

## **TC-9-10 Reservoir Watershed Regulations**

Amends the City Code to implement the rules of the State's Falls Lake Water Supply Nutrient Strategy to apply to new development located within the City's Reservoir Watershed Protection Area Overlay Districts.

The regulations propose to limit nutrient discharges in stormwater to no more than 2.2 pounds per acre per year for nitrogen and to no more than 0.33 pound per acre per year for phosphorus.

Regulations are proposed to be effective on June 1, 2011 and subject to conformity with the Environmental Management Commission's Falls Lake Water Supply Nutrient Strategy Model Ordinance.



# Certified Recommendation

Raleigh Planning Commission

CR# 11403

## Case Information: TC-9-10/Reservoir Watershed Regulations

### Comprehensive Plan Guidance

<i>Applicable Policy Statements</i>	<p>EP 3.3 – Water Supply Protection</p> <p>EP 4.7 – No adverse Impact</p> <p>PU 3.10 – Water Quality Improvements</p>
<i>Action Items</i>	Not applicable

### Summary of Text Change

<i>Summary</i>	<p>Amends the City Code to implement the rules of the State's Falls Lake Water Supply Nutrient Strategy to apply to new development located within the City's Reservoir Watershed Protection Area Overlay Districts. The regulations propose to limit nutrient discharges in stormwater to no more than 2.2 pounds per acre per year for nitrogen and to no more than 0.33 pound per acre per year for phosphorus. Regulations are proposed to be effective on June 1, 2011 and subject to conformity with the Environmental Management Commission's Falls Lake Water Supply Nutrient Strategy Model Ordinance.</p>
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### Summary of Impacts

<i>Impacts Identified</i>	<p><u>Adoption of TC-9-10:</u></p> <ul style="list-style-type: none"> <li>A potential increase in the cost of new construction; 86 privately-owned vacant parcels (210 acres) within the Falls Lake Watershed and 318 privately-owned vacant parcels (324 acres) within the Swift Creek Watershed.</li> </ul> <p><u>No Action:</u></p> <ul style="list-style-type: none"> <li>Violation of State laws.</li> </ul>
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### Public Meetings

<i>Public Hearing</i>	<i>Committee</i>		<i>Planning Commission</i>	
10-19-10	11-16-10,	Text Change	10-26-10	Referred to Text Change

	12-14-10	Committee; recommended approval, as revised	1-25-11	Committee
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Attachments

1. Staff report
2. Summary
3. Ordinance

**Planning Commission Recommendation**

<i>Recommendation</i>	That this Text Change be approved, as revised.
<i>Findings &amp; Reasons</i>	<ol style="list-style-type: none"> <li>1. As mandated by the State of North Carolina’s Environmental Management Commission’s Falls Reservoir Water Supply Nutrient Strategy: Stormwater Management for New Development, jurisdictions governing properties located within the Falls Lake Basin are required to adopt the Strategy’s regulations for new development by the summer of 2012.</li> <li>2. That the proposed regulations will provide stormwater runoff control to ensure that the nutrient processing functions of receiving waters are not compromised and that water supplies, aquatic life and recreational uses of the Falls Lake and Swift Creek reservoirs are protected from the potential impacts of new development.</li> <li>3. That extending the State’s regulations to also be applicable within the Swift Creek basin will provide the same protections necessary for this water supply reservoir watershed.</li> <li>4. The Falls Lake strategy has a separate set of rules for Existing Development. Under those rules, the City must</li> </ol>







## Zoning Staff Report – TC-9-10

### Reservoir Watershed Regulations Text Change

#### Request

<i>Section Reference</i>	New Code Section 10-10021(d), Part 10 Chapter 10, Reservoir Watershed Protection Area Regulations
<i>Basic Information</i>	Proposes to limit nutrient discharges in stormwater to no more than 2.2 pounds per acre per year for nitrogen and to no more than 0.33 pound per acre per year for phosphorus on properties zoned Reservoir Watershed Protection Area Overlay District.
<i>PC Recommendation Deadline</i>	February 2, 2011

#### Comprehensive Plan Guidance

<i>Applicable Policies</i>	EP 3.3 – Water Supply Protection EP 4.7 – No adverse Impact PU 3.10 – Water Quality Improvements
<i>Action Items</i>	Not applicable

#### Contact Information

<i>Staff Coordinator</i>	Greg Hallam: <a href="mailto:greg.hallam@raleighnc.gov">greg.hallam@raleighnc.gov</a> ; 516.2636
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#### History/Overview

As mandated by the State Legislature, the Environmental Management Commission (EMC) adopted a draft of the FALLS RESERVOIR WATER SUPPLY NUTRIENT STRATEGY: STORMWATER MANAGEMENT FOR NEW DEVELOPMENT. This strategy is to be enforced by all jurisdictions governing properties located within the Falls Lake Basin. The purpose of the new rules are as follows:

- (a) To achieve and maintain the nitrogen and phosphorus loading objectives established for Falls Reservoir in 15A NCAC 02B .0275 from lands in the Falls watershed on which new development occurs;

- (b) To provide control for stormwater runoff from new development in Falls watershed to ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows; and
- (c) To protect the water supply, aquatic life and recreational uses of Falls Reservoir from the potential impacts of new development.

The rules require all local governments to develop stormwater management programs for submission to and approval by the EMC and require that the regulations be adopted and effective by the summer of 2012.

### **Purpose and Need**

As stated within the State's adopted Strategy, "...to attain the full classified uses of Falls of the Neuse Reservoir set out on Rule 15A NCAC 2B .0211 from current impaired conditions related to excess nutrient inputs; protect its classified uses as set out on Rule 15A NCAC 2B .0216, including use as a source of water supply for drinking water, and maintain and enhance protections currently implemented by local governments in existing water supply watersheds encompassed by the watershed of Falls of the Neuse Reservoir."

### **Alternatives Considered**

No alternative other than the No Action approach was considered.

### **Scoping of Impacts**

Potential adverse impacts of the proposed text change have been identified as follows:

Current City of Raleigh regulations limit Nitrogen discharges in stormwater to no more than 3.6 pounds per acre per year and do not limit Phosphorus discharges. The State mandate is to limit discharges in stormwater for new development to no more than 2.2 pounds per acre per year for nitrogen and to no more than 0.33 pound per acre per year for phosphorus on properties located within the Falls Lake Basin. This will most likely increase the cost of new development. In addition, TC-9-10 proposes to extend these regulations to the Swift Creek Reservoir Watershed Basin, not a current requirement of the State. Currently, there are 86 privately-owned vacant parcels (210 acres) within the Falls Lake Watershed and 318 privately-owned vacant parcels (324 acres) within the Swift Creek Watershed.

The adverse impacts of taking no action (retaining the existing regulations) have been identified as follows:

If regulations are not adopted by the City, reviewed and approved by the State and effective by the Summer of 2012, the City will be in violation of State Law.

### **Impacts Summary**

#### **Adoption of Proposed Text Change**

Adoption of TC-9-10 would comply with the State mandate to limit discharges in stormwater for new development to no more than 2.2 pounds per acre per year for nitrogen and to no more than 0.33 pound per acre per year for phosphorus on properties located within the Falls Lake Basin. TC-9-10 extends these regulations to the Swift Creek Reservoir Watershed

Basin. This will most likely increase the cost of new development. Currently, there are 86 privately-owned vacant parcels (210 acres) within the Falls Lake Watershed and 318 privately-owned vacant parcels (324 acres) within the Swift Creek Watershed.

**No action**

Under the “no action” alternative, if regulations are not adopted by the City, reviewed and approved by the State and effective by the Summer of 2012, the City will be in violation of State Law.

2/1/11

**ORDINANCE NO. (2011) 833 TC 341  
TC-9-10**

**AN ORDINANCE TO ADOPT NORTH CAROLINA'S ENVIRONMENTAL  
MANAGEMENT COMMISSION'S NUTRIENT SENSITIVE REGULATIONS,  
APPLICABLE TO NEW DEVELOPMENT WITHIN THE CITY'S RESERVOIR  
WATERSHED PROTECTION AREA OVERLAY DISTRICTS**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RALEIGH,  
NORTH CAROLINA that:**

**Section 1.** Amend Raleigh City Code Section 10-3051(d), subsection title, to add the words "**and Chapter 10**" to the end of the subsection title.

Furthermore, amend Section 10-3051(d), first sentence, to add the words "and Chapter 10" immediately following the words "Chapter 9" as it appears twice in this sentence.

**Section 2.** Amend Raleigh City Code Section 10-9002, **DEFINITIONS**, the definition of **Open space area**, second sentence, to delete the word "and" immediately preceding the word "permanently" and include the following at the end of this second sentence: ", and other similar terms."

Furthermore, amend Section 10-9002, the definition of **Stormwater control plan**, first sentence, to delete the word "chapter" and substitute in lieu thereof "Code."

**Section 3.** Amend Raleigh City Code Section 10-10002 [as amended by TC-8-10, ORD. (2010) 806TC338, effective 12/5/10], **Definitions**, to include in alphabetic order the following new definitions:

**"Maintain or Maintenance.** Any action necessary to keep stormwater control measures and devices in proper working condition, so that such facilities *shall* continue to comply with the standards of this chapter to prevent failure of stormwater control measures and devices and function as intended. Maintenance includes activities undertaken to prevent failure of stormwater control measures and devices, and includes maintenance activities identified on approved stormwater control plans, maintenance manuals, and the **Raleigh Stormwater Control and Watercourse Buffer Manual**.

**Open space area.** Primarily vegetated areas where development is restricted and no additional *impervious surface* may be placed without first obtaining a permit from the *City of Raleigh*. The *following* are *open space areas*: greenways and public parks, natural protective yards set forth in conditional use zoning

districts, permanently protected undisturbed *open space areas* and other similar terms.

**Stormwater control plan.** The set of drawings and other documents that comprise all of the information and specifications for the drainage systems, structures, concepts, techniques, measures and devices that will be used to control nitrogen and phosphorous loads and stormwater runoff, as required by this Code and the **Raleigh Stormwater and Watercourse Buffer Design Manual**. Also included are the supporting engineering calculations, input data for any computer analysis, and results of any computer analysis.

**Watershed stormwater control master plan.** A conceptual plan approved by the Raleigh City Council, which establishes stormwater control policies for protected watersheds and recommendations for an entire watershed as an alternative to individual site specific *stormwater control plans*. The purpose of this plan is to meet or exceed the stormwater requirements of the State of North Carolina's Falls Water Supply Nutrient Strategy in a more coordinated and cost effective manner through the use of *regional stormwater control facilities* as opposed to the exclusive use of on-site or off-site stormwater control facilities."

**Section 4.** Amend Raleigh City Code Section 10-10021 [as amended by TC-8-10, ORD. (2010) 806TC338, effective 12/5/10], **RESERVOIR WATERSHED PROTECTION AREA OVERLAY DISTRICT REGULATIONS**, to insert within reserved subsection (d) the following:

**“(d) Nitrogen and Phosphorous Loading.**

**(1) New development.**

Within the Reservoir Watershed Protection Area Overlay Districts, the maximum amount of nitrogen and phosphorous loading *shall* comply with subsection a. below. These regulations *shall* be applied to new development and expansions to *impervious surfaces* as set forth in the following paragraph occurring on or after June 1, 2011 unless the development is otherwise exempted pursuant to Chapter 406 of the 2009 Session Laws of the State of North Carolina. Substitutions of *impervious surface* done in accordance with §10-2146.2(a)(5) are allowed provided there is no net increase in *impervious surface* and equal or greater stormwater control is provided.

All lots and structures existing prior to June 1, 2011 *shall* not be deemed a nonconformity solely because of the application of these regulations. Additions and expansions to existing *impervious surfaces*, uses and structures *shall* comply with the requirements of

these regulations; however, *impervious surfaces* existing prior to the initial application of these regulations *shall* not be included in the nitrogen and phosphorous loading calculations.

All *stormwater management plans* required for new development on properties located within a designated Reservoir Watershed Protection Area Overlay District *shall* comply with the following regulations.

**a. Requirement**

Nitrogen and phosphorous loads contributed by the proposed new development activity *shall* not exceed the unit-area mass loading rates as follows:

- Nitrogen: two and two-tenths (2.2) pounds per acre per year
- Phosphorus: thirty-three hundredths (0.33) pound per acre per year

The developer's *stormwater management plan shall* determine the load reductions necessary to comply with the above maximums by utilizing the loading calculation method prescribed in the **Raleigh Stormwater Control and Watercourse Buffer Manual**.

*Developments* that comply with the *watershed stormwater control master plan* approved for its watershed protection area are exempted from the requirements of this subsection. Compliance with *watershed stormwater control master plan shall* include the installation within the *development* of all stormwater control measures shown on the *watershed stormwater control master plan*, payment of fees in lieu of installation, when allowed by the *State*, and payment of any applicable drainage fees if the facilities prescribed by the master plan are constructed.

**b. Option for offsetting a portion of nutrient loading.**

The developer *shall* have the option of offsetting a portion of the nitrogen and phosphorous load by implementing or funding off-site management measures. Prior to utilizing any off-site option, the developer's *stormwater management plan shall* implement structural stormwater controls that attain a minimum of sixty (60) percent reduction in increased post-construction nitrogen loading rate and a minimum of sixty (60) percent in increased

post-construction phosphorus loading rate on-site and, when applicable, implementing all engineered stormwater controls for compliance with National Pollutant Discharge Elimination System (NPDES) requirements and any other State-mandated stormwater regulation.

Offsetting measures provided off-site by the developer *shall* achieve at least equivalent reductions in nitrogen and phosphorus loading as needed on-site to comply with the maximum loading rates specified above. Offsetting measures provided off-site *shall* meet the requirements of State Administrative Rule 15A NCAC 02B .0282, which may include the following:

- Within the Falls Basin: Payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program.
- Within the Swift Creek Basin: Payments to the City of Raleigh to implement the City-approved offset program ; or
- A City of Raleigh approved offset program prescribed in the **Raleigh Stormwater Control and Watercourse Buffer Manual**; or
- An offset program proposed by the property owner which is located within the applicable reservoir watershed protection area basin subject to final approval by the City's Public Works Director, or designee.

**c. Maintenance of Stormwater Control Measures and Devices.**

The land owner or person in possession or control of the land *shall maintain*, repair, reconstruct, replace and make payments for all stormwater control measures and devices and *open space areas* required by the *stormwater control plan* in accordance with §10-9027, unless those measures, devices, and *open space areas* are accepted for maintenance by a governmental agency.

**(2) Existing development (RESERVED)."**

**Section 5.** All laws and clauses of laws in conflict herewith are hereby repealed to the extent of said conflict.

**Section 6.** If this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable.

**Section 7.** This ordinance has been adopted following a duly advertised joint public hearing of the Raleigh City Council and the City Planning Commission following a recommendation of the Planning Commission.

**Section 8.** This ordinance has been provided to the North Carolina Capital Commission as required by law.

**Section 9.** This ordinance shall be enforced by law as provided in N.C.G.S. 160A-175 or as provided in the Raleigh City Code. All criminal sanctions shall be the maximum allowed by law notwithstanding the fifty dollar limit in G.S. 14-4(a) or similar limitations.

**Section 10.** This ordinance shall become effective June 1, 2011. This ordinance shall not apply to any unexpired building permit, unexpired site plan or subdivision approval, or site plan or subdivision application officially filed prior to the effective date of this ordinance.

**ADOPTED:** February 1, 2011

**EFFECTIVE:** June 1, 2011

**DISTRIBUTION:** Planning – Silver, Hallam, Brandon  
Stormwater Management – Bowden, Brown  
Inspections – Strickland  
City Attorney – Hargrove  
Transcription Svcs – Taylor