

ORDINANCE NO.: 2024-15

**AN ORDINANCE TO AMEND TITLE 18, CHAPTER 7,
SIGNAL MOUNTAIN TOWN CODE, SO AS TO COMPLY
WITH FEDERAL REQUIREMENTS TO MAINTAIN AND
REGULATE PERMANENT STORMWATER
CONTROLS AND DISCHARGES.**

**BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF
SIGNAL MOUNTAIN, TENNESSEE**, that Title 18, Chapter 7, of the Town of Signal Mountain
Municipal Code, is hereby amended by striking the same said section in its entirety and
substituting in lieu thereof the following:

CHAPTER 7

STORMWATER RUNOFF REGULATION AND CONTROL

SECTION

- 18-701. General provisions.
- 18-702. Definitions.
- 18-703. Construction Stormwater Management
- 18-704. Permanent stormwater management: design and construction inspection.
- 18-705. Permanent Stormwater Control Measure (SCM) maintenance and inspection.
- 18-706. Permanent SCM's: new development, existing locations and ongoing
developments.
- 18-707. Illicit discharges.
- 18-708. Enforcement
- 18-709. Penalties.
- 18-710. Appeals.

18-701. **General provisions.**

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

(a) Protect, maintain, and enhance the environment of the Town and the public health, safety and the general welfare of the citizens of the Town, by controlling discharges of pollutants to the Town'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 Town;

(b) Enable the Town to comply with the National Pollution Discharge Elimination System permit (NPDES) and applicable regulations, 40 CFR § 122 as applicable for stormwater discharges;

(c) Allow the Town 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 Town, whether or not owned and operated by the Town;
- (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 Town of Signal Mountain 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 tool for permit compliance and to facilitate the necessary control of

stormwater. (as added by Ord. #2001-6, Dec. 2001, and replaced by Ord.: 2003-7, Nov. 2003, and Ord. #2014-10, Dec. 2014)

18-702. 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 Town declares that any person violating the provisions of this chapter may be assessed a civil penalty by the Town 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) “Analytical monitoring.” Test Procedures for the Analysis of Pollutants - Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required. Pollutant parameters shall be determined using sufficiently sensitive methods in Title 40 C.F.R. § 136, as amended, and promulgated pursuant to Section 304 (h) of the Act. The chosen methods must be sufficiently sensitive as required in state rule 0400-40-03-.05(8).

(3) “Aquatic Resource Alteration Permit (ARAP).” Physical alterations to properties of the waters of the state require an ARAP or a §401 Water Quality Certification (§401 certification). ARAP means a permit issued pursuant to T.C.A. § 69-3-108 of the Act, which authorizes the alteration of properties of waters of the state that result from activities other than discharges of wastewater through a pipe, ditch, or other conveyance.

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

(5) “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, leaks, sludge or waste disposal, or drainage from raw material storage. BMPs include source control practices (non-structural BMPs) and engineered structures designed to treat runoff.

(a) Structural BMPs are facilities that help prevent pollutants in stormwater runoff from leaving the site.

(b) Non-structural BMPs are techniques, activities and processes that reduce pollutants at the source.

(6) A “BMP Manual” provides technical guidance including additional policies, criteria, standards, specifications, constants, and information for the proper implementation of the requirements of the National Pollution Discharge Elimination System permit (NPDES) and applicable regulations, 40 CFR § 122 as applicable for stormwater discharges.

(7) “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.

(8) “Buffer Zone” or “Water Quality Riparian Buffer” is a permanent strip of natural perennial vegetation, adjacent to a stream, river, wetland, pond, or lake that contains dense vegetation made up of grass, shrubs, and/or trees. The purpose of a water quality riparian buffer is to maintain existing water quality by minimizing risk of any potential sediments, nutrients or other pollutants reaching adjacent surface waters and to further prevent negative water quality impacts by providing canopy over adjacent waters.

(9) “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 thirty foot (30') 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 feet (30') 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 feet (15') at any measured location.

(i) Buffer zone requirements for discharges into impaired or high quality waters: A sixty foot (60') natural riparian buffer zone adjacent to the receiving stream designated as impaired or high quality 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 feet (60') criterion for the width of the buffer zone can be established on an average with basis at a project, as long as the minimum width of the buffer zone is more than thirty feet (30') at any measured location.

(b) "Permanent" New development and significant redevelopment sites are required to preserve water quality buffers along waters within the MS4. Buffers shall be clearly marked on site development plans, grading permit applications, and/or concept plans. Buffer width depends on the size of a drainage area. Streams or other waters with drainage areas greater than one (1) square mile will require buffer widths of sixty feet (60') minimum. The sixty feet (60') criterion for the width of the buffer zone can be established on an average with basis at a project, as long as the minimum width of the buffer zone is more than thirty feet (30') at any measured location. Streams or other waters with drainage areas less than one (1) square mile will require buffer widths of thirty feet (30') minimum. The thirty foot (30') criterion for the width of the buffer zone can be established on an average width basis, as long as the minimum width of the buffer zone is more than fifteen feet (15') at any measured location.

(10) "Channel" means a natural or artificial watercourse with a definite bed and banks that conducts continuously or periodically flowing water.

(11) "Clearing" refers to removal of vegetation and disturbance of soil prior to grading or excavation in anticipation of construction activities. Clearing may also refer to wide area land disturbance in anticipation of non-construction activities. Clearing, grading, and excavation do not refer to clearing of vegetation along existing or new roadways, highways, dams, or power lines for sight distance or other maintenance and/or safety concerns, or cold planing, milling, and/or removal of concrete and/or bituminous asphalt roadway pavement surfaces. The clearing of land for agricultural purposes is exempt from federal stormwater NPDES permitting in accordance with Section 401(1)(1) of the 1987

Water Quality Act and state stormwater NPDES permitting in accordance with the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.).

(12) “Commencement of construction” means the initial disturbance of soils associated with clearing, grading, excavating or other construction activities.

(13) “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.

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

(15) “Control measure” refers to any Best Management Practice (BMP) or other method used to prevent or reduce the discharge of pollutants to waters of the state.

(16) “CWA” means the Clean Water Act of 1977 or the Federal Water Pollution Control Act (33 U.S.C. 1251, et seq.)

(17) “Design storm” is a storm event as defined by Precipitation-Frequency Atlas of the United States. Atlas 14. Volume 2. Version 3.0. U.S. Department of Commerce. National Oceanic and Atmospheric Administration (NOAA), National Weather Service, Hydrometeorological Design Studies Center, Silver Springs, Maryland or its digital product equivalent. The estimated design rainfall amounts, for any return period interval (i.e., 1,-yr, 2,-yr, 5,-yr, 25,-yr, etc.,) in terms of either depths or intensities for any duration, can be found by accessing the data available at https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html . The Design Storm Events for the Town of Signal Mountain are as follows:

- (a) 1 year: 3.19 in.
- (b) 2 year: 3.81 in.
- (c) 5 year: 4.65 in.
- (d) 10 year: 5.30 in.
- (e) 25 year: 6.20 in.
- (f) 50 year: 6.92 in.

(g) 100 year: 7.65 in.

(18) “Discharge or discharge of a pollutant” refers to the addition of pollutants to waters from a source.

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

(20) An “ecoregion” is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables. Ecoregions can be determined for specific stream segments by using Tennessee’s Online Water Quality Assessment Data viewer <http://tdeconline.tn.gov/dwr>.

(21) “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.

(22) “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.

(23) “Exceptional Tennessee Waters” are surface waters designated by the Tennessee Department of Environment and Conservation as having the characteristics set forth at Tennessee Rules, Chapter 0400-40-03-.06(4). Characteristics include waters within parks or refuges; scenic rivers; waters with threatened or endangered species; waters that provide specialized recreational opportunities; waters within areas designated as lands unsuitable for mining; waters with naturally reproducing trout; waters with exceptional biological diversity and other waters with outstanding ecological or recreational value.

(24) “Hot spot” means an area where land use or activities generate highly contaminated runoff, with concentrations of pollutants in excess of those typically found in stormwater. Examples might include operations producing concrete or asphalt, auto repair shops, auto supply shops, large commercial parking areas and restaurants. The following land uses and activities are deemed stormwater hot spots, but that term is not limited to only these land uses:

- (a) Vehicle salvage yards and recycling facilities
- (b) Vehicle service and maintenance facilities
- (c) Vehicle equipment cleaning facilities
- (d) Fleet storage areas (bus, truck, etc.)
- (e) Industrial sites (included on standard industrial classification code list)
- (f) Marinas (service and maintenance)
- (g) Public works storage areas

- (h) Facilities that generate or store hazardous waste materials
- (i) Commercial container nursery
- (j) Restaurants and food service facilities
- (k) Other land uses and activities as designated by an appropriate review authority

(25) “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.

(26) “Illicit discharge” means any discharge to the municipal separate storm sewer system that is not composed entirely of storm water and not specifically exempted under § 18-706(2).

(27) “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 the Underground Injection Control (UIC) program of the Tennessee Department of Environment and Conservation. 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. More information regarding an Underground Injection Control Permit can be found on TDEC’s DWR webpage at <https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/underground-injection-control-permit.html>

(28) “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 SWPPPs;
- (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 Construction General Permit (CGP) and other environmental permits.

(29) “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,

redevelopment, demolition, construction, reconstruction, clearing, grading, filling, and excavation.

(30) “Level 1” - Fundamentals of Erosion Prevention and Sediment Control training and certification program administered by University of Tennessee Water Resources Research Center (<https://tnepsc.org/index.asp>).

(31) “Level 2” - Design Principles for Erosion Prevention and Sediment Control for Construction Sites training and certification program administered by University of Tennessee Water Resources Research Center (<https://tnepsc.org/index.asp>).

(32) “Linear Project” is a land disturbing activity as conducted by an underground/overhead utility or highway department, including, but not limited to, any cable line or wire for the transmission of electrical energy; any conveyance pipeline for transportation of gaseous or liquid substance; any cable line or wire for communications; or any other energy resource transmission ROW or utility infrastructure, e.g., roads and highways. Activities include the construction and installation of these utilities within a corridor. Linear project activities also include the construction of access roads, staging areas and borrow/spoil sites associated with the linear project. Land disturbance specific to the development of residential and commercial subdivisions or high-rise structures is not considered a linear project.

(33) “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.

(34) “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.

(35) “Monitoring” refers to tracking or measuring activities, progress, results, etc., and can refer to non-analytical monitoring for pollutants by means other than 40 C.F.R. § 136 (and other than state- or federally established protocols in the case of biological monitoring and assessments), such as visually or by qualitative tools that provide comparative values or rough estimates.

(36) “Municipal Separate Storm Sewer System (MS4)” means the conveyances owned or operated by the town for the collection and transportation of stormwater, including the roads and streets and their drainage systems, catch basins, curbs, gutters, ditches, manmade channels, and storm drains, and where the context indicates, it means the municipality that owns the separate storm sewer system.

(37) “Municipality” means any incorporated Town or Town, county, metropolitan or consolidated government, or special district of this state empowered to provide storm water facilities.

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

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

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

(41) “Operator” means any person who owns, leases, operates, controls, or supervises a source. Including, but not limited to, an owner or operator of any “facility or activity” subject to regulation under the NPDES program.

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

(43) “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.

(44) “Permanent Stabilization” means that all soil disturbing activities at the site have been completed and one of the three following criteria is met:

(a) A perennial, preferably native, vegetative cover with a uniform (i.e., evenly distributed, without large bare areas) density of at least 70 percent has been established on all unpaved areas and areas not covered by permanent structures, and all slopes and channels have been permanently stabilized against erosion.

(b) Equivalent permanent stabilization measures such as the use of riprap; permanent geotextiles; hardened surface materials including concrete, asphalt, gabion baskets or Reno mattresses have been employed.

(c) For construction projects on land used for agricultural or silvicultural purposes, permanent stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural or silvicultural use.

(45) “Point source” (or “Outfall”) means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include introduction of pollutants from non-point source agricultural and silvicultural activities, including stormwater runoff from orchards,

cultivated crops, pastures, range lands, forest lands or return flows from irrigated agriculture or agricultural stormwater runoff. In short, outfall is a point where runoff leaves the site as a concentrated flow in a discrete conveyance.

(46) “Pollutant” means sewage, industrial wastes, or other wastes.

(47) “Priority construction” means those construction activities discharging directly into, or immediately upstream of, waters the state recognized as unavailable condition for siltation or Exceptional Tennessee Waters.

(48) A “rainfall event” is defined as any occurrence of rain preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

(49) “Registered Engineer and Registered Landscape Architect” is an engineer or landscape architect certified and registered by the State Board of Architectural and Engineer Examiners pursuant to Section 62-202, Tennessee Code Annotated, to practice in Tennessee.

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

(51) “Runoff coefficient” means the fraction of total rainfall that will appear at the conveyance as runoff. Runoff coefficient is also defined as the ratio of the amount of water that is not absorbed by the surface to the total amount of water that falls during a rainstorm.

(52) “Sediment” means solid material, both inorganic (mineral) and organic, that is in suspension, is being transported; or has been moved from the site of origin by wind, water, gravity or ice as a product of erosion.

(53) “Sediment basin” A temporary basin consisting of an embankment constructed across a wet weather conveyance, an excavation that creates a basin or by a combination of both. A sediment basin typically consists of a forebay cell, impoundment, permanent pool, primary spillway, secondary or emergency spillway and surface dewatering device. The size and shape of the basin depends on the location, size of drainage area, incoming runoff volume and peak flow, soil type and particle size, land cover, and receiving stream classification (i.e., waters with unavailable parameters, Exceptional TN Waters, or waters with available parameters).

(54) “Sedimentation” means the action or process of forming or depositing sediment.

(55) “Significant Contributor” is defined as a source of pollutants where the volume, concentration, or mass of a pollutant in a stormwater discharge can cause or threaten to cause pollution, contamination, or nuisance that adversely impact human health

or the environment and cause or contribute to a violation of any applicable water quality standards for receiving water.

(56) “Soil or Topsoil” means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of plants.

(57) “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.

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

(59) “Steep Slope or Steep Grade” means a natural or created slope of 35% grade or greater.

(60) “Stormwater” means rainfall runoff, snow melt runoff, and surface runoff and drainage.

(61) “Stormwater control measure” or “SCM” means permanent practices and measures designed to reduce the discharge of pollutants from new development projects or redevelopment projects.

(62) “Stormwater entity” means the entity designated by the town to administer the stormwater management ordinance, and other stormwater rules and regulations adopted by the town.

(63) “Stream” as defined by TCA 69-3-103(38) “stream” means a surface water that is not a wet weather conveyance.

(64) “Stormwater associated with industrial activity” is defined in 40 C.F.R. 122.26(b)(14) and incorporated here by reference. Most relevant to the Town is 40 C.F.R. 122.26(b)(14)(x), which relates to construction activity including clearing, grading, filling and excavation activities, including borrow pits containing erodible material. Disturbance of soil for the purpose of crop production is exempt from NPDES permit requirements, but stormwater discharges from agriculture-related activities that involve construction of structures (e.g., barn construction, road construction, pond construction) are considered associated with industrial (construction) activity. Maintenance to the original line and grade, hydraulic capacity of Signal Mountain; or to the original purpose of the facility (e.g., re-clearing, minor excavation performed around an existing structure necessary for maintenance or repair and repaving of an existing road) is not considered a construction activity.

(65) “Construction Stormwater discharge-related activities” means activities that cause, contribute to or result in point source stormwater pollutant discharges. These activities may include excavation, site development, grading and other surface disturbance activities; and activities to control stormwater including the siting, construction and operation of best management practices (BMPs).

(66) “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.

(67) “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.

(68) “Stormwater Pollution Prevention Plan (SWPPP)” is a written site-specific plan required by the Tennessee Construction General Permit (CGP) that includes a narrative pollution prevention plan and graphical erosion and sediment control plan. In its basic form, the plan contains a site map, a description of construction activities that could introduce pollutants to stormwater runoff, a description of measures or practices to control these pollutants, and erosion and sediment control plans and specifications. The SWPPP should be prepared in accordance with the Tennessee Erosion and Sediment Control Handbook (latest edition).

(69) “Stormwater runoff” means flow on the surface of the ground, resulting from precipitation.

(70) “Structural BMPs” means facilities that are constructed to provide control of stormwater runoff.

(71) “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.

(72) “Take of an endangered species” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct.

(73) “Tennessee Erosion and Sediment Control (TDESC) Handbook” is a guidance issued by the Division of Water Resources for the purpose of developing Stormwater Pollution Prevention Plans and Erosion and Sediment Control Plans required by the Construction General Permit CGP.

(74) “Temporary stabilization” is achieved when vegetation or non-erodible surface has been established on the area of disturbance and construction activity has

temporarily ceased. Under certain conditions, temporary stabilization is required when construction activities temporarily cease.

(75) “Treatment chemicals” are polymers, flocculants or other chemicals used to reduce turbidity in stormwater discharges by chemically bonding to suspended silts and other soil materials and causing them to bind together and settle out. Common examples of anionic treatment chemicals are polyacrylamide-chitosan (PAM–CS) .

(76) “Turbidity” is 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.

(77) “Waste site” is an area where material from a construction site is disposed of. When the material is erodible, such as soil, the site must be treated as a construction site.

(78) “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.

(79) “Water quality buffer” see “buffer zone”.

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

(81) “Watershed” means all the land area that contributes runoff to a particular point along a waterway.

(82) “Waters with unavailable parameters” means any segment of surface waters that has been identified by the TDEC as failing to support one or more classified uses. Unavailable parameters exist where water quality is at, or fails to meet, the levels specified in water quality criteria in Rule 0400-40-03-.03, even if caused by natural conditions. In the case of a criterion that is a single response variable or is derived from measurement of multiple response variables, the unavailable parameters shall be the agents causing water quality to be at or failing to meet the levels specified in criteria. Resources to be used in making this determination include biennial compilations of impaired waters, databases of assessment information, updated GIS coverages (<https://tdeconline.tn.gov/dwr/>), and the results of recent field surveys. GIS coverages of the streams and lakes not meeting water quality standards, plus the biennial list of waters with unavailable parameters, can be found at <https://www.tn.gov/environment/program-areas/wr-water-resources/water-quality/water-quality-reports---publications.html>.

(83) “Water quality riparian buffer” means a permanent strip of natural perennial vegetation adjacent to a stream, river, wetland, pond, or lake that contains dense vegetation made up of grass, shrubs, and/or trees. The purpose of a water quality riparian buffer is to maintain existing water quality by minimizing the risk of any potential sediments, nutrients, or other pollutants reaching adjacent surface waters and to further prevent negative water quality impacts by providing canopy over adjacent waters.

(84) “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 natural soil conditions. Wetlands include, but are not limited to, swamps, marshes, bogs, and similar areas.

(85) A “one-week period” is a synonym of a calendar-week; typically, a period from Sunday through Saturday

(86) “Water quality treatment volume (WQTV)” is a portion of the runoff generated from impervious surfaces at a new development or redevelopment project by the 1-year 24-hour design storm. The WQTV is further determined by the type of treatment provided. Note: Uncontaminated roof runoff may be excluded from the WQTV. However, roof runoff should be presumed to be contaminated unless it has been demonstrated to be uncontaminated.

(87) “Wet weather conveyances” are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that meet the following:

- (a) The conveyance carries flow only in direct response to precipitation runoff in its immediate locality.
- (b) The conveyances channels are at all times above the groundwater table.
- (c) The flow carried by the conveyance is not suitable for drinking water supplies.
- (d) Hydrological and biological analyses indicate that, due to naturally occurring ephemeral or low flow under normal weather conditions, 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. (Tennessee Rules, Chapter 0400-40-3-.04(3)). (as added by Ord. #2001-6, Dec. 2001, and replaced by Ord.: 2003-7, Nov. 2003, and Ord. #2014-10, Dec. 2014)

18-703. Construction Stormwater Management. (1) MS4 Stormwater Construction BMP Manual.

- (a) Adoption. The Town adopts as its MS4 stormwater construction BMP manual(s) the following publication(s), which is incorporated by reference in this ordinance as if fully set out herein:
 - (i) TDEC Erosion Prevention and Sediment Control Handbook (most current edition);
 - (ii) The City of Chattanooga, Hamilton County and Town of Signal Mountain Stormwater Management Manual (BEST MANAGEMENT PRACTICES (BMP) MANUAL – most current edition).
 - (b) The Town has adopted, for use in designing Stormwater Control Measures, construction design storm events. The construction design storm events adopted by the Town are as follows:
 - (i) 2-yr, 24-hr design storm for non-impaired, non-exceptional waters;
 - (ii) 5-yr, 24-hr design storm for impaired or exceptional waters
 - (c) Requirements for design storm for all waters as well as special conditions for unavailable parameters waters or exceptional Tennessee waters must be consistent with those of the current Tennessee Construction General Permit (TNR100000).
- (2) The municipality has adopted, for use in designing EPSC measures, the design storm requirements from the current Tennessee Construction General Permit for all waters as well as special conditions for unavailable parameters or Exceptional Tennessee Waters.
- (3) Waste Control Construction site operators are required to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater.
- (4) Priority Construction
- (a) Priority in construction shall be, at a minimum, those construction activities discharging directly into, or immediately upstream of, waters the state recognized as unavailable condition for siltation or Exceptional Tennessee Waters.
 - (b) Requirements for all priority construction activities must include preconstruction meetings with construction site operators for priority construction activities.

(5) Land development permit - This section shall be applicable to all land development, including, but not limited to, site plan applications, subdivision applications, land disturbance applications and grading applications. These standards apply to qualifying new development or redevelopment site(s), When required. Every person will be required to obtain a land disturbance permit from the Town in the following cases:

- (a) One (1) acre or more;
 - (i) New development that involves land development activities of one (1) acre or more;
 - (ii) Redevelopment that involves other land development activity of one (1) acre or more;
- (b) Projects of less than one acre of total land disturbance may also be required to obtain authorization under this ordinance if:
 - (i) The Town of Signal Mountain has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard; or is likely to be a significant contributor of pollutants to water of the state,
 - (ii) Changes in state or federal rules require sites of less than one acre that are not part of a larger common plan of development or sale to obtain a stormwater permit;
 - (iii) Any new development or redevelopment, regardless of size, that is defined by the Town to be a hot spot land use; or
 - (iv) The minimum applicability criteria set forth in item (a) above if such activities are part of a larger common plan of development, (see “common plan of development” definition).
 - (v) The creation and use of borrow pits, that are not permitted under the Tennessee Multi Sector Permit (TMSP), where material is excavated and relocated offsite, and fill sites where materials or earth is deposited by mechanized methods resulting in an increased elevation or grade.
 - (vi) As determined by the Town for single or duplex residential lots of any size, 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 landscape architect may be waived by the Town.

(vii) Minimal plan requirements shall include pre- and post-stormwater runoff directions, construction access, erosion/sediment control measures, downspout roof direction and termination, swales and temporary and/or permanent soil stabilization.

(viii) Land disturbance activities in Town 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 waiver from such permits and licenses prior to the issuance of a land disturbance permit by the Town.

(ix) If unpermitted construction activity is on-going, the Town will issue an immediate stop-work order. If, in addition to the Town's permit, a TDEC permit was required but was not obtained, the violator will also be reported to TDEC.

(Note: Any discharge of stormwater or other fluid to an improved sinkhole or other injection well, as defined, must be authorized by permit or rule as a Class V underground injection well under the provisions of Tennessee Department of Environment and Conservation (TDEC) Rules, Chapter 0400-45-06. More information regarding an Underground Injection Control Permit can be found on TDEC's DWR webpage at <https://www.tn.gov/content/tn/environment/permit-permits/water-permits1/underground-injection-control-permit.html>)

(6) Land disturbance/Grading/Stormwater Construction Permit- Persons seeking the issuance of any land disturbance permit must provide proof of coverage under the Tennessee Construction General Permit (CGP) (if applicable) when requested; and a copy of the Stormwater Pollution Prevention Plan (SWPPP) to the Town when requested.

(a) Copies of additional applicable local, state or federal permits (i.e.: ARAP, approved hydrologic determination, etc.) must also be provided to the Town.

(b) The Town has the authority to withhold local permits prior to receiving copies of the aforementioned permits.

(c) In circumstances where no such permits have been required, the Town may still require a SWPPP as part of the land disturbance permit application.

(7) Building Permit. No building permit shall be issued until the applicant has first obtained a land disturbance permit where required by this ordinance.

(8) Construction site operators are required to implement appropriate erosion prevention and sediment control measures and best management practices. EPSC requirements shall meet the Tennessee's CGP design storm(s), be consistent with the TDEC ESC Handbook best management practices and with the requirements of this ordinance.

(9) Where site assessments are required by the CGP, the operator shall provide a copy of the assessment to the Town.

(10) Twice-Weekly inspections of the site and the BMP's/SCM's must be performed by an individual who has either received certification under the Level I Fundamentals of Erosion Prevention and Sediment Control course or has other credentials identified as equivalent within this ordinance.

(11) 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 14 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 fourteen (14) 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.

(d) For steep slopes of 35% or more stabilization measures shall be initiated within 7 days Construction buffer zones. Construction buffer zones shall be those water quality buffers and buffer zones as defined in 18-702 above and shall meet the requirements in this ordinance and, where appropriate in the TN CGP. The criteria for the width of the construction 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 the required minimum width at any measured location. If the new development or redevelopment site encompasses both sides of a stream, buffer averaging can be applied to both sides, but must be applied independently. Water quality riparian buffer widths are measured from the top of bank also referred to as the "ordinary high-water mark." Construction buffers are not primary sediment control measures and shall not be relied on as such. Stormwater discharges must enter the water quality riparian buffer zone as sheet flow, not as concentrated flow, where site conditions allow. The designer/operator must comply with the vegetation requirements and the permissible land uses set forth for buffers in the TN CGP. Where it is not practicable to maintain a construction water quality riparian buffer, BMPs providing equivalent protection to a receiving stream as a natural water quality riparian buffer must be used.

(e) In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures such as properly anchored mulch, soil binders or matting must be employed.

(12) Notice of Termination (NOT) the operator shall provide the Town with a copy of the NOT when it is issued by TDEC.

(13) As built plans (record drawings). All applicants are required to submit actual as built plans certified by the design engineer 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 certification by the design engineer certifying that SCM's will function within original design parameters as constructed shall be included. A final inspection by the Town is required before any performance security or performance bond will be released. The Town 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/SCM's have been made and accepted by the Town. No bonds or securities shall be released by the Town until the (stormwater manager) has accepted the as built plans. The warranty period for any infrastructure to be accepted by the Town for maintenance shall not commence until the Town has accepted the as built plans.

(14) Equipment manufacturer startups. No bonds or securities shall be released until any equipment to be maintained by the Town passes any specified manufacturer startup procedure. The warranty period shall not commence prior to the equipment passing any specified manufacturer startup procedure.

18-704. Permanent stormwater management: design and construction inspection.

(1) In order to comply with the Town's permanent stormwater standards for new development and redevelopment projects, design and install SCMs as established by Tennessee Rule 0400-40-10-.04 and comply with other requirements of Tennessee Rule 0400-40-10-.04. Note that for design purposes, total suspended solids (TSS) may be used as the indicator for the reduction of pollutants.

(2) SCMs must be designed to provide full treatment capacity within 72 hours following the end of the preceding rain event for the life of the new development or redevelopment project. The first inch of rainfall must be one hundred percent (100%) managed with no discharge of surface waters. The designer may select from the most appropriate alternatives listed in the Town's BMP Manual.

(3) Designs shall be based on the 24-hour design storm adopted by the Town. The Town has adopted, for use in designing water quality SCMs, the design storm requirements as established in Tennessee Rule 0400-40-10-.04. The Post Construction/Permanent water quality design storm is a 1-year, 24-hour storm event for water quality SCMs. The table below indicates Water Quality Treatment Volume and the corresponding SCM Treatment Type for the 1-year, 24-hour design storm. See definition of Design Storm Event for the municipality's rainfall amounts for each return period interval.

Water Quality Treatment Volume and the Corresponding SCM Treatment Type for the 1-year, 24-hour design storm		
SCM Treatment Type	WQTV	Notes
infiltration, evaporation, transpiration, and/or reuse	runoff generated from the first 1 inch of the design storm	Examples include, but are not limited to, bioretention, stormwater wetlands, and infiltration systems.
biologically active filtration, with an underdrain	runoff generated from the first 1.25 inches of the design storm	To achieve biologically active filtration, SCMs must provide minimum of 12 inches of internal water storage.
sand or gravel filtration, settling ponds, extended detention ponds, and wet ponds	runoff generated from the first 2.5 inches of the design storm or the first 75% of the design storm, whichever is less	Examples include, but are not limited to, sand filters, permeable pavers, and underground gravel detention systems. Ponds must provide forebays comprising a minimum of 10% of the total design volume. Existing regional detention ponds are not subject to the forebay requirement.
hydrodynamic separation, baffle box settling, other flow-through manufactured treatment devices (MTDs), and treatment trains using MTDs	maximum runoff generated from the entire design storm	Flow-through MTDs must provide an overall treatment efficiency of at least 80% TSS reduction. Refer to 4.2.5.20

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

- (a) Where a potential for introducing pollutants into the groundwater exists, unless pretreatment is provided;
- (b) Where pre-existing soil contamination is present in areas subject to contact with infiltrated runoff;
- (c) Presence of sinkholes or other karst features.

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

(6) 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:

- (a) Redevelopment;
- (b) Brownfield redevelopment;
- (c) High density (>7 units per acre);
- (d) Vertical density, (Floor to Area Ratio (FAR) of 2 or > 18 units per acre); and

(e) Mixed use transit oriented development (within one half (1/2) mile of transit).

(7) 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 chapter approved. The treatment technology must be designed, installed and maintained to continue to meet this performance standard.

(8) For projects that cannot meet one hundred percent (100%) of the runoff reduction requirements, the Town of Signal Mountain may allow runoff reduction measures to be implemented at another location within the same USGS twelve (12) digit hydrologic 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 twelve (12) digit HUC) and runoff reduction measures must be approved by the Town of Signal Mountain. The Town of Signal Mountain shall identify priority areas within the watershed in which mitigation projects can be completed. The Town of Signal Mountain 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.

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

(10) 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.

(11) 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.

(12) Prior to or during the site design process, applicants for land disturbance permits shall consult with the Town of Signal Mountain to determine if they are subject to additional stormwater design requirements.

(13) The calculations for determining peak flows as found in the MS4 BMP manual shall be used for sizing all stormwater facilities.

(14) Minimum volume control requirements. (Note: the volume control requirements are by the MS4 and not the TDEC MS4 permit) in accordance with 18-

701(1)(c)(iii) the MS4 may establish standards to regulate the quantity of stormwater discharged, therefore:

- (a) Stormwater designs shall meet the multi-stage storm frequency storage requirements as identified in the MS4 BMP manual.
- (b) If hydrologic or topographic conditions warrant greater control than that provided by the minimum control requirements, the Town of Signal Mountain may impose any and all additional requirements deemed necessary to control the volume, timing, and rate of runoff.

(15) Permanent stormwater management plan requirements. The stormwater management plan shall include sufficient information to allow the Town of Signal Mountain 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 feet (100') 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;
 - (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 the MS4 BMP manual. 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:

- (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 referenced in the MS4 BMP manual; and
- (ix) Documentation of sources for all computation methods and field test results.

(16) **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.

(17) **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.

(18) **Water Quality Riparian Buffers. Post Construction/Permanent** water quality riparian buffers shall be those buffers defined in 18-702 above and shall meet the requirements described in this ordinance. The criteria for the width of the post construction/permanent 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 the required minimum width at any measured location. If the new development or redevelopment site encompasses both sides of a stream, buffer averaging can be applied to both sides, but must be applied independently. Water quality riparian buffer widths are measured from the top of bank also referred to as the “ordinary high-water mark.” Stormwater discharges should enter the post construction/permanent water quality riparian buffer as sheet flow, not as concentrated flow, where site conditions allow.

(a) Post Construction/Permanent buffers for waters with available parameters for siltation or habitat alteration or unassessed waters:

- (i) Average buffer width: 30 feet.
- (ii) Minimum buffer width: 15 feet

(b) Post Construction/Permanent buffers for Exceptional Tennessee Waters or waters with unavailable parameters for siltation or habitat alteration:

- (i) Average buffer width: 60 feet.
- (ii) Minimum buffer width: 30 feet

(c) Variance Policy - Alternative buffer widths will be considered on a case-by-case basis for new development and redevelopment projects where averaged water quality riparian buffers cannot be fully implemented on-site. Alternative widths will be considered by way of a variance request that is heard before the Town's Stormwater Board. Staff will be involved in the process but cannot authorize alternative widths administratively. The following provides details of the process:

(i) Pre-application meeting (Town staff and prospective applicant)

(1) Discussion about demonstrating hardship and impracticality.

(a) Town may deny application for inadequate justification or if subject property is located along stream with defined waste load allocation or TMDL.

(b) Full listing of variance provisions.

(2) Discussion about potential mitigation.

(3) Decision made whether to proceed with application.

(ii) Application/Submittals

(1) Applicant submits "Application to Appear Before the Stormwater Board" to the Stormwater Manager.

(2) Applicant submits variance request checklist to Stormwater Manager.

(3) Applicant submits mitigation plan to the Stormwater Manager along with all other required checklist items.

(iii) Staff Review

(1) Stormwater Manager reviews completeness of application.

(2) Stormwater Manager evaluates sufficiency of proposed mitigation.

(a) Impairments/TMDLs should be considered

(b) Mitigation should not negate water quality standards.

(c) Staff may request professional analysis or a demonstration of effectiveness of mitigation.

- (3) Stormwater Manager creates pros and cons/justifications page for requested project.
 - (4) Stormwater Manager by memo and exhibit requests comments from staff of other Town departments for consideration.
 - (5) Requests and concerns are conveyed to the applicant.
- (iv) Final Submittals
 - (1) Applicant submits final plans/mitigation for inclusion in Stormwater Board agenda.
- (v) Review by Stormwater Board
 - (1) Stormwater Manager prepares memo detailing request, including exhibits and mitigation plan, and presents it to Water Resources Board.
 - (2) Stormwater Manager recommends to Board whether to approve, approve with conditions, or deny the variance.
 - (3) If the Water Resources Board grants the variance, the Stormwater Manager drafts a letter or record to be signed by the Director of the Water Resources Board.
 - (a) The letter must reiterate the mitigation elements and conditions, as well as express the need for the developer to adhere to the water quality standards and existing permits.
 - (4) Stormwater Manager sends a letter of record to the applicant, along with a letter of record to relevant staff and Planning Department.

Note: All variance request documents (including the Variance Request Checklist, Application to Appear Before the Water Resources Board, and copy of 18-704 of the Stormwater Ordinance), are to be kept in the Town of Signal Mountain filing system. The designer/operator must comply with the vegetation requirements and the permissible land uses set forth for buffers in the MS4 permit.

18-705. Permanent SCM maintenance and inspection.

(1) As built plans. All applicants are required to submit actual as built plans for any structures located on-site within 90 days after final construction is completed. The plan must show the final design specifications for all stormwater management facilities and must be sealed by either a registered professional engineer or landscape architect licensed to practice in Tennessee. A sealed certification by the design engineer that all SCM's will function within design parameters as constructed shall accompany the as built plans. A final inspection by the Town is required before any performance security or performance bond will be released. The Town 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 stormwater management facilities have been made and accepted by the Town.

(2) In addition to the certified as built drawings, the Town shall be provided with a permanent stormwater management plan for the site and all stormwater management facilities (e.g., SCM's). Occupation permits shall not be granted until the permanent stormwater management plan has been approved and accepted by the Town.

(3) Inspection of stormwater management facilities. Periodic inspections of facilities shall be performed, documented, and reported in accordance with this chapter, as detailed in §18-706.

(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 Town 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 Town, after notice as specified in the Enforcement Response Plan, 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 Town 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 Town may take necessary corrective action. The cost of any action by the Town under this section shall be charged to the responsible party.

(6) In the event that the stormwater management facility becomes a danger to public health/public safety- the Town may take such immediate corrective action as deemed necessary.

18-706. Permanent SCM's: new development, existing locations, and ongoing developments.

(1) On-site stormwater management facilities inspection and maintenance agreement¹

- (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 subsection (v) 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 individual(s) approved by the Town who will submit a signed written report of the inspection to the Town. It shall also grant permission to the Town 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 needed to meet the intended design specification of the stormwater facility.
 - (iv) Provide that maintenance needs must be addressed in a timely manner, on a schedule to be determined by the Town.
 - (v) Provide that if the property is not maintained or repaired within the prescribed schedule, the Town 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 Town's cost of performing the maintenance shall be a lien against the property.
- (2) Existing problem locations – no maintenance agreement

(a) The Town 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 SCM's that have not been maintained and/or inspected in accordance with this ordinance shall be regarded as non-compliant discharges.

(b) Inspection of existing facilities. The Town 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 Town's NPDES MS4 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 SCM's.

(3) Owner/Operator Inspections. The owners and/or operators of the SCMs shall:

(a) Perform routine inspections to ensure that all SCM'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 Town 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 years, at a minimum. Such inspections must be conducted by individual(s) approved by the Town. Complete inspection reports for these five-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 BMP's, and
- (vii) Specific maintenance items or violations that need to be corrected by the BMP owner along with deadlines and reinspection dates.

(c) Owners or operators shall maintain documentation of these inspections. The Town may require submittal of this documentation.

(4) Requirements for all existing locations and ongoing developments. The following requirements shall apply to all locations and developments 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 the BMP Manual and on a schedule acceptable to the Town.
- (b) Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed.
- (c) Drainage ways shall be appropriately stabilized.
- (d) Trash, junk, rubbish, etc. shall be cleared from drainage ways.
- (e) Stormwater runoff shall, at the discretion of the Town be treated 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
 - (1) Media Filter
 - (2) Sand filter
 - (3) Filter/absorption bed
 - (4) Filter and buffer strips
- (v) Open channel
 - (1) Swale

(5) Corrections of problems subject to appeal. Corrective measures imposed by the Town under this section are subject to appeal under section 18-710 of this chapter.

18-707. Illicit discharges.

(1) Scope. This section shall apply to all water generated on developed or undeveloped land entering the Town'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. No person shall allow discharges that flow from a stormwater facility that is not inspected in accordance with section 18-706. 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) Water line flushing
- (b) Landscape irrigation

- (c) Diverted stream flows
- (d) Rising ground waters
- (e) Uncontaminated ground water infiltration (Infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.)
- (f) Uncontaminated pumped ground water
- (g) Discharges from potable water sources
- (h) Air conditioning condensation
- (i) Irrigation water
- (j) Springs
- (k) Water from crawl space pumps
- (l) Footing (foundation) drains
- (m) Lawn watering
- (n) Individual residential car washing
- (o) Flows from riparian habitats and wetlands
- (p) Dechlorinated swimming pool discharges
- (q) Street wash water with no soaps or solvents
- (r) Discharges or flows from firefighting activities
- (s) Any other uncontaminated water source
- (t) Dye testing is an allowable discharge if the town has so specified in writing.

Unless the Town determines they are significant contributors of pollutants to the MS4.

(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. This prohibition expressly includes

SCM's connected to the system not properly inspected and maintained in accordance with this ordinance.

(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 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 SCM's that have not been maintained and/or inspected in accordance with this ordinance shall be prohibited.

(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 Town 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 Town 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 illegal dumping allowed. No person shall dump or otherwise deposit outside an authorized landfill, convenience center or other authorized garbage or trash collection point, any trash or garbage of any kind or description on any private or public property, occupied or unoccupied, inside the Town. Such illegal activity exposes runoff to contamination, generating an illicit discharge. Therefore, any individual or corporation guilty of illegal dumping may have committed a violation of this ordinance. (as added by Ord. #2001-6, Dec. 2001, and replaced by Ord.: 2003-7, Nov. 2003, and Ord. #2014-10, Dec. 2014)

18-708. Enforcement.

(1) Enforcement authority. The Town shall have the authority to issue notices of violation and citations, and to impose civil penalties to anyone that violates 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 Town, The Town's enforcement authority includes (as set forth in the Town's Enforcement Response Plan (ERP)):

- (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 Town 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 Town'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 Town may also use other escalated measures provided under local legal authorities. The Town 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 Town 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 Town 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 Town. 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 Town 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 Town 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 Town 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 Town finds that any person has violated or continues to violate this chapter or any permit or order issued hereunder, the Town 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 Town 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 Town. 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 Town 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(s) adopted by the Town under this ordinance, the strictest standard shall prevail. (as added by Ord. #2001-6, Dec. 2001, and replaced by Ord.: 2003-7, Nov. 2003, and Ord. #2014-10, Dec. 2014)

18-709. 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 Town, shall be guilty of a civil offense.

(2) Penalties. Under the authority provided in Tennessee Code Annotated § 68-221-1106, the Town declares that any person violating the provisions of this chapter may be assessed a civil penalty by the Town 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.

(3) Measuring civil penalties. In assessing a civil penalty, the Town shall consider:

- (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 Town; The amount of penalty established by ordinance or resolution for specific categories of violations; and
- (f) 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 Town may recover:

- (a) All damages proximately caused by the violator to the Town, 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.
- (b) The costs of the Town's maintenance of stormwater facilities when the user of such facilities fails to maintain them as required by this chapter.

(5) Referral to TDEC. In accordance with the Town's Enforcement Response Plan and the NPDES Permit requirements, the Town may also notify TDEC of violations. Where the town has used progressive enforcement to achieve compliance with this ordinance, and in the judgment of the town has not been successful, the town 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 SIC code, if known);
- (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 Town 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. (as added by Ord. #2001-6, Dec. 2001, and replaced by Ord.: 2003-7, Nov. 2003, and Ord. #2014-10, Dec. 2014)

18-710. 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 Town's governing body.

(1) Appeals to be in writing. The appeal shall be in writing and filed with the municipal recorder or clerk within fifteen (15) days after the civil penalty and/or damage assessment is served in any manner authorized by law.

(2) Public hearing. Upon receipt of an appeal, the Town's governing body, or other appeals board established by the Town'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 Town shall be final.

(3) Appealing decisions of the town council. Any alleged violator may appeal a decision of the town council pursuant to the provisions of Tennessee Code Annotated, title 27, chapter 8. (as added by Ord. #2001-6, Dec. 2001, and replaced by Ord.: 2003-7, Nov. 2003, and Ord. #2014-10, Dec. 2014)

This Ordinance shall become effective immediately from and after its passage as provided by law.

Passed First Reading:

Passed Second Reading:

Mayor

Date

Recorder

Date

