall be used for sizing all stormwater facilities.

(8) Minimum Volume Control Requirements. In accordance with Section 14-501(1)(c)(iii) the City Manager or the City Manager’s designee may establish standards to regulate the quantity of stormwater discharged, therefore:

(a) Stormwater designs shall meet the multi-stage storm frequency storage requirements to control the peak flow rates of stormwater discharge associated with the one (1) year, two (2) year, five (5) year, ten (10) year, and twenty-five (25) year Type II twenty-four (24) hour design storm frequency in accordance with rainfall standards used for most construction projects in the United States (U.S.) as established by the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS). Post construction stormwater generated runoff must be reduced to pre-construction levels. These practices should seek to utilize pervious areas for storm water treatment and to infiltrate stormwater runoff from driveways, sidewalks, rooftops, parking lots, and landscaped areas to the maximum extent practical to provide treatment for both water quality and quantity.

(b) Whenever detention or retention ponds are employed as part of a storm water management system, then such ponds and related stormwater management equipment and facilities shall be maintained in perpetuity as requires by this ordinance.

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

(d) All stormwater design assumptions, calculation and analysis results shall be summarized in an executive summary attached to the site plan submission.

(9) Permanent Stormwater Management Plan Requirements. The stormwater management plan shall include sufficient information to allow the City Manager or the City Manager’s
designee to evaluate the 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: Topographic base map of the site which extends a minimum of one-hundred (100) feet beyond the limits of the proposed development and indicates:

(i) Existing surface water drainage including streams, ponds, culverts, ditches, sink holes, wetlands; and the type, size, elevation, etc., of nearest upstream and downstream drainage structures;

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

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

(iv) 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.

(b) Proposed structural and non-structural BMPs;

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

(d) Calculations: Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in this ordinance. These calculations must show that the proposed stormwater management measures are capable of controlling runoff from the site in compliance with this chapter and the guidelines of this manual. Such calculations shall include:

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

(ii) Time of concentration;

(iii) Soil curve numbers or runoff coefficients including assumed soil moisture conditions;

(iv) Peak runoff rates and total runoff volumes for each watershed area;

(v) Infiltration rates, where applicable;

(vi) Culvert, stormwater sewer, ditch and/or other stormwater conveyance capacities;

(vii) Flow velocities;

(viii) Data on the increase in rate and volume of runoff for the design storms; and
(ix) Documentation of sources for all computation methods and field test results.

(e) Soils information: If a stormwater management control measure depends on the hydrologic properties of soils (e.g., infiltration basins), 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.

(10) Maintenance and Repair Plan. The design and planning of all permanent stormwater management facilities shall include detailed maintenance and repair 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.

(11) Buffers and Buffer Zones. ”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 re-establishment of native vegetation bordering streams, ponds, wetlands, springs, reservoirs or lakes, which exists or is established to protect those water bodies. 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.

(12) Buffer Zone Requirements.

(a) "Construction" 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. A 30-foot natural riparian buffer zone adjacent to all streams at the construction site shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality buffer zone is required to protect waters of the State located within or immediately adjacent to the boundaries of the project, as identified using methodology from Standard Operating Procedures for Hydrologic Determinations (see rules to implement a certification program for Qualified Hydrologic Professionals, TN Rules Chapter 0400-40-17). Buffer zones are not primary sediment control measures and should not be relied on as such. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, for improvement of its effectiveness of protection of the waters of the State. The buffer zone requirement only applies to new construction sites. The riparian buffer zone should be preserved between the top of stream bank and the disturbed construction area. The thirty (30) feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than fifteen (15) feet at any measured location.

(b) Buffer zone requirements for discharges into impaired or exceptional waters: A sixty (60) foot natural riparian buffer zone adjacent to the receiving stream designated as impaired or exceptional waters shall be preserved, to the maximum extent practicable, during construction activities at the site. The water quality buffer zone is required to protect waters of the State (e.g. perennial and
intermittent streams, rivers, lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified on a 7.5-minute USGS quadrangle map, or as determined by the director. Buffer zones are not sediment control measures and should not be relied upon as primary sediment control measures. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, for improvement of its effectiveness of protection of the waters of the State. The buffer zone requirement only applies to new construction sites. The riparian buffer zone should be established between the top of stream bank and the disturbed construction area. The sixty (60) feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than thirty (30) feet at any measured location.

(c) "Permanent" new development and significant redevelopment sites are required to preserve water quality buffers along waters within the City. Buffers shall be clearly marked on site development plans, grading permit applications, and/or concept plans. Buffer width depends on the size of a drainage area. Streams or other waters with drainage areas less than 1 square mile will require buffer widths of thirty (30) feet minimum. Streams or other waters with drainage areas greater than one (1) square mile will require buffer widths of sixty (60) feet minimum. The sixty (60) feet criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than thirty (30) feet at any measured location. The City Manager or the City Manager's designee shall 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 buffer zone. If water quality buffer widths as defined above cannot be fully accomplished on-site, the City Manager or the City Manager's designee shall determine 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.

Section 14-506. Permanent stormwater management: operation, maintenance, 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 inspection by the City is required before any performance security or performance bond will be released. The City shall have the discretion to adopt provisions for a partial pro-rata release of the performance security or performance bond on the completion of various stages of development. In addition, occupation permits shall not be granted until corrections to all BMPs have been made and accepted by the City.

(2) Landscaping 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 stabilized. Stabilization measures shall be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site (or a phase of the project) must be completed not later than fifteen (15) days after the construction activity
in that portion of the site has temporarily or permanently ceased. In the following situations, temporary stabilization measures are not required:

(i) Where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy ground conditions, stabilization measures shall be initiated as soon as practicable; or

(ii) Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within fifteen (15) days.

(b) Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable. Unpacked gravel containing fines (silt and clay sized particles) or crusher runs will not be considered a non-eroding surface.

(c) The following criteria shall apply to revegetation efforts:

(i) 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.

(ii) 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.

(iii) Any area of revegetation must exhibit survival of a minimum of seventy-five percent (75%) of the cover crop throughout the year immediately following revegetation. Revegetation must be repeated in successive years until the minimum seventy-five percent (75%) survival for one (1) year is achieved.

(iv) 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 explain not only how the site will be stabilized after construction, but 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 Management Facilities. Periodic inspections of facilities shall be performed, documented, and reported in accordance with this chapter, as detailed in Section 14-506.

(4) Records of Installation and Maintenance Activities. Parties responsible for the operation and maintenance of a stormwater management facility shall make records 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.

(5) 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 chapter, the City, after reasonable 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 shall notify in writing the party responsible for maintenance of the stormwater management facility. Upon receipt of that notice, the responsible person shall have thirty (30) 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 may take necessary corrective action. The cost of any action by the City under this section shall be charged to the responsible party.

Section 14-507. Existing locations and ongoing developments.

(1) On-Site Stormwater Management Facilities Maintenance Agreement.

(a) Where the stormwater facility is located on property that is subject to a development agreement, and the development agreement provides for a permanent stormwater maintenance agreement that runs with the land, the owners of property must execute an inspection and maintenance agreement that shall operate as a deed restriction binding on the current property owners and all subsequent property owners and their lessees and assigns, including but not limited to, homeowner associations or other groups or entities.

(b) The maintenance agreement shall:

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

(ii) Provide for a periodic inspection by the property owners in accordance with the requirements of below for the purpose of documenting maintenance and repair needs and to ensure compliance with the requirements of this ordinance. The property owners 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 signed written report of the inspection to the City Manager or the City Manager’s designee. It shall also grant permission to the City to enter the property at reasonable times and to inspect the stormwater facility to ensure that it is being properly maintained.

(iii) Provide that the minimum maintenance and repair needs include, but are not limited to: the removal of silt, litter and other debris, the cutting of grass, cutting and vegetation removal, and the replacement of landscape vegetation, in detention and retention basins, and inlets and drainage pipes and any other stormwater facilities. It shall also provide that the property owners shall be responsible for additional maintenance and repair needs consistent with the needs and standards outlined in the MS4 BMP manual.

(iv) Provide that maintenance needs must be addressed in a timely manner, on a schedule to be determined by the City Manager or the City Manager’s designee.

(v) 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.
(2) **Existing Problem Locations – No Maintenance Agreement.**

(a) The City Manager or the City Manager's designee shall, in writing, notify the owners of existing locations and developments of specific drainage, erosion or sediment problems affecting or caused by such locations and developments, and the specific actions required to correct those problems. The notice shall also specify a reasonable time for compliance. Discharges from existing BMPs that have not been maintained and/or inspected in accordance with this ordinance shall be regarded as illicit.

(b) Inspection of existing facilities. The City may, to the extent authorized by state and federal law, enter and inspect private property for the purpose of determining if there are illicit non-stormwater discharges, and to establish inspection programs to verify that all stormwater management facilities are functioning within design limits. These inspection programs may be established on any reasonable basis, including but not limited to: (1) routine inspections; (2) random inspections; (3) inspections based upon complaints or other notice of possible violations; (4) inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; (5) 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 City’s NPDES stormwater permit; and (6) joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: (1) reviewing maintenance and repair records; (2) sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and (3) evaluating the condition of drainage control facilities and other BMPs.

(3) **Owner/Operator Inspections - Generally.** The owners and/or the operators of stormwater management practices shall:

(a) Perform routine inspections to ensure that the BMPs are properly functioning. These inspections shall be conducted on an annual basis, at a minimum. These inspections shall be conducted by a person familiar with control measures implemented at a site. Owners or operators shall maintain documentation of these inspections. The City Manager or the City Manager's designee may require submittal of this documentation.

(b) Perform comprehensive inspection of all stormwater management facilities and practices. These inspections shall be conducted once every five (5) years, at a minimum. Such inspections must be conducted by either a professional engineer or landscape architect, licensed in the State of Tennessee. Complete inspection reports for these five (5) year inspections shall include:

(i) Facility type;

(ii) Inspection date;

(iii) Latitude and longitude, and nearest street address;

(iv) BMP owner information (e.g. name, address, phone number, fax, and email);

(v) A description of BMP condition including: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety
benches; spillways, weirs, and other control structures; and any sediment and debris accumulation;

(vi) Photographic documentation of BMPs; and

(vii) Specific maintenance items or violations that need to be corrected by the BMP owner along with deadlines and re-inspection dates.

(c) Owners or operators shall maintain documentation of these inspections. The City Manager or the City Manager’s designee may require submittal of this documentation.

(4) Requirements for All Existing Locations and Ongoing Developments. The following requirements shall apply to all locations and development at which land disturbing activities have occurred previous to the enactment of this ordinance:

(a) Denuded areas must be vegetated or covered under the standards and guidelines specified in Section 14-506 and on a schedule acceptable to the City Manager or the City Manager’s designee.

(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, at the discretion of the City Manager or the City Manager’s designee, be controlled to the maximum extent practicable to prevent its pollution. Such control measures may include, but are not limited to, the following:

(i) Ponds

(1) Detention pond

(2) Extended detention pond

(3) Wet pond

(4) Alternative storage measures

(ii) Constructed wetlands

(iii) Infiltration systems

(1) Infiltration/percolation trench

(2) Infiltration basin

(3) Drainage (recharge) well

(4) Porous pavement

(iv) Filtering systems
Section 14-508. **Illicit discharges.**

1. **Scope.** This section shall apply to all water generated on developed or undeveloped land entering the City'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 14-507 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:**
      
     (i) Water line flushing or other potable water sources;
     (ii) Landscape irrigation or lawn watering with potable water;
     (iii) Diverted stream flows;
     (iv) Rising ground water;
     (v) Groundwater infiltration to storm drains;
     (vi) Pumped groundwater;
     (vii) Foundation or footing drains;
     (viii) Crawl space pumps;
     (ix) Air conditioning condensation;
     (x) Springs;
     (xi) Non-commercial washing of vehicles;
(xii) Natural riparian habitat or wetland flows;
(xiii) Swimming pools (if dechlorinated - typically less than one PPM chlorine);
(xiv) Firefighting activities; or
(xv) 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 has so specified in writing.

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

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

(ii) 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;

(iii) Water used to control dust in accordance with CGP Section 3.5.5;

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

(v) Routine external building washdown that does not use detergents or other chemicals;

(vi) Uncontaminated groundwater or spring water; and

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

(3) **Prohibition of Illicit Connections.** The construction, use, maintenance or continued existence of illicit connections to the municipal separate storm sewer system is prohibited. 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.

(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 in compliance with the provisions of this section. Discharges from existing BMPs that have not been maintained and/or inspected in accordance with this ordinance shall be regarded as illicit.

(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 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 in person or by telephone, fax, or email, no later than the next business day. Notifications in person or by telephone shall be confirmed by written notice addressed and mailed to the City 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 three (3) years.

(6) No IllegaI 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.

Section 14-509. Enforcement.

(1) Enforcement Authority. The City shall have the authority to issue notices of violation and citations, and to impose the civil 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 Manager or the City Manager's designee has the authority to assess monetary penalties, which may include civil and 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 Manager or the City Manager's designee's own approval process affecting the facility's ability to discharge to the MS4 can be used to abate the violation.

(f) Additional Measures – The City Manager or the City Manager's designee may also use other escalated measures provided under local legal authorities. The City Manager or the City Manager's designee 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 City 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 City Manager or the City Manager's designee may serve upon such person written notice of the violation. Within ten (10) days of this notice, an explanation of the violation and a plan for the satisfactory correction and prevention thereof, to include specific required actions, shall be submitted to the City Manager or the City Manager's designee. Submission of this plan 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 City 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 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 City 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 City finds that any person has violated or continues to violate this chapter or any permit or order issued hereunder, the City Manager or the City Manager’s designee may issue a stop work order or an order to cease and desist all such violations and direct those persons in noncompliance to:

(i) Comply forthwith; or

(ii) 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 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 Manager or the City
Manager’s designee may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.

(h) Conflicting standards—Whenever there is a conflict between any standard contained in this chapter and in the BMP manual adopted by the City under this ordinance, the strictest standard shall prevail.

Section 14-510. Penalties.

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

(2) 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 a civil penalty by the City 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 Civil Penalties. Under the authority provided in Tennessee Code Annotated §68-221-1106, the following factors may be considered by the City in assessing a civil penalty:

(a) The harm done to the public health or the environment;

(b) Whether the civil 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 City;

(f) The amount of penalty established by ordinance or resolution for specific categories of violations; and

(g) Any equities of the situation which outweigh the benefit of imposing any penalty or damage assessment.

(4) Recovery of Damages and Costs. In addition to the civil penalty in Subsection (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 chapter, or any other actual damages caused by the violation; and

(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 chapter.

(5) Referral to TDEC. Where the City has used progressive enforcement to achieve compliance with this ordinance, and in the judgment of the City has not been successful,
the City may refer the violation to TDEC. For the purposes of this provision, "progressive enforcement" shall mean two (2) follow-up inspections and two (2) warning letters. In addition, enforcement referrals to TDEC must include, at a minimum, the following information:

(a) Construction project or industrial facility location;
(b) Name of owner or operator;
(c) Estimated construction project or size or type of industrial activity (including the Standard Industrial Classification (SIC) code, if known); and
(d) Records of communications with the owner or operator regarding the violation, including at least two (2) follow-up inspections, two (2) warning letters or notices of violation, and any response from the owner or operator.

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

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

Section 14-511. Appeals from Decisions of City Manager or the City Manager's Designee.

(1) When May Appeal. Whenever the City Manager or the City Manager's designee shall reject or refuse to approve the mode or manner of construction proposed to be followed, or materials to be used, or when it is claimed that the provisions of this ordinance do not apply, or that an equally good or more desirable form of construction can be employed in any specific case, or when it is claimed that the true intent and meaning of this ordinance or any of the regulations thereunder have been misconstrued or wrongly interpreted, the owner of such property or his duly authorize agent, may appeal from the decision of the City Manager or the City Manager's designee to the Board of Zoning Appeals. Notice of appeal shall be in writing and filed within sixty (60) days after the decision is rendered by the City Manager or the City Manager's designee. A fee of two hundred dollars ($200) shall accompany such notice of appeal which shall be returned to the appellant if successful.

(2) Time for Appeal May be Limited. In case of a condition which, in the opinion of the City Manager or the City Manager's designee, is unsafe or dangerous, the City Manager or the City Manager's designee may, in his order, limit the time for such appeal to a shorter period.

(3) Appeal Form. Appeals under this section shall be on forms provided by the City Manager or the City Manager's designee.

(4) Timeframe. The Board of Zoning Appeals shall meet and conduct a hearing on any appeal within thirty (30) days unless the appellant requests or consents to additional time.

Section 14-512. Appeal of Damage Assessment or Civil Penalty

Pursuant to Tennessee Code Annotated §68-221-1106(d), any person incurring a damage assessment or a civil penalty as provided by this chapter (alleged violator) may appeal the damage assessment or civil penalty to the City's Board of Zoning Appeals.
(1) **Appeals to be in Writing.** The appeal shall be in writing and filed with the Community Development Department within thirty (30) days after the civil penalty and/or damage assessment is served in any manner authorized by law.

(2) **Appealing Decisions of Board of Zoning Appeals.** The alleged violator may appeal a decision of the Board of Zoning Appeals pursuant to the provisions of Tennessee Code Annotated, Title 27, Chapter 8.

(3) **Failure to Appeal to Board of Zoning Appeals.** If the alleged violator does not file an appeal within the timeframe set forth above in Subsection (1), the alleged violator shall be deemed to have consented to the damage assessment or civil penalty and it shall become final. The City may then apply to the appropriate chancery court for a judgment and seek execution of such judgment. The court shall treat the failure to appeal such damage assessment or civil penalty as a confession of judgment.

Section 2. This ordinance shall become effective ten (10) days after adoption on second reading, the welfare of the City of Oak Ridge requiring it.

APPROVED AS TO FORM AND LEGALITY:

Kenneth R. Krushenski, City Attorney

Warren L. Gooch, Mayor

Mary Beth Hickman, City Clerk

First Reading: 2/08/2016
Publication Date: 2/11/2016
Second Reading: 3/14/2016
Publication Date: 3/17/2016
Effective Date: 3/24/2016