CHAPTER 2

STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL

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- 11-201. <u>Short title</u>. This chapter shall be known as the "Peak Stormwater Management and Erosion and Sediment Control Ordinance of the Town of Jonesborough, Tennessee." (Ord. of Feb. 12, 1974, as replaced by Ord. #99-12, Sept. 1999, Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-202. <u>Purpose</u>. The purpose of this chapter is to conserve the land, water and other natural resources of the Town of Jonesborough; and promote the public health and welfare of the people by establishing requirements for the peak flow control of stormwater, erosion and sediment and by establishing procedures whereby these requirements shall be administered and enforced; and to diminish threats to public safety from degrading water quality caused by the run-off of excessive stormwaters and associated pollutants; and to reduce flooding and the hydraulic overloading of the town's stormwater system; and to reduce the economic loss to individuals and the community at large. (Ord. of Feb. 12, 1974, as replaced by Ord. #99-12, Sept. 1999, Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-203. <u>Definitions</u>. For the purpose of this chapter, the following words and phrases shall have the meanings respectively ascribed to them by this section:
- (1) "Adequacy of outfalls." The capacity of the receiving channel, stream, waterway, storm drain system, etc., and a determination whether it is adequately sized to receive runoff from the developed site so as to not cause erosion and/or flooding.
- (2) "Best Management Practices (BMPs)." A schedule of activities, prohibitions of practices, design, construction and maintenance procedures, and other management practices to prevent the pollution of stormwater runoff.
- (3) "Development." Any activity on one (1) acre or more or on three (3) lots or more that involves making changes to the land contour by grading, filling, excavating, removal, or destruction of topsoil, trees, or vegetative covering.

(4) "Denuded area." Areas disturbed by grading, tilling, or other such activity in which all vegetation has been removed and soil is exposed directly to the elements allowing for the possibility of erosion and stormwater and sediment run-off.

(5) "Developer." Any person, owner, individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns.

(6) "Drainage." A general term applied to the removal of surface or subsurface water from a given area either by gravity or by pumping; commonly

applied to surface water/stormwater.

(7) "Drainage ways and local waters." Any and all streams, creeks, branches, ponds, reservoirs, springs, wetlands, wells, drainage ways and wet weather ditches, or other bodies of surface or subsurface water, natural or artificial including Jonesborough's stormwater system; lying within or forming a part of the boundaries of the Town of Jonesborough, or the areas under the regulatory responsibility of the Jonesborough Planning Commission that are adjacent to or intended to be served by the Jonesborough Sewer System.

(8) "Enforcement officer." The building inspector, the public works director or any other person designated by the Jonesborough Board of Mayor and Aldermen to enforce the stormwater management, erosion and sediment

control ordinance.

(9) "Erosion." The general process whereby soils are moved by flowing surface or subsurface water.

(10) "Exceptional and historical trees." Those trees or stands of trees that are exceptional representatives of their species in terms of size, age, or unusual botanical quality, or which are associated with historical events.

- (11) Exceptional waters of the state." Surface waters of the State of Tennessee that satisfy the characteristics as listed in Rule 1200-4-3-.06 of the official compilation rules and regulations of the State of Tennessee. Characteristics include waters with exceptional biological diversity or other waters with outstanding ecological or recreational value as determined by the State of Tennessee.
- (12) "Grading permit." The permit that must be issued by the building inspector, or in his/her absence, an enforcement officer, before any land disturbing activity is undertaken by a developer; or when grading, filling, or excavating is proposed on any project. Even though issued separately, grading permit fees shall be covered under the cost of building permits.

(13) "Impaired waters of the state." Any segment of surface waters that has been identified by the State of Tennessee as failing to support classified uses. The State of Tennessee periodically compiles a list of such waters known

as the 303(d) list.

(14) "Land disturbing activity." Means any activity which may result in soil erosion from water or wind and the movement of sediments into drainage

ways, or local waters, including, but not limited to, clearing, grading, excavating, transportation and filling of land, except that the term shall not include:

(a) Such minor land disturbing activities as home gardens and individual home landscaping, repairs and maintenance work.

(b) Construction, installation or maintenance of utility lines and individual service connections, or septic lines and drainage fields.

(c) Emergency work to protect life, limb or property.

(15) "Stormwater management facility." Term is used in a general sense to mean retention ponds, detention ponds, sediment basins, sediment traps, and any other structure that is constructed to reduce or control stormwater run-off and prevent silt and other pollutants from entering the town's waterways. When terms such as sediment basins and detention ponds are used in this chapter, they are also intended to describe a variety of possible structures whose applications in certain circumstances helps control stormwater and waterway pollutants.

(16) "Stormwater plan." For the purpose of this chapter; a stormwater plan refers to a formal written document and/or drawing addressing grading, stabilization using vegetation, stormwater conveyance, stormwater management, and erosion and sediment controls, as specified in §§ 11-205 through 11-208, that is reviewed by the public works director and/or building inspector with possible other technical assistance as deemed necessary, reviewed by the Jonesborough Planning Commission, and if approved by the planning commission is used as the basis for the building inspector to issue a grading permit that allows land disturbing activity to proceed.

(17) "SWPPP (Stormwater Pollution Prevention Plan)." This is a combination of an erosion and sediment control plan and a narrative in accordance with the State of Tennessee's current construction general permit.

- (18) "Waters of the state." Defined in the Tennessee Water Quality Control Act and 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 to effect a junction with natural surface or underground waters. (Ord. of Feb. 12, 1974, as replaced by Ord. #99-12, Sept. 1999; Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-204. Regulated land disturbing activities. (1) Except as provided in subsections 11-204(2) and (3), it shall be unlawful for any person to engage in any land disturbing activity on any commercial development, on any multi-family development, or any single-family development, construction, or renovation activity involving at least one (1) acre of land disturbance, construction activity that is part of a larger common development or sale that

would disturb at least one (1) acre of land, or three (3) lots or more without submitting and obtaining approval of a stormwater plan as detailed in §§ 11-206 through 11-209 of this chapter, and being issued a grading permit by the building inspector.

- (2) Any person who owns, occupies and operates private agriculture or forest lands shall not be deemed to be in violation of this chapter of land disturbing activities which result from the normal functioning of these lands, however, the public works director and the building inspector have the authority to require "best practices" erosion and sediment control measures if pollution and run-off problems are evident.
- (3) Any state or federal agency not under the regulatory authority of the Town of Jonesborough for stormwater management, erosion and sediment control. (Ord. of Feb. 12, 1974, as replaced by Ord. #99-12, Sept. 1999, Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-205. Permit required for any land disturbing activity. Any land disturbing activity, as defined, shall require a grading permit, in addition to any building permit, which must be issued by the building inspector prior to the commencement of any work. Grading permits for regulated land disturbing activities as defined in § 11-204 will be issued by the building inspector only upon the developer meeting requirements outlined in §§ 11-206 through 11-209 of this chapter which includes obtaining approval of a stormwater plan by the Jonesborough Planning Commission. Building permit fees will cover the cost of obtaining a grading permit.

A grading permit is also required for any development or construction activity on less than one (1) acre of land. However, said development and construction activities do not require a formal stormwater plan unless they are commercial or multi-family developments or a stormwater plan is specifically requested by the planning commission.

A pre-construction meeting shall be held between the Town of Jonesborough and the developer (or their representative) for any project that discharges directly into or is immediately upstream of a siltation or stream-side habitat impaired or exceptional waters of the state. No grading operations may take place until after the pre-construction meeting and perimeter sediment control devices are in place and functional. (Ord. of Feb. 12, 1974, as replaced by Ord. #99-12, Sept. 1999, Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

11-206. <u>Stormwater plan required</u>. A stormwater plan shall be required for all developments, subdivisions, or construction activities involving one (1) or more acres, of land disturbance, construction activity that is part of a larger common development or sale that would disturb at least one (1) acre of land, or

three (3) lots or more, except as exempted in §§ 11-204(2) and 11-204(3) of this chapter. A stormwater plan shall be required for all commercial construction or renovation, or any multi-family residential facility regardless of the acreage or number of units. If necessary to protect the health and safety of the people, the planning commission may, at its discretion, require a stormwater plan for any development or renovation under an acre, or single-family subdivision with less than three (3) lots. (Ord. of Feb. 12, 1974, as replaced by Ord. #99-12, Sept. 1999, Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14 04-09-18*)

11-207. <u>Plan requirements</u>. The stormwater plan shall be prepared and designed by a registered design professional qualified to prepare stormwater plans in accordance with State of Tennessee law and in accordance with the current State of Tennessee Construction General Permit, where applicable. The length and complexity of the plan is to be commensurate with the size of the project, severity of the site condition, and the potential for off-site damage.

For projects which require a construction general permit through the State of Tennessee, the SWPPP (plan and narrative) shall be prepared by a person in accordance with the current State of Tennessee Construction General Permit and submitted to the town. The SWPPP shall contain all required information at required by the current State of Tennessee Construction General Permit. Be aware that the requirements for projects which drain into impaired or exceptional waters of the state are different than for projects draining to an unimpaired water of the state.

The plan shall include at least the following:

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

(2) Contour intervals of five feet (5') or less showing present conditions

and proposed contours resulting from land disturbing activity.

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

(4) A general description of existing land cover; individual trees and

shrubs do not need to be identified.

(5) Stands of existing trees as they are to be preserved upon project completion, specifying their general location on the property. Differentiation shall be made between existing trees to be preserved, trees to be removed and proposed planted trees. Tree protection measures must be identified, and the diameter of the area involved must also be identified on the plan and shown in feet per inches. Information shall be supplied concerning the proposed destruction of exceptional and historic trees in setbacks and buffer strips, where they exist. Complete landscape plans may be submitted separately but must

meet guidelines established in chapter 5 of title 11 of the municipal code. The plan must include the sequence of implementation for tree protection measures.

- (6) Limit of disturbance showing approximate limits of proposed clearing, grading and filling.
- (7) Drainage area map showing pre and post development stormwater leaving any portion of the site.
- (8) A general description of existing soil types and characteristics and any anticipated soil erosion and sediment problems resulting from existing characteristics.
- (9) Location, size, details, and layout of proposed stormwater management improvements. Provide appropriate details such as a profile through the principal spillway with cut-off trench, anti-seep control, trash rack details, compaction/backfill details or notes, riser detail, outlet stabilization, and emergency spillway detail for detention ponds and other details/sections as needed for the contractor to build the structures.

Any opening in a riser structure and its overflow shall have a trash rack to prevent the openings, the riser, and/or the principal spillway from becoming clogged. The trash racks shall not be flat across the openings.

Provide hydraulic calculations sealed by a registered professional engineer for stormwater facilities. As a minimum, the calculations shall include a pre and post development drainage area map, brief narrative, pre and post development run-off data, and routing calculations to determine the outflow rate.

- (10) Proposed closed and open drainage network.
- (11) Proposed storm drain or waterway sizes.
- (12) Location and amount of stormwater run-off leaving site after construction and stormwater management measures proposed. The evaluation must include projected effects on property adjoining the site and on existing drainage facilities and systems. The plan must address the adequacy of outfalls from the development. When water is concentrated, what is the capacity of waterways and storm drains, if any, accepting stormwater off-site, and what measures including infiltration, sheeting into buffers, outfall setbacks, etc. are to be used to spread concentrated run-off and prevent the scouring of waterways and drainage areas off-site.

If the downstream storm drain or waterway is not of sufficient size to handle the post development run-off, or even the pre-development a review shall be undertaken to determine if any reasonable accommodation can be given in the stormwater plan to reducing the likelihood of problems downstream. The plan will be expected to address, to the extent reasonable, improvements that will reduce the release rate to no greater than the capacity of the downstream storm drains or waterways.

Outfall pipes from storm drain systems and stormwater management facilities shall be setback sufficiently from off-site properties to allow the concentrated water to spread out back to pre-development flow characteristics. Under no circumstance shall an outfall pipe, as measured from the end section, headwall, or pipe, if no end structures used, be any closer than ten feet (10') from the off-site property unless a drainage easement from the off-site property owner is obtained and recorded. The outfall setback shall be determined by the engineer and shall be based on outflow rate and the receiving channel or pipe characteristics.

Stormwater discharge from a concentrated point such as a pipe outfall shall discharge onto rip-rap or other velocity/energy dissipating method to reduce erosion potential. All rip-rap or other stone used to reduce velocity shall be placed on a geotextile to prevent scouring and the stone from sinking into the underlying soil.

The overflow path through the site and from any stormwater management device for stormwater run-off above the design storm event, shall

not impact any structure.

(13) The projected sequence of construction represented by the grading, drainage and erosion and sediment control plans as related to other major items of construction, beginning with the initiation of excavation and including the construction of any sediment basins or stormwater facilities. The sequence of construction is a vital component of the stormwater plan and it explains to the contractor, and building inspector, when the drainage and sediment control devices are to be in place.

The sequence of construction shall state that no clearing or grading may begin until all perimeter sediment control devices are in place and functional.

(14) Specific remediation measures to prevent erosion and sediment run-off and to meet approved standards as outlined in § 11-208 of this chapter. Plans shall include detailed drawings of all control measures used; stabilization measures including vegetation and non-vegetative measures, both temporary and permanent, will be detailed. Detailed construction notes and a maintenance schedule shall be included for all control measures in the plan.

If a detention pond is to be used initially as a temporary sediment basin, then appropriate details and notes shall be provided showing how the pond will increase the residence time of the sediment laden water and when and how the sediment basin is to be converted to a permanent detention pond. Typically this conversion occurs once the upland drainage area to the pond has been stabilized. The sequence of construction shall include notes on when these activities are to take place.

The use of earth berms/dikes, swales, sediment traps, outlet structures, and sediment basins are strongly encouraged over the use of silt fence and straw bales for long term projects and where concentrated run-off is present.

All disturbed areas that will not be disturbed again within fourteen (14) days shall be temporarily or permanently stabilized with seed, mulch, and/or other appropriate measures within fourteen (14) days of grading or clearing operations ceasing. It is very important that disturbed soil be stabilized as soon as possible to prevent sediment run-off. For slopes 3:1 or steeper, they must be

temporarily or permanently stabilized within seven (7) days of grading ceasing on those slopes.

(15) A stone construction exit per the Tennessee <u>Sediment Control Handbook</u> shall be provided for all construction ingress/egress points for all construction projects including single lot construction. This is required in order to prevent mud, sediment, and debris on Jonesborough streets and public ways at a level acceptable to the public works director or building inspector. Mud, sediment, and debris brought onto streets and public ways must be removed by the end of the day by machine, broom or shovel to the satisfaction of the public works director. Failure to remove said sediment, mud or debris shall be deemed a violation of this chapter.

It is the contractor's responsibility to prevent sediment from leaving the construction site and this includes sediment leaving the site by way of run-off flowing out the entrance or by vehicular tires carrying the sediment into the street. If there is run-off flowing down the construction exit to the street, a mountable stone berm or equivalent measures shall be used to direct the run-off to sediment control devices adjacent to the exit. The use of smaller stone or gravel other than shown in the Tennessee Sediment Control Handbook is not permitted.

- (16) Proposed structures; location (to the extent possible) and identification of any proposed additional building, structures or development on the site.
- (17) A description of on-site measures to be taken to recharge surface water in to the ground water system through infiltration, if appropriate for the site.
- (18) The plan must have the seal of the design professional responsible for creating the plan. The stamped and signed plan, if approved, shall be copied and be the official plan that must be available in the field during construction. (as added by Ord. #99-12, Sept. 1999, and replaced by Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-208. <u>Plan must contain measures to meet approved standards</u>. The stormwater plan shall contain measures that will ensure development, construction or site work will meet or exceed the following standards:
- (1) The development fits within the topography and soil conditions in a manner that allows stormwater and erosion and sediment control measures to be implemented in a manner satisfactory to the Jonesborough Planning Commission. Development shall be accomplished so as to minimize adverse effects upon the natural or existing topography and soil conditions and to minimize the potential for erosion.
- (2) Plans for development and construction shall seek to minimize cut and fill operations. Construction and development plans calling for excessive cutting and filling shall be justified to the Jonesborough Planning Commission.

- (3) During development and construction, adequate protective measures shall be provided to minimize damage from surface water to the cut face of excavations or the sloping surfaces of fills. Fills shall not encroach upon natural water courses, their flood plains; or constructed channels in a manner so as to adversely affect other properties.
- (4) Pre-construction vegetation ground cover shall not be removed, destroyed, or disturbed prior to obtaining a grading permit. Perimeter sediment controls shall be in place prior to the start of clearing or grading operations.
- (5) Developers shall be responsible upon completion of land disturbing activities to leave slopes and developed or graded areas so that they will not erode. Such methods include, but are not limited to, re-vegetation, mulching, rip-rapping or gunniting, and retaining walls. Bank cuts and fills should preferably be 3:1 slopes or flatter; however, they shall not exceed a 2:1 slope without planning commission approval and must be permanently stabilized. Regardless of the method used, the objective is to leave the site as erosion and maintenance free as is practical.
- (6) Provisions are implemented that accommodate any increased in stormwater run-off generated by the development in a manner in which the pre-development levels of run-off for the two- and ten-year storm events are not increased during and following development and construction. The board of mayor and aldermen reserves the right to require stormwater management to maintain pre-development levels of run-off for the 25-, 50-, 100-year storm event, when it is determined that it is in the best interest of the town to consider "partnering" with the developer to further reduce stormwater flows onto adjoining properties or if a known flooding problem exists downstream.

Any stormwater detention or retention pond shall also be designed to pass the 100-year storm (peak attenuation to the 100-year pre-development rate is not required) through the pond without over topping any portion of the dam. This can be accomplished through the principal spillway and emergency spillway, which shall be installed on virgin soil and not to be placed on fill material or the dam. If it is not feasible to place the emergency spillway on virgin soil then the principal spillway shall be designed for the 100-year storm.

To the extent necessary, sediment in run-off water must be trapped by the use of sediment basins, silt traps or other sediment control measures until the disturbed area is stabilized. Structural controls shall be designed and maintained as required to prevent pollution. The town strongly encourages the use of sediment traps/basins and earth berms/dikes for sediment control measures. Silt fence may be used but should not always be the first or only device considered.

All off site surface water flowing toward the construction or development area shall, to the extent possible, be diverted around the disturbed area by using berms, channels, or other measures as necessary. Limiting the amount of run-off, especially concentrated run-off, from flowing through the construction site can be extremely helpful in preventing or significantly reducing sediment

run-off. Under no circumstances, unless a drainage easement is obtained, may be diverted off site run-off be redirected onto off site properties or be diverted onto an off site property's existing drainage way in a manner that would cause harm to the property.

- (7) All grading, vegetation, drainage, stormwater, erosion and sediment control mitigation measures shall conform to any or all best management practices approved and revised from time to time by the board of mayor and aldermen and meet the requirements of the current State of Tennessee's Erosion and Sediment Control Handbook.
- (8) All perimeter sediment control devices such as earth berms/dikes, swales, sediment basins, sediment traps, and other perimeter drainage and sediment control measures shall be installed in conjunction with initial work and must be in place and functional prior to the initial grading operations. These measures must be maintained throughout the development process. Sediment basins and/or sediment traps may be temporary, but shall not be removed without the approval of an enforcement officer.
- (9) Existing trees shall not be cut or otherwise damaged or destroyed within portions of the property to be used for required open space, if required, setback or buffer requirements of the Jonesborough Zoning Ordinance or the Jonesborough Landscape Ordinance, without the formal approval of the Jonesborough Planning Commission. When hardships or development problems exist in these areas, the Jonesborough Planning Commission may entertain plans that include planted trees and vegetation in setback and buffer areas.

The town strongly encourages the developer or builder to not remove existing trees in order to construct a stormwater management facility.

- (10) Heritage trees in setbacks, buffer strips and required open spaces shall not be removed without receiving approval of the Jonesborough Planning Commission. The Jonesborough Building Inspector, with the possible technical assistance of the Washington County Extension Agent and the soil conservationist, shall make the initial determination related to any exceptional and/or historical trees prior to review by the planning commission and the issuance of grading and building permits.
- (11) A permanent undisturbed buffer shall be provided from the top of bank along both sides of streams, rivers, lakes, wetlands, or other waters of the state except as necessary for the installation of utilities, development of roads crossing the waterway, trails and walkways, or construction of outfalls for stormwater facilities and related drainage improvements and for removal of invasive species to enhance the existing buffer. These utility, road, trail/walkway, and stormwater outfall disturbances shall be designed to minimize disturbance and impact on the waters of the state and their buffers. Any disturbance to streams, wetlands, or other waters of the state require an aquatic resource alteration permit through the State of Tennessee.

The buffer widths are based on the drainage area to the point along the stream or other waters of the state where the buffer is being determined:

For drainage area less than one (1) square mile, the buffer (a)

is thirty feet (30').

For drainage areas one (1) square mile or more, the buffer is sixty feet (60') average with a thirty foot (30') minimum width. To use the sixty foot (60') average/thirty foot (30') minimum method, it must be shown that the straight sixty foot (60') width would be a hardship to developing the property and may not be based solely on the difficulty or the cost of implementation.

If it is not practical to provide the required buffer or only a portion of the buffer can be provided, approval through the Town of Jonesborough Board of Zoning Appeals must be obtained. Justification for this variance must be justified in accordance with the Town of Jonesborough Board of Zoning Appeals

criteria.

During construction, a temporary thirty foot (30') average (fifteen foot (15') minimum) undisturbed buffer or equivalent measures, shall be provided from the top of the stream bank. If the stream or water of the state is impaired due siltation or streamside habitat removal or is an exceptional water of the state, the temporary undisturbed buffer during construction is increased to a sixty foot (60') average (thirty foot (30') minimum) or equivalent measures.

Soil and other materials shall not be temporarily or permanently stored in locations which would cause suffocation of root systems of trees intended to be preserved. Stockpiled soils shall have silt fencing or other sediment control measures surrounding, and shall be located away from street, curbs and drainage ways to prevent sediment from getting into local waters or

streets and public ways.

Land shall be developed to the extent possible in increments of workable size, which can be completed in a single construction season, spring to fall. Erosion and sediment control measures shall be coordinated with the sequence of construction, development and construction operations. Control measures such as berms, interceptor ditches, terraces, and sediment and silt

traps shall be put into effect prior to any next stage of development.

The permanent vegetation shall be installed on areas of the construction site that are outside of the building area, pad or footprint, as soon as utilities are in place and final grades are achieved. Without prior approval of an alternate plan by the Jonesborough Planning Commission, permanent or temporary soil stabilization must be applied to disturbed areas outside of the building pad or footprint within fourteen (14) days from substantial completion of grading, or where these disturbed areas outside the building site will remain unfinished for more than fourteen (14) calendar days. The building area should be stabilized with a concrete pad or the footprint covered with gravel.

Stormwater management facilities and drainage structures shall, where possible, use natural topography and natural vegetation. In lieu thereof, these structures shall have planted trees and vegetation such as shrubs and permanent ground cover on their borders, except no woody vegetation such as trees and shrubs shall be planted on dam areas or within twenty-five feet (25') of the dam. Plant varieties shall be those sustainable in a drainage way environment or as may be outlined in best management practices.

Landscaping of detention ponds shall be in accordance with the Town of

Jonesborough <u>Detention Pond Landscape Manual</u>.

- (16) In many situations stormwater management facilities and drainage structures need to be fenced in order to protect public safety. The Jonesborough Planning Commission may require fencing for any basin or structure. When fencing is required, the following specifications apply:
 - (a) Height minimum of forty-two inches (42").
 - (b) For residential areas and high visibility commercial areas, the fencing shall be split rail with black or green vinyl coated wire attached, or some other type of attractive fencing but shall not be chain link fencing.

For commercial and industrial uses, the fencing may be chain link up to six feet (6') tall if the fencing is not visible from residential zone or used property or a public right of way. Under no circumstances may barbed wire be used.

- (c) A lockable access gate of a minimum width of twelve feet (12') must be provided to allow access by equipment and machinery as needed for maintenance.
- (d) An adequate access road to the gate sufficient for maintenance vehicles and equipment.

The Jonesborough Planning Commission may consider and approve other fencing alternatives provided that the alternatives presented meet minimum safety and security objectives.

(17) Stormwater plans must meet minimum requirements established by the State of Tennessee's Construction General Permit, where applicable, and in their erosion and sediment control handbook. If there is a conflict between these regulations and the State of Tennessee's regulation, the most stringent regulation shall apply.

All erosion and sediment control devices shall be designed for the two (2) year, 24-hour storm as a minimum. For drainage area of ten (10) acres or more to a single outfall point, a sediment basin(s) or equivalent measures shall be used and designed for the 2-year, 24-hour storm.

For projects which drain into an impaired or exceptional water of the state, the erosion and sediment control devices shall be designed for the 5-year, 24-hour storm and a sediment basin or equivalent measures shall be used for drainage areas of five (5) acres or more to a single outfall point.

(18) The Town of Jonesborough wishes to minimize the negative effects of development on our environment, on our economy, and on our health while at the same time reducing development costs for the developers and maintenance costs for the town and the developer. All efforts should be utilized to implement site design and non-structural stormwater management practices

to reduce and minimize runoff in new development. Efforts to enhance infiltration, passage or movement of water into the soil surface, reduction of hard surfaces, minimizing the concentration of runoff, and lengthening of the time of concentration should be a priority.

The following BMPs and stormwater credits can be applied to the peak and water quality stormwater calculations thereby reducing the size and cost of the stormwater BMPs:

- (a) Natural area conservation. The preservation of forest, wetlands, pasture land, and other sensitive areas of existing vegetation thereby retaining pre-development hydrologic and water quality characteristics. If these areas are undisturbed and placed in a recorded protective easement, these areas may be subtracted from the total site area when calculating water quality volume. The post development curve numbers for these areas can be modeled as forest in good condition.
- (b) Disconnection of rooftop runoff. Rooftop runoff that is disconnected from another impervious surface and directed over a pervious area will infiltrate into the soil or be filtered by the surface material. The longer the flow path of the water from the pipe across vegetated areas, the greater the filtering and infiltration of the run-off which in turn improves water quality and reduces downstream run-off.

If the lot is graded to disperse the rooftop runoff as sheet flow through at least fifty feet (50') of thick grass or other thick vegetation or through at least twenty-five feet (25') of existing woodlands, fifty percent (50%) of the rooftop impervious area draining through the vegetation may be modeled as grass in good condition when calculating the post development curve number. If reforestation or planted landscape beds equal in area to fifty percent (50%) of the rooftop area is placed in the path of the disconnected rooftop runoff, then the remaining fifty percent (50%) of the rooftop impervious area may be modeled as grass in good condition when calculating the post development curve number.

If the rooftop runoff is discharged into a properly designed and constructed bioretention facility/rain garden onsite, one hundred percent (100%) of the rooftop impervious area draining to the device may be modeled as grass in good condition when calculating the post development curve number.

In addition, under both conditions listed above, the total impervious area in the water quality calculations may be reduced relative to the impervious area reduction associated with the curve number credit.

If downspouts need to be piped away from building foundations to prevent damage to the foundations, the pipes must outfall at least ten feet (10'), preferable further, from any property line. If the downspouts are piped and the runoff cannot disperse in accordance with the above requirements, no stormwater credit is available.

(c) Disconnection of non-rooftop impervious runoff. Rooftop runoff that is disconnected from another impervious surface and directed over a pervious area will infiltrate into the soil or be filtered by the surface material. The longer the flow path of the water across vegetated areas, the greater the filtering and infiltration of the runoff which in turn improves water quality and reduces downstream runoff.

Discharging run-off from impervious surfaces onto pervious surfaces through the use of pervious pavers, permeable paving surfaces, rain gardens/bioretention facilities, grassed swales, use of open road sections in lieu of curbed roads, and by grading the site so that run-off travels from an impervious surface to a pervious surface before being collected in a drainage system. All of these increase filtering and infiltration of stormwater before the flows become concentrated and this in turn improves water quality and reduces downstream run-off which means pipes, swales, ditches, and stormwater facilities can be smaller.

Avoid sending run-off from one impervious surface directly onto another impervious surface. Place pervious surfaces between impervious surfaces along the run-off path.

If the site is graded to disperse the impervious runoff as sheet flow through at least fifty feet (50') of thick grass or other thick vegetation or through at least twenty-five feet (25') of existing woodlands, fifty percent (50%) of the impervious area draining through the vegetation may be modeled as grass in good condition when calculating the post development curve number. If the impervious runoff is discharged into a properly designed and constructed bioretention facility/rain garden onsite, one hundred percent (100%) of the impervious area draining to the device may be modeled as grass in good condition when calculating the post development curve number.

- (d) Sheet flow. Maintain sheet flow for as long as possible before the run-off has to be collected in a stormwater conveyance system. Sheet flow increases infiltration and lengthens the time of concentration which in turn improves water quality and reduces run-off downstream. Spread out concentrated flows created by the development before they are discharged offsite using stilling basins, level spreaders, directing run-off through woodlands, or other means so the run-off returns to pre-development characteristics to meet the adequacy of outfall provision of this chapter and to improve water quality and reduce run-off downstream.
 - (e) Grass channels in lieu of piping or hard surface channels.
- (f) Environmentally sensitive development. Maintaining/not disturbing environmentally sensitive areas such as streams, stream buffers, existing woodlands, existing steep slopes, wetlands, etc., the reduction of cut and fill, excavating, etc. and the appropriate balance of buildings and parking on the development site.

- (g) Improvements to and the reduction in the impervious areas on the development site. Design parking lots with the minimum amount of hard surface required to meet the zoning regulations. If additional parking area is desire, the town strongly encourages the employee and/or overflow parking areas to be constructed in a more pervious material than asphalt or concrete. If the parking regulations require excessive parking for your type of development, discuss the issue with the town staff. If the town staff feels a reduction in the number of required parking spaces is justified, a variance can be submitted to the board of zoning appeals to reduce the parking requirements which in turn will reduce the amount of impervious surface installed.
- (h) Increased use of trees, shrubs and ground cover, which absorb up to fourteen (14) times more rainwater than grass and require less maintenance.
- (19) Neighboring persons and property shall be protected from damage or loss resulting from an increase in stormwater run-off above the pre-development rate, soil erosion, or the deposit upon private property, public streets or right-of-ways of silt and debris transported by water from construction, excavating, grading, etc. associated with a development. (as added by Ord. #99-12, Sept. 1999, and replaced by Ord. #2001-13, Sept. 2001, Ord. #2005-09, March 2005, and Ord. #2008-13, Oct. 2008, amended by Ord. #2009-10, Sept. 2009, and replaced by Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-209. <u>Permit application</u>. In addition to the stormwater plan, applications for a grading permit involving land disturbing activities must include the following:
 - (1) Name of applicant.
 - (2) Business or residence address of applicant.
 - (3) Name and address of owner(s) of property involved in activity.
- (4) Address and legal description of property, and names of adjoining property owners.
- (5) Name, address and state license number of contractor, if different from applicant, and to the extent possible any subcontractor(s) who shall undertake the land disturbing activity and who shall implement the stormwater plan.
- (6) A brief description of the nature, extent, and purpose of the land disturbing activity.
- (7) Proposed schedule for starting and completing project. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

- 11-210. Plan development at owner/developer's expense. Unless approved by the board of mayor and aldermen, all stormwater plans shall be developed and presented at the expense of the owner/developer. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-211. Plan submitted to building inspector. Four (4) copies of the stormwater plan shall be submitted directly to the building inspector who will direct a copy to any other enforcement officer or department, and may provide copies to the soil conservationist and extension agent or others for review. Any insufficiencies and violations determined by the building inspector and other enforcement officer(s) shall be noted and comments will be directed back to the applicant/developer. The plan will then be revised as required prior to being presented to the Jonesborough Planning Commission. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 Ch14_04-09-18)
- 11-212. <u>Plan submitted in number satisfactory to planning commission</u>. The Jonesborough Planning Commission shall determine the number of copies of the stormwater plan that must be provided to the commission by the owner/developer. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-213. <u>Plan review</u>. The Jonesborough Planning Commission shall review the stormwater plans as quickly as possible while still allowing for a thorough evaluation of the problems and mitigation measures identified and addressed. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-214. Grading permit and bond. Following approval of the stormwater plan by the planning commission, a grading permit shall be obtained from the building inspector. No grading permit shall be issued until a contractor performance bond or irrevocable line of credit is posted in the amount determined to be reasonable by the planning commission. A project cost summary must accompany the application so that it can be used to help determine the bond amount. The bond may not be higher than an amount equal to the estimated cost of the improvements, and said bond shall only be released by the building inspector following completion of construction and acceptance of the grading, vegetation, drainage, stormwater management, and erosion and sediment control measures. The bond shall be made out to the town of

jonesborough and if issued in conjunction with a subdivision plan, shall include the cost of paving, landscaping, and utilities including streetlights if decorative lights are submitted and approved. If after eight (8) months from the start of construction it appears that the drainage and sediment plan activities approved by the jonesborough planning commission will not be implemented within a twelve (12) month period, the Jonesborough Planning Commission, at its discretion after a notice of non-compliance has been properly issued as outlined in § 11-228 of this chapter and the developer has failed to comply, may cash said contractor's performance bond or utilize the irrevocable line of credit to complete all of the improvements approved or any portion of the stormwater plan activities it deems necessary to protect the health and safety of residents and to protect the quality of local waters. Upon the posting of the bond, the developer must sign and have notarized an approved certification granting permission for any stormwater plan activities, and any landscaping, paving and utility improvements also approved, to be made on the property in case of default. The planning commission may waive the requirement for a contractor's performance bond or line of credit for work on an acre or more in which the land disturbing activities are very minimal and are similar to single lot residential development. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 Ch14 04-09-18)

- protective measures. The building inspector and the public works director have the authority at their discretion to require ground cover or other remediation measures preventing stormwater, erosion and sediment run-off, if either determines after construction begins that the plan and/or implementation schedule approved by the planning commission does not adequately provide the protection intended in the chapter and in the approval issued by the commission. Additional protective measures required by the public works director and/or the building inspector that fall under the authority of the planning commission are subject to appeal under the procedures outlined in § 11-231 of this chapter. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 Ch 14_04-09-18)
- 11-216. <u>Certification of design professional</u>. The registered design professional responsible for developing the stormwater plan may be required to provide written certification to the extent possible that the stormwater management facility approved by the planning commission have been implemented satisfactorily and are in compliance with the approved plan. The building inspector or designee will ultimately have final approval authority through the issuance of a certificate of occupancy as designated in § 11-229. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March

2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

- 11-217. Stormwater management facilities and drainage structures maintained. All on-site stormwater management and drainage structures shall be properly maintained by the owner/developer during all phases of construction and development so that they do not become a nuisance. Nuisance conditions shall include: improper storage resulting in uncontrolled run-off and overflow; stagnant water with concomitant algae growth, insect breeding, and odors; discarded debris; and safety hazards created by the facilities operation. When problems occur during any phase of construction and development, it is the responsibility of the developer to make the necessary corrections. Corrective actions will be monitored and inspected by the enforcement officer. The board of mayor and aldermen may accept ownership of stormwater management facilities in behalf of the town under the terms set forth in § 11-219 of this chapter, however, unless the town accepts ownership the developer, or a legal entity acceptable to the planning commission, shall have on-going responsibility to see that the stormwater management facility is properly maintained and operational. The developer shall provide the necessary permanent easements to provide town personnel access to the stormwater management facilities and drainage structures for periodic inspection. A right-of-way to conduct such inspections shall be expressly reserved in the permit. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, Ord. #2015-04, April 2015 Ch14 04-09-18)
- 11-218. <u>Improperly maintained stormwater management facilities and drainage structures a violation</u>. The building inspector and/or the public works director shall periodically monitor and inspect the care, maintenance and operation of stormwater management facilities and drainage structures during and after construction and development. Facilities found to be a nuisance, as defined in § 11-217, are in violation of the ordinance and are subject to fines of up to five thousand dollars (\$5,000.00) per day for each day of violation¹ with each additional day considered a separate violation. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-219. <u>Town may take ownership of stormwater management facilities</u> and drainage structures. The Jonesborough Planning Commission shall have the authority to recommend to the board of mayor and aldermen that the town

¹State law reference <u>Tennessee Code Annotated</u>, § 68-221-1101.

take ownership of stormwater management facilities and drainage structures provided that the commission feels the public interest is best served by the town providing on-going responsibility for maintenance and up-keep. The board of mayor and aldermen will consider the recommendations of the planning commission on a case-by-case basis. In such cases, approval of the transfer of ownership shall only occur after the board of mayor and aldermen has received an inspection report from the enforcement officers, with the possible technical assistance of the Washington County Extension Agent and/or conservationist or others, that certifies to the extent possible said devices have been properly constructed and landscaped, are operating effectively, and appropriate safety and protective measures have been implemented or constructed. The designing engineer shall also certify that the stormwater management/drainage facility meets the standards outlined in best management practices. Transfer of ownership to the town shall occur at or near the completion of the subdivision or development and the developer must provide fee simple title to the property on which the stormwater management or drainage structure is located and/or any necessary easements allowing the Town of Jonesborough to get access to the facilities for routine maintenance and The Jonesborough Planning Commission shall declare its intent to recommend to the board of mayor and aldermen that the town accepts responsibility for stormwater management facilities and drainage structures when approving the stormwater plan, and when the plan is approved, the developer shall be responsible for maintenance and upkeep until any board action is finalized. The board of mayor and aldermen will make a final determination whether to accept the stormwater management/drainage facility within one (1) year from the date the stormwater management facility or drainage structure has been completed. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 Ch14_04-09-18)

- 11-220. <u>Technical assistance</u>. The town staff, as determined by the town administrator, are available for consultation and advice concerning stormwater management and erosion and sediment problems to all persons planning to develop land within the town or under the subdivision jurisdiction of the Jonesborough Planning Commission. (as added by Ord. #2001-13, Sept. 2001 and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-221. Building inspector and/or public works director responsible for providing safeguards in projects less than one acre or utilizing less than three lots. Projects undertaken within the city limits of Jonesborough that are not subject to review and approval of the Jonesborough Planning Commission shall fall under the responsibility of the enforcement officers to see that the measures required in this chapter to protect the health and safety of the people and to

protect the quality of surface water are carried out as needed. The enforcement officers shall require reasonable drainage and erosion and sediment control measures as part of the grading permit process outlined in § 11-222. Under no conditions shall the developer/contractor of a property allow silt or sediment to enter drainage ways or adjoining properties, or allow stormwater flows to adversely impact adjoining properties. Denuded areas, cuts, and slopes in areas outside the building site shall be properly covered within the same schedule as directed in § 11-208(14) of this chapter. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

- 11-222. Grading permit also required for any project on less than one acre involving grading, filling, or excavating. A grading permit is also required for any development or construction activity on property one (1) acre or less except for: the normal functioning and operation of private agriculture and forest lands; any state or federal agency not under the regulatory authority of the Town of Jonesborough for stormwater management, sediment and erosion control; and minor land disturbing activities such as home gardens, individual home landscaping, repairs and maintenance. However, said development and construction activities do not require a formal stormwater plan unless specifically requested by the planning commission. The building inspector shall require that all grading, vegetation, drainage, stormwater, erosion and sediment control measures necessary shall be implemented, shall conform to any and all best management practices, and shall meet the objectives established in this chapter. Developers must also present to the building inspector a description of the measures that will be taken to address the requirements established in §§ 11-207(14) and (15) of this chapter - avoiding mud, sediment, rock and debris on public ways and streets. These measures must be addressed prior to the building inspector issuing a grading permit. Measures preventing excess run-off and erosion must be in place prior to the commencement of grading and/or excavation. (as added by Ord. #2001-13, Sept. 2001, amended by Ord. #2001-17, Dec. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, Ord. #2015-04, April 2015 Ch14_04-09-18)
- 11-223. Existing developed properties with drainage, erosion and sediment concerns. Properties of any size within the city limits of the Town of Jonesborough that have been developed or in which land disturbing activities have previously been undertaken, are subject to the following requirements:
- (1) Denuded areas still existing as of the second and final reading of this chapter must be vegetated or covered under the standards and guidelines specified in the best management practices adopted by the board of mayor and aldermen, and on a schedule acceptable to the enforcement officers.
- (2) Cuts and slopes must be properly covered with appropriate vegetation and/or retaining walls constructed.

(3) Drainage ways shall be properly covered in vegetation or secured with stones, etc. to prevent erosion.

1) Junk, rubbish, etc. shall be cleared of drainage ways to prevent

possible contaminate and pollution.

- (5) Stormwater run-off in commercial areas, office or medical facilities, shall be controlled to the extent reasonable to prevent pollution of local waters. Such control measures may include, but not be limited to, the following:
 - (a) Oil skimmer/grit collector structure or other water quality device. These structures are designed to skim off floatables out of parking lots and other impervious surfaces, and allow solids of debris and sediment to settle before being discharged in a local waterway.
 - (b) Stormwater management facilities.
 - (c) Planting and/or sowing of vegetation and other nonstructural measures.
 - (d) Rip-rapping, mulching, and other similar erosion control measures associated with local drainage ways. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-224. Improvements needed at existing locations/developments determined by the building inspector and/or director of public works. Improvements needed to provide drainage and sediment control in existing and completed developments shall be determined by either the enforcement officers. The enforcement officers shall evaluate existing developments, parking areas, site work, and drainage ways to determine if additional measures to protect health and safety and water quality are needed. Assistance in undertaking the evaluations and making recommendations may be provided by the soil conservationist and/or the county extension agent. Recommendations shall be:

(1) Provided in writing to the property/business owner.

- (2) Detailed as to specific actions required and why these actions are necessary.
- (3) Made with a reasonable period of time for implementation. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-225. <u>Improvements required in existing developments normally at owner's expense</u>. Drainage and sediment control measures required in existing developed properties shall normally be undertaken at the property or business owner's expense. Unless, determined otherwise by the board of mayor and aldermen, drainage and sediment control measures implemented shall be properly maintained by the property or business owner. The board of mayor and aldermen, however, at its discretion in circumstances in which board members

feel the town's participation is essential to protecting the health and safety of residents and the water quality of Jonesborough's drainage ways, may approve cost-sharing or total financial responsibility for needed drainage and sediment control measures. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

- 11-226. Town may take responsibility for existing stormwater management facilities and drainage structures. The Jonesborough Planning Commission may recommend that the board of mayor and aldermen take responsibility for existing stormwater management facilities and drainage structures if the commission determines that the general public is better served when said facilities are under the long-term maintenance responsibility of the town. The board of mayor and aldermen will consider these recommendations on a case-by-case basis. Facilities considered shall be accepted as outlined in § 11-219 of this chapter. The Jonesborough Planning Commission may also recommend to the board of mayor and aldermen that the town participate in making certain improvements to existing facilities in addition to accepting responsibility for their long-term maintenance and care if the commission feels said improvements are in the best interest of the general public. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 Ch14_04-09-18)
- 11-227. Improvements required with existing developments subject to appeal. Improvements required by the enforcement officers as outlined in §§ 11-224 and 11-225 of this chapter are subject to appeal by the property/business owners to the Jonesborough Planning Commission as specified in § 11-231. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-228. Monitoring, reports, and inspections. The public works director and/or the building inspector, with the possible assistance others, shall make periodic inspections, during construction and development, of the land disturbing activities, the stormwater management system installations, and other activities requiring a grading permit to ensure compliance with the approved plan and Jonesborough's Best Management Practices. For construction sites draining to siltation impaired stream or exceptional waters of the state, the town shall perform monthly inspections. Inspections will evaluate whether the measures required in the stormwater plan and/or grading permit and undertaken by the developer are effective in controlling erosion. The right of entry to conduct such inspections shall be expressly reserved in the permit.

As a minimum, the owner/operator of any construction project which requires a stormwater plan is required to perform twice weekly inspections of their erosion and sediment control devices and to perform required maintenance in a timely manner. If the construction project requires a construction stormwater permit through the State of Tennessee, the owner/operator shall perform inspections, site assessments, maintenance of devices, and documentation in accordance with the State of Tennessee's current construction general permit.

For drainage areas of ten (10) acres or more to a single outfall (five (5) acres or more if draining to siltation or stream-side habitat alteration impaired or exceptional waters of the state), a site assessment by the design professional who prepared the plans shall be performed within one (1) month of grading or clearing operations starting to verify the installation, functionality and performance of all erosion and sediment control measures on the plans and in the SWPPP. Any issues shall be addressed immediately and the plans and

SWPPP updated, if applicable.

If the public works director or the building inspector determines that the permit holder has failed to comply with plan approval, the following procedures

shall apply:

(1) A notice from the enforcement officer shall be served on the permit holder either by registered or certified mail, delivered by hand to the permit holder or an agent or employee of the permittee supervising the activities, or by posting the notice at the work site in a visible location, that the permit holder is in non-compliance.

(2) The notice of non-compliance shall specify the measures needed to comply and shall specify the time within which such corrective measures shall be completed. The enforcement officer shall require a reasonable period of time for the permittee to implement measures bringing the project into compliance, however, if it is determined by the enforcement officer that health and safety factors or the damage resulting from being non-compliant is too severe, immediate action may be required.

(3) If the permit holder fails to comply within the time specified, the permittee may be subject to the revocation of the permit. In addition, the permittee shall be deemed to be in violation of this ordinance and upon

conviction shall be subject to the penalties provided in this chapter.

(4) In conjunction with the issuance of a notice of non-compliance, or subsequent to the permittee not completing the corrective measures directed in the time period required, the building inspector, or his designee, may issue an order requiring all or part of the land disturbing activities on the site be stopped. The stop work order may be issued with or as part of the notice of non-compliance, or may be delivered separately in the same manner as directed in § 11-228(1). (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

- 11-229. Certificate of occupancy not issued until approvals. The building inspector will not issue a certificate of occupancy necessary to occupy any commercial or residential establishment until all aspects of the stormwater plan including stormwater management facilities have been completed, control devices constructed have been approved and accepted, and, if within a subdivision or commercial development, all paving, landscaping of public ways, and utilities, including street lighting if decorative lights are used, are approved and accepted. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-230. <u>Plan construction acceptance and bond release</u>. Stormwater plan activities must be inspected and accepted by the enforcement officer. If within a commercial or subdivision development, streets, sidewalks, curbs and alleys, landscaping, street lighting, water, sewer, and any installation of electric, telephone, cable, and gas utilities must be approved and accepted by the appropriate official. An approval and acceptance form shall be completed by all monitoring and regulatory authorities before the building inspector releases the associated performance bond. The building inspector will sign a release on the approval and acceptance form as soon as all of the project criteria have been satisfied and approved. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)
- 11-231. Appeal of administrative action. Actions taken by the enforcement officer as authorized in §§ 11-215, 11-221, 11-226, 11-228, 11-229, and 11-230 are subject to review by the jonesborough planning commission provided an appeal is filed in writing with the chairman of the planning commission within thirty (30) days from the date any written or verbal decision has been made which the developer feels adversely affects his/her rights, duties or privileges to engage in the land disturbing activity and/or associated development proposed. Drainage and sediment mitigation actions required by the building inspector and enforcement officer with existing properties or developments are also subject to appeal to the Jonesborough Planning Commission provided that appeals are made in writing, within thirty (30) days of receiving formal notification, to the commission chairman citing the specific reason(s) the activity or activities required present a hardship and cannot be implemented. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 Ch14_04-09-18)
- 11-232. Town clean-up resulting from violations at owner/developer's expense. Town staff is authorized at any time during construction and development to take remedial actions to prevent, clean-up, repair or otherwise

correct situations in which water, sediment rock, vegetation, etc. ends up on public streets and/or right-of-ways resulting from violations of this chapter; where necessary drainage erosion and sediment control measures have not been properly implemented. In such cases, the cost of labor, equipment, and materials used will be charged to the developer/owner in addition to a service charge of one hundred dollars (\$100.00) per hour. The town will invoice the developer/owner directly, and payment shall be received within fourteen (14) days. Failure to pay for remedial actions taken by the town under this section may result in the town attorney filing a lien against the property involved in the action, and may negate any intention by the town to accept responsibility for any drainage and sediment control facilities. The decision of the town to take remedial actions to protect the health and safety of the public in no way supplants or negates the authority of the appropriate town staff to issue citations for violations of this chapter. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

- 11-233. <u>Illicit discharge and illegal dumping</u>. (1) The owner/operator if the site or project must design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
 - (a) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 - (b) 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; and
 - (c) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
 - (2) The following discharges are prohibited from construction sites:
 - (a) Wastewater from washout of concrete, unless managed by an appropriate control.
 - (b) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials
 - (c) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.
 - (d) Soaps or solvents used in vehicle and equipment washing. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

11-234. Penalties; enforcement. Any developer or 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 any authorized enforcement officer or the Jonesborough Planning Commission, shall be guilty of a violation of this municipal ordinance, and each day of such violation or failure to comply shall be deemed a separate offense and punishable accordingly. Upon conviction, the developer or person shall be subject to fines of up to five thousand dollars (\$5,000.00) per day for each day of violation¹. Unless otherwise specified within any section of this chapter, the building inspector and the public works director are the designated enforcement officers of this ordinance. Citations for violations may be issued by any enforcement officer, the public safety director or any Jonesborough Police Officer. (as added by Ord. #2001-13, Sept. 2001, and replaced by Ord. #2005-09, March 2005, Ord. #2008-13, Oct. 2008, Ord. #2012-09. July 2012, and Ord. #2015-04, April 2015 Ch14 04-09-18)

11-235. <u>Severability</u>. If any provision of this chapter is held to be unconstitutional or invalid, such unconstitutionality or invalidity shall not affect any remaining provisions. (as added by Ord. #2008-13, Oct. 2008, and replaced by Ord. #2012-09, July 2012, and Ord. #2015-04, April 2015 *Ch14_04-09-18*)

¹State law reference <u>Tennessee Code Annotated</u>, § 68-221-1101.