

MEMORANDUM

TO: Roger L. Stancil, Town Manager

THROUGH: Lance Norris, Public Works Director
J. B. Culpepper, Planning Director

FROM: Sue Burke, P.E., Stormwater Management Engineer

SUBJECT: Chapel Hill Implementation of the Approved Jordan Nutrient Strategy Rules

DATE: November 23, 2009

PURPOSE

This report provides the Council with an update of the Jordan Lake Nutrient Management Strategy Rules and the implementation approach proposed by Town staff.

BACKGROUND

The Jordan Lake Nutrient Management Strategy is a set of rules developed to reduce the nutrient over-enrichment in the lake. From its inception, Jordan Lake was classified as a Nutrient Sensitive Water. In 2002, the Upper New Hope Arm of Jordan Lake was designated as impaired by the North Carolina Environmental Management Commission (EMC) after exceeding the chlorophyll-a standard. Chlorophyll-a is used by the State as an indicator of excess nutrients. In 2006, the rest of the Jordan Lake exceeded that standard.

The EMC began the rule-making process in June 2007 by publishing a draft set of regulations. These regulations addressed various sources of nutrients to include stormwater runoff from new development; stormwater runoff from existing development; wastewater discharges; agriculture; and fertilizer management. The rules also required protection of riparian buffers along intermittent and perennial streams.

After conducting three public hearings and soliciting written comments during a 90-day public comment period, the EMC adopted revised regulations in May 2008 and submitted them to the Rules Review Commission (RRC). The RRC approved the last of the regulations in November 2008. Because the RRC received more than the required number of letters objecting to each rule, the regulations were submitted to the 2009 session of the General Assembly for its consideration. A more detailed history of the strategy and rule-making process is included as Attachment 1.

The General Assembly enacted two bills, which were signed into law by Governor Perdue. The effective date for the existing development stormwater rule is June 30, 2009. The effective date for the remaining rules is August 11, 2009.

DISCUSSION

All of Chapel Hill is tributary to the Upper New Hope Arm of the Jordan Lake. The Town is required to develop, modify, and implement the necessary ordinances and strategies for the new and existing development stormwater regulations, the riparian buffer protection regulations, and the fertilizer management regulations. A summary of key issues was prepared by the North Carolina Division of Water Quality (DWQ) and is included as Attachment 2.

Of immediate importance is the stormwater regulation addressing existing development. The Town must submit its Stage One Adaptive Management Program to the North Carolina Department of Environment and Natural Resources (DENR) by December 31, 2009. The Stage One Program consists of five elements:

- Public education program
- Stormwater system mapping program
- Identification and removal of illicit discharges
- Best Management Practice (BMP) maintenance program
- Identification of retrofit opportunities and projects to reduce nutrient loading from existing development.

The DWQ has prepared guidance for local governments (please see Attachment 3).

Under its National Pollutant Discharge Elimination System (NPDES) Phase II permit, Chapel Hill is already developing and implementing its stormwater management program to address the first four requirements listed above and may use its NPDES Phase II permit to demonstrate compliance with the Jordan Lake rule. The fifth element is a new requirement. At this time, the Town must submit only its strategy for identifying retrofit opportunities and new projects. The Stormwater Management Master Plan can serve to demonstrate compliance with this element. The Town must submit annual reports to the DWQ.

The next major milestone in the Jordan Lake Rule implementation is the riparian buffer rule. Local governments must submit their local riparian buffer programs to the DWQ by March 10, 2010 for review and approval by the EMC. The local program will consist of ordinances, policies, and procedures for protecting the riparian buffer, variance determinations, record keeping, and enforcement.

The riparian buffer program must provide 50-foot wide buffers along intermittent and perennial streams, lakes, ponds, and reservoirs. The water features subject to the buffer requirements must appear on the most recent soil survey maps prepared by the U.S. Natural Resources Conservation Service; the 1:24,000 scale quadrangle topographic maps prepared by the U.S. Geologic Survey (USGS), or a map approved by the North Carolina Information Coordinating Council and the EMC.

While the riparian buffer rule provides for local government riparian buffer programs to exceed the minimum requirements, it is not clear if a more protective program is limited

to only an increase in the buffer widths or may include intermittent and perennial streams that do not appear on either the soil survey map or USGS quad map. It is our understanding that the DWQ staff is working to provide clarification on that issue.

Within the 50-foot buffer, there are two zones. Zone One extends from the top of bank and extends landward 30 feet and must remain in an undisturbed, vegetated condition. Permitted activities in this zone are limited. Zone Two is the remaining 20 feet landward of Zone One. Zone Two is a stable, vegetated area that is to remain undisturbed unless the activity is expressly permitted under the rule. Grading and revegetating in Zone Two is permitted provided that Zone One is not adversely impacted. The State rule includes a table of uses that are designated as exempt, allowable, or allowable with mitigation. The Town may grant minor variances, i.e., activities that will impact only Zone Two, but major variances (activities that would impact any portion of Zone One) must be submitted to the EMC for approval.

The Town has riparian buffer requirements via the Resource Conservation District (RCD) in its Land Use Management Ordinance (LUMO). While it appears that the RCD requirements would meet some of the Jordan Lake rule criteria, Town staff anticipates that revisions to the LUMO (e.g., revisions to permitted uses, grandfathering) or additional regulations (e.g., enforcement, reporting) will be needed to demonstrate compliance. Stormwater and Planning staffs are working together to review the Jordan Lake riparian buffer rule and the model riparian buffer ordinance prepared by the DWQ (please see Attachment 4) as they relate to the Town's RCD requirements. LUMO text amendments and/or new regulations will be drafted by staff to enact stricter riparian buffer protection, beyond that provided by the RCD requirements, to comply with the State regulations.

The stormwater rules for new development will go into effect in 2012. A model program and ordinance will be available to local governments in September 2010 with local governments submitting their stormwater programs (ordinance and nutrient loading accounting tool) to the DWQ in September 2011. The Council may wish to consider requiring new development and redevelopment to comply with the nutrient reduction requirements prior to that time because untreated development will be added to the existing development that the Town is required to address. Staff will prepare a more detailed analysis and recommendation concerning this rule in the coming months.

NEXT STEPS

After the Town submits its Stage One Adaptive Management Program to DENR, the EMC will have six months to approve the program or request revisions. Within three months of approval by the EMC, the Town must begin implementation of its program and provide annual reports to the EMC.

Similarly, the EMC will have one year to review and approve, or request revisions, to the Town's riparian buffer program. Within two months of the EMC's approval, the Town must begin implementation of its riparian buffer program and provide annual reports to the EMC summarizing its activities in implementing the riparian buffer rule.

Staff will provide additional updates and make recommendations to, and will seek direction from, the Council as implementation of the Jordan Lake rules proceeds.

RECOMMENDATIONS

We recommend that the Council receive the report concerning the Town's implementation of the Jordan Nutrient Management Strategy regulations.

ATTACHMENTS

1. Division of Water Quality Jordan Lake Nutrient Management Strategy History and Rulemaking (p. 5).
2. Division of Water Quality Summary of Key Issues (p. 9).
3. Division of Water Quality Guidance for Local Governments – Existing Development (p. 11).
4. Division of Water Quality Guidance and Model Riparian Buffer Ordinance (p. 21).