

Jordan Lake rules heading to the NC Senate

By Michael Pollock

A bill to reduce pollution in Jordan Lake, necessary because pollution is above State and Federal limits, is moving through the General Assembly. There were already predictions of eutrophic or even hyper-eutrophic conditions before the Haw and New Hope valleys were flooded. Excessive nitrogen and phosphorus come from treated wastewater, fertilizer, vehicles, and other sources. In the sunny Lake this leads to runaway algae growth, which can use up too much oxygen.

In 2002 the Upper New Hope arm was added to the EPA's impaired waterways list, under the Clean Water Act (CWA), because of the amount of chlorophyll-a, a measure of algal growth. Durham argues that chlorophyll-a measurements are inaccurate. Few states use it as absolute measure of water quality, and clean lakes have had more chlorophyll-a than Jordan Lake. In 2006 the Lake as a whole became impaired and the Haw River

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arm had an alkalinity above pH 9.0, another measure of nutrient loading. In 2008 the Upper New Hope arm reached that level. The Haw River Assembly (HRA) says it is like a bleach solution and can mildly burn swimmers.

In 1997 the legislature passed the Clean Water Responsibility Act (House Bill 515), requiring the Environmental Management Commission (EMC) to develop plans to deal with problems in Nutrient Sensitive Waters, such as Jordan Lake. Next a model was developed to see what needs to be done to clean it up. In 2003 the first of over 30 stakeholder meetings began. According to the HRA, there should have been a plan in place by 2003 under HB 515.

In March 2007 the EMC opened the proposed B. Everett Jordan Reservoir Water Supply Nutrient

Strategy to comment. The Upper New Hope needs to have 35 percent less nitrogen and the Haw River needs 8 percent less, while both need 5 percent less phosphorus. About 32 percent of the nitrogen comes from treated wastewater from around 65 plants, and they would have had to improve by 2014, at a cost of \$212 million according to the Department of Environment and Natural Resources. The rules as written at the time required fertilizer plans and training at farms and golf courses, stream buffers, reductions from vehicles, and created a trading system, so extra reductions could be sold to sources that could not meet their quota. The City of Durham thought the cost would be two to three times more than the Division of Water Quality's estimate of \$905 million, of which over half would be for existing development. The proposed rules were similar to those for the Neuse and Tar-Pamlico rivers, except that the new storm water rules would apply to all local towns, local governments would apply the stream buffers, existing development would be affected, State and Federal sources would have different storm water rules, and trading would be allowed. (For more on the process, see h2o.enr.state.nc.us/nps/JordanNutrientStrategy.htm.)

In May 2008 the EMC approved the regulations and sent them to the Rules Review Commission, where they were passed last November and forwarded to the legislature.

Two bills were proposed to disapprove the rules. If the rules are not disapproved or modified by legislators, they will become law. Durham, Burlington, Greensboro, and developers oppose the rules (for Durham's take, see www.ci.durham.nc.us/departments/wm/jordan_lake_rules.cfm). A main complaint was the cost of cleaning up runoff from existing development, which could require retrofitting. Durham says nitrogen has never been

reduced by a set percent from developed areas and that basin cities already spend more than \$10 million annually on wastewater treatment and storm water management. Durham sees it as unjustified that the nitrogen limit in the more polluted Neuse River basin is 38 percent higher than the proposed limit for the Upper New Hope. There is also debate about how much this would lower chlorophyll-a. Some argue that air pollution is a major source of nitrogen. Durham points out that nitrogen has decreased in both rivers in the last 20 years and that the Lake is still relatively clean. Durham says the Farrington Road causeway traps pollution. It takes a year for water to move through the New Hope arm, while it moves through the Haw River arm in weeks. Chatham, Cary, Apex, Orange, Carrboro, and Chapel Hill support the rules.

A compromise, House Bill 239 (see www.ncleg.net), was reported without prejudice by the Committee on Environment and Natural Resources, and sent to the Judiciary I committee. That committee reported favorably, so the bill was sent to the full House, which approved it May 12, by 106 votes to 8. It bars the EMC from requiring retrofitting. Treatment plants have until 2016 to upgrade. There will be stronger regulations if testing shows that water quality is still below State and Federal limits in the Haw in March 2014 or 2017. March 2023 is the benchmark for the Upper New Hope. A scientific advisory board will be created. The bill requires public outreach and storm water system mapping starting July 1.

Whatever form the cleanup plan eventually takes, it will be a model for upcoming regulations at Falls Lake and several others.

Michael Pollock is a freelance writer living in southern Durham who founded Northeast Creek Stream Watch. He studied biology and anthropology at UNC and has an interest in Fortean phenomena.



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