

TITLE 14 - CHAPTER 4

STORMWATER MANAGEMENT

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14-401 General provisions

14-401.1 Purpose

It is the purpose of this chapter to:

1. Protect, maintain, and enhance the environment of the City of Columbia and the public health, safety and the general welfare of the citizens of the city, by controlling discharges of pollutants to the city’s Municipal Separate Storm Sewer System (MS4) 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;
2. Enable the city to comply with the National Pollution Discharge Elimination System (NPDES) permit and applicable regulations, 40 CFR 122.26 for stormwater discharges;
3. Allow the city to exercise the powers granted in Tennessee Code Annotated § 68-221-1105

14-401.2 Administering entity

The City of Columbia’s Department of Development Services shall administer the provisions of this Chapter.

14-401.3 Jurisdiction

The Stormwater Management Ordinance shall apply to all properties within the corporate limits of the City of Columbia, except agricultural land management activities subject to United States Department of Agriculture (USDA) regulations.

14-401.4 MS4 Stormwater Design and BMP manuals

1. The city adopts as its MS4 stormwater design and best management practices (BMP) manuals for stormwater management, the following publications, which are incorporated by reference in this ordinance as if fully set out herein:
 - a. For Construction Site Stormwater Runoff Pollutant Control, “TDEC - Erosion Prevention and Sediment Control Handbook”; most current edition,
 - b. For Post Construction Stormwater Runoff and , “Tennessee Permanent Stormwater Management and Design Guidance Manual”; most current edition,
 - c. A collection of approved BMP’s developed or collected by the City of Columbia that comply with the goals of the MS4 permit and/or the State of Tennessee Construction General Permit (CGP).
2. The city reserves the right to accept or reject BMP’s and engineering methods and calculations not explicitly detailed within the adopted BMP manuals.
3. 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 of Columbia Department of Development Services, based on improvements in engineering, science, monitoring and local maintenance experience, or changes in federal or state law or

regulation. 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.

14-402 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” (“BMP’s”) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMP’s also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
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.
5. “Buffer Zone” means a setback from the top of water body’s bank of undisturbed vegetation, including trees, shrubs and herbaceous vegetation; enhanced or restored vegetation; or the 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. For Buffer Zone requirements see Title 14 Chapter 5 of the Municipal Code.
6. “Channel” means a natural or artificial watercourse with a definite bed and banks that conducts flowing water continuously or periodically.
7. “Common plan of development or sale” is broadly defined as any announcement or documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot. A common plan of development or sale identifies a situation in which multiple

areas of disturbance are occurring on contiguous areas. This applies because the activities may take place at different times, on different schedules, by different operators.

8. “Design storm event” means a hypothetical storm event, of a given frequency interval and duration, used in the analysis and design of a stormwater facility. The estimated design rainfall amounts, for any return period interval in terms of either 24-hour depths or intensities for any duration, can be found by accessing the following NOAA National Weather Service Atlas 14 data for the Columbia, Tennessee station ID: 40-1957.
9. “Contaminant” means any physical, chemical, biological, or radiological substance or matter in water.
10. “Development.” Any man-made change to improved or unimproved real estate, including but not limited to, Buildings or other Structures, mining, dredging, Filling, Grading, paving, excavating, drilling operations, or permanent storage of materials (as defined as materials of like nature stored in whole or in part for more than six months).
11. “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.
12. “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.
13. “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.
14. “Erosion prevention and sediment control (EPSC) plan” 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.
15. “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. The following land uses and activities are deemed stormwater hot spots, but that term is not limited to only these land uses:
16. “Illicit connections” means illegal and/or unauthorized connections to the municipal separate storm sewer system whether or not such connections result in discharges into that system.
17. “Illicit discharge” means any discharge to the municipal separate storm sewer system that is not composed entirely of stormwater and not specifically exempted under §14-407(2).
18. “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).
19. “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 SWPPP’s;
 - 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.
 20. “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.
 21. “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.
 22. “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.
 23. “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.
 24. “National Pollutant Discharge Elimination System permit” or a “NPDES permit” means a permit issued pursuant to 33 U.S.C. 1342.
 25. “Off-site facility” means a structural BMP located outside the subject property boundary described in the permit application for land development activity.
 26. “On-site facility” means a structural BMP located within the subject property boundary described in the permit application for land development activity.
 27. “Operator” means any person associated with construction activities that has either design control over construction plans and specifications or day to day operational control over activities on site that are necessary to comply with the SWPPP.

28. "Peak flow" means the maximum instantaneous rate of flow of water at a particular point resulting from a storm event.
29. "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.
30. "Redevelopment." The alteration of developed land. Redevelopment is not intended to include such activities as exterior remodeling, which would not be expected to cause adverse stormwater quality impacts.
31. "Roadway Prism." means that portion of the right-of-way between the back of ditch (at the elevation of the adjoining roadway shoulder) or the back of sidewalk and including the roadway ditches, traveled way, shoulders and auxiliary lanes.
32. "Runoff" means that portion of the precipitation on a drainage area that is discharged from the area into the municipal separate storm sewer system.
33. "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.
34. "Sedimentation" means soil particles suspended in stormwater that can settle in stream beds.
35. "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.
36. "Stabilization" means providing adequate measures, vegetative and/or structural, that will prevent erosion from occurring.
37. "Stormwater" means stormwater runoff, snow melt runoff, surface runoff, street wash waters related to street cleaning or maintenance, infiltration and drainage.
38. "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.
39. "Stormwater management" means the programs to maintain quality and quantity of stormwater runoff to pre-development levels.
40. "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.
41. "Stormwater management plan" means the set of drawings and other documents that comprise all the information and specifications for the programs, drainage systems, structures, BMP's, concepts and techniques intended to maintain or restore quality and quantity of stormwater runoff to pre-development levels.
42. "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 (BMP's) 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 SWPPP's shall be prepared and updated in accordance with Section 3 of the General NPDES Permit for Discharges of Stormwater Associated with Construction Activities.

43. "Stormwater runoff" means flow on the surface of the ground, resulting from precipitation.
44. "Structural BMP's" 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. "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.
47. "Water Quality Buffer" see "Buffer".
48. "Watercourse" means a permanent or intermittent stream or other body of water, either natural or man-made, which gathers or carries surface water.
49. "Watershed" means all the land area that contributes runoff to a particular point along a waterway.
50. "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.
51. "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.
52. "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)).

14-403 Land Disturbance Permit

14-403.1 Requirements for Obtaining a Land Disturbance Permit

All development that meets one or more of the following criteria must obtain a Land Disturbance Permit;

1. Development that results in land disturbance of equal to or greater than one acre, or less than one acre if part of a larger plan of common development or sale;
2. Development that results in 10,000 square feet or more of additional impervious surface;
3. Development less than the requirements of §14-403.1.1 and §14-403.1.2 may also be required to obtain authorization under this ordinance if:
 - a. The City of Columbia Department of Development Services has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state or federal water quality standard;
 - b. The City of Columbia Department of Development Services has determined that the 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 ten thousand (10,000) square feet that are not part of a larger common plan of development or sale to obtain a permit from the authorizing MS4 authority; and
 - d. Any development, regardless of size, that is defined by the City of Columbia Department of Development Services to be a hotspot land use.
4. The City Engineer or Designee shall issue a Land Disturbance Permit for development that meets the guidelines and requirements of this ordinance. Application for a permit shall be accompanied by a fee as specified in *Engineering Fee Schedule*.
5. A pre-construction meeting with the City Engineer or Designee shall be held with the Primary Permittee or designee, Operator(s), and EPSC Professional(s) prior to the issuance of a Land Disturbance Permit.
6. Prior to commencement of land disturbing activities, the Operator(s) must request an inspection of the site with applicable EPSC practices in place, as designated by the pre-construction meeting. This inspection is not a substitute CGP initial site assessment requirements.
7. If coverage under the CGP is required, prior to the pre-construction meeting, proof of Notice of Coverage of the CGP must be provided to the city. Proof of Notice of Termination of the CGP must be also be provided before termination of the Land Disturbance Permit.

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.

14-403.2 Other Provisions and Requirements

1. Prior to commencement of land disturbing activities, the Operator(s) must request an inspection of the site with applicable EPSC practices in place, as designated by the pre-

construction meeting. This inspection is not a substitute CGP initial site assessment requirements.

2. If coverage under the CGP is required, prior to the pre-construction meeting, proof of Notice of Coverage of the CGP must be provided to the city. Proof of Notice of Termination of the CGP must be also be provided before termination of the Land Disturbance Permit.

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. Technical, administrative, or procedural matters may be modified by the City of Columbia Department of Development Services as needed to meet the objectives and policies defined in this ordinance, so long as such modifications are not contrary or beyond the intent of the objectives and policies of this ordinance.
4. Primary Permittee shall notify the City of Columbia Department of Development Services once all areas have been stabilized and vegetated, all permanent stormwater controls have been installed, and all construction activities have been completed related to that section's or site's corresponding Land Disturbance Permit to be granted a Notice of Termination. This shall be completed prior to the release of all performance sureties.
5. The Primary Permittee shall be responsible for all standards and practices required under this Chapter, regardless of individual lot ownership, until a Notice of Termination is issued by the City of Columbia Department of Development Services, releasing them from responsibility.
6. Every Land Disturbance Permit shall expire and become null and void if substantial work authorized by such permit has not commenced within one hundred and eighty (180) calendar days of issuance, or is not complete within eighteen (18) months from the date of the commencement of construction. Expiration of a Land Disturbance Permit does not release Operator(s) from the requirements of this Chapter.
7. Prior to the expiration of the Land Disturbance Permit, the Primary Permittee must request a Land Disturbance Permit extension from the City of Columbia Department of Development Services. Terms of this extension may include changes to the requirements of the Operator(s) defined in this Chapter.

14-403.3 Stormwater Management Plan

The applicant must submit a Stormwater Management Plan (SWMP). The SWMP shall include sufficient information to allow the City of Columbia Department of Development Services 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:

1. Topographic base map: Topographic base map of the site which extends a minimum of 100 feet beyond the limits of the proposed development and indicates:
 - a. 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;

- b. Current land use including all existing structures, locations of utilities, roads, and easements;
 - c. All other existing significant natural and artificial features;
 - d. 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.
2. Proposed structural and non-structural BMP's;
 3. A written description of the site plan and justification of proposed changes in natural conditions may also be required;
 4. Calculations: Hydrologic and hydraulic design calculations for the pre-development and post-development conditions for the design storms specified in the MS4 BMP manual and 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 the MS4 BMP manual. Such calculations shall include:
 - a. A description of the design storm frequency, duration, and intensity where applicable;
 - b. Time of concentration;
 - c. Soil curve numbers or runoff coefficients including assumed soil moisture conditions;
 - d. Peak runoff rates and total runoff volumes for each watershed area;
 - e. Infiltration rates, where applicable;
 - f. Culvert, stormwater sewer, ditch and/or other stormwater conveyance capacities;
 - g. Flow velocities and/or Tractive Force method calculations for open channel design;
 - h. Data on the increase in rate and volume of runoff for the design storms referenced in the MS4 BMP manual and this ordinance; and
 - i. Documentation of sources for all computation methods and field test results.
 5. Soils information: If SCMs depend 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.

14-403.4 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.

14-403.5 Performance bonds

1. The City of Columbia Development Services Department may, at its discretion, require the submittal of a performance security or performance bond prior to issuance of a permit or Certificate of Occupancy in order to ensure that the storm water practices are installed by the permit holder as required by the approved storm water management plan. The amount of the installation performance security or performance bond shall be the total estimated construction cost of the structural BMPs approved under the permit plus any reasonably foreseeable additional related costs, e.g., for damages or enforcement. 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 of Columbia Development Services Department. Alternatively the City of Columbia Development Services Department shall have the right to calculate the amount of construction cost estimates.
2. The performance security or performance bond shall be released in full only upon 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 title. The City of Columbia Development Services Department will make a final inspection of the structural BMP to ensure that it is in compliance with the approved plan and the provisions of this chapter. Provisions for a partial pro-rata release of the performance security or performance bond based on the completion of various development stages can be made at the discretion of the City of Columbia Development Services Department.

14-404 General Design Criteria

The following performance criteria shall be addressed for permanent stormwater management at all development.

1. The City Engineer or Designee has the authority to adopt site development design criteria.
2. The stormwater drainage system, consisting of open and closed conduits, shall accommodate a 10-year return frequency 24-hour duration storm unless otherwise required.
3. Stormwater systems under a City (public or private) road shall accommodate a 25-year frequency 24-hour duration storm.
4. Stormwater systems passing greater than 100 cubic feet per second (cfs) for the 10-year return frequency 24-hour duration storm shall be capable of accommodating a 50-year frequency 24-hour duration storm.
5. Stormwater drainage systems passing greater than 200 cubic feet per second (cfs) for the 10-year return frequency 24-hour duration storm shall be capable of accommodating a 100-year frequency 24-hour duration storm.
6. All permanent stormwater management systems shall be sized to prevent flooding of any new structures for the 100-year frequency 24-hour duration storm and have no additional adverse impact on existing structures.
7. Material for pipes used for conveyance of stormwater within the city shall be in accordance with the following:
 - (a) Cross drains and any other pipe under the pavement surfaces shall be reinforced concrete pipe (RCP). Storm drains within the roadway prism, but not under the pavement, shall also be RCP;
 - (b) RCP is required if the failure of the pipe would cause flooding or potential property damage on adjacent properties.
 - (c) Material for driveway pipes may be RCP, corrugated metal pipe (CMP), or double-walled high-density-polyethylene-pipe (HDPE) as desired by the responsible agency, corporation, or individual. RCP is required underneath any driveways or entrances that are heavily traveled or which would have the potential to flood areas within the public right-of-way or any structure. The minimum size for driveway pipes and culverts shall be at minimum fifteen (15) inches with headwalls and endwalls constructed of concrete;
 - (d) Double-walled HDPE pipe and CMP may be used to convey stormwater generated on the particular property ("on-site drainage"), such as parking lots, buildings, etc. Both pipe materials (HDPE and CMP) may be used to convey water under driveways in locations where a pipe is outside of the roadway prism, has adequate cover, and would not cause flooding of adjacent properties or rights-of-way in the event of pipe failure. Installation of all pipe must be done with adequate pipe bedding, backfill material, and coupling bands as recommended by the pipe manufacturer;

8. Construction shall not aggravate upstream or downstream flooding. Existing downstream or upstream problems may be required to be corrected in conjunction with development or redevelopment;
9. In no instance shall development or redevelopment cause or have the potential to cause water quality degradation to immediate or downstream water resources;
10. The construction and financing of any required off-site drainage improvement necessitated by private development within the same watershed shall be the responsibility of the developer;
11. Under no circumstances shall a site be graded or drained in such a way as to increase surface runoff to sinkholes, dry wells, or drainage wells;
12. Soil bioengineering, “green” and other “soft” slope and stream bank stabilization methods shall receive preference over riprap, concrete and other hard armoring techniques. “Hard” alternatives shall only be permitted when their necessity can be demonstrated given site-specific conditions;
13. The city may require maintenance or modification of stormwater management practices that are not operating within the guidelines established by this Chapter, as determined by the City Engineer;

14-405 Hydraulic and Hydrologic Calculations

1. All hydrologic and hydraulic computations utilized in the design of stormwater detention facilities must be prepared by a registered engineer proficient in the field of hydrology and hydraulics and licensed to practice engineering in the state.
2. The required hydrologic and hydraulic computations shall be in accordance with NRCS (formerly known as the SCS) unit hydrograph procedures using AMC II curve numbers and type II rainfall distribution, or other criteria that the City Engineer or Designee shall establish based on scientific and engineering information. All post developed conditions must be routed at appropriately small time intervals using either hand calculations or computer models that are widely accepted among engineering professionals.
3. Other methods may be approved by the City Engineer or Designee in the design of curb inlets and small pipe systems when the final result is verified by a NRCS method.

14-406 Peak Runoff Control

Peak runoff control shall be required for all sites receiving a Land Disturbance Permit unless noted below.

14-406.1 Hydraulics and Hydrology

1. Peak runoff control shall be designed to address the rate at which flow is released over the entire runoff discharge period and the volume of discharge over the Critical Design-Storm Period. This shall be applied for 2, 5, 10, 25, 50, and 100 year 24-hour storms.
2. The post-development peak discharge rate shall not to exceed the pre-development peak discharge rate.
3. Other methods for evaluating and controlling peak runoff may be considered on a case-by-case basis.

14-406.2 Partial Development of a Parcel

On parcels greater than 10 acres, the entire parcel and the area within the limits of construction shall be analyzed for peak runoff control. The peak runoff control shall be sized to attenuate the more strenuous condition.

14-406.3 Redevelopment

If redevelopment alters greater than 50% of the pre-development impervious surface area and the post-development impervious surface area is greater than 2 acres. Peak runoff control shall evaluate pre-development site conditions as having a maximum curve number of 70.

14-406.4 Existing Flooding Problems

When existing flooding problems are present, the City Engineer or Designee has authority to condition the approval of a permit upon the compliance with additional requirements, including but not limited to detention, conveyance facilities, or other stormwater management solutions required to reduce the adverse impact of the proposed development on other properties or on the subject development.

14-406.5 Waivers

Peak Runoff Control may be waived, with the approval of the City Engineer or Designee, if the development's stormwater discharges directly into a main stream.

14-406.6 Location of Facilities

Peak Runoff Control devices shall be located in common lots on residential developments requiring plats. All other development shall be required to locate devices in an exclusive Public Drainage Easement.

14-407 Construction Site Stormwater Runoff

In order to protect, maintain and enhance the immediate and long-term health, safety and general welfare of the citizens of the city, this article has objective to control erosion and sedimentation to limit deposition in streams and other water bodies. All land disturbing activities shall exercise erosion prevention and sediment control (EPSC) consistent with the intent of this chapter and the State of Tennessee Construction General Permit.

14-407.1 Sites Receiving a Land Disturbance Permit

All construction sites receiving a Land Disturbance Permit shall follow the requirements of the State of Tennessee's Construction General Permit (CGP) and those set forth in this Chapter (whichever is more stringent) including the following:

1. Land disturbing activities may commence once EPSC practices have been installed and are operational to the city's satisfaction and the Land Disturbance Permit has been issued;
2. The design-storm for EPSC practices shall be consistent with the Tennessee Construction General Permit;
3. All construction site operators must control wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site.
4. The city may require more stringent EPSC practices on properties adjacent to impaired waters, or within impaired watersheds, watersheds with TMDLs, or sites in close proximity to water resources. This may include measures that limit or eliminate, with a greater safety factor, the potential for Sediment or other forms of water pollution from entering Sensitive Areas as designated by TDEC or the City Engineer;
5. The city may require more stringent EPSC practices on properties containing or adjacent to slopes greater than 30 percent.
6. Unwarranted acceleration of erosion or sedimentation, or transport of other pollutants or forms of pollution, due to various land development activities shall be controlled;
7. If deemed appropriate, the city may require the addition, removal or modification of EPSC measures and/or EPSC locations at any time during the construction process to ensure proper EPSC performance;
8. The city may impose enforcement actions outlined in §14-414 if any site, development, or construction is found to be in violation of this ordinance or the CGP in order to achieve EPSC compliance.

14-408 Post Construction Water Quality

All sites receiving a Land Disturbance Permit are required to remove pollutants using permanent stormwater control measures (SCMs) to treat the entire Water Quality Treatment Volume. The Water Quality Treatment Volume (WQTV) is defined as the runoff generated from impervious surfaces during the first inch of a rainfall event.

1. A representative storm event or a volumetric runoff coefficient (Rv) and other widely accepted methods may be used to calculate the WQTV.
2. The City Engineer may adopt or establish a preferred method of design and analysis of the WQTV
3. The WQTV may be reduced for satisfying any of the following conditions, with a maximum reduction of 50%:
 - a. 20% - Water quality riparian buffer, with primarily sheet flow entering the buffer.
 - b. 10% - Redevelopment with an increase in impervious area
 - c. 20% - Redevelopment with a reduction in impervious area.
 - d. 20% - Vertical density (floor to area ratio of at least 2, or at least 18 units per acre)
4. Preference for design is given to SCMs that are designed and built to infiltrate, evapotranspire, capture and/or reuse the entire WQTV. Alternative SCMs may be authorized to treat the remaining portion of the WQTV. Such alternative SCMs must at a minimum be designed to achieve 80% TSS removal.
5. SCMs shall be located in common lots on residential developments requiring plats. All other development shall be required to locate SCMs in an exclusive Public Drainage Easement.

14-409 As-Built Plan

As construction is completed, an “as-built” plan must be submitted upon completion of the Stormwater Management Facilities. The “as-built” plan must be sealed by a registered professional engineer licensed to practice in Tennessee.

1. The plan must show the final design specifications for all stormwater management facilities. The licensed professional shall certify that: the facilities have been constructed as shown on the “as-built” plan, and facilities meet the approved Stormwater Management Plan and specifications, or achieve the function for which they were designed.
2. 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 BMP’s have been made and accepted by the city.

14-410 Landscaping and Stabilization

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)

1. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 days.
2. 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.
3. The following criteria shall apply to revegetation efforts:
 - a. 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.
 - b. 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.
 - c. 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.
 - d. 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.

14-411 Operation, Maintenance, and Inspection.

14-411.1 Inspection of Stormwater Management Facilities

Periodic inspections of facilities shall be performed, documented, and reported in accordance with this chapter, as detailed in §14-411.2.

14-411.2 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 six (6) years. These records shall be made available to the city during inspection of the facility and at other reasonable times upon request.

14-411.3 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.

14-412 Existing Locations and new and ongoing developments.

14-412.1 On-site Stormwater Maintenance Agreement:

1. 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.
2. The maintenance agreement shall:
 - a. 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. All residential stormwater management facilities shall be maintained by a homeowners association or other legal entity and the burden should not be imposed on a single property owner.
 - b. Provide for a periodic inspection by the property owners in accordance with the requirements of subsection (5) 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 of Columbia Department of Development Services. 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.
 - c. 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.
 - d. Provide that maintenance needs must be addressed in a timely manner, on a schedule to be determined by the City of Columbia Department of Development Services.
 - e. Provide that if the property is not maintained or repaired within the prescribed schedule, the City of Columbia 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 of Columbia cost of performing the maintenance shall be a lien against the property.

14-412.2 Existing Problem Locations – No Maintenance Agreement.

1. The City of Columbia Department of Development Services 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 BMP's that have not been maintained and/or inspected in accordance with this ordinance shall be regarded as illicit.
2. 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: routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; inspection of drainage basins or areas identified as higher than typical sources of sediment or other contaminants or pollutants; inspections of businesses or industries of a type associated with higher than usual discharges of contaminants or pollutants or with discharges of a type which are more likely than the typical discharge to cause violations of the city's NPDES stormwater permit; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to: reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in drainage control facilities; and evaluating the condition of drainage control facilities and other BMP's.

14-412.3 Owner/Operator Inspections

The owners and/or the operators of stormwater management practices shall:

1. Perform routine inspections to ensure that the BMP's 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 of Columbia may require submittal of this documentation.
2. Perform comprehensive inspection of all stormwater management facilities and practices. These inspections shall be conducted once every five 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 year inspections shall include:
 1. Facility type,
 2. Inspection date,
 3. Latitude and longitude and nearest street address,
 4. BMP owner information (e.g. name, address, phone number, fax, and email),

5. 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,
 6. Photographic documentation of BMP's, and
 7. Specific maintenance items or violations that need to be corrected by the BMP owner along with deadlines and re-inspection dates.
3. Owners or operators shall maintain documentation of these inspections. The City of Columbia may require submittal of this documentation.

14-412.4 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:

1. Denuded areas must be vegetated or covered under the standards and guidelines specified in §14-410 and on a schedule acceptable to the City of Columbia Department of Development Services.
2. Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed.
3. Drainage ways shall be properly covered in vegetation or secured with rip-rap, channel lining, etc., to prevent erosion.
4. Trash, junk, rubbish, etc. shall be cleared from drainage ways.
5. Stormwater runoff shall, at the discretion of the City of Columbia Department of Development Services be controlled to the maximum extent practicable to prevent its pollution. Such control measures may include, but are not limited to, the following:
 - a. Ponds;
 - i. Detention pond
 - ii. Extended detention pond
 - iii. Wet pond
 - iv. Alternative storage measures
 - b. Constructed wetlands;
 - c. Infiltration systems;
 - i. Infiltration/percolation trench
 - ii. Infiltration basin
 - iii. Drainage (recharge) well
 - iv. Porous pavement
 - d. Filtering systems;
 - i. Catch basin inserts/media filter
 - ii. Sand filter
 - iii. Filter/absorption bed
 - iv. Filter and buffer strips
 - e. Open channel.
 - i. Swale

14-412.5 Corrections of Problems Subject to Appeal

Corrective measures imposed by the City of Columbia Department of Development Services under this section are subject to appeal under §14-416.

14-413 Illicit Discharges

14-413.1 Scope

This section shall apply to all water generated on developed or undeveloped land entering the city's separate storm sewer system.

14-413.2 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 a stormwater facility that is not inspected in accordance with section §14-412 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 crashes, 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:

1. Uncontaminated discharges from the following sources:
 - a. Water line flushing or other potable water sources;
 - b. Landscape irrigation or lawn watering with potable water;
 - c. Diverted stream flows;
 - d. Rising ground water;
 - e. Groundwater infiltration to storm drains;
 - f. Pumped groundwater;
 - g. Foundation or footing drains;
 - h. Crawl space pumps;
 - i. Air conditioning condensation;
 - j. Springs;
 - k. Non-commercial washing of vehicles;
 - l. Natural riparian habitat or wetland flows;
 - m. Swimming pools (if dechlorinated - typically less than one PPM chlorine);
 - n. Firefighting activities;
 - o. Any other uncontaminated water source.
2. Discharges specified in writing by the city as being necessary to protect public health and safety.
3. Dye testing is an allowable discharge if the city has so specified in writing.
4. Discharges authorized by the Construction General Permit (CGP):
 - a. Dewatering of work areas of collected stormwater and ground water (filtering or chemical treatment may be necessary prior to discharge);
 - b. 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;

- c. Water used to control dust in accordance with CGP;
- d. Potable water sources including waterline flushings from which chlorine has been removed to the maximum extent practicable;
- e. Routine external building washdown that does not use detergents or other chemicals;
- f. Uncontaminated groundwater or spring water; and
- g. Foundation or footing drains where flows are not contaminated with pollutants (process materials such as solvents, heavy metals, etc.).

14-413.3 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.

14-413.4 Reduction of Stormwater Pollutants by the Use of BMP's.

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 BMP's 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 BMP's that have not been maintained and/or inspected in accordance with this ordinance shall be regarded as illicit.

14-413.5 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.

14-413.6 Dumping

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.

14-414 Enforcement

14-414.1 Enforcement authority

The City of Columbia Department of Development Services shall have the authority to issue notices of violation and citations, and to impose the civil penalties provided in this section. Measures authorized include:

1. Verbal Warnings – At a minimum, verbal warnings must specify the nature of the violation and required corrective action.
2. Written Notices – Written notices must stipulate the nature of the violation and the required corrective action, with deadlines for taking such action.
3. Citations with Administrative Penalties – The MS4 has the authority to assess monetary penalties, which may include civil and administrative penalties.
4. 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.
5. Withholding of Plan Approvals or Other Authorizations – Where a facility is in noncompliance, the MS4's own approval process affecting the facility's ability to discharge to the MS4 can be used to abate the violation.
6. Additional Measures – The MS4 may also use other escalated measures provided under local legal authorities. The MS4 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.

14-414.2 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.

14-414.3 Written Notice

Whenever City of Columbia Department of Development Services 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 of Columbia Department of Development Services 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 of Columbia Department of Development Services. 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.

14-414.4 Consent orders

The City of Columbia 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.

14-414.5 Show Cause Hearing

The City of Columbia Department of Development Services 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.

14-414.6 Compliance Order

When the City of Columbia Department of Development Services finds that any person has violated or continues to violate this chapter or a permit or order issued thereunder, the City of Columbia Department of Development Services may issue an order to the violator directing that, following a specific time period, adequate structures or devices be installed and/or procedures be 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.

14-414.7 Cease and Desist and Stop Work Orders

When the City of Columbia Department of Development Services finds that any person has violated or continues to violate this chapter or any permit or order issued hereunder, the City of Columbia Department of Development Services may issue a stop work order or an order to cease and desist all such violations and direct those persons in noncompliance to:

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

14-414.8 Suspension, Revocation, or Modification of Permit

The City of Columbia 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 of Columbia Department of Development Services may deem necessary to enable the applicant or other responsible person to take the necessary remedial measures to cure such violations.

14-414.9 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.

14-415 Penalties.

14-415.1 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 of Columbia, shall be guilty of a civil offense.

14-415.2 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 Columbia 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.

14-415.3 Measuring Civil Penalties

In assessing a civil penalty, the City of Columbia may consider:

1. The harm done to the public health or the environment;
2. Whether the civil penalty imposed will be a substantial economic deterrent to the illegal activity;
3. The economic benefit gained by the violator;
4. The amount of effort put forth by the violator to remedy this violation;
5. Any unusual or extraordinary enforcement costs incurred by the City;
6. The amount of penalty established by ordinance or resolution for specific categories of violations; and
7. Any equities of the situation which outweigh the benefit of imposing any penalty or damage assessment.

14-415.4 Recovery of Damages and Costs

In addition to the civil penalty in subsection (2) above, the city may recover:

1. 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.
2. 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.

14-415.5 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:

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

14-415.6 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.

14-415.7 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.

14-416 Appeals

Pursuant to Tennessee Code Annotated § 68-221-1106(d), any person aggrieved by the imposition of a civil penalty or damage assessment as provided by this chapter may appeal said penalty or damage assessment to the city's governing body.

14-416.1 Appeals to be in Writing

The appeal shall be in writing and filed with the municipal recorder or clerk within thirty (30) days after the civil penalty and/or damage assessment is served in any manner authorized by law.

14-416.2 Public hearing

Upon receipt of an appeal, the city's governing body, or other appeals board established by the city's governing body shall hold a public hearing within thirty (30) days. Ten (10) days prior notice of the time, date, and location of said hearing shall be published in a daily newspaper of general circulation. Ten (10) days' notice by registered mail shall also be provided to the aggrieved party, such notice to be sent to the address provided by the aggrieved party at the time of appeal. The decision of the governing body of the city shall be final.

14-416.3 Appealing Decisions of the City's Governing Body

Any alleged violator may appeal a decision of the city's governing body pursuant to the provisions of Tennessee Code Annotated, title 27, chapter 8.