

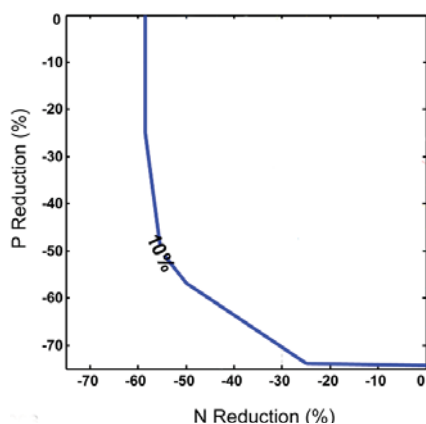
Falls Lake Nutrient Management Strategy Stakeholder Process

The Falls Lake Nutrient Management Strategy Stakeholder Meeting #6 took place June 18 at the Durham Water Management & Maintenance Facility. After a few brief housekeeping items and a presentation on a recent chlorophyll-*a* report from the City of Raleigh (see right), John Huisman with the Division of Water Quality (DWQ) presented an update on the timeline. DWQ is now working under the assumption that the deadline for adoption of the Nutrient Management Strategy by the Environmental Management Commission will be July 1, 2010, which means that DWQ may not be able to collaborate with stakeholders as much as they had previously planned.

The main agenda item was presentation of the lake nutrient response model by the DWQ Modeling Team. DWQ lake response modeling demonstrated that substantial reductions of nutrients will be necessary to reduce algal growth. The graph shows the relationship between phosphorous (P) and nitrogen (N) that would achieve water quality targets.

Stakeholder Meeting #7 will take place on July 16, from 1-4 pm at the Durham Water Management Mist Lake facility. At the July meeting, stakeholders will begin discussing how best to reduce nutrient inputs to the lake.

Details about meetings and the stakeholder process in general can be found by visiting <http://www.fallslakestakeholder.org>. Specific questions can be directed to Sarah Bruce at sbruce@tjcg.org or 919-558-9343. Anyone is invited to visit and post to the online project wiki, or discussion board, at www.fallslakestakeholder.wikispaces.com. Many relevant topics are being discussed there.



Nutrients, Algae, and Falls Lake

At the Falls Lake Nutrient Management Strategy Stakeholder Meeting #6, City of Raleigh Public Utilities staff Kenny Waldroup and Ed Buchan presented some findings from a study using additional chlorophyll-*a* sampling that NCSU, USGS, and Spirogyra, Inc. have conducted. The additional data collection used a methodology that the state does not recognize, but according to the City, the studies support the state's findings of substantial violations of the chlorophyll-*a* standard, especially in the upper portion of Falls Lake.

Chlorophyll-*a* is photosynthetic pigment in all plants that can be used as an indicator of "algal biomass," or the amount of total algae in a given sample. Algal growth is encouraged by the nutrients nitrogen and phosphorous, both of which are abundant in Falls Lake tributaries. These nutrients may come from atmospheric deposition, municipal wastewater effluent, fertilizers applied to crops and turf, onsite wastewater (septic) systems, and other sources.

Many types of algae cause problems for drinking water and recreational uses of our reservoirs. In Falls Lake, Raleigh Public Utilities is particularly concerned about diatom algae, which not only cause taste and odor problems in treated drinking water, but also clog their filters.

"Blooms" of diatom algae, or rapid increases in diatom algae populations, have been happening every year. Blooms typically have lasted 4-6 weeks, whereas last spring, the bloom lasted an unprecedented 12 weeks. During diatom blooms, the City has to backflush its filters every 35 hours, compared to every 60 hours when diatoms are not blooming. Because filter backflushing requires the use of treated drinking water, increased backflushing frequency reduces the plant's treatment capacity.

The City of Raleigh has provided the report for the FallsLakeStakeholder.org website (will be posted under "Resources") and will make their consultants available to answer questions about the studies.

Volunteers Needed: UNRBA at the Festival for the Eno River

This year's Festival for the Eno will take place July 3, 4, & 5. The UNRBA has proudly hosted a booth at this event with the help of volunteers since 2004 and we need volunteers to help out again this year. Volunteers can donate as little as three hours of their time simply talking to festivalgoers about the important work we do in protecting water quality, and spend the rest of the day enjoying all the music and art of the festival. Contact UNRBA's intern Rohit at rohit@tjcg.org if you'd like to help or call him at 919-558-2702. Festival information can be found at <http://www.enoriver.org/Festival>.

Looking for Past Issues of the UNRBA Newsletter?

Past issues of the UNRBA newsletter are available on the UNRBA website at <http://www.unrba.org/downloads.htm>. In addition, you can find descriptions of UNRBA projects with supporting documents, technical reports, annual reports, maps and images, and meeting materials. Visit the website to see how we're working with you to protect your local watersheds!

Upper Neuse River Basin Association

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Research Triangle Park NC 27709

www.unrba.org



Upcoming Meetings

Falls Lake Nutrient Management Stakeholder Meeting
July 16, 2009

1-4 pm, Durham Water Management & Maintenance Facility

Conferences and Workshops

Introduction to LID and LEED: July 28-29, Raleigh, NC

Workshop participants will be introduced to the basic principles of LID (Low Impact Development) and LEED (Leadership in Energy and Environmental Design). Agenda:

- * Overview of LID
- * Overview of LEED
- * Overview of Integrated Management Stormwater Practices
- * Overview of policy pertaining to LID and LEED
- * Case Studies
- * Overview of Economics of LID and LEED
- * Hands-on activities, including design exercises

Cost is \$125 or \$150 if PDHs are sought. Contact Extension Agent Cathy Smith at cathy_smith@ncsu.edu or 919-515-6780.

Who Is the UNRBA?

The Upper Neuse River Basin Association (UNRBA) formed in 1996 to provide an ongoing forum for voluntary regional cooperation on water quality protection and water resource planning and management within the 770-square-mile Upper Neuse Basin (Falls Lake watershed). We are a coalition of public entities in the watershed, including municipalities, counties, Soil & Water Conservation Districts, and South Granville Water and Sewer Authority. (See UNRBA Participants, below.)

What Is the UNRBA's Mission?

Our mission is to preserve the water quality of the Upper Neuse River Basin through innovative and cost-effective pollution reduction strategies and to constitute a forum to cooperate on water supply issues within the Upper Neuse River Basin.

SWAT Workshops

The Soil & Water Assessment Tool is a river-basin scale model to quantify the impacts of land management practices in large, complex watersheds. SWAT is a public-domain model supported by the USDA Agricultural Research Service. It is assumed that attendees have a working knowledge of ArcGIS.

Nov. 16-17, 2009 - Greensboro, NC: Beginner SWAT Workshop. Introduces new users to the model, inputs, and ArcGIS interfaces. \$500.

Nov. 19-20, 2009 - Raleigh, NC: Advanced SWAT Workshop. Sensitivity analysis, model calibration, and uncertainty analysis, participants' individual model issues. \$500.

To register, contact Cathy Smith with NCSU at 919-515-6780 or cathy_smith@ncsu.edu.

Upper Neuse River Basin Association Participants

Jurisdiction	UNRBA Board of Directors Contact (Policy and Process Issues)		UNRBA Technical Advisory Committee Contact (Technical Issues)	
Butner	Thomas Marrow	tmarrow@butnenc.org	Melissa Hodges	mhodges@butnenc.org
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Durham	Cora Cole-McFadden	cora.cole-mcfadden@durhamnc.gov	Reggie Hicks	reginald.hicks@durhamnc.gov
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Upper Neuse River Basin Association Staff

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