

AN ORDINANCE AMENDING CHAPTER 5 OF THE TOWN CODE TO REGULATE THE APPLICATION OF NUTRIENTS TO TWO ACRES OR MORE OF LAND AREA

THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO ORDAINS:

Section 1. Article II of Chapter 5 of the Carrboro Town Code is amended by adding thereto a new Section 5-20.1 as follows:

Section 5-20.1 Application of Nutrients to Two Acres or More of Land Area.

(a) No person may apply nutrients, including fertilizer, bio solids, or compost, to any land area that exceeds two acres in size, or cause, suffer, or permit the application of such nutrients to any land area that exceeds two acres in size under the control of such person, unless:

(1) The person who applies the nutrients has attended and completed nutrient management training as described in subsection (b) of this section or works under the direct supervision of someone who has attended and completed such training; or

(2) The nutrients are applied in accordance with a nutrient management plan prepared and approved as provided in subsections (c) or (d) of this section.

(b) In order to satisfy the requirements of this section by nutrient management training, a person must complete training provided by either the North Carolina Cooperative Extension Service or the North Carolina Division of Water Quality and obtain a certificate from the training entity to that effect. Training shall be sufficient to provide participants with an understanding of the value and importance of proper management of nitrogen and phosphorus, and the water quality impacts of poor nutrient management, and the ability to understand and properly carry out a nutrient management plan. Training certificates must be kept at the site of the nutrient application or be produced within 24 hours of a request by the town.

(c) For pasture and cropland, a nutrient management plan developed to satisfy the requirements of this section shall be approved by the North Carolina Cooperative Extension Service.

(d) For land besides pasture and cropland, including but not necessarily limited to residential, commercial, and recreational turf, a nutrient management plan developed to satisfy the requirements of this section can be approved by the North Carolina Cooperative Extension Service. Alternatively, a nutrient management plan developed to satisfy the requirements of this section can be prepared in accordance with the guidelines set forth in the most current edition of one or more of the following publications as applicable and approved by the Town:

- (1) *Organic Lawn Care: A Guide to Lawn Maintenance and Pest Management for North Carolina, Water Quality and Professional Lawn Care, Water Quality and Home Lawn Care, or Carolina Lawns: A Guide to Maintaining Quality Turf in the Landscape* published by the North Carolina Cooperative Extension Service (NCCES publication numbers AG-562, WQWM-155, WQWM-151, and AG-69 respectively).
- (2) *Water Quality for Golf Course Superintendents and Professional Turf Managers*, published by the North Carolina Cooperative Extension Service (NCCES publication numbers WQWM-156).

- (3) Other publications establishing appropriate guidelines for nutrient application promulgated by universities or governmental agencies.

(e) A nutrient management plan that is based on guidelines contained in the publications referenced in subsection (d)(1)-(d)(3) shall at a minimum document whether or how the following nutrient management plan components are considered to insure appropriate management practices are employed to minimize the risk of over application and excessive loss of nutrients to surface waters.

- (1) Map of application area.
- (2) Choice of grasses and fertilizer.
- (3) Soil testing: timing, map of where samples are taken, sampling procedures, results.
- (4) Coring and aerification.
- (5) Application rates of nitrogen, phosphorus, potassium, and/or iron in pounds per square foot, including adjustments for steeper slopes and areas near drainageways (streams, ditches, swales, and runoff conveyances) and impervious surfaces.
- (6) Timing of application.
- (7) Recycling of grass clippings.
- (8) Type of spreader (gravity or centrifugal).
- (9) Name and contact information of applier.
- (10) Reference document(s) used to develop the plan

Records shall be kept and updated annually to document the actual implementation of these components. Nutrient quantities stored and applied shall be documented via sales receipts or similar records.

(f) Landowners and other individuals applying nutrients to areas less than two acres in size are encouraged to adopt manage practices to reduce the risk of surface water impacts and apply nutrients at rates recommended by the North Carolina Cooperative Extension Service.

Section 2. All provisions of any Town ordinance in conflict with this ordinance are repealed.

Section 3. This ordinance shall become effective thirty days after the date of adoption.



## TOWN OF CARRBORO

NORTH CAROLINA

**TRANSMITTAL                      PLANNING DEPARTMENT****DELIVERED VIA:**  *HAND*  *MAIL*  *FAX*  *EMAIL*

**To:**                      **Steve Stewart, Town Manager  
Mayor and Board of Aldermen**

**From:**                **Randy Dodd, Environmental Planner**

**Date:**                **June 2nd, 2009**

**Subject:**            **Nutrient Management Report**

Background and Summary

On February 17, 2009 staff presented a Town Code provision regulating nutrient application primarily in consideration of NPDES Phase II permit requirements, and secondarily in consideration of draft rules for Jordan Lake. A 2 acre applicability threshold was included; the provision would apply within the municipal limits. The purpose of this memo is to report on:

1. modifying the draft Town Code language to distinguish between farm land and turf;
2. working with the Cooperative Extension Office on the training component;
3. following up with with affected residents/landowners to determine if the proposed ordinance would be an obstacle to them.

Information

The consideration of this item has been discussed at previous meetings as presented in Table 1.

**Table 1: Compilation of Links to Board Agendas and Minutes Regarding Nutrient Management**

Date	Agenda/Minutes	Topic
5/20/2008	<a href="http://www.townofcarrboro.org/BoA/Agendas/2008/05_20_2008.htm">http://www.townofcarrboro.org/BoA/Agendas/2008/05_20_2008.htm</a>	Year 3 NPDES permit report
	<a href="http://www.townofcarrboro.org/BoA/Minutes/2008/05_20_2008.pdf">http://www.townofcarrboro.org/BoA/Minutes/2008/05_20_2008.pdf</a>	
6/10/2008	<a href="http://www.townofcarrboro.org/BoA/Agendas/2008/06_10_2008.htm">http://www.townofcarrboro.org/BoA/Agendas/2008/06_10_2008.htm</a>	Discussion of a fertilizer surcharge
	<a href="http://www.townofcarrboro.org/BoA/Minutes/2008/06_10_2008.pdf">http://www.townofcarrboro.org/BoA/Minutes/2008/06_10_2008.pdf</a>	
10/21/2008	<a href="http://www.townofcarrboro.org/BoA/Agendas/2008/10_21_2008.htm">http://www.townofcarrboro.org/BoA/Agendas/2008/10_21_2008.htm</a>	Report on fertilizer application
	<a href="http://www.townofcarrboro.org/BoA/Minutes/2008/10_21_2008.pdf">http://www.townofcarrboro.org/BoA/Minutes/2008/10_21_2008.pdf</a>	
1/27/2009	<a href="http://www.townofcarrboro.org/BoA/Agendas/2009/01_27_2009.htm">http://www.townofcarrboro.org/BoA/Agendas/2009/01_27_2009.htm</a>	Public hearing on a Town Code amendment to regulate the application of fertilizer to two acres or more of land area
	<a href="http://www.townofcarrboro.org/BoA/Minutes/2009/01_27_2009.pdf">http://www.townofcarrboro.org/BoA/Minutes/2009/01_27_2009.pdf</a>	
2/17/2009	<a href="http://www.townofcarrboro.org/BoA/Agendas/2009/02_17_2009.htm">http://www.townofcarrboro.org/BoA/Agendas/2009/02_17_2009.htm</a>	Continued discussion on a Town Code amendment to regulate the application of fertilizer to two acres or more of land area
	<a href="http://www.townofcarrboro.org/BoA/Minutes/2009/02_17_2009.pdf">http://www.townofcarrboro.org/BoA/Minutes/2009/02_17_2009.pdf</a>	

## A. As a general summary of prior consideration:

- As much as a quarter of the Town's land is in grass/turf. About 80% of lots have some grass.
- The total amount of grassed area within the Town limits is about 1000 acres, or about 1.5 square miles.
- A majority of the grassed land is residential; however, an overwhelming portion of residential grass is in small (< ½ acre) patches.
- The second largest category of grassed land is public, representing almost a fifth of the total grassed area.
- Slightly more than a third of the grassed area is in patches greater than 2 acres.
- There is limited area of grass in patches of ½ to 2 acres .
- From the Town's GIS, it appears as if there are 9 landowners affected with land in pasture, located off Old Fayetteville Road near McDougle School.
- Staff anticipate that Jordan Lake rules will be adopted in June 2009. The section of the rules relating to nutrient management as currently drafted include a 5 acre threshold. The rules also exempt residential uses. Agricultural nutrient management will not be included in the Town's implementation requirements for the Jordan Lake rules as currently drafted.

Based on these findings and deliberations at the previous meetings, the Board asked staff to modify the draft amendment to apply to properties greater than 2 acres in October, 2008.

## B. Staff follow up to the February, 2009 Board meeting discussion is summarized below

**1) Modifying the draft Town Code language to distinguish between farm land and turf;**

Staff has redrafted the Town Code amendment to distinguish between pasture/cropland and non-pasture/cropland (i.e., turf, lawns, and other herbaceous urban/suburban areas). The redrafted language designates the Cooperative Extension Service as the entity reviewing pasture/cropland nutrient management plans, and either the Cooperative Extension Service or the Town as the entity reviewing plans for urban/suburban areas. This language has been reviewed by the Cooperative Extension Service.

**2) Working with the Cooperative Extension Office on the training component;**

In addition to phone and email correspondence, Town staff met with the Cooperative Extension staff (Karen McAdams and Carl Matyac) on March 6<sup>th</sup>. A training was scheduled, publicized and completed on May 13<sup>th</sup>. The training addressed both turf/urban landscapes (Mr. Matyac) and pasture (Ms. McAdams). Staff sent a postcard to all potentially affected residents (56 landowners) announcing the training and inviting recipients to contact staff with questions or comments. Staff also sent a postcard to landscape contractors in the Town's privilege license database, parties that signed up at the February meeting (even though virtually all of these parties would not be affected since they reside outside the municipal limits), and several other parties potentially interested. Staff also distributed flyers, ran announcements in local media, posted a message on the ENVIROTOC listserv, and informed the EAB.

**3) Following up with affected residents/landowners to determine if the proposed ordinance would be an obstacle to them.**

Town staff have reached out to affected residents as described in item 2. One of the residents who provided public comment at the Public Hearing, Liz Rooks, attended the training provided by the Cooperative Extension Service regarding her interest in clarity about requirements for pasture land. Randy Dodd (Environmental Planner) and Trish McGuire (Planning Administrator) were also present at this training. Staff followed up with Ms. Rooks and Ms. Saul, who also commented in February, via email and phone.

As an educational and outreach (but not a binding regulatory) step, staff have prepared a draft outline for preparation of a nutrient management plan for lawns and turf (Appendix 1). This has been prepared to address potential questions about details of what would be deemed as an acceptable nutrient management plan by Town staff. This document can be readily amended as implementation of the program proceeds.

Staff Recommendation

Staff recommends that the Board of Aldermen adopt the proposed Town Code amendment.

**Appendix 1: Draft Outline for Nutrient Management Plan to Meet  
Requirements for Carrboro's Town Code (Lawns/Turf)**

There is no required minimum or maximum length of a plan. The minimum topics to be covered are shown below. The intent is to document that the applier has reasonably demonstrated the knowledge and practice of nutrient application to minimize the risk of undesirably high rates of loss of nutrients to surface waters, as outlined in Attachment 1.

**Map of application area**

The plan should include either a computer generated/electronic or hand drawn map. It should clearly indicate areas receiving nutrients, along with estimates of area in square feet or acres, and should have enough detail so that someone who is not familiar with the plan and site can look at the map and have a reasonable understanding of the area of application. The map can include soil testing sites (see below).

**Choice of grasses/plants and fertilizer**

The plan should include a simple listing of the variety/varieties of grasses/plants receiving nutrients. Strictly by way of example, a satisfactory response would be: "Nutrients are applied to tall fescue. An organic program is utilized based on the document "Organic Lawn Care: A Guide to Lawn Maintenance and Pest Management for North Carolina (AG-562)". Bone meal, wood ash, and dolomitic limestone are utilized."

**Soil testing: timing, map of where samples are taken, sampling procedures**

The plan should indicate the last date of soil sampling. Soil sampling sites should be included on the above map, or a separate map of the location of soil testing provided. The plan should indicate if the soil sampling procedures recommended by the NC Department of Agriculture were followed. The most recent soil test should be attached to the plan.

**Application rates of nitrogen, phosphorus, potassium, and/or iron**

The plan should present application rates for each nutrient and each application in pounds per square foot. The plan should include any adjustments for rates, e.g., for steeper slopes and areas near drainageways (streams, ditches, swales, and runoff conveyances). The plan should provide planned and/or actual dates. of application.

**Other Management Approaches**

The plan should indicate planned and/or actual dates of coring and aerification, and extent, if less than the entire site.

The plan should indicate if grass clippings are created through a mulching type mower, bagged, and/or composted.

The plan should indicate if a gravity or centrifugal spreader is used for application. If a centrifugal spreader is used, the plan should indicate steps taken to minimize risk of application to surfaces in which fertilizer could more readily enter surface waters.

**Name and contact information of applier**

**Reference document(s) used to develop the plan (see attachment 1 for recommended documents)**

**Attachment 1**  
**Excerpts from Town Code Section 5-20.1 Regulating Application of Nutrients and**  
**Outlining Nutrient Management Plan Provisions for Non-agricultural Land**

A nutrient management plan developed to satisfy the requirements of this section can be prepared in accordance with the guidelines set forth in the most current edition of one or more of the following publications as applicable and approved by the Town:

- (i) *Organic Lawn Care: A Guide to Lawn Maintenance and Pest Management for North Carolina, Water Quality and Professional Lawn Care, Water Quality and Home Lawn Care, or Carolina Lawns: A Guide to Maintaining Quality Turf in the Landscape* published by the North Carolina Cooperative Extension Service (NCCES publication numbers AG-562, WQWM-155, WQWM-151, and AG-69 respectively).
- (ii) *Water Quality for Golf Course Superintendents and Professional Turf Managers*, published by the North Carolina Cooperative Extension Service (NCCES publication numbers WQWM-156).
- (iii) Other publications establishing appropriate guidelines for nutrient application promulgated by universities or governmental agencies.
- (iv) A nutrient management plan that is based on guidelines contained in the publications referenced in subsection (d)(i)-(d)(iii) shall at a minimum document whether or how the following nutrient management plan components are considered to insure appropriate management practices are employed to minimize the risk of over application and excessive loss of nutrients to surface waters.

Map of application area

Choice of grasses and fertilizer

Soil testing: timing, map of where samples are taken, sampling procedures, results

Coring and aerification

Application rates of nitrogen, phosphorus, potassium, and/or iron in pounds per square foot, including adjustments for steeper slopes and areas near drainageways (streams, ditches, swales, and runoff conveyances) and impervious surfaces.

Timing of application

Recycling of grass clippings

Type of spreader (gravity or centrifugal)

Name and contact information of applier

Reference document(s) used to develop the plan

Records shall be kept and updated annually to document the actual implementation of these components. Nutrient quantities stored and applied shall be documented via sales receipts or similar records.

Yes Randy. I think the training and revisions to the code that allow the Orange County Extension office to review and approve management plans for the pasture have addressed my concerns. I guess I need to follow up with Karen McAdams about a certificate for the training? I will not be able to attend on June 2 because my company is hosting the International Association of Science Parks annual conference in Raleigh that week and there is a function that evening. You are welcome to tell the Board that I appreciate their responsiveness to our concerns.

Thank you for your help.

Liz

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**From:** Randy Dodd [mailto:RDodd@ci.carrboro.nc.us]

**Sent:** Thursday, May 28, 2009 3:19 PM

**To:** Liz Rooks

**Subject:** Carrboro fertilizer follow up

Dear Liz,

Thanks for showing up for the fertilizer training. I hope it was helpful.

Next Tuesday we will be reporting to the Board of Aldermen. I wanted to check with you on a couple matters:

- 1) Has the training and the revision to the Town Code language (attached) addressed your concerns? Perhaps the most important thing to note is that a new section in the Town Code has been added (subsection c) that provides the Cooperative Extension Service with the sole governmental responsibility for nutrient management plans for pasture
  - a. For pasture and cropland, a nutrient management plan developed to satisfy the requirements of this section shall be approved by the North Carolina Cooperative Extension Service.

I don't think the cropland piece applies---no active cropland within Town limits-- but we wanted to respond to the BOA request to address "agriculture" and be clear that CES would work with a landowner and not Town staff just in case some future use might arise.

- 2) Are there other people you recommend that it would be helpful for me to check in with to see if they have outstanding concerns? I was planning to contact Betsy Saul since she came to the public hearing.

Sincerely,

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