AMENDING CHAPTER 30

AN ORDINANCE AMENDING THE GREENSBORO CODE OF ORDINANCES WITH RESPECT TO ZONING, PLANNING AND DEVELOPMENT

(Editor's Note: Added text shown with underlines and deleted text shown with strikethroughs.)

- Section 1. That Section 30-1-3.2(G) is hereby rewritten to read as follows:
- G) Protect water quality within watershed critical areas, and the general watershed areas of designated water supply watersheds and other watershed districts;
- Section 2. That Section 30-1-3.12, Water supply watershed management and protection purposes, is hereby rewritten to read as follows:
- 30-1-3.12. Water supply watershed <u>and other watershed</u> management and protection purposes. The watershed protection regulations, adopted and prescribed in this Ordinance, to protect the public health; are found by the City Council to be necessary and appropriate to:

 (A) Protect those portions of designated water supply watersheds <u>and other watersheds which</u> lie closest to existing and proposed water supply reservoirs from activities which could degrade water quality in the reservoirs and streams;
- (B) Reduce the volume of nutrients and other chemicals which could enter <u>streams and</u> the water supply by reducing the amount of runoff which any given development will generate;
- (C) Minimize land disturbance to reduce the amount of sediment washing into streams and lakes and to enhance the infiltration of runoff into soils, thus alleviating the sedimentation of water supply lakes which reduces their storage capacity, shortens their useful life, and makes them less able to withstand drought;
- (D) Reduce the probability of the release of harmful chemicals into <u>streams and</u> water supply reservoirs, either through natural catastrophe or human error; and
- (E) Provide for natural and engineered methods for managing the stormwater which flushes contaminants off of built-upon areas in the water supply watersheds <u>and other watersheds and</u> which may reach water supply reservoirs <u>and streams</u> unless controlled.
- (F) To require that new development maintain the pre-development hydrologic response in their post-development state as nearly as practicable for the applicable design storm to reduce flooding, streambank erosion, nonpoint and point source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats; and (G) To establish provisions for the long-term responsibility for and maintenance of structural and nonstructural stormwater Best Management Practices (BMPs) to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety.
- Section 3. That Section 30-1-4 is hereby rewritten to read as follows:

The provisions of this Ordinance shall apply to all the territory encompassed in the City of Greensboro, North Carolina <u>as well as its extraterritorial jurisdiction</u> and shall govern the development and use of land and structures therein.

Section 4. That Section 30-2-1 is hereby rewritten to add the following words to the Definition Index within alphabetical order:

<u>Disturbed Area</u>	30-2-2.2
High Density Project	30-2-2.2
Larger Common Plan of Development, Redevelopment or Sale	30-2-2.2
Low Density Project	30-2-2.2
One year, 24-hour storm	30-2-2.2
Perennial Streams	30-2-2.2
Post Construction	30-2-2.2
Structural Best Management Practice	30-2-2.2
Watershed, other	30-2-2.2
Watershed manual	30-2-2.2

Section 5. That Section 30-2-2.2 is hereby rewritten to revise the following definitions:

Intermittent streams. Streams, and lakes and ponds along them, that are indicated as being intermittent 1) on the most recent version of the US Geological Survey 1:24000 scale (7.5 minute quadrangle) topographic maps, 2) on the most recent version of the Soil Survey map developed by the USDA--Natural Resource Conservation Service, or 3) by an examination of site-specific evidence by the City Stormwater Services Management Division using criteria approved by the NC Division of Water Quality or U.S. Army Corps of Engineers. However, if the above-mentioned map indicates an area as an intermittent stream but the Stormwater Management Services Division finds no intermittent water body actually exists on the ground, that area shall not be deemed an intermittent stream. Ponds and lakes created for animal watering, crop irrigation, or other agricultural uses that are not part of a natural drainageway are not streams. If the City of Greensboro develops a detailed stream network map covering one or more watersheds, and that map is approved by the NC Division of Water Quality, then within the watersheds covered by that map intermittent streams shall thenceforth be as shown by that map. In the event of a conflict in stream determination, a NC Division of Water Quality or U.S. Army Corps of Engineers determination shall supersede any local designation.

New development. (1) Any land-disturbing activity which adds to or changes the amount of built-upon area or which otherwise decreases the infiltration of precipitation into the soil; (2) Any land-disturbing activity at an existing development, other than activity exempt as specified by Section 30-7-1.3(B) (Exempt Activities). (This definition applies only with respect to stormwater management and watershed protection regulations.)

Perennial streams. In water supply watersheds other than the Upper and Lower Randleman Lake watersheds, streams shown on the Guilford County Designated Water Supply Watershed Map, dated June 30, 1991. In the Upper and Lower Randleman Lake watersheds, streams, and lakes and ponds along them, that are indicated as being perennial 1) on the most recent version of the US Geological Survey 1:24000 scale (7.5 minute quadrangle) topographic maps, 2) on the most recent version of the Soil Survey map developed by the USDA--Natural Resource Conservation Service, or 3) by an examination of site-specific evidence by the City Stormwater Services Management Division using criteria approved by the NC Division of Water Quality or U.S. Army Corps of Engineers. However, if the above-mentioned map indicates an area as a perennial

stream but the Stormwater <u>ManagementServices</u> Division finds no perennial water body actually exists on the ground, that area shall not be deemed a perennial stream. Ponds and lakes created for animal watering, crop irrigation, or other agricultural uses that are not part of a natural drainageway are not streams. If the City of Greensboro develops a detailed stream network map covering one or more watersheds, and that map is approved by the NC Division of Water Quality, then within the watersheds covered by that map perennial streams shall thenceforth be as shown by that map. In the event of a conflict in stream determination, a NC Division of Water Quality or U.S. Army Corps of Engineers determination shall supersede any local designation. *Riparian protection area*. A stream buffer, or a portion of a stream buffer, subject to stronger maintenance and protection requirements than are applied to other stream buffers. It consists of Randleman Zone 1 and Randleman Zone 2, as described in Section 30-7-1.8 (Stream buffer required).

Stream Buffer. A natural or vegetated area through which stormwater runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants. The buffer width is measured landward from the normal pool elevation of impoundments and from the top of bank on each side of streams or rivers. (This definition applies only with respect to <u>stormwater management and</u> watershed protection regulations.)

Watershed, water supply. The entire area contributing drainage to Lake Townsend, Lake Brandt, Lake Higgins, Oak Hollow Lake, High Point City Lake, Lake Mackintosh, Polecat Creek Lake, and the proposed-Randleman Lake

Watershed map. The map incorporated by reference at Section 30-7-1.2 (Incorporation of Designated Water Supply Watershed Basin-Map(s)).

Section 6. That Section 30-2-2.2 is hereby rewritten to add the following definitions within alphabetical order:

<u>Disturbed Area</u>. Any land area which has been cleared, grubbed, graded, disturbed or otherwise altered for the purposes of development.

High Density Project. Any project that exceeds the low density project threshold for dwelling units per acre or built-upon area percentage. (also see definition of Low Density Project)

Larger Common Plan of Development, Redevelopment or Sale. Any area where multiple separate and distinct construction or land-disturbing activities will occur under one plan.

Low Density Project. A project that has no more dwelling units per acre or percent built-upon area for all residential and non-residential development as specified by Table 30-7-1-4 (DENSITY LIMITS IN WATER SUPPLY WATERSHEDS AND OTHER WATERSHED DISTRICTS IN DWELLING UNITS PER ACRE & % BUILT-UPON AREA).

<u>Post Construction</u>. The condition of a development once the land disturbing activity is complete as it relates to the management and control of stormwater runoff quantity and quality. <u>Storm, one-year 24-hour</u>. The surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in 12 months and with a duration of 24 hours.

<u>Structural Best Management Practice</u>. A physical device designed to trap, settle out, or filter pollutants from stormwater runoff; to alter or reduce stormwater runoff velocity, amount, timing, or other characteristics; to approximate the pre-development hydrology on a developed site; or to achieve any combination of these goals. Structural BMP includes physical practices such as

constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. "Structural BMP" is synonymous with "structural practice," "stormwater control facility," "stormwater control practice," "stormwater treatment practice," "stormwater management practice," "stormwater control measures," and "structural stormwater treatment systems."

<u>Watershed</u>, <u>other</u>. All areas within the jurisdiction not encompassed within a water supply watershed district.

Section 7. That Section 30-2-2.4 is hereby rewritten to revise the following definition:

Water quality conservation easement. A permanent easement for the protection of water quality in which no structures or land-disturbing activities are allowed, except as specified by Section 30-4-7.5 (Easement Encroachments) and Section 30-7-3.2(E)4(C) (Protection of Fragile Areas).

Section 8. That Section 30-2-2.5 is hereby rewritten to revise the following definitions:

Department (DEHNR). The North Carolina Department of Environment, Health, and Natural Resources.

Director (DEHNR). The Director of the Division of Land Resources of the Department of Environment, Health, and Natural Resources.

Section 9. That Section 30-2-2.7 is hereby rewritten to revise the following definition:

Development. Any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures; mining, dredging, filling, grading, paving, excavation, or drilling operations; or storage of equipment or materials. (also see definition of New Development in Section 30-2-2.2-if the property is in a General Watershed Area or Watershed Critical Area).

Section 10. That Section 30-4-1.3, Overlay districts, is hereby rewritten to read as follows:

Overlay districts establish regulations for certain areas in addition to the regulations of the underlying General Zoning or Conditional Zoning District(s). In the event of a conflict between the standards of the underlying zoning district and the overlay district, the standards of the overlay district shall govern.

- (A) HD Historic District. The HD, Historic Overlay District establishes regulations which will help maintain the historic integrity of certain areas within the City. These regulations are specified in Section 30-4-4 (Overlay District Requirements).
- (B) SR Scenic Corridor District. The SR, Scenic Corridor Overlay District establishes regulations which will enhance the attractiveness of certain major thoroughfares within the City. These regulations are specified in Section 30-4-4 (Overlay District Requirements).
- (C) AR Airport District. The AR Airport Overlay District establishes very low residential densities near the Piedmont Triad International Airport so as to minimize the negative effects of aircraft noise on homes and prohibits the erection of structures which would, by virtue of their height, interfere with operations at Piedmont Triad International Airport. These regulations are specified in Section 30-4-4 (Overlay District Requirements).

- (D) MH Manufactured Housing District. The MH, Manufactured Housing Overlay District establishes regulations governing the development of manufactured housing on individual lots in certain areas of the City. These regulations are specified in Section 30-4-4 (Overlay District Requirements).
- (E) WCA Watershed Critical Area District. The WCA, Watershed Critical Area Overlay District establishes regulations for protecting the portion of a water supply watershed adjacent to a water supply intake or reservoir. These regulations are specified in Section 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts) and Section 30-7-3 (Watershed Critical Areas).
- (F) GWA General Watershed Area District. The GWA, General Watershed Area Overlay District establishes regulations for protecting the portion of a water supply watershed outside the WCA. These regulations are specified in Section 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts) and Section 30-7-2 (General Watershed Areas and Other Watershed Districts).
- (G) Other Watershed Area District. The Other Watershed Area Overlay District establishes regulations for protecting a watershed other than a water supply. These regulations are specified in Section 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts) and Section 30-7-2 (General Watershed Areas and Other Watershed Districts).
- (<u>HG</u>) PED Pedestrian Scale Overlay District. The PED, Pedestrian Scale Overlay District establishes regulations to accommodate commercial, residential, office, and neighborhood business uses as infill development and to provide safe, walkable, attractive, pedestrian-oriented areas. These regulations are specified in Section 30-4-4 (Overlay District Requirements).
- (IH) NCO Neighborhood Conservation District . The NCO, Neighborhood Conservation Overlay District establishes regulations to enhance natural, economic, and architectural resources unique to specific areas of the city while protecting neighborhoods from incompatible development. These regulations are specified in Section 30-4-4 (Overlay District Requirements).
- Section 11. That Section 30-4-4.6, Watershed Critical Area Overlay Districts and General Watershed Area Overlay Districts, is hereby rewritten to read as follows:
- Sec. 30-4-4.6. Watershed Critical Area Overlay Districts, and General Watershed Area Overlay Districts and Other Watershed Overlay Districts.

The regulations for these overlay districts are found in Sections 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts), 30-7-2 (General Watershed Areas and Other Watershed Districts), and 30-7-3 (Watershed Critical Areas).

- Section 12. That Section 30-5-4.1(A), Exemptions, is hereby rewritten to read as follows:
- (A) *Exemptions:* The requirements of Section 30-5-4 shall not apply to the uses and activities listed below. Any applicable requirements of Sections 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts), 30-7-2 (General Watershed Areas and Other Watershed Districts), 30-7-3 (Watershed Critical Areas), and 30-7-4 (Soil Erosion and Sedimentation Control) still apply.
- Section 13. That Section 30-6-9.2(B), Design and Construction, is hereby rewritten to read as follows:

(B) *Design and Construction:* Engineered stormwater controls shall be designed and installed in accordance with the requirements of Section 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts).

Section 14. That Section 30-6-9.2(F), Plat Recordation, is hereby rewritten to read as follows:

(F) *Plat Recordation:* If a subdivision lot is dependent upon an engineered stormwater control to meet the requirements of Section 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts), that structure's location and type must be shown on the same plat as the lot or on a plat recorded previously. If the runoff control structure has been completed, with full design volume available (this may require the cleanout and disposal of sediment from the pond), when the plat is recorded, it shall be labeled as existing and an Engineer's Certification of Stormwater Control Completion (Table 30-7-1-6) shall be filled out on the plat. If the structure has not been completed, it shall be labeled as proposed, assurance of its completion, with full design volume available, within one (1) year shall be provided in accordance with Section 30-3-9 (Sureties or Improvement Guarantees), and a prominent asterisk shall be placed on the lot accompanied by a note on the plat stating 1) that no certificate of compliance shall be issued for any building on that lot until the engineered stormwater control has been completed, certified, and approved and 2) that (the name of the person) has posted a guarantee and bears responsibility for its timely completion.

If the Enforcement Officer determines that there is a potential risk that underground rock, buried materials, springs, underground utility lines, or some other obstacle may make construction of the structure unviable, he shall require that excavation for the structure be successfully performed prior to acceptance of a surety or improvement guarantee.

Section 15. That Section 30-6-13.7(A)(1) is hereby rewritten to read as follows:

(1) Refer to Section 27-22 (Stormwater management control requirements) of the Greensboro Code of Ordinances for additional requirements that apply citywide and to Sections 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts), 30-7-2 (General Watershed Areas and Other Watershed Districts), and 30-7-3 (Watershed Critical Areas) for additional requirements that apply in GWA and WCA areas.

Section 16. That Section 30-7-1 is hereby rewritten to read as follows:

30-7-1. WATER SUPPLY WATERSHED AND OTHER WATERSHED DISTRICTS*

Section 17. That Section 30-7-1.1, District descriptions, is hereby rewritten to read as follows:

Two (2) overlay districts cover designated water supply watersheds. They are the Watershed Critical Area (WCA) and the General Watershed Area (GWA). The WCA covers the area adjacent to a water supply intake or reservoir where risk associated with pollution is greater than from the remaining portions of the watershed. No portion of the WCA outer boundary is closer than one-half (-1/2) mile to the normal pool elevation of an existing or proposed designated reservoir. The GWA covers the rest of the watershed draining to the reservoir or intake. The

remaining areas within the City's jurisdiction are hereby referred to as *Other Watershed Districts*.

Section 18. That Section 30-7-1.2, Incorporation of Designated Water Supply Watershed Basin Map(s), is hereby rewritten to read as follows:

30-7-1.2. Incorporation of Designated Water Supply Watershed Basin-Map(s). This Section incorporates by reference the Greensboro Designated Water Supply Watershed Basin Map, dated June-January 1, 2000/2009, showing Watershed Critical Areas and General Watershed Areas of the following: Greensboro (Reedy Fork Creek), Upper Randleman Lake (East and West Forks of Deep River, which drain to High Point City Lake and Oak Hollow Lake), Lower Randleman Lake (Deep River), Lake Mackintosh (Big Alamance Creek), and Polecat Creek watersheds. The map also depicts boundaries of the Other Watershed Districts.

Section 19. That Section 30-7-1.3(A)(1), is hereby rewritten to read as follows:

(1) This Section 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts) applies to all sites containing new development in the <u>City's jurisdiction</u> Watershed Critical Area or General Watershed Area, including grading, paving, gravel placement, and construction of buildings and other structures, except for the exempt activities listed in Section 30-7-1.3(B) below. Section 30-7-2 (General Watershed Areas and Other Watershed Districts) and Section 30-7-3 (Watershed Critical Areas) impose additional requirements specific to the overlay district.

Section 20. That Section 30-7-1.3(B), Exempt Activities, is hereby rewritten to read as follows:

- (B) *Exempt Activities:* The following activities are exempt from the plan submission and approval requirements of this Section. However, any restrictions upon building location, drainageways, pavement, or other built-upon area, or any other matter appearing on any previously approved watershed development (watershed control) or stormwater management plan covering the subject property, shall be complied with unless and until replaced by an approved revised plan.
- (1) Construction of a single-family dwelling and its accessory structures on a lot of record created outside WCA Tiers 1 and 2 prior to July 1, 1993.
- (2) Replacement of existing built-upon area with a like or lesser amount of new built-upon area outside any required stream buffer on the same zone lot <u>providedif</u> the Enforcement Officer has determined that equal or improved stormwater managementwater quality will result.
- (3) Except as provided in Subsection (1) above, placement of small accessory buildings or structures or small amounts of other built-upon area provided that the total additional built-upon area is no greater than four hundred (400) square feet and the additional built-upon area is not placed within a required stream buffer. This exemption shall apply to a zone lot for one time only after June 30, 1993
- (4) Existing development until such time as new development is initiated on the site.
- (5) Activities exempt from permit requirements of Section 404 of the Federal Clean Water Act, as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities).

Section 21. That Section 30-7-1.5(A)(2) is hereby rewritten to read as follows:

- (2) For all other new development in a GWA or Other Watershed Districts, a watershed development plan in accordance with the performance standards specified in Table 30-7-2-1 and with other requirements of Sections 30-7-1 and 30-7-2 shall be submitted to the Enforcement Officer.
- Section 22. That Section 30-7-1.5(C), Approved Plan a Prerequisite, is hereby rewritten to read as follows:
- (C) Approved Plan a Prerequisite: The Enforcement Officer is not authorized to issue any permits, except as provided in Section 30-3-4.2 (Permits Issued Prior to Site Plan or Preliminary Plat Approval) and grading permits as provided in Section 30-3-3.2 (Grading Permit), for development on any land in a WCA, or Other Watershed Districts unless and until a watershed development plan in compliance with the requirements of this Section has been approved.
- Section 23. That Section 30-7-1.5(D), Permanent Engineered Stormwater Controls, is hereby rewritten to read as follows:
- (D) *Permanent Engineered Stormwater Controls:* When a permanent engineered stormwater control is required for a development to meet the requirements of this Article, a North Carolina registered professional engineer shall prepare the plan with the Engineer's Certification of Stormwater Quality Control from Table 30-7-1-5 affixed, signed, sealed, and dated. <u>An operation and maintenance plan for the permanent engineered stormwater control shall be submitted with the watershed development plan.</u>
- Section 24. That Section 30-7-1.6(B), Construction of Watershed Protection Improvements, is hereby rewritten to read as follows:
- (B) Construction of Watershed Protection Improvements:
- (1) See Section 30-6-9.2(F) (Plat recordation) if improvements are pursuant to a watershed development plan that was a prerequisite to a subdivision approval.
- (2) The construction of all improvements designed for watershed protection and shown on other approved watershed development plans shall be substantially completed, have full design volume available, and be functioning properly prior to any pond plat recordation or issuance of any building certificate of compliance. Alternatively, the Enforcement Officer may issue a temporary certificate of compliance if the structure has not been completed when assurance of its completion within one (1) year is provided in accordance with Section 30-3-9 (Sureties or Improvement Guarantees).
- (3) Final approval after inspection of installed engineered stormwater controls shall be required at finalization of the grading permit or at issuance of the final building certificate of compliance, whichever comes later. If neither a building permit nor a grading permit is required for a site, then any such engineered stormwater control shall be substantially completed and have full design volume available prior to installation of any built-upon area on the site. An Engineer's Certification of Stormwater Control Completion (Table 30-7-1-6) shall be required prior to final approval by the Enforcement Officer.

- (4) A final inspection and approval by the Enforcement Officer shall occur before the release of any performance securities.
- (5) The certification requirements of this section also apply for those projects utilizing a structural best management practice.
- Section 25. That Section 30-7-1.6(C), Recordation of Permanent Improvements, is hereby rewritten to read as follows:
- (C) Recordation of Permanent Improvements: All permanent engineered stormwater controls and associated access/maintenance easement(s) (specific or general, at the owner's option) shall be recorded on a Pond Plat, and a mechanism to ensure their proper operation and maintenance shall be established concurrent with or prior to plat recordation.
- Section 26. That Section 30-7-1.6, Improvements, is hereby amended by adding the following to the end of the section:
- (E) As-Built Plans: The applicant shall submit the following:
- (1) Prior to the issuance of any certificate of compliance the applicant shall submit under seal actual as-built plans for all stormwater conveyances. The plans shall show the final design specifications for all stormwater conveyances with the field location, size, depth, controls, and devices, as installed. This shall include plan view drawings showing all public and private storm drainage piping twelve (12) inches or larger in diameter with associated invert elevation data.

 (2) Upon completion of the structural best management practices and before a final certificate of compliance is granted, the applicant shall submit under seal as-built plans for the structural best management practice.
- Section 27. That Section 30-7-1.8, Stream buffer required, is hereby amended to read as follows:
- (A) Stream Buffer Widths: In the WCA, and the GWA, or Other Watershed Districts stream buffers containing zones and widths as specified in Table 30-7-1 (Low Density Stream Buffer Zone and Width Requirements in Upper and Lower Randleman Lake Watersheds Watershed Districts) and Table 30-7-2 (High Density Stream Buffer Width Requirements in Other Water Supply Watersheds Watershed Districts) below shall be maintained. (See Section 30-7-3 (Watershed Critical Area Requirements) for additional requirements concerning stream buffers in the WCA).
- (B) Relationship to Requirements of Chapter 27: Where stricter stream buffer requirements are present in Section 27-22(f) (Stream Buffer Requirement), the stricter requirements shall apply.
- (BC) Stream Channelization: In a GWA, or WCA, or Other Watershed Districts approval from the Technical Review Committee, NC Division of Water Quality and U.S. Army Corps of Engineers shall be secured before any intermittent or perennial stream is channelized.

 Additionally, ilf the stream is in a WCAperennial, it shall not be channelized without prior approval by the Planning Board. Evaluation of the channelization request shall be based on grounds for a modification in accordance with Section 30-9-11.7.

- (CD) Explanation of Randleman Zones and Other Stream Buffers: Perennial and intermittent sStream buffers in the Upper and Lower Randleman Lake watersheds and in other (non-Randleman) water supply watersheds may be composed of two or three of the following zones, depending upon whether the low density option or the high density option is used. Stream buffers required in other (non-Randleman) water supply watersheds are not broken into zones.
- (1) Randleman Zone 1 is the portion of a riparian protection area, required in <u>all Water Supply</u> the Upper and Lower Randleman Lake Watersheds <u>and in Other Watershed Districts</u>, located closest to the stream. It is intended to be an undisturbed area of vegetation.
- (2) Randleman Zone 2, the remainder of a riparian protection area, is intended to provide protection through a vegetated riparian zone which provides for diffusion and infiltration of runoff and filtering of pollutants.
- (3) Randleman-Zone 3 is not part of a riparian protection area and therefore is subject to less extensive requirements than are Randleman-Zones 1 and 2. Randleman-Zone 3 covers the outermost fifty (50) feet of one hundred (100) foot perennial stream buffers under the high density option in the Upper and Lower Randleman Lake watersheds and in other water supply watersheds. No new built upon area is to be placed in this zone.
- (4) A non Randleman stream buffer covers the entire perennial stream buffer, be it thirty (30) feet under the low density option or one hundred (100) feet under the high density option, in other water supply watersheds.

TABLE 30-7-1 STREAM BUFFER ZONE AND WIDTH* REQUIREMENTS IN UPPER AND LOWER RANDLEMAN LAKE WATERSHEDS

LOW DENSITY OPTION

TABLE INSET:

-Watersheds	Perennial Streams, Lakes & Ponds			Intermit	tent Stream	ms
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Upper & Lower Randleman Lake	0-30	30 50	N/A	0-30	30-50	N/A

HIGH DENSITY OPTION

TABLE INSET:

-Watersheds	Perennial Streams, Lakes & Ponds			Intermit	ent Stream	ms
	Zone 1 Zone 2 Zone 3			Zone 1	Zone 2	Zone 3
Upper & Lower Randleman Lake	0-30	3050	50100	030	3050	N/A

TABLE 30-7-21 LOW DENSITY STREAM BUFFER WIDTH* REQUIREMENTS IN OTHER WATER SUPPLY WATERSHEDS WATERSHED DISTRICTS

LOW DENSITY OPTION

TABLE INSET:

Watersheds <u>District</u>	Perennial Streams, Lakes & Ponds		Intermitten			
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Greensboro	030	<u>3050</u>	<u>N/A</u>	030	<u>3050</u>	N/A
Lake Mackintosh	030	<u>3050</u>	<u>N/A</u>	030	<u>3050</u>	N/A
Polecat Creek	030	<u>3050</u>	<u>N/A</u>	030	<u>3050</u>	N/A
Randleman	<u>030</u>	<u>3050</u>	<u>N/A</u>	<u>030</u>	<u>3050</u>	<u>N/A</u>
Other Watershed Districts	<u>030</u>	<u>3050</u>	<u>N/A</u>	<u>030</u>	<u>3050</u>	<u>N/A</u>

TABLE 30-7-2 HIGH DENSITY STREAM BUFFER WIDTH* REQUIREMENTS IN WATERSHED DISTRICTS

HIGH DENSITY OPTION

TABLE INSET:

Watershed <u>District</u>	Perennial S	Perennial Streams, Lakes & Ponds		Intermittent Streams		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Greensboro	0 100 30	<u>3050</u>	<u>50100</u>	030	<u>3050</u>	N/A
Lake Mackintosh	0 100 <u>30</u>	<u>3050</u>	<u>50100</u>	<u>030</u>	<u>3050</u>	N/A
Polecat Creek	0 100 <u>30</u>	3050	<u>50100</u>	030	<u>3050</u>	N/A
Randleman	030	3050	<u>50100</u>	030	<u>3050</u>	N/A
Other Watershed Districts	030	<u>3050</u>	<u>N/A</u>	<u>030</u>	<u>3050</u>	<u>N/A</u>

^{*}Distances on all sides of water bodies are in feet and are with reference to top of bank for streams and normal pool elevation for all other water bodies. Thus, "0" equals top of bank or normal pool elevation and "30" equals 30 feet landward from top of bank or normal pool elevation.

(DE) Structures, Uses, Practices, and Activities Allowed in Randleman Zone 1:

- (1) Natural regeneration of forest vegetation and planting vegetation to enhance the riparian area if disturbance is minimized, provided that any planting shall primarily consist of locally native trees and shrubs;
- (2) Selective cutting of individual trees, where forest vegetation as defined in Rule.0202 of the EMC Rules exists, as long as the following conditions are met every one hundred (100) feet on each side of the stream:
- (a) Of existing trees twelve (12) inches and greater in diameter breast height (dbh), a minimum of five (5) trees must remain uncut;
- (b) Trees twelve (12) inches and greater dbh may be harvested based on the following equation: Number of Trees Harvested = (Total Number of Trees Greater than 12 Inches dbh - 5)/2;
- (c) No trees less than twelve (12) inches dbh may be harvested unless exceptions provided in this Section are met;
- (d) Trees may not be harvested more frequently than every ten years; and
- (e) No tracked or wheeled equipment is allowed;
- (3) Horticulture or silvicultural practices to maintain the health of individual trees;
- (4) Removal of individual trees which are in danger of causing damage to dwellings, other structures, or the stream channel;
- (5) Removal of dead trees and other timber cutting techniques necessary to prevent extensive pest or disease infestation if recommended by the Director, NC Division of Forest Resources and approved by the Director, NC Division of Water Quality;
- (6) Ongoing agricultural operations provided that existing forest vegetation is protected;
- (7) Water dependent structures, road crossings, driveway crossings, railroad crossings, bridges, airport facilities, utility crossings, stream restoration projects, scientific studies, stream gauging, and passive recreation facilities such as boardwalks, trails, pathways, historic preservation and archeological activities where no practical alternative exists. These structures shall be located, designed, constructed, and maintained to have minimal disturbance, to provide maximum nutrient removal and erosion protection, to have the least adverse effects on aquatic life and habitat, and to protect water quality to the maximum extent practical through the use of best management practices; and
- (8) Stream crossings associated with timber harvesting, if performed in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J.0201-.0209).

(EF) Practices and Activities Not Allowed in Randleman Zone 1:

- (1) Land-disturbing activities and placement of fill and other materials, other than those allowed elsewhere in this Section;
- (2) New development, except as allowed elsewhere in this Section;
- (3) New on-site sanitary sewage systems which use ground adsorption;
- (4) Application of fertilizer; and
- (5) Any activity that threatens the health and function of the vegetation, including, but not limited to, application of chemicals in amounts exceeding the manufacturer's recommended rate, deposition of sediment from uncontrolled sediment sources on adjacent lands, and creation of any areas with bare soil.

(<u>FG</u>) Structures, Uses, Practices, and Activities Allowed in Randleman Zone 2:

(1) All those permitted in Randleman Zone 1;

- (2) Periodic mowing and removal of plant products such as timber, nuts, and fruit, provided the purpose of the riparian area is not compromised by harvesting, disturbance, or loss of forest and herbaceous ground cover;
- (3) Grading and timber harvesting, provided that vegetative ground cover is established immediately following completion of land-disturbing activity;
- (4) Stormwater management facilities and ponds;
- (5) Corridors for the construction and management of utility lines, such as water, sewer, or gas, (including access roads and stockpiling of materials) running parallel to the stream, as long as no practical alternative exists and best management practices are used to minimize runoff and maximize water quality protection to the maximum extent practicable. Permanent, maintained access corridors shall be restricted to the minimum width practicable and shall not exceed ten (10) feet in width except at manhole locations. A ten (10) feet by ten (10) feet perpendicular vehicular turnaround shall be allowed provided they are spaced at least five hundred (500) feet apart along the riparian area; and
- (6) Stream restoration projects, scientific studies, stream gauging, water wells, and passive recreation facilities such as boardwalks, trails, pathways, historic preservation and archeological activities, provided that they are designed, constructed, and maintained to provide the maximum nutrient removal and erosion protection, to have the least adverse effects on aquatic life and habitat, and to protect water quality to the maximum extent practical through the use of best management practices.
- (7) In Other Watershed Districts, this zone is to be maintained free from occupied structures and shall maintain a built-upon area less than or equal to fifty (50) percent.
- (GH) Practices and Activities Not Allowed in Randleman Zone 2:
- (1) New development, other than that allowed elsewhere in this Section; and
- (2) Those uses listed in Sections 30-7-1.8(EF)(3) and (5) above.
- (<u>HI</u>) *Timber Removal in Randleman Zones 1 and 2:* Timber removal and skidding of trees shall be directed away from the water course or water body. Skidding shall be done in a manner to prevent the creation of ephemeral channels perpendicular to the water body. Any tree removal must be performed in a manner that does not compromise the purpose of the riparian area and is in accordance with the Forest Practices Guidelines Related to Water Quality (15A NCAC 1J.0201-.0209).
- (IJ) Maintenance of Sheet Flow in and Entering Randleman Zones 1 and 2:
- (1) Sheet flow must be maintained to the maximum extent practical through dispersing concentrated flow and re-establishment of vegetation to maintain the effectiveness of the riparian area.
- (2) Concentrated runoff from new ditches or manmade conveyances must be dispersed into sheet flow before the runoff enters Randleman Zone 2 of the riparian area. In the remaining (Non-Randleman) watershed districts sheet flow must be established before runoff enters Zone 1 of the riparian area. Care shall be taken to minimize pollutant loading through existing ditches and manmade conveyances from fertilizer application or erosion.
- (3) Periodic corrective action to restore sheet flow shall be taken by the landowner if necessary to impede the formation of erosion gullies which allow concentrated flow to bypass treatment in the riparian area.

- (JK) Maintenance of Modified Natural Streams in Randleman Zones 1 and 2: Periodic maintenance of modified natural streams such as canals is allowed provided that disturbance is minimized and the structure and function of the riparian area is not compromised. A grassed travelway is allowed on one side of the water body when alternative forms of maintenance access are not practical. The width and specifications of the travelway shall be only those needed for equipment access and operation. The travelway shall be located so as to interfere as little as practical with stream shading.
- (<u>K</u>L) Structures, Uses, Practices, and Activities Allowed in Randleman Zone 3 and in Non-Randleman Stream Buffers:
- (1) All those permitted in Randleman Zone 2, and
- (2) Water dependent structures, public projects such as street, railroad and driveway crossings, airport facilities, utility crossings and corridors, and stormwater management facilities and ponds may be allowed where no practicable alternative exists. Installation of these structures shall minimize built-upon area, divert runoff away from surface waters, and maximize the utilization of best management practices.
- (<u>LM</u>) Structures and Uses Not Allowed in Randleman Zone 3 and in Non-Randleman Stream Buffers: No new built-upon area, other than that permitted in Section 30-7-1.8(<u>K</u>L) above, is allowed.
- (MN) Platting of Stream Buffers: Subdivision plats and pond plats shall show each stream buffer and Randleman zone applicable to the property.
- Section 28. That Section 30-7-1.11(A) is hereby written to read as follows:
- (A) *Density Limits:* New development shall not exceed the density limits in Table 30-7-1-3 (Density Limits in Upper and Lower Randleman Lake Watersheds) or Table 30-7-1-4 (Density Limits in Other Water Supply Watersheds, and Other Watershed Districts), whichever is applicable.
- Section 29. That Table 30-7-1-4 is hereby revised to read as follows:

TABLE 30-7-1-4 DENSITY LIMITS IN OTHER WATER SUPPLY WATERSHEDS AND OTHER WATERSHED DISTRICTS IN DWELLING UNITS PER ACRE & % BUILT-UPON AREA+

TABLE INSET:

		Low Density Option		High Density Option
Watershed <u>District</u>	Overlay Zone & Tier	DU/AC	%BUA	%BUA*
Greensboro & Polecat Creek (WS-III)	GWA	2**	24	50(70#)

	WCA,1	See BUA	0.5	No HD option
	WCA,2	0.2	2.4	No HD option
	WCA,3,sewer	1***	12	30
	no sewer	0.33	4	No HD option
	WCA,4,sewer	2**	24	40
	no sewer	1***	12	No HD option
Lake Mackintosh (WS-IV)	GWA	2**	24	70
	WCA,1	See BUA	0.5	no HD option
	WCA,2	0.2	2.4	No HD option
	WCA,3,sewer	2**	24	34
	no sewer	0.33	4	No HD option
	WCA,4,sewer	2**	24	40
	no sewer	1***	12	No HD option
Other Watershed Districts	OtherWatershed Districts	2**	<u>24</u>	> 24

Section 30. That Section 30-7-1.12, Stormwater quality controls, is hereby written to read as follows:

- (A) What Stormwater (Runoff) Is To Be Controlled: Where stormwater control is required by this Article, runoff from the following shall be controlled, and engineered stormwater controls and other best management practices (BMPs) shall be sized accordingly.
- (1) New built-upon area and other new development on the site (but see #4 below);
- (2) To the extent practicable, existing development on the site (consult with the Enforcement Officer for a determination);
- (3) Any other on-site runoff that happens to flow into the structure or BMP;
- (4) Any off-site runoff that happens to flow into the structure or BMP; if untreated built-upon area runoff from off the site is included, then the Technical Review Committee may permit control of that runoff to offset non-control of a lesser, modest amount of on-site built-upon area runoff that would be difficult to control.
- (B) Methods of Stormwater Quality Control:
- (1) Developments using the high density option shall use engineered stormwater controls, which may consist of wet detention ponds or alternative stormwater management systems consisting of other treatment options, or a combination of options approved by the Director of the Division of Water Quality in accordance with 15A NCAC 2B.0104(g) and 15A NCAC 2H.1008(a). The design criteria for approval shall include control and treatment of the first one inch (1") of rainfall and a minimum of eighty-five percent (85%) average annual removal for

<u>T</u>total <u>S</u>suspended <u>S</u>solids (TSS) <u>removal</u>, as well as discharge <u>the storage volume at a rate equal</u> to or less than the predevelopment discharge rate for the one-year, 24-hour storm-rate. Runoff <u>volume drawdown time shall be a minimum of forty-eight (48) hours but not more than one hundred twenty (120) hours.</u>

- (2) Developments using the low density option, if they are required to have stormwater control, shall use either a method allowed under the high density option or, as applicable, a method prescribed in Section 30-7-2 or 30-7-3. For low density development in Other Watershed Districts the use of vegetated conveyances shall be used to the maximum extent practicable.
- (3) New development that drains in whole or part to class NSW waters or waters assigned a Total Maximum Daily Load (TMDL) by North Carolina DWQ shall design and implement best stormwater management practices, up to and including the installation of engineered stormwater controls, that reduce nutrient loading, or other pollutant of concern, while still meeting other requirements of this ordinance. The Enforcement Officer shall have final approval of any proposed structural best management practice (BMP) required to meet State mandated nutrient loading or other pollutant of concern reduction measures in order to facilitate treatment of the nutrient or pollutant of concern to the maximum extent practicable.
- (C) Water Quality Control Exemptions
- (1) <u>Development in Other Watershed Districts that cumulatively disturbs less than one acre and is not part of a Larger Common Plan of Development, Redevelopment or Sale is exempt from the stormwater quality control provisions of this section. Development that cumulatively disturbs less than one acre is not exempt if such activities are part of a Larger Common Plan of <u>Development, Redevelopment or Sale</u>, even though multiple, separate or distinct activities take place at different times on different schedules.</u>
- (2) Development that meets all of the following requirements is exempt from the stormwater quality control provisions of this section:
- (a) The division of a tract in single ownership;
- (b) The tract area is not greater than two (2) acres;
- (c) The division does not result in more than three (3) lots;
- (d) No street right-of-way dedication is involved; and
- (e) The resultant lots are equal to or exceed the standards of this ordinance.

Section 31. That Section 30-7-2, General Watershed Areas (GWA), is hereby written to read as follows:

30-7-2. GENERAL WATERSHED AREAS (GWA) AND OTHER WATERSHED DISTRICTS*

Section 32. That Section 30-7-2.1, General provisions, is hereby written to read as follows:

- (A) *Performance Standards:* The watershed development plan for any new development in the GWA <u>or Other Watershed Districts</u> shall be prepared and submitted in accordance with the requirements in Table 30-7-2-1 (General Watershed Area<u>and Other Watershed District</u> Performance Standards).
- (B) *Stormwater Quality Control:* For developments using the high density option, see Section 30-7-1.12(B)(1) in Methods of Stormwater Quality Control. Developments using the low density

option may use a method allowed in that section or a retention pond, natural infiltration area, filter basin, or other BMP found by the Enforcement Officer to be similarly effective.

Section 33. That Table 30-7-2-1 is hereby revised to read as follows:

TABLE 30-7-2-1 GENERAL WATERSHED AREA AND OTHER WATERSHED DISTRICT PERFORMANCE STANDARDS

TABLE INSET:

Development Type		Schedule
1)	Low Density Option (see Tables 30-7-1-3 & 30-7-1-4 for density limits)	General Watershed Area And Other Watershed District Scoresheet (Table 30-7-2-2). A passing score is 120 or more points; or Engineer's Certification.
2)	High Density Option	Engineer's Certification.

Notes:

1) For the form of the Engineer's Certification, see Table 30-7-1-5_(Engineer's Certification of Stormwater Quality Control).

Section 34. That Table 30-7-2-2 is hereby revised to read as follows:

TABLE 30-7-2-2

GENERAL WATERSHED AREA AND OTHER WATERSHED DISTRICT PERFORMANCE SCORESHEET

TABLE INSET:

MAXIMUM POINTS	FACTOR	POINT VALUE	POINTS EARNED
25	1. Clustering		
	Minimal	10	
	Moderate	15	
	Major	20	
	Exceptional	25	
25	2. Built-Upon Area		
	0-3%	25	
	3.01-7%	20	
	7.01-10%	15	

	10.01-15%	10	
	15.01-20%	5	
25	3. Proximity to Floodway as Defined by FEMA		
	More than 2000 Feet	25	
	1000-2000 Feet	20	
	500-1000 Feet	15	
	100-500 feet	10	
	50-100 Feet	5	
10	4. Soil limitations as Defined on Pg. 29 and Tbl. 7, Pg. 57 Guil. Co. Soil Survey		
	Slight	10	
	Moderate	5	
25	5. Drainage-Protect and Use Natural Drainageways		
	Piped or Improved Drainage With Riprap	5	
	Dispersed Drainage or Protected Drainageways	10	
	Dispersed Drainage and Protected Drainageways (or Dispersed and No Drainageway)	20	
	Enhanced and Protected Natural Drainageways	25	
25	6. Average Pre-development Slope of Land Subject to Grading or Filling		
	0-6%	25	
	6.01-10%	20	
	10.01-15%	5	
25	7. Stream Buffer Along Drainageways		
	No Drainageway Present on Property or Within 50 Feet	25	
	50 Feet, All Wooded Except for Sewers and Required Streets	25	
	50 Feet, At Least Half Wooded	20	
	50 feet, No Grading or Fill Except For Sewers and Required Streets	15	
	40 Feet, Same Restrictions	10	

25	8. Stormwater Runoff Control Strategies	
	Divide the % of Stormwater (Runoff) Controlled by 4	
10	9. Sewage Disposal	
	Public Sewer Service	10
10	10. Street & Driveway Design	
	With Vegetated Ditches	10
	With Piped Drainage and/or Curb and Gutter and Energy Dissipators	5
33	11. Wooded Area	
	Divide the % of Tract to Remain Wooded by 3 and To Be Thickly Planted in Tree Stands by 6	
	12. Grading Reduction and Other bonuses	
	NR:<1 Driveway per 300 Feet of Frontage	5
	All: Creation of Wetlands	Up to 20
	All: Other Measures	Up to 10
	Total	

Notes: (1) All plans must have at least 120 points and meet all other requirements to be approved.

(2) Use this table for low density option only.

SUBMISSION REQUIREMENTS

SUBDIVISIONS: Rated prior to approval of preliminary plat.

SITE PLANS: Rated prior to approval of site plan unless lot was prequalified by subdivision. PROJECTS WITHOUT SITE PLANS: Rated prior to approval of the building permit. DEFINITIONS, EXPLANATIONS, AND STANDARDS

1. *Minimal Clustering* means: in SF that there is 15% or more open space; in MF & NR that buildings and parking are concentrated away from streams and steep slopes.

Moderate Clustering means: in SF that there is 25% or more open space; in MF that the Minimal Clustering criteria are met and that at least half of the units are in buildings of 2 stories or more; in NR that Minimal Clustering criteria are met and that parking uses 17-foot space depth and 24 foot aisles, or 8.5 foot space width.

Major Clustering means: in SF that there is 35% or more open space or that average lot size is not more than 2,000 sq. ft. larger than the minimum allowed; in MF that at least 75% of the units are in buildings of 2 stories or more, that the number of parking spaces is no more than 5% higher than the Ordinance minimum, and that there is no BUA that could be marked to form additional parking spaces; in NR that the Moderate Clustering Criteria are met, as are the same parking requirements as in MF.

Exceptional Clustering means: in SF that there is 45% or more open space or that the average lot size is no more than 1,000 sq. ft. larger than the minimum allowed; in MF that the Major Clustering criteria are met and that all units are in buildings of 2 stories or more and some are in

buildings of 3 stories or more; in NR that the Major Clustering criteria are met and that at least 20% of the parking spaces are inside buildings of 2 stories or more.

- 2. If, compared to the sidewalk installation requirements effective through December 31, 2002, the sidewalk installation requirements contained in Ordinance Number 02-239, effective January 1, 2003, increase the amount of sidewalk built-upon area, thereby reducing the number of built-upon area points earned, the Technical Review Committee may approve reductions to required street pavement widths, sidewalk widths, driveway widths, or off-street parking area, so as to result in the same built-upon area as under the previous sidewalk installation requirements.
- 3. If land is dedicated to the City as drainageway and open space, measure from the downhill edge of the land not dedicated. If a street crossing that dedication is required by the City, ignore it in measuring.
- 5. *Protected Drainageway* means drainage is channeled by pervious devices such as sod waterways, berms, channels, or swales which have been constructed to resist soil erosion by either vegetating, netting, rip-rapping, or a combination of those, and which allows infiltration of water into the soil.

Dispersed Drainage means spread out, as opposed to collecting the runoff in channels, so as to effect increased sheet flow and overland flow.

Improved Drainageway means channeled by impervious surfaces such as curb and gutter or concrete (gunnite, bituminous, etc.) channels.

Enhanced Drainageway means carried by existing natural drainageways which have been enhanced to resist soil erosion, including stream bank degradation.

6. Average slope means the maximum inclination of the land surface from the horizontal as measured in percentage slope.

Land is subject to Grading or Filling if it is in street R/W, in a lot or common elements but not covered by a water quality conservation easement, or in an area that will be disturbed before being dedicated to the public.

- 9. No points will be allowed for on-site septic tank systems or private sewage treatment systems.
- 11. *Thickly Planted in Tree Stands* means that trees (but not shrubs) are planted at a Type A number and size planting rate. [Sample Calculation: if 30% remains wooded, 30 divided by 3=10 points; and if another 18% is thickly planted in tree stands, 18 ÷ by 6=3 points; total score is 13 points.]
- 12. *Other measures* are measures not covered above but which are deemed effective by, and assigned up to 10 total points by, the TRC.

Abbreviations: BUA = Built-upon area, SF=single family detached, MF=multifamily, NR=nonresidential, All=all types

- Section 35. That Section 30-9-6.4(B), Watershed Exception, is hereby revised to read as follows:
- (B) *Watershed Exception:* The Planning Board, the City Council, and the North Carolina Environmental Management Commission are the bodies charged with hearing requests and appeals dealing with the requirements of Sections 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts), 30-7-2 (General Watershed Areas and Other Watershed Districts), and 30-7-3 (Watershed Critical Areas). Refer to Section 30-9-11.5 (Modification of Water Supply Watershed Standards).

Section 36. That Section 30-9-11.5(A), Minor Watershed Modifications, is hereby revised to read as follows:

(A) *Minor Watershed Modifications:* Recognizing that the evaluation of requests for minor modifications of standards in Sections 30-7-1 (Water Supply Watershed Districts and Other Watershed Districts), 30-7-2 (General Watershed Areas and Other Watershed Districts), and 30-7-3 (Watershed Critical Areas) involves both technical evaluations (normally conducted by the Enforcement Officer and the Technical Review Committee) and evaluations made in light of both water supply watershed protection policies and fundamental fairness (normally conducted by the Planning Board and City Council), the City Council hereby designates the Planning Board to be the appropriate planning agency to approve minor watershed modifications in General Watershed Areas and the City Council to be the appropriate body to approve minor watershed modifications in Watershed Critical Areas. The approval procedure shall be as follows:

Section 37. All ordinances in conflict with the provisions of this ordinance are repealed to the extent of such conflict.

Section 38. Watershed or Stormwater management plans initially submitted to the Planning Department for Technical Review Committee (TRC) review after June 1, 2009 will be subject to the provisions contained within this amendment.

Section 39. The effective date of this ordinance shall be June 1, 2009.