

**A RESOLUTION RECEIVING THE REPORT ON
JORDAN LAKE RULEMAKING STATUS
Resolution No. 144/2007-08**

WHEREAS, Carrboro is located in the watershed that drains to the upper New Hope arm of Jordan Lake, and

WHEREAS, the North Carolina Environmental Management Commission and Division of Water Quality are actively pursuing new regulations limiting nitrogen and phosphorus inputs to Jordan Lake, and

WHEREAS, these new regulations could have a substantial fiscal impact on the Town

NOW THEREFORE, the Carrboro Board of Alderman does hereby receive the report prepared by Staff, and direct staff to provide a report in the fall/winter of 2008 on the State's continued consideration of these rules, and implementation recommendations, including land use ordinance updates and potential fiscal and staff impacts and options for financial planning.



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: May 12, 2008

Subject: Jordan Lake Nutrient Rulemaking Process Update

Background and Summary

The North Carolina Environmental Management Commission (EMC) and Division of Water Quality (DWQ) have been managing nitrogen and phosphorus inputs to Jordan Lake since the early 1980's. In the past decade, legislative mandates and technical studies have prompted the EMC and DWQ to consider new regulations. The Board of Aldermen have received several reports from Town and Triangle J COG staff during this period. The purpose of this memo is to provide a historical summary and an update subsequent to the public hearings held in July 2007 and DWQ, Hearing Officer, and EMC response to public hearing feedback. The report provided below is mostly excerpted from information recently posted by DWQ staff at <http://h2o.enr.state.nc.us/nps/JordanNutrientStrategy.htm>.

InformationGeneral Background

Since its impoundment in 1983, the B. Everett Jordan Reservoir has consistently shown nutrient over-enrichment, which leads to algal blooms and other water quality problems. The NC Environmental Management Commission (EMC) designated the reservoir a Nutrient Sensitive Water (NSW) that same year. In 2002, the Division of Water Quality determined that the Upper New Hope Creek Arm of the lake no longer met its designated uses due to excess nutrient inputs. The Division made the same determination for the rest of the lake in 2006. As a result, the entire reservoir is now on North Carolina's list of impaired waters under Section 303(d) of the federal Clean Water Act.

The potential for excess nutrients was a concern when the reservoir was proposed in 1945. Congress authorized the New Hope Dam in 1963 but water quality concerns continued to grow, and construction was delayed due to an inadequate Environmental Impact Statement and legal actions in the early 1970's. Although water quality standards were frequently exceeded at most sampling locations in the watershed in the 1970s, a Federal Court

in the 1970s, a Federal Court decision allowed completion of the lake in 1979. Algal blooms, including harmful blue-green blooms, have been documented consistently in both the Haw and New Hope Arms throughout the reservoir's history. Following its supplemental classification as NSW in 1983, phosphorus limits were required for wastewater dischargers. Despite these early controls, portions of the lake remained hypereutrophic, reflecting a superabundance of nutrients. Nuisance blooms of blue-green algae were documented in both the Haw and New Hope arms through the 1980's. Despite the installation of biological nutrient removal by Orange Water and Sewer Authority (OWASA)'s Mason Farm wastewater treatment plant on Morgan Creek in 1991, water quality problems persisted and elevated nutrients led to periodic algal blooms in the early 1990s. In 1996 and again in 2003, the Town of Cary, which withdraws drinking water from Jordan Lake, received extensive complaints about the water's taste and odor. In March 2006, the Division documented a fish kill in the Upper New Hope Arm.

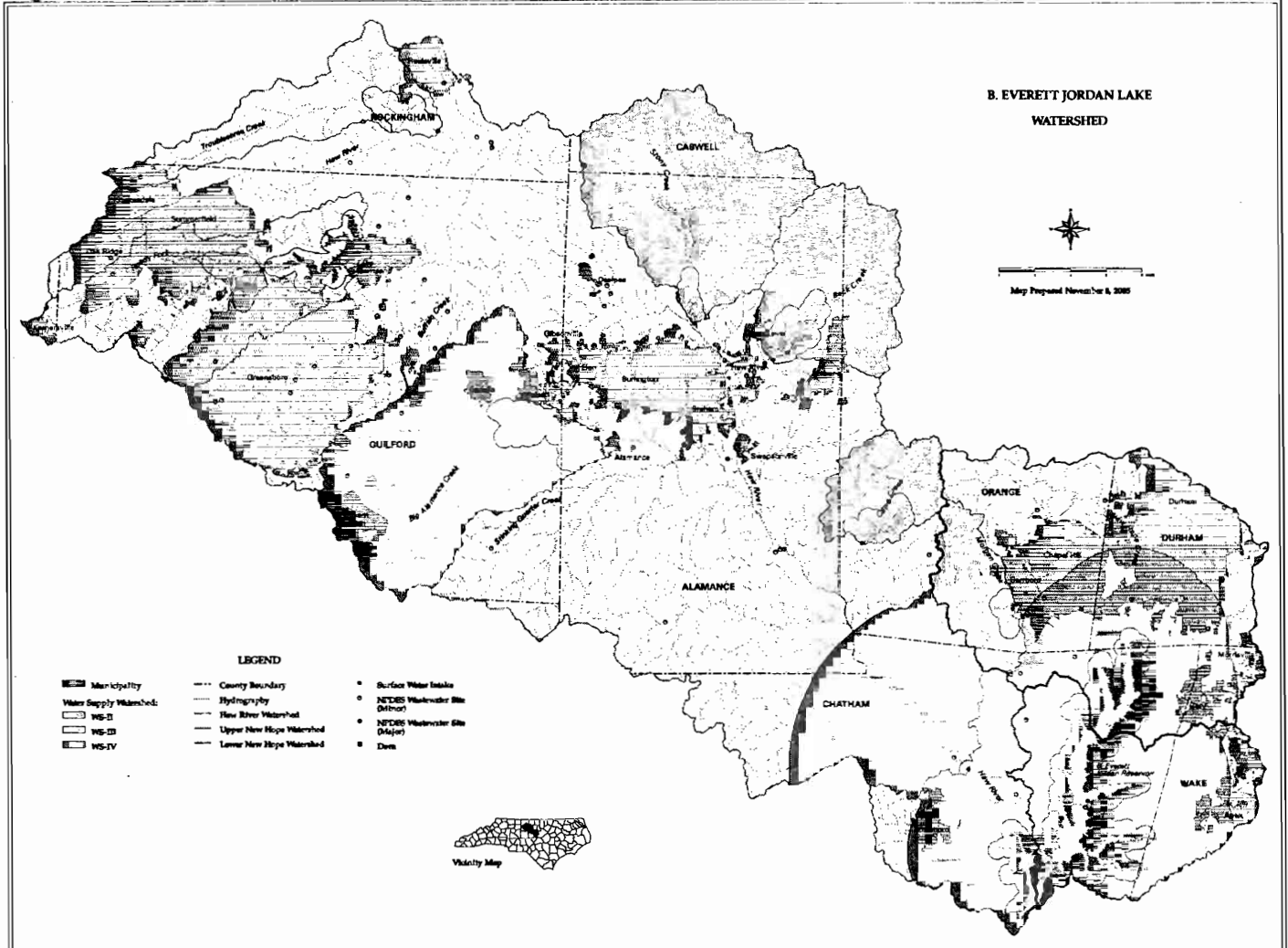
Jordan Reservoir's watershed encompasses 1,686 square miles, just over 1 million acres, including all or portions of eight counties and twenty-six municipalities (Figure 1). It takes in both the west side of the Triangle area, including Chapel Hill and parts of Durham, Cary and Apex, as well as most of the Piedmont Triad, another of the fastest growing areas in the state. While half of the watershed is nested with smaller Water Supply Watersheds (Figure 1) that impose development density limits and require stormwater controls, these restrictions do not ensure that nutrient loading from new development will be stemmed. In addition, existing developed areas, most of them lacking stormwater treatment, cover significant acreage in the watershed. The Upper New Hope subwatershed is heavily urbanized, while the Lower New Hope subwatershed is being rapidly developed at suburban residential densities. Reflecting development, agriculture in the watershed is following the statewide trend of decreasing land area.

Management Mandates

Chapter 143B-282 and other North Carolina statutes charge the EMC with the responsibility to protect and restore water quality throughout the state, and empower it to adopt regulations to that end. The sweeping Clean Water Responsibility Act of 1997, S.L. 1997-458 (often referred to as House Bill 515), included requirements to address water quality problems in NSW waters and directed the EMC to establish goals for reducing nutrient inputs to these waters and to ensure that point and nonpoint sources share proportionally in cleanup responsibility. The following year, SL 1998-212 amended the Act to allow the EMC to grant a compliance extension under conditions that affected parties develop a calibrated nutrient response model for the water body and adhere to its results. In 1999, the Haw River municipalities of Greensboro, Mebane, Reidsville, Graham, Pittsboro, Burlington, and OWASA formed the Project Partners and sought a compliance extension as allowed by SL 1998-212. In April 1999, the Commission granted the request pursuant to N.C. Gen. Stat §143-215.1B. The Act did not set time limits on rule adoption by the Commission. Dischargers' optimization plans were presented at the July 2000 EMC Water Quality Committee meeting. The dischargers contracted the development of a reservoir nutrient response model pursuant to the requirements of HB 515. The Committee approved the combined hydrodynamic and water quality reservoir model in July 2002. The model resulted in slightly more stringent wastewater nitrogen limits for Haw dischargers than imposed by HB515, and significantly more stringent limits for Upper New Hope dischargers.

In addition to state legislative requirements, the 2002 impairment determination on the Upper New Hope Arm precipitated federal Clean Water Act requirements to set and enforce nutrient load reduction limits, known as a total maximum daily load (TMDL). NCDWQ contracted enhancements to the Project Partners' reservoir nutrient response model for TMDL development. In 2005, the General Assembly enacted SL 2005-190 that specifically identified excess nutrients as a major source of impairment to drinking water supplies and directed the Commission to adopt permanent rules to establish and implement nutrient management strategies to protect drinking water supply reservoirs.

Figure 1: B. Everett Jordan Lake Watershed



Strategy Development Process

To meet federal and state requirements, NCDWQ staff conducted a 1½-year collaborative evaluation process with stakeholders during 2003-2004, facilitated by TJCOG, to apply the reservoir model to seek consensus on establishment of lake nutrient loading goals, discharger allocation methods, and a conceptual nonpoint source strategy. The reservoir model allows estimation of the magnitude of loading reductions needed to minimize exceedances of the water quality standard for chlorophyll-*a*, the primary standard on which nutrient impairment is based. After 22 formal meetings, the stakeholders issued a report in February 2005. The report contained a mix of consensus recommendations and majority/ minority positions on goals, allocations and strategy concepts, and it included a conceptual nonpoint source proposal.

In April 2005, the Division followed with the *B. Everett Jordan Nutrient Management Strategy and Total Maximum Daily Load*. This combined TMDL/strategy document included percentage load reduction goals and mass load equivalents, individual wastewater treatment plant allocations, and a conceptual nonpoint source

nonpoint source strategy. The Division provided a 60-day comment period and held two public meetings on May 5, 2005. In addition to public meeting comments, the Division received 2,278 written comments on the proposed strategy, the vast majority of which were postcards from lake users supporting regulatory actions. The Division considered the comments and drew heavily from the stakeholders' recommendations to expand the conceptual strategy into draft rules, which were presented to the Commission's Water Quality Committee. The Committee approved moving the rules to public comment in October 2005.

Stakeholder concerns over the modeling basis for strategy goals, timelines and costs, existing development load reduction requirements and costs, and timeframe prompted an ad hoc session of the full Environmental Management Commission in January 2006. Further action on the strategy was postponed in favor of additional stakeholder discussions and development of cost estimates. Over the course of 2006, staff held a total of 27 technical meetings. Strategy refinements resulting from these meetings included the following:

- Draft fiscal analysis and cost estimates for most rules.
- A list of alternative nutrient-reducing practices for existing developed lands.
- Revisions to most rules.
- A draft study plan for future remodeling of Jordan reservoir and its watershed.

Recent Formal Rulemaking Efforts

At its March 2007 meeting, the Commission approved taking the rules to public hearings and a formal comment period. Public hearings were held in July 2007 at Carrboro and Elon College. Oral and written comments were received from all interested parties, including the Town of Carrboro. The Hearing Officers began deliberations over the rules in late August 2007. Due to the scope and complex subject addressed by the rules, a total of 14 meetings were held with associated preparation and follow-up to fully evaluate the comments and issues and to reach consensus on a set of recommended revisions. This process continued into April 2008. The Hearing Officers received input from Division staff in the Planning, Surface Water Protection, and Aquifer Protection Sections, as well as the Attorney General's Office.

Summary of Written and Public Hearing Comments

A mix of development/real estate interests and local citizens and environmental groups attended the Carrboro hearing, and comments were relatively evenly split between support for and opposition to the rules. Local governments and developers dominated the Elon hearing, and Elon comments were heavily in opposition with a few themes repeated by a great many commenters. While a certain level of misunderstanding over proposed regulations characterizes any rulemaking process, the Hearing Officers were struck by the widespread misconceptions about these rules especially in light of the considerable level of staff involvement with stakeholders preceding the comment period.

Supporters of the rules cited a longstanding need for restoring the lake, federal and state mandates, a steadily eroding quality of their lake use experience, the regional importance of the lake, and the collateral benefits to numerous degraded streams in the watershed from the proposed rules. They attached urgency to the lake's restoration need given the rapidly growing nature of watershed communities and problems with the current growth-related water quality regulations. They called for holding point source dischargers to the original 2011 compliance date from the statute given the key role of wastewater discharges and the ample notice already provided to the discharge community. They believed that waiting for Phase II stormwater controls to play out before considering the need for dealing with existing development ignored the fact that Phase II does not

development ignored the fact that Phase II does not address existing development, that the lake is impaired now as a result of existing land uses, and thus that restoration requires addressing existing development in a meaningful way. They observed that Division cost estimates reflect only part of a full and fair cost/benefit assessment and an avoidable, worst-case representation of costs for the existing development requirements. They also observed that the Existing Development rule provides great latitude to use alternative nutrient-reducing practices, and projected that lower-cost options for existing development would emerge with implementation.

Those in opposition questioned the wisdom, historical consistency, and feasibility of the goal as well as the cost burden relative to degree of impairment. Equity concerns were numerous. Many felt that Haw communities would pay for the benefit of New Hope communities who withdraw water from the lake, or that the regional nature of benefits should compel the General Assembly to fund restoration actions. Many objected to the rules as an unfunded mandate and stated that the state was unfairly passing costs off on local governments. Several local governments commented that agriculture contributed most of the nutrient loading yet faced minimal requirements and minimal costs. Numerous commenters raised concerns that the strategy would undercut the Triad region's recovering economy, drive business elsewhere, and make home purchase unaffordable for many. They saw the imposition of these rules on only this watershed as inequitable and unnecessary. Many generally believe that Division cost estimates were greatly understated, and would result in increased taxes, utility rates, or home prices. A few offered estimates of exorbitant fees that would be passed on to homeowners or homebuyers. A few local governments expressed concern that past responsible and proactive planning would not be credited or was being punished by the rules. People frequently commented that adaptive management should mean implementing less costly measures first and evaluating the effects before contemplating costlier actions.

Commenters frequently objected to the technical foundation for the strategy, which many represented broadly as "bad science". They raised concerns with various aspects of the impairment determination, the reservoir and watershed models, the data used to develop them, and they pointed to other data and studies indicating improvement. Commenters repeatedly expressed dismay that after all the costs and impacts there was no guarantee the strategy would work. Several challenged the Commission's statutory authority to require local ordinances or to impose the existing development rule, and objected to the use of the Critical Water Supply Watershed concept for various reasons including that it would require density limitations, promote sprawl, and allow future additional land use restrictions. Regarding individual rules, many in opposition proposed that adaptive management should allow evaluation of the effect of Phase II stormwater requirements before imposing additional stormwater mandates on communities. A number raised strong concern over the technical feasibility of stormwater retrofitting under the Existing Development rule, as well as the great costs, tax base losses, and great administrative and maintenance burden that would result. A few commenters claimed that the New Development rule would result in untenable levels of onsite structural controls, such as three BMPs per project.

Hearing Officer's and EMC Recommendations

The Jordan Rules Hearing Officers have reviewed and weighed input from the stakeholder teams, potentially affected parties, local governments, legislators, concerned citizens, interest groups and organizations, and staff. It is the recommendation of the Hearing Officers that the rules be adopted and filed as permanent rules with the Rules Review Commission. The proposed effective date is April 1, 2009. In making these recommendations, the Hearing Officers have considered the requirements pursuant to various NC General Statutes, as well as the verbal and written comments received. In arriving at this recommendation, the Hearing Officers deliberated extensively over the public comments. During this process, which took place from August 2007 through March 2008, they formed positions on a number of key issues, and developed certain recommendations to accompany the rule changes. Those positions and recommendations are provided below and with the individual rule

recommendations are provided below and with the individual rule summaries that follow.

The EMC met on May 8, 2008 and unanimously adopted the proposed rules. The rules will next be considered by the Rules Review Commission (RRC) on June 19th for approval prior to the January 2009 Session of the General Assembly. Requested effective date is April 1, 2009; however, it is possible that legislative review could be required, which would delay the effective date into the summer of 2009, assuming the rules are approved by the RRC.

The Hearing Officers and EMC:

- Agree that a comprehensive set of management actions across source types is needed to address the lake's nutrient-driven impairment and that rules are needed to effectively address existing developed lands and new development as well as agriculture and point sources. They believe that an ideal conceptual approach would allow credit for past nutrient-reducing actions regardless of when they occurred, and that such an approach is practically achievable with point sources. However, they also believe that this ideal conceptual approach is neither practically achievable with nonpoint sources nor easily applied to them.
- Support the nonpoint source design of requiring reductions equating to the percentage goals from each source relative to its baseline loading, which includes crediting of load-reducing practices implemented since the baseline and prior to implementation date of the rules.
- Consider the offset and trading options included in the rules to be valuable in providing the greatest possible latitude to achieve the most cost-effective reductions for both point and nonpoint sources. For this reason they have added or clarified the additional option throughout the rules to allow for market-based trading where it can be supported with the necessary infrastructure and accounting.
- Recommend that the Commission endorse a resolution to the General Assembly requesting funding (\$100M) for local governments and the Division to assist in the implementation of the new development stormwater, buffer protection and existing development stormwater programs required under these rules.

The Hearing Officers:

- Recognize the concerns over new costs potentially imposed on local governments by this set of rules, while they emphasize that the Division's original cost estimates are considered a very avoidable worst-case scenario.
- Recognize the new challenges that local governments will face in implementing the requirements of the existing development rule, and the emerging nature of tools that may be used in this effort.
- Are sympathetic to arguments that the benefits to individual local governments are not necessarily proportionate with the compliance costs they may face. They view the benefits provided by Jordan Reservoir as being regional in nature, extending beyond the bounds of the watershed.
- Recognize that some of the same aspects of these rules will place new demands on Division staff to provide local governments with the support services needed to carry them out successfully and efficiently.

Updated State Fiscal Analysis

To meet rulemaking requirements and address stakeholder interest, Division staff estimated costs for the rules in a Fiscal Analysis document. This fiscal analysis was reviewed and approved by DENR's Division of Budget, Planning and Analysis and the Office of State Budget and Management. The Office of the Governor and the Fiscal Research Division of the General Assembly also reviewed it. Staff made numerous revisions as a result of reviewer input. The Commission also had opportunity to review the analysis before approving the rules for public comment.

DWQ Staff has developed revisions to cost estimates. They address several issues. In general, the public comments reflected a high level of concern over anticipated cost impacts of the rules, particularly the Existing Development rule. More specific reasons are that:

- Some valid technical issues were raised with Division cost estimates.
- Rule revisions by the Hearing Officers have affected some cost projections.
- Costs for Existing Development in the Fiscal Analysis were developed as worst-case projections of the full cost of rule compliance based on the assumed use of structural stormwater retrofits only, as well as purchasing all the land required for them. This has led to the widespread impression that costs will in fact be at least this great. The rule, on the other hand, allows for and identifies a wide range of load-reducing practices. DWQ staff believe many of these options are available to local governments now and expect more to become available as accounting is developed. Given the long-term nature of compliance, DWQ staff also recognize the potential for local governments to find significant willing landowners for the use of structural retrofits, placing practices on private property or in easements and avoiding purchase costs. Overall, we expect that the rule to be significantly less costly to implement than State fiscal estimate and others' projections would suggest.
- DWQ staff recognize that in projecting beyond a handful of years for the set of actions that will be taken to address existing development, the uncertainties become prohibitively large for several reasons. First, DWQ expects to develop accounting tools during the first years that will allow credit for additional, more cost-effective alternative practices for which we cannot currently state the magnitude of reductions. Second, DWQ recognizes the extent to which other factors may play in to local decision-making. One factor that might not have been foreseen five years ago is how the current drought is driving real interest in technologies for capturing rainfall as a resource. Water-harvesting technologies also reduce nutrient loading, and will likely become more available and cost-effective with time. Third, several NOx emission air quality regulations currently in place are expected to result in reductions in nitrogen export from impervious surfaces over the next thirty years. The magnitude of this effect will be determined through monitoring of runoff.

Description of Strategy

The State's proposed strategy is designed around nitrogen (N) and phosphorus (P) percentage reduction goals for each of the three arms (upper and lower New Hope and Haw River arms) of Jordan Reservoir. Separate goals were needed for each arm because of the hydrologically distinct behavior exhibited by each arm. These goals are relative to a baseline period of 1997 through 2001. The baseline period becomes important for implementation because all subsequent load-changing activities in the watershed need to be quantified either for reduction credit or as additional load to be offset in reaching the goals.

The watershed of the Upper New Hope Arm, in which Carrboro, Chapel Hill, and Durham are located, faces the greatest reduction needs. The Lower New Hope Arm has the least reduction need. Its watershed is very small but is being rapidly developed. Finally, the Haw River arm, which comprises 80% of the entire Jordan watershed, contains the rapidly growing Piedmont Triad area.

The proposed rules reflect a comprehensive effort to address nutrient sources to Jordan Reservoir to meet the reduction goals established in the TMDL. The strategy includes reductions by point source discharges and in nutrient runoff from agriculture, existing development, and new development. In addition, riparian buffer protection rules would largely stem loading increases that would otherwise result from loss of those landscape features, while requirements to establish buffers during a change in land use would achieve some loading reduction. Lastly, a fertilizer management rule would result in training of fertilizer applicators in the watershed, potentially reducing nutrient inputs through education.

Timeframes for point source compliance are mandated by the statutes discussed above, SL 1997-458 and SL 1998-212, as a maximum of five years following the Commission's adoption of this strategy. Compliance timeframes for nonpoint sources are less prescriptive. Within the Basinwide planning statute, Session Law 1997-458 calls for the Commission to develop 5-year plans for point and nonpoint sources to achieve reduction goals for Nutrient Sensitive Waters, and to require demonstration of incremental annual progress. The nonpoint source compliance timeframes in these rules are specific to the source category. **Assuming an effective date of April 2009, the urban stormwater compliance timeframe would require the Town to develop and submit a load reduction program plan to the State in 2011-2012, and begin implementing the program in 2012-2013.**

Table 1. List of Proposed Rules Comprising the Jordan Nutrient Strategy

15A NCAC 02B	Rule Title
Rule Number	
.0262	Watershed Nutrient Reduction Goals
.0263	Nutrient Management
.0264	Agriculture
.0265	Stormwater Management for New Development
.0266	Stormwater Management for Existing Development
.0267	Protection of Existing Riparian Buffers
.0268	Mitigation for Riparian Buffers
.0269	Options for Offsetting Nutrient Loads
.0270	Wastewater Discharge Requirements
.0271	Stormwater Requirements for State and Federal Entities
.0272	Riparian Buffer Mitigation Fees
.0311	Cape Fear River Basin (Schedule of Classifications)

Changes from previous nutrient strategies implemented in the Neuse and Tar-Pamlico River Basins include stormwater requirements for *all* local governments in the watershed, *local* implementation of buffer rules, a rule requiring local governments to achieve loading reductions from existing developed lands, a separate stormwater rule for State and Federal entities, and a separate rule outlining a trading framework to maximize options for cost-effective reductions. Table 1 lists the set of rules comprising the proposed strategy. Of these, the rules for stormwater management for existing development (.0266) are believed by Town staff to present the largest challenge to the Town.

Staff Recommendation

Staff recommend that the Board of Aldermen accept this report, and direct staff to provide a report in the fall/winter of 2008 on the State's continued consideration of these rules, and implementation recommendations, including land use ordinance updates and potential fiscal and staff impacts and options for financial planning.

State Response to Comments Provided by Carrboro in July, 2007

Comment	Summary of State Response
Don't identify specific municipalities but rather generically identify all municipalities in watershed to allow for future changes in boundaries from annexation	While municipalities still listed, wording in rule changed to identify "all incorporated municipalities with planning jurisdiction within or partially within the Jordan watershed."
Rules will place financial burden on Town and in doing so impact long standing local growth commitments	Stormwater utilities are perhaps the most obvious means of local funding. The longer utilities are in place, the greater the proportion of their funds that will likely become available for the purposes of this rule as more pressing flooding and decaying infrastructure needs are addressed. The rule provides the opportunity for local governments to assess those needs and propose reasonable compliance timeframes. DWQ staff appreciate the Division of Soil and Water Conservation's efforts to mention the Community Conservation Assistance Program and agree that it could be very useful to local governments in addressing this rule. The Hearing Officers are sensitive to the potential magnitude of costs these rules may impose, and to the general concerns stated here. While the rules cannot require that the General Assembly provide funding, the EMC has requested financial support from General Assembly
Study the feasibility, cost effectiveness and water quality improvement from reconfiguring the causeway in the upper New Hope arm to improve circulation	Road causeways do have the potential to affect the spatial distribution of nutrient concentrations in Jordan Lake, and removal of these causeways may improve water quality in terms of chlorophyll a concentrations in lake segments upstream. However, this proposal has the potential to cause additional impairments or worsen existing impairments in lake segments downstream of the existing causeways. While this proposal may hold merit, a strategy that could also degrade water quality downstream should be considered a secondary option better suited for a subsequent stage of adaptive management if needed.
The rule needs to specifically incorporate atmospheric nitrogen as a source and in consideration of seeking optimal reduction solutions	Acknowledged. In developing these rules, we have considered the adequacy of other existing regulations that address the sources mentioned in the comment. We also recognize that through adaptive management we may in the future refine the strategy to better address certain sources. Altogether, we believe that some level of reduction in atmospheric N deposition is likely to occur in coming years. In terms of how reductions will be recognized in this strategy, accounting methods for agriculture and stormwater implicitly incorporate atmospheric deposition. We recognize in the stormwater rules that the accounting methods are to be updated periodically with the results of new data that quantifies these changes in runoff N content. This will appropriately account for reductions in this source. In addition, in practicing adaptive management, our ongoing monitoring of nutrient inputs to the lake and the lake's response will allow us to capture any unforeseen improvements and to revise requirements accordingly, especially for existing development.
There is uncertainty as to if the nitrogen and phosphorous loading targets are feasible for dense development and redevelopment	Encouragement of establishment of trading and offset programs

<p>Agricultural uses should have to meet changes related to the 2001 baseline as is proposed for all other uses, or any other uses whose actions prior to 2001 can be shown to have water quality benefits to receive credit for those actions.</p>	<p>As discussed with many of the local governments during rule development, the accounting will be designed to provide them the ability to credit load-reducing actions implemented since the baseline. We consider it an unavoidable inequity that the rule cannot credit beneficial actions taken during or prior to the baseline. The Hearing Officers have removed the language referenced in the agriculture rule that would allow crediting of pre-baseline BMPs toward individual compliance.</p>
<p>Fiscal Impacts – The estimated costs, as high as they are already, still appear to grossly underestimate the full cost of implementing the rule as written. There are concerns with the magnitude of direct, indirect, and administrative costs.</p>	<p>State DWQ staff have updated their fiscal analysis. While the rulemaking process required calculation of direct, accounting costs and not opportunity costs, we estimated opportunity costs where they appeared to be important. For new development, we captured much of the opportunity cost of sacrificing land to BMPs by including the cost of that land in the calculations. The other potential indirect costs may have merit. However, they are beyond the scope of North Carolina rulemaking requirements to quantify. Based in part on experience in the Neuse and Tar-Pamlico Basins, we reasoned that only five small but growing municipalities would require new staff, and estimated those costs to total \$375,000/yr. For counties, the assumption of little development falling within ETJ's was one of two that we felt supported the assumption of no significant new costs to counties. The other was that all counties contain Water Supply Watersheds and implement stormwater and buffer programs for those purposes. Given these comments and the fact that we were unable to survey all local governments on this issue during fiscal note development, we have increased our estimate of the number of positions as detailed in the Fiscal Revisions (Appendix E) of this report. We have also revised our estimate of local government costs for regulatory development assuming a pay rate of \$100/hr.</p>
<p>There are related environmental costs with the potential to encourage sprawling land use that need to be carefully considered</p>	<p>The environmental costs described in these comments may have merit. However, they are beyond the scope of North Carolina rulemaking requirements to quantify. To the extent that they may occur, any stormwater regulation would incur them, and Phase II stormwater regulations would likely precipitate the great majority of any such costs.</p>
<p>Section .0265 (3)(a)(vi) must be clarified such that if there exists a local government option for mitigation then that local option shall be the only offset option that developers use. Clarification throughout rules that local governments have the option to implement more stringent standards to achieve the nutrient reduction goals will be essential. Fiscal Impacts Section .0265 must also be clarified such that any contributions to NC EEP resulting from development occurring within a particular jurisdiction and within one of the three Jordan Lake arms, or other appropriate hydrologic unit must be expended within that same political and hydrological area .</p>	<p>We understand the desire to ensure that a local offset program will be successful, and the desire we infer from the comment for offsets to be installed locally. Session law SL 2007-438, adopted during the comment period, requires EEP to transition to a fee-based program based on actual costs of providing credits. It also allows for private operators to provide credits. The Hearing Officers have revised the rule to comport with this legislation, to recognize the private option, and to require all options to meet the provisions of the trading rule. These changes may address the commenter's concerns by allowing for local offsets at market rates.</p>
<p>The five-year time frame for the completion of nutrient management training specified in Section .0263 (5)(a) is too long. Local governments affected by this rule are, as it is currently written, required to prepare programs demonstrating how</p>	<p>The Hearing Officers have shortened the rule compliance timeframe to 3 years, the shortest feasible timeframe that would still allow the Cooperative Extension Service sufficient time to structure and carry out training. The Hearing Officers have added an exception for homeowners to the requirements on</p>

<p>required reductions will be achieved within three years. The nutrient management training time frame should be no longer than three years as well. Requiring homeowners to bear the responsibility for verifying that nutrient applicators they hire have met the requirements of Section .0263 (5)(a) is cumbersome and unrealistic.</p>	<p>those who hire applicators.</p>
<p>Reconsider the numbers of livestock that in Section .0264 (4)(c); these thresholds will allow too many small farming operations to operate without necessary nutrient management practices.</p>	<p>The swine thresholds have been lowered. The proposed thresholds capture the great majority of livestock nitrogen in the watershed. In addition, the Hearing Officers added a clause to the rule ensuring that the Division may require a sub-threshold operation to comply with the rule if it causes or may cause water quality problems.</p>
<p>Section .0265 (4)(e) should be revised to allow local governments that are also subject to NPDES II, or other State-mandated stormwater programs which require an annual report, to prepare one annual report that responds to the initiatives of all programs.</p>	<p>We agree with the efficiency that this recommendation targets, recognizing that the report will need to include nutrient statistics that Phase II would not require. We intend to work with the local governments to establish streamlined suitable reporting.</p>
<p>Section .0266 does not provide clear information on how required water quality improvements will be tracked.</p>	<p>The comment seems fair if 'clear' is read as 'specific'. The rule requires DWQ to develop the accounting requirements collaboratively with local governments and requires annual reports from the local governments once implementation begins. This process will provide the desired specifics.</p>
<p>The buffer portion of the rule should apply to all intermittent and perennial surface waters, as defined in Section .0267 (2) and per the latest publication of DWQ's Identification Methods for the Origins of Intermittent and Perennial Streams, rather than only those delineated on the USGS or Soil Survey maps. It is well known that many of the aforementioned surface waters are not shown on these maps.</p>	<p>Language has been included to allow for more accurate information/maps to be used.</p>