

A RESOLUTION CALLING A PUBLIC HEARING ON AN ORDINANCE
AMENDING THE CARRBORO LAND USE ORDINANCE PROVISIONS DEALING
WITH STORMWATER MANAGEMENT
Resolution No. 203/2006-07

WHEREAS, the Carrboro Board of Aldermen seeks to provide ample opportunities for the public to consider modifications to existing policies and regulations; and

NOW, THEREFORE BE IT RESOLVED that the Board of Aldermen calls a public hearing on June 26, 2007 to consider adopting "AN ORDINANCE AMENDING THE CARRBORO LAND USE ORDINANCE DEALING WITH STORMWATER MANAGEMETN."

BE IT FURTHER RESOLVED that the draft ordinance is referred to Orange County for review per the Joint Planning Agreement and to the Town of Carrboro Planning Board for its recommendations.

BE IT FURTHER RESOLVED that the draft ordinance is also referred to the following advisory boards and commissions for consideration and recommendation prior to the specified public hearing date:

☐ Appearance Commission

☐ Recreation and Parks Commission

☐ Transportation Advisory Board

☐ Northern Transition Area Advisory Committee

☒ Environmental Advisory Board

☐ _____

☐ Economic Sustainability Commission

☐ _____

**AN ORDINANCE REVISING THE PROVISIONS OF ARTICLE XVI OF THE
CARRBORO LAND USE ORDINANCE DEALING WITH STORMWATER
MANAGEMENT**

THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

Section 1. All references in this ordinance are to Chapter 15 of the Carrboro Town Code, the Carrboro Land Use Ordinance.

Section 2. Part II of Article XVI of the Carrboro Land Use Ordinance is revised by rewriting Sections 15-261, 15-262, and 15-263, and adding new subsections 15-263.1 and 15-263.2 as follows:

ARTICLE XVI

**FLOOD DAMAGE PREVENTION, STORMWATER MANAGEMENT, AND
WATERSHED PROTECTION**

PART II. STORMWATER MANAGEMENT

Section 15-261 Natural Drainage System Utilized to Extent Feasible.

(a) To the extent practicable, all development shall conform to the natural contours of the land, and natural drainage ways shall remain undisturbed.

(b) To the extent practicable, lot boundaries shall be made to coincide with natural drainage ways within subdivisions to avoid the creation of lots that can be built upon only by altering such natural drainage ways.

Section 15-262 Development Must Drain Properly.

(a) All development shall be provided with a stormwater management system containing drainage facilities that are adequately designed and constructed to prevent the undue retention of surface water on the development site. Surface water shall not be regarded as unduly retained if:

- (1) The retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or stormwater management plan, or
- (2) The retention is not substantially different in location or degree than that experienced by the development site in its pre-development stage, unless such retention presents a danger to health or safety.

(b) No surface water may be channeled or directed into the OWASA sanitary sewer system.

(c) Whenever practicable, the drainage system of a development shall coordinate with the drainage system or drainage ways on surrounding properties or streets.

(d) Use of drainage swales rather than curb and gutter and storm sewers in subdivisions is provided for in Section 15-216. Private roads and access ways within unsubdivided developments shall utilize curb and gutter and storm drains to provide adequate drainage if the grade of such roads or access ways is too steep to provide drainage in another manner or if other sufficient reasons exist to require such construction.

(e) The minimum design storm frequency for all drainage systems shall be the 10 year storm, except that those facilities crossing streets shall be designed for the 25 year storm.

(f) Drainage culverts and associated facilities shall be suitably sized to accommodate designated storm frequencies and shall be suitably constructed and installed to insure that the facilities will function adequately and will not deteriorate within an unreasonably short period of time. (AMENDED 04/03/90)

Section 15-263 Management of Stormwater

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(a) The requirements of this section shall apply to all development that involves the disturbance of at least 5,000 square feet of land area, subject to the following:

- (1) For purposes of this section, the term "disturbance" means that the land surface is altered in some substantial way. By way of illustration without limitation, land disturbance occurs whenever the ground surface is altered by grading, clearing, adding or enlarging a structure to cover an area not previously covered, or otherwise altering it to make it less pervious. Adding new pavement to a previously unpaved surface, or the reconstruction of a previously paved area shall be considered disturbance, but repairing or resurfacing a previously paved surface shall not.
- (2) Single-family and two-family residential development activities that involve the disturbance of less than 7,500 square feet of land area shall be exempt from the provisions of this section.
- (3) When land is subdivided, then the amount of land disturbance attributable to such subdivision (for purposes of determining whether the requirements of this section apply) shall include not only the

disturbance of land authorized by the permit or plat approval that authorizes the creation of the subdivision, but also the disturbance of land resulting from the reasonably expected development of any lot within such subdivision that is less than five acres in size.

(b) When land is subdivided, then the stormwater management system that is installed to comply with the provisions of this section shall be required to take into account not only the stormwater runoff from the subdivision if the lots so created remained undeveloped, but also the reasonably expected (according to generally accepted engineering standards) stormwater runoff from the development of all lots within such subdivision that are less than five acres in size. When such lots are subsequently developed, they shall be exempt from further review under the provisions of this section. However, lots within such subdivision that are five acres or more in size and that were not included in the stormwater calculations for purposes of designing a stormwater management system that satisfies the requirements of this section shall be required to comply with the requirements of this section when such lots are developed.

(c) Developments must install and maintain stormwater management systems that will control and treat runoff from the first one inch of rain as follows:

- (1) Draw down the treatment volume no faster than 48 hours, but no slower than 120 hours.
- (2) Achieve an eighty-five percent (85%) average annual removal rate for Total Suspended Solids.

(d) Subject to subsection (f), developments proposed for sites that have not previously been substantially developed must install and maintain stormwater management systems that ensure that the nutrient load contributed by the development activity is limited to 2.2 pounds per acre per year of nitrogen loading, and .82 pounds per acre per year of phosphorous loading.

(e) Subject to subsection (f), developments proposed for sites that have already been substantially developed shall install and maintain stormwater management systems that either meet the nutrient loading limits of 2.2 pounds per acre per year of nitrogen and .82 pounds per acre per year of phosphorous for the entire site, or achieve a 35% nitrogen and 5% phosphorous reduction between the existing and the post redevelopment situations.

(f) Developments that are not able to achieve the nitrogen loading limitations set forth in subsections (d) and (e) of this section using structural stormwater management systems to the maximum extent practicable shall have the option of partially offsetting projected nitrogen loads by funding wetland or riparian area restoration or BMPs through the Carrboro Mitigation Program. (See Section 15-263.1). However, the total nitrogen loading rate cannot exceed 3 pounds per acre per year for residential

Comment [ToC1]: Henry and Will A. will begin investigating a rate.

Will will send Mike language on rates from DWQ.

development or 5 pounds per acre per year for other development outside the B-1C and B-1G zoning districts, and 8 pounds per year for all developments within the B-1C and B-1G zoning districts.

(g) Developments shall be constructed and maintained so that their stormwater management systems meet the following minimum standards:

- (1) The post-development discharge rates shall be less than or equal to the pre-development discharge rates for the 1-, 2-, 5-, 10-, and 25-year 24-hour design storms.
- (2) For upstream properties, the 1% chance flood elevation may not be increased.

(h) The presumption established by this section is that, to satisfy the standards set forth herein, the applicant shall design and construct all stormwater management systems required by this section in accordance with the guidelines set forth in the Town of Carrboro Storm Drainage Design Manual (Appendix I to this chapter). However, the permit issuing authority may establish different requirements when it concludes, based upon (i) the information it receives in the consideration of the specific development proposal, and (ii) the recommendations of the public works director or the town engineer, that such deviations from the presumptive guidelines are necessary to satisfy the standards set forth in this section, or that the standards can still be met with such deviations and the deviations are otherwise warranted.

Comment [ToC2]: Henry:
Please check Appendix C and I to add "DO NOT DUMP" message to inlets and storm manhole covers and make other necessary changes when the time comes.

(i) Approval by the town of an applicant's stormwater management plans, and construction by the applicant of the stormwater management systems as shown in such plans, shall not relieve the applicant of the responsibility of complying with the standards set forth in this section. If at any time prior to two years following the issuance of a certificate of occupancy, for an unsubdivided development, or the approval of a final plat, for a subdivision, the town determines that the stormwater management systems planned to be installed or actually installed to meet the requirements of this section do not achieve that objective, the town may require the submission of revised plans and the installation of new, altered, or additional facilities to bring the development into compliance. Prior to issuance of a certificate of occupancy or approval of a final plat, the town may require the applicant to post a performance bond or other sufficient surety to guarantee compliance with this section.

Comment [ToC3]: ALL:
Ongoing maintenance, sureties, annual reports, permits, right of entry for inspections, etc. HOW DO WE MAKE SURE THAT ALL THE BMPs IN TOWN ARE BEING MAINTAINED INTO PERPETUITY, AND WILL NOT BECOME A LIABILITY FOR THE PUBLIC AT LARGE. This topic needs some serious consideration and time for discussion.

(j) Upon completion of construction of the stormwater management facilities, the permit recipient shall submit to the town "as built" plans for all such facilities in the form required by the town. Compliance with this requirement must occur prior to issuance of a certificate of occupancy, or prior to final plat approval (if applicable), unless adequate security is otherwise provided in accordance with the provisions of Sections 15-53 or 15-60.

Henry: Does Sungate have examples of O&M docs that you have attached to plans you have prepared for clients in other jurisdictions?

Section 15-263.1 Maintenance of Structural BMPs.

(a) For purposes of this section, a “structural BMP” is a device constructed or installed to trap, settle out, or filter pollutants from stormwater runoff or to reduce stormwater volume or velocity in order to satisfy one or more of the requirements of Section 15-263.

(b) The owner of each structural BMP installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the structural BMP was designed. Such operation and maintenance shall be in accordance with the Operation and Maintenance Agreement specified in subsection () of this section.

(c) The owner of each structural BMP shall ensure that each such facility is inspected in accordance with the Operation and Maintenance Agreement specified in subsection () of this section by a qualified registered North Carolina professional engineer, surveyor, or landscape architect. The person performing the inspections shall submit annually to the administrator a report certifying the results of such inspections. The report shall be in a format and shall contain the information prescribed by the administrator. The first report shall be due one year from the date of the as built certification required by Subsection 15-263(i), and subsequent reports shall be due on or before that anniversary date.

(d) The owner of each structural BMP shall ensure that, in accordance with the Operation and Maintenance Agreement, funds are set aside in an escrow account, sinking fund, or other arrangement, sufficient to pay major, non-routine costs associated with keeping such BMPs in proper operational condition, such as the cost of sediment removal, structural, biological, or vegetative replacement, major repair, or reconstruction. The owner shall submit annually to the administrator a report certifying that such funds have been set aside. The report shall be in a format and shall contain the information prescribed by the administrator. The first report shall be due one year from the date of the as-built certification required by Subsection 15-263(i), and subsequent reports shall be due on or before that anniversary date.

(e) Prior to final plat approval, in the case of a subdivision, or prior to the issuance of a certificate of occupancy, in the case of an unsubdivided development, the owner of a development that contains a structural BMP shall enter into an Operation and Maintenance Agreement with the town (and shall record such agreement in the Orange County Registry) that specifies that the owner, and his or her successor and assigns:

- (1) Agrees to comply with the obligations set forth in subsections (b), (c), and (d) of this section;
- (2) Authorizes the town and its employees or agents to enter the property where the structural BMPs are located at reasonable times to inspect

the same for compliance with the requirements of this section, the permit issued pursuant thereto, and the provisions of the Operation and Maintenance Agreement;

- (3) Agrees that, if the owner fails to operate and maintain such structural BMPs in accordance with the requirements of this section, the permit issued pursuant thereto, and the provisions of the Operation and Maintenance Agreement, the town is authorized (but not obligated) to enter the property to perform such work as is necessary to bring such BMPs into compliance and to charge the owner with the costs of such work.

(f) If structural BMPs are to be owned by a property owners or homeowners association or similar entity, then the covenants applicable to such association shall clearly reference the obligations of the association, as owner of such BMPs, to fulfill the obligations of the owner relating to such BMPs as required by the provisions of this section, the permit issued pursuant thereto, and the provisions of the Operation and Maintenance Agreement.

Section 15-263.2 Carrboro Mitigation Program

(a) The town shall establish a special capital reserve fund into which payments made pursuant to the provisions of Subsection 15-263(f) are deposited and from which appropriations are made for the purpose of funding projects that will reduce the nitrogen and phosphorus loadings of stormwater.

(b) The Board of Aldermen shall establish by resolution and revise from time to time a dollar value that a developer shall be allowed to pay in accordance with the provisions of Subsection 15-263(f) per pound of nitrogen per acre per year. The dollar amount established shall be an amount reasonably calculated to pay for the average cost of constructing and maintaining a facility that would remove from stormwater one pound of nitrogen per acre per year.

Section 2. Except as provided in Section 3, all provisions of any town ordinance in conflict with this ordinance are repealed.

Section 3. This ordinance shall become effective upon adoption, except that the provisions of Sections 15-263 and 15-263.2 shall not be applicable to developments for which completed applications have been received and fees paid prior to the effective date of this ordinance. As to such projects, the provisions of Section 15-263 of the existing Land Use Ordinance shall remain applicable.