

## **ORDINANCE NO. 996**

### **AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE CITY OF COLLEGEDALE, TENNESSEE, BY ADDING TO TITLE 14 A NEW CHAPTER 5 FOR THE PURPOSE OF REGULATING AND CONTROLLING THE RUNOFF OF STORMWATER**

The City of Collegedale Ordains:

- Section 1. Existing Title 14, Chapter 5 to the Code of Ordinances of the City of Collegedale is hereby deleted in its entirety.
- Section 2. A new Title 14, Chapter 5 to the Code of Ordinances of the City of Collegedale is hereby added to read as follows:

#### **TITLE 14**

#### **CHAPTER 5**

#### **STORMWATER RUNOFF REGULATION AND CONTROL**

#### **DIVISION 1 - GENERAL PURPOSE AND GENERAL REQUIREMENTS**

- 5.1 Purpose: The purpose of this ordinance is to diminish threats to the public health and safety caused by the runoff of excess stormwater, to reduce the possibilities of hydraulic overloading of the storm sewer system, to reduce economic losses to individuals and the community at large as a result of the runoff of excess stormwater, and to protect and conserve land and water resources, while at the same time ensuring orderly development. The provisions of this ordinance are specifically intended to supplement existing ordinances regulating the following:
- 1. The subdivision, layout, and improvement of lands located within the City of Collegedale.
  - 2. The excavating, filling, and grading of lots and other parcels or areas.
  - 3. The construction of buildings, including related parking and other paved areas, and the drainage of the sites on which those structures and their related parking and other paved areas are located.

4. The design, construction, and maintenance of stormwater drainage facilities and systems.

5.2 Definitions: For the purposes of this ordinance, the following definitions are adopted:

1. Base Flood Elevation: The elevation delineating the flood level having a one-percent probability of being equaled or exceeded in any given year (also known as the 100-year flood elevation), as determined from Flood Insurance Rate Maps (FIRMs) or the best available information.
2. Channel: A natural or man-made open watercourse with definite bed and banks which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water.
3. City Engineer: The person formally designated by the City of Collegedale as the City Engineer.
4. Control Elevation: Contour lines and points of predetermined elevation used to denote a detention storage area on a plat or site drawing.
5. Detention Facility: A facility constructed or modified to restrict the flow of stormwater to a prescribed maximum rate, and to concurrently detain the excess waters that accumulate behind the outlet.
6. Detention Storage: The temporary detaining or storage of stormwater in storage basins, on rooftops, in streets, parking lots, school yards, parks, open space, or other areas under predetermined and controlled conditions, with the rate of drainage therefrom regulated by appropriately installed devices.
7. Discharge: The rate of outflow of water from any source.
8. Drainage Area: The area from which water is carried off by a drainage system, i.e., a watershed or catchment area.
9. Excess Stormwater Runoff: The rate of flow of stormwater discharged from an urbanized drainage area which is or will be in excess of that rate which represented or represents the runoff from the property prior to the date of this ordinance.
10. Floodplain: The special flood hazard lands adjoining a watercourse, the surface elevation of which is lower than the Base Flood Elevation and is subject to periodic inundation.

11. Hydrograph: A graph showing, for a given point on a stream or conduit, the runoff flow rate with respect to time.
12. One Hundred-Year Storm: A precipitation event of 24-hours' duration, having a one percent chance of occurring in any one year.
13. Peak Flow: The maximum rate of flow of stormwater at a given point in a channel or conduit resulting from a predetermined storm or flood.
14. Stormwater Drainage System: All means, natural or man-made, used for conducting stormwater to, through, or from a drainage area to the point of final outlet including, but not limited to, any of the following: open and closed conduits and appurtenant features, canals, channels, ditches, streams, swales, culverts, streets, and pumping stations.
15. Stormwater Runoff: The waters derived from precipitation within a tributary drainage area, flowing over the surface of the ground or collected in channels or conduits.
16. Time of Concentration: The elapsed time for stormwater to flow from the most distant point in a drainage area to the outlet or other predetermined point.
17. Two-Year Storm: A precipitation event having a fifty percent chance of occurring in any one year.
18. Two-Year Storm Runoff: The stormwater runoff having a fifty percent probability of occurring in any one year.
19. Upland Area: Any land whose surface drainage flows toward the area being considered for development.
20. Watercourse: Any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, street, roadway, swale, or wash in which water flows in a definite direction, either continuously or intermittently, and which has a definite channel, bed, or banks.
21. Wet Bottom Detention Basin: A basin designed to retain a permanent pool of stormwater after having provided its planned detention of runoff during a storm event.

5.3 Permit: Before initiating any activity regulated by this ordinance, an applicant shall be required to obtain an approval of the construction plans by the City which indicates that the requirements of this Chapter 5 have been met.

Land Disturbance Permit fees:

0 - 1 acres = \$25.00

Over 1 acres = \$100.00

5.4 Other Requirements: In addition to meeting the requirements of Division 2 and before starting any activity regulated by this ordinance, an applicant shall comply with the requirements set forth in all other related ordinances and State statutes and regulations, including but not limited to the Tennessee Department of Environment and Control Construction General Permit and the Hamilton County Water Quality Program.

5.5 -- 5.9 Reserved

## **DIVISION 2 - SPECIFIC REQUIREMENTS**

5.10 General: Sediment shall be maintained on site and excess stormwater runoff shall be detained in connection with any new construction, development, redevelopment or land use change occurring within the City of Collegedale in accordance with the requirements set forth in this Chapter 5. Notwithstanding the foregoing, exceptions to this requirement are as follows:

1. For stormwater detention, the development of any single-family or two-family lot not a part of a larger development unless the impervious area exceeds 10,000 square feet.
2. For stormwater detention, the development of commercial, industrial, high density residential or agricultural property in which the increase in the run off rate does not exceed the pre-development rate of run off.
3. A determination by the City that the excess runoff from the proposed construction, development, redevelopment or land use change will be insufficient to adversely affect the carrying capacity of the receiving body or watercourse. In this connection and should the City's determination of insufficient adverse effect be sought, the developer shall make available to the City such hydraulic or hydrologic computations as will support the requested exception.

- 5.11 Discharge Rate: The peak discharge after full development resulting from the proposed development shall not exceed the corresponding peak discharge rate prior to development during storms of 1-year, 2-year, 5-year, 10-year and 25-year return frequency storm as determined at the property line of the development.
- 5.12 Flood Elevation: There shall be no detrimental effect on the floodway or the flood elevation during a 100-year storm upstream or downstream of the proposed development area as a result of the proposed development.
- 5.13 Allowable Detention Facilities: The increased stormwater runoff resulting from proposed development shall be detained by providing for appropriate detention storage as required by this Chapter 5. In no case shall the design maximum water elevation of a detention facility be less than one (1) foot below the lowest ground elevation adjacent to, or opening into an existing or future structure or above the elevation of any public street.
- 5.14 Detention Storage: Designs for detention storage and related appurtenances shall be submitted to the City for approval. Upon submittal of a design the City shall determine as to those control elevations that shall be entered on the final plat or make a determination as to the necessity for deed restrictions on any particular lot in said subdivision. Where a non-subdivided parcel of land is proposed for development, the City shall make a determination as to the need for covenants to maintain responsibility for mandatory drainage facilities. All said facilities shall be designed and constructed in accordance with the City of Collegedale specifications and shall be located in easements dedicated to the public.
- 5.15 Sizing of Detention Storage and Outlet:
1. The drainage area used in computation will be the total area tributary to the detention storage outlet.
  2. The developer will be required to submit detailed hydrologic and hydraulic calculations to show that the requirements of this Chapter 5 will be met. A unit hydrograph method of analysis (SCS) will be used for detailed hydrologic computations. The hydrologic report shall show and state that there is no increase in the stormwater runoff rates as a result of the development.
  3. No orifice or flow control opening shall be less than 1" in size.

- 5.16 Discharge Velocity: The discharge velocity from detention facilities shall not exceed three feet per second at the property line unless it is determined by the City that greater velocities will not be harmful to the receiving channel. Where the City's determination is requested, the developer shall make available such hydraulic or hydrologic computations as will adequately support the course of action being requested.
- 5.17 Emergency Spillway: Emergency spillways shall be provided to permit the safe passage of runoff generated from rainfall events up to the 100-year rainfall event.
- 5.18 Freeboard: Detention storage areas shall have adequate capacity to contain the storage volume of tributary stormwater runoff with at least one foot of freeboard above the water surface during the 100-year rainfall event.
- 5.19 Joint Development of Control System: Stormwater control systems may be planned in coordination by two or more property owners as long as the potential for damage from stormwater is not increased at intervening locations.
- 5.20 Early Installation of Control Systems: Stormwater control measures shall be installed prior to undertaking other grading of site and a schedule of construction for this purpose shall be submitted prior to construction in the City of Collegedale.
- 5.21 Flows from Upland Areas: The total drainage area must be used in calculating the allowable release rate. The required storage volume will be based on the project area only, with extraneous flows from upland areas being bypassed or discharged via overflow spillways or other devices. Where storm sewers are required they shall be of such size as will provide sufficient capacity to receive the flow generated by ten-year storm from upland areas. As to the latter and regardless of whether it has occurred in fact, such upland areas shall be deemed to have been fully developed for all purposes of this requirement.
- 5.22 Land Disturbance of One Acre or More: The developer shall comply with the State of Tennessee General NPDES Permit for Stormwater Discharges Associated with

Construction Activity, the Hamilton County Water Quality Program and provide copies of each to the City prior to starting construction.

- 5.23 All Land Disturbances: Land disturbances associated with any new construction, development, redevelopment, or land use change regardless of use shall incorporate into the development plan the following elements as a minimum:

Stone construction entrance

Silt fence or other sediment retaining device on the low side of the site

Temporary seeding of disturbed areas remaining open more than two weeks

Removal of soil tracked into the public right-of-way

Permanent seeded

A copy of the development plan shall be submitted to the City prior to starting construction.

5.24--5.29 Reserved

### **DIVISION 3**

#### **ADDITIONAL SUBDIVISION AND BUILDING IMPROVEMENT REGULATIONS**

- 5.30 Preliminary Plats: Information indicating the manner in which the provisions of this ordinance are to be met shall be indicated on all preliminary plats.
- 5.31 Requirements for Construction Plans: Information indicating the manner in which the provisions of this ordinance are to be met shall be submitted with all construction plan submissions or any other plan for improvements which falls under the requirements of Division 2. All computations, plans and specifications shall be prepared and sealed by a professional engineer registered in the State of Tennessee.

Requirements for Final Plats: The easements or separate lots required for detention facilities shall be shown on the final plat. The control elevation for each detention facility shall be shown on the plat near the detention facility.

5.32 Drainage and Detention Design Requirements: All subdivisions and other proposed improvements which are subject to the provisions of Division 2 shall incorporate such design features as are required in this Chapter 5. Variation from these requirements shall require the approval of the City Commission whose action shall be conditioned upon the following:

1. That a petition be submitted describing in detail the rationale for the proposed design change.
2. That there are special circumstances or conditions affecting the property under consideration such that strict compliance with the provisions of this Chapter 5 would deprive the applicant of the reasonable use of his land.
3. That the variance is necessary for the preservation and enjoyment of a substantial property right of the proprietor.
4. That the granting of the variance will not be detrimental to the public health, safety or welfare or injurious to other property in the territory in which said property is located.

5.33 Maintenance: Designs for detention storage and related appurtenances will incorporate features which facilitate their inspection and maintenance. The designer shall submit an Operation and Maintenance (O&M) plan for any detention facility prior to its approval. The O&M plan will address silt removal, vegetative growth control, erosion control in the structure and the maintenance of the inlet and outlet structures and safety features. All detention facilities may be inspected by the City at such times they deem necessary. If deficiencies, or conditions creating nuisances, are found, the owner shall be required to initiate the necessary corrections with fourteen (14) days after notification, and all deficiencies shall be corrected within thirty (30) days.

5.34 Safety Features: Designs of detention facilities shall incorporate safety features, particularly at inlets, outlets, on steep slopes, and at any attractive nuisances. These features shall include, but not be limited to, fencing, hand rails, lighting, steps, grills, signs, and other protective or warning devices so as to restrict access.



- 5.35 Sediment ponds which are constructed with the intent of being used as a detention pond once the site is stabilized shall be cleaned, graded, stabilized and the control structure modified as required before it will be acceptable to the City.
- 5.36 Wet detention ponds are allowed but will require additional safety features and maintenance requirements due to their appeal. This may include flatter slopes along the normal water line, aeration, a greater level of maintenance and other features to insure safe and proper operation.
- 5.37 The property owner shall enter into an Inspection and Maintenance Agreement for a Stormwater Detention Facility with the City indicating that the owner will be responsible for the operation and maintenance of the facility.
- 5.38 -- 5.39 Reserved

#### **DIVISION 4 - ADMINISTRATION**

- 5.40 Responsibility: The administration of this ordinance shall be the responsibility of the City of Collegedale.
- 5.41 Interpretation: In the interpretation and application of this ordinance, the provisions expressed herein shall be held to be the minimum requirements and shall be liberally construed in favor of the City of Collegedale.
- 5.42 Appeal: The City of Collegedale Commission is hereby designated as the appeals board for disputes arising from the application of this Ordinance. The Commission shall hear appeals where it is alleged by an appellant that there is error in any order, requirement, decision, grant or refusal made by the City in the enforcement of the provisions of this Ordinance.
- 5.43 Penalties for violation.
1. General: Any person, firm, organization, association or corporation violating any of the provisions of this Chapter 5, including violation of any variances granted under the authority of this Chapter 5, shall be deemed guilty of a municipal ordinance and each

such person or other entity shall be deemed guilty of a separate offense for each and every day or portion thereof that any violation of any of the provisions of this code is committed, continued or permitted, and upon conviction of such violation, such person or other entity may be punished by a fine of not less than fifty dollars (\$50.00) and more than five hundred dollars (\$500.00).


2. Additional Corrective Actions: Any building or structure constructed in violation of the provisions of this Chapter 5 or any use carried on in violation of this Chapter 5 is hereby declared to be a nuisance per se, with any court of competent jurisdiction having the authority to determine that the owner or developer is guilty of maintaining a nuisance per se and to order such nuisance abated. In this connection, the City is hereby authorized to institute any appropriate action or proceeding in any appropriate court to prevent, restrain, correct or abate any violations of this Chapter 5.
3. The provisions of this chapter are in addition to and not in restriction of limitations or rights that the citizens of the City of Collegedale may have under the Common laws of the State of Tennessee.

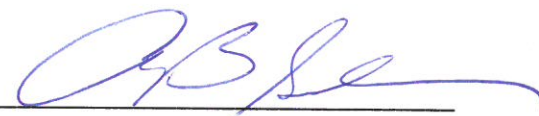
Passed first reading 7/7/14

Votes for 5 Votes against 0

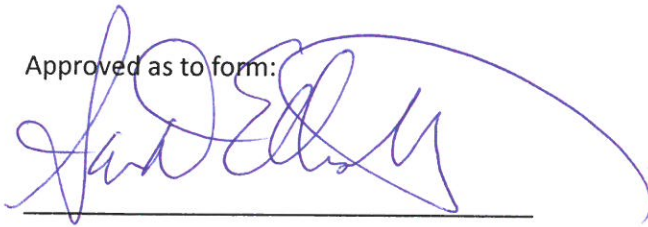
Passed second reading 7/21/14

Votes for 5 Votes against 0

  
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Mayor

  
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Attest: City Recorder

Approved as to form:

  
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City Attorney