



# An Update on the Proposed Jordan Lake Nutrient Management Rules

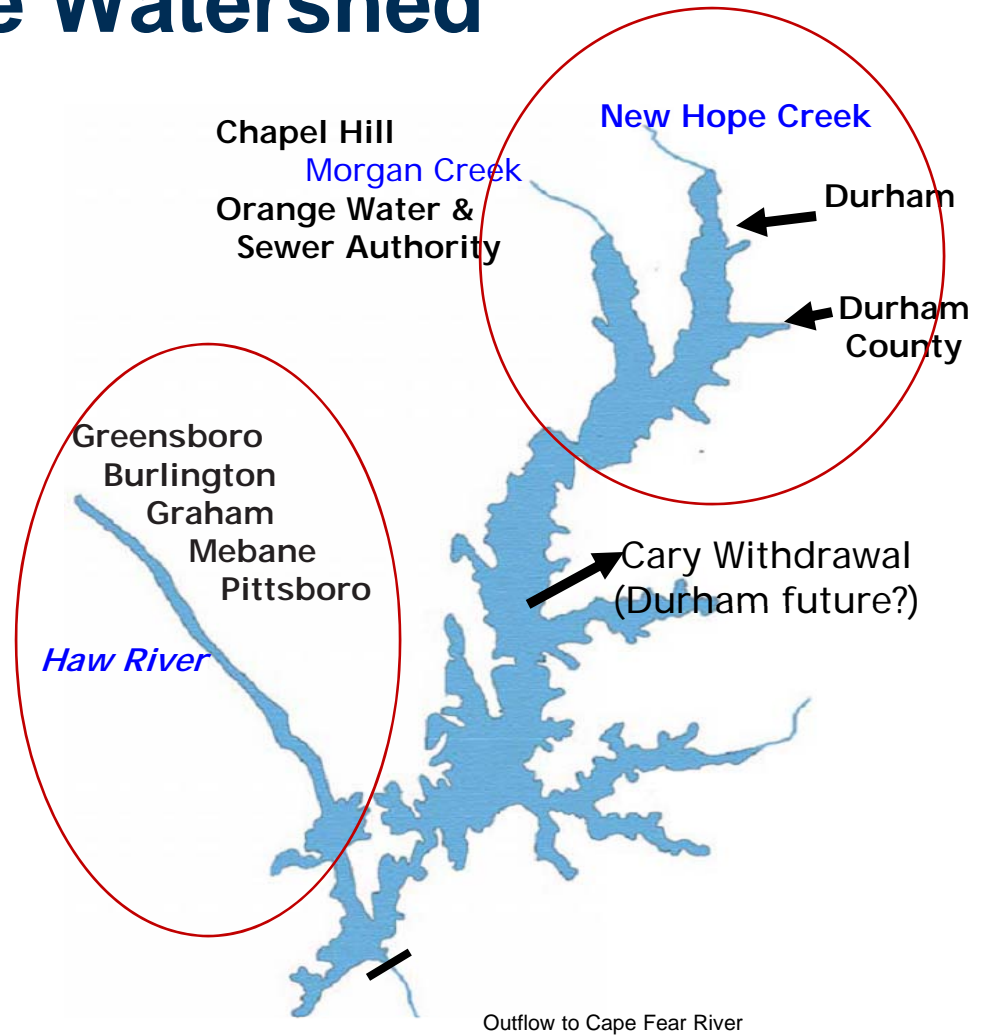
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Stormwater Services Division  
December 18, 2008





# Jordan Lake Watershed

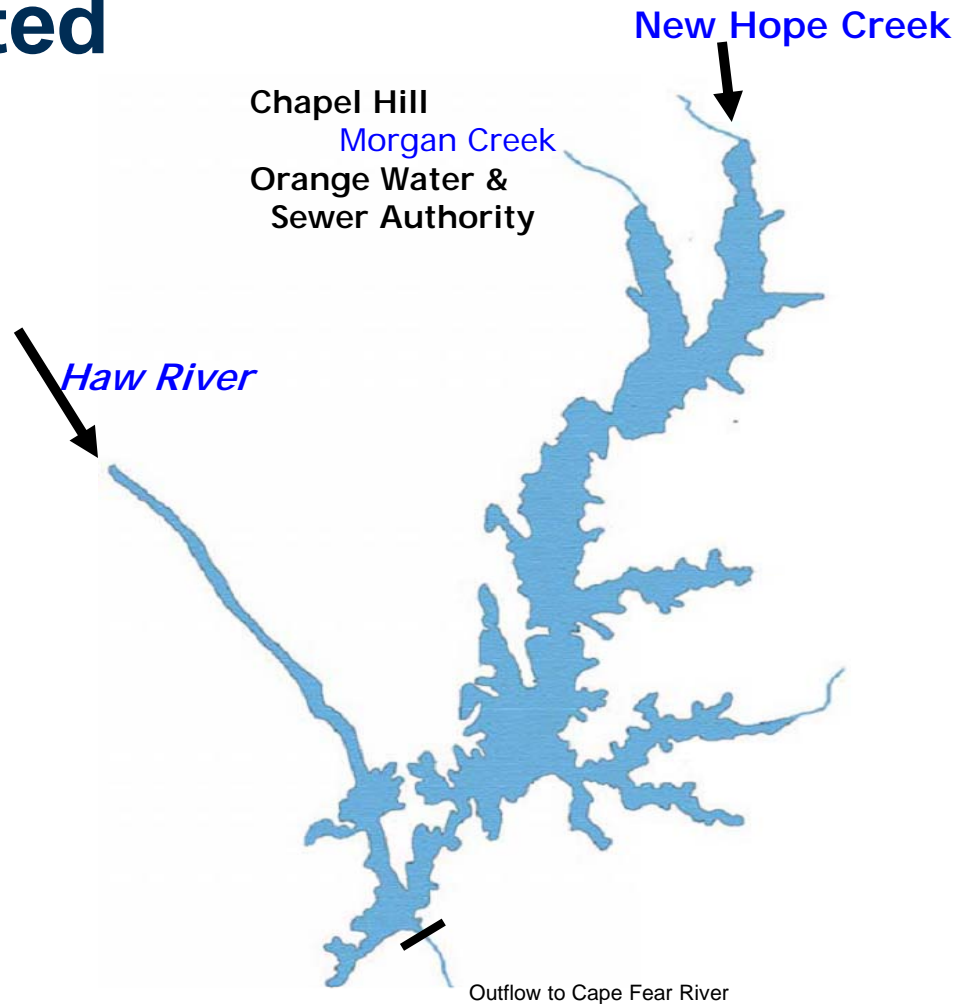
Monitoring by the NC Division of Water Quality has found high levels of chlorophyll *a* in the Upper New Hope and Haw River Arms of Jordan Lake.





# Lake Water Quality Is Better Than Predicted

- Lake quality improved after construction – better than predicted
- Nitrogen loads in New Hope Creek have been declining
- Nitrogen loads in the Haw River have been declining
- Load reductions occurred before the recent upgrades at OWASA and Durham County





## Proposed Requirements

Many of the proposed rules are similar to those in other nutrient management plans:

- Nutrient reductions required for new development
- Additional WWTP reductions in nitrogen and phosphorous
- Riparian buffers are protected





## Proposed Requirements

However, some of the requirements are unprecedented in North Carolina:

- More stringent limits on wastewater
- Most stringent limits for new development
- Buffer rule must be enforced locally
- Unprecedented requirements to retrofit for existing development to treat stormwater runoff





# Unprecedented Requirements for Existing Development

Local governments will be required to retrofit existing development with stormwater treatment systems to remove nutrients from runoff.

No other nutrient management plan in North Carolina has required the retrofitting of existing development to treat stormwater; making these the most restrictive rules ever issued in North Carolina!





## 20-Year Cost of Retrofitting Existing Development

Estimated costs for reducing nitrogen from existing developed areas using various combinations of stormwater treatment:

Low cost \$330 million

Probable cost \$570 million

High end cost \$680 million

Low cost does not consider feasibility

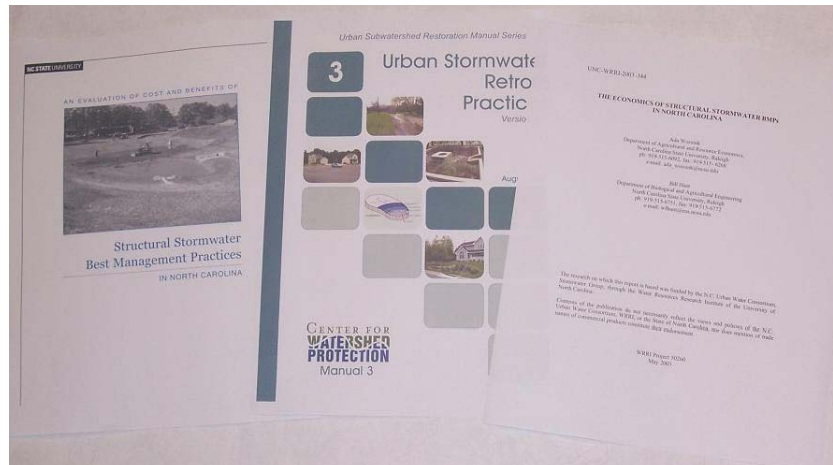
All costs includes land, construction, 20 years operation and maintenance,;all costs are 2007 dollars





# Retrofit Costs Are Based on Published Information

City cost estimates are based on published information from recognized experts:



- Hunt, NCSU
- Center for Watershed Protection
- Hunt & Wossink, NCSU





# Revenue Requirements: Impact On Utility Fees

Current Annual Utility Bills Compared to Utility Bills  
Required to Generate Additional \$28.5 Million from City in  
Jordan Lake Watershed



Jordan Billing Category		Current Annual	Annual Jordan	Annual Increase
Residential Tier 1	Individual Residence	\$26	\$200	\$174
Residential Tier 2	Individual Residence	\$54	\$416	\$362
mid size church	10 erus	\$540	\$4,161	\$3,621
strip mall	132 erus	\$7,128	\$54,933	\$47,805
drug store	10 erus	\$540	\$4,161	\$3,621
Hillside High School	420 erus	\$22,680	\$174,787	\$152,107

Costs are in 2007 dollars



# Stormwater Management for Existing Development

Some of our concerns about this rule:

- The precedent setting policy
- The exorbitant cost
- The equitability of the rules, costs, and accountability
- Feasibility of retrofitting
- No load reduction estimates available for alternate reduction measures, only for retrofitting



## Additional Rule Concerns

- **Protection of Existing Riparian Buffers**  
(15A NCAC 02B.0267)  
Modify rule so implementation same as in Neuse Buffer and Tar-Pam Buffer rules
- **Wastewater Discharge Requirements**  
(15A NCAC 02B.0270)  
Modify to implement on original schedule, 2016



## Rule Approval Status

- Environmental Management Commission: approved
- Rules Review Commission: approved
- Legislature: can rescind or modify

