



Status Update: Jordan Lake Model Stormwater Ordinance for New Development

November 18, 2010

- The Jordan Nutrient Management Strategy New Development Stormwater Rule (15A NCAC 02B .0265) requires local governments in the watershed to develop local stormwater programs that ensure compliance with the rule.
- To assist local governments in developing these new development programs, the Division of Water Quality is required to develop a model program that includes an accounting tool and a model ordinance.
- Schedule
 - Model ordinance and program reviewed by the EMC for approval in **January 2011**
 - Local governments will have until approx. **June 2011** to submit their new development draft stormwater program and ordinance to DWQ
 - DWQ will then have until approx. **April 2012** to review the local programs and offer recommendations to the EMC.
 - If approved by EMC, local governments will have until approx. **June 2012** to begin implementing their program.
- DWQ contracted with the UNC School of Government to develop the model ordinance
- The accounting tool is under development (NC State University) and review by DWQ. An introductory session has been held where local government participated and received a draft copy (digital spreadsheet model). *Local government staff will use this accounting tool for development review in the Jordan Lake Watershed to ensure compliance with the Jordan Lake Stormwater Rules.*

- The county must provide to DWQ a “stormwater program” that describes how the ordinance is going to be administered. (eg: engineering, technical issues, certifications, reporting, etc.)
- Session Law 2009-484 revised portions of rule .0265, and those revisions are included in the DWQ model ordinance.
- An informational and comment meeting was held on November 30th, 2010 for local government to review and comment on the model ordinance and program requirements with DWQ. Chatham County ERD Director attended this meeting and provided comments and questions.

**Model Stormwater Ordinance Summary of Key Issues
for Chatham County compliance**

1. Provisions may be amended into the Chatham County Stormwater Ordinance as text amendments, similar to the recent Watershed Protection Ordinance for riparian buffers.
2. The work will be fairly extensive and will require a comprehensive staff and legal review and comparative analysis with the existing county ordinances: stormwater, sedimentation and erosion control, watershed protection, subdivision, zoning, etc.
3. General new performance standards include:

New Development

- a. Total Nitrogen Load (maximum loading limits per sub-watershed):
 - i. Haw River Watershed: 3.8 pounds per acre per year
 - ii. Upper New Hope Arm: 2.2 pounds per acre per year
 - iii. Lower New Hope Arm: 4.4 pounds per acre per year
- b. Total Phosphorous Load (maximum loading limits per sub-watershed):
 - i. Haw River Watershed: 1.43 pounds per acre per year
 - ii. Upper New Hope Arm: 0.82 pounds per acre per year
 - iii. Lower New Hope Arm: 0.78 pounds per acre per year

Re-development

Note: Re-development may meet the above standards (for net increase of built-upon area) or meet the following nutrient load reductions;

- a. Total Nitrogen Load Reductions
 - i. Haw River Watershed: 8 percent reduction
 - ii. Upper New Hope Arm: 35 percent reduction
 - iii. Lower New Hope Arm: no increase allowed

- b. Total Phosphorous Load Reductions
 - i. Haw River Watershed: 5 percent reduction
 - ii. Upper New Hope Arm: 5 percent reduction
 - iii. Lower New Hope Arm: no increase

Partial Nutrient Off-sets

Note: These off-sets are required for development that cannot meet the nutrient loading targets on their development site. As an illustrative example, a commercial development in the Haw River Watershed has a 3.8 pounds/acre/ year maximum nitrogen loading limit. The development proposed generates 13 pounds/acre/year. The off-set rule allows a maximum of 10/pound/acre/year of nitrogen running off-site for commercial development. Therefore, the development must treat at least 3 pounds/acre/year on-site to meet the 10 pound limit off-site. Assuming this can be achieved with BMP's, the remaining 10 pounds/acre/year of nitrogen running off-site must be reduced to 3.8 (Haw River Watershed limit), or a reduction of 6.2 pounds/acre/year must be off-set by other means allowed.

Also added to .0265, if any development site cannot attain the target loading rate for their watershed (yet remains below the maximum allowed running off-site) without a BMP, then the site must be treated for 85% TSS using a structural BMP. Then if with the structural BMP, the development still is not attaining 3.8 pounds, it must use the off-set option to meet the target loading rate for the balance load.

- a. On-site requirements for *maximum nutrient (T&P) loading rates allowed:
 - i. Single-family, detached & duplex: 6 pounds per acre per year
 - ii. All other development: 10 pounds per acre per year (plus other performance standards required) ** Any additional reductions required may be achieved by off-set payment to NCEEP, local government or private bank/mitigation program.*

4. Since Chatham County contains portions of all 3 sub-watersheds listed above (Haw River, Upper and Lower Arm of New Hope Creek) flowing into Jordan Lake, it will be important to clearly identify these watersheds on a sub-watershed map made available to the general public and consider and utilize the most efficient methods practicable to:
 - a. comply with the minimum state rules for these three particular sub-watersheds,
 - b. minimize administrative and staff resource requirements
 - c. minimize the burden and cost on citizens and land owners
 - d. Recognize all other watersheds (Deep and Rocky River Watersheds) in Chatham County and the regulatory treatment of the stormwater ordinance within those watersheds outside of the Jordan Lake Watershed.
5. The existing performance standards of the Chatham County Stormwater Ordinance include other required (or similar) performance standards: volume, TSS, peak discharge, etc. These standards will need to be carefully reviewed to determine if they meet minimum state rules *as-is* or if modifications are needed to “dovetail” or come into compliance with these new state standards for Jordan Lake Watershed specifically.
6. In general, the new performance standards to include are total nitrogen and total phosphorous loading limits.
7. Depending on county resources made available, it is estimated that the full six month time-frame noted above (January – July 2011) will be required (at a minimum) for Environmental Resources Director to make the draft stormwater ordinance revisions required for submittal to DWQ/EMC review. Key assistance will be required from Planning Division staff and from the county attorney.
8. Also depending on resources available, it may become necessary to form a stormwater committee and/or hire a consulting firm to assist if the schedule and draft submittal deadline becomes a limiting factor.
9. It is recommended that the ordinance amendment process also include (at a minimum) input from the Environmental Review Board and the Planning Board with periodic up-dates provided to the Board of Commissioner’s.

For further information, questions or comments, please contact Fred Royal, PE, Director, Environmental Resources Division.