Consensus Principles II (Summary)—Draft 9/18/2023

1. Falls Lake needs to be protected

2. Revised rules should be passed expeditiously

3. Focus on watershed health

4. Incorporate adaptive management

5. Establish a watershed organization

6. Avoid requirements for natural areas

7. Promote land conservation

8. Investment-based, joint compliance

9. Continue implementing new development rules with refinements

10. Include requirements for new or expanded wastewater treatment plants (WWTPs)

11. Optimize treatment performance and evaluate emerging technologies for existing WWTPs

12. Allow investment credits for addressing poorly performing onsite wastewater treatment systems

13. Avoid separate management plans for other impoundments in the watershed

14. Expand list of eligible activities and potential partners

15. Promote opportunities for equitable stakeholder participation

16. Evaluate chlorophyll-a water quality standard and assessment methodology

Town of Stem Board of Commissioners

The UNRBA's Recommendations for a Revised Falls Lake Nutrient Management Strategy

September 18, 2023

Upper Neuse River Basin (UNRBA)

- Members
  - Six counties
  - Seven municipalities
  - One water utility
  - Soil and water conservation districts
- Active External Stakeholders
  - Agriculture
  - Environmental groups
  - Land conservation organizations
  - NC DEQ/DWR
  - NC DOT
  - NC DA&CS

Falls Lake Designated Uses and Benefits

- Provides drinking water for over 500,000 customers
- Minimizes downstream flooding
- Protects water quality downstream
- Provides habitat
- Provides regional recreational facility

Current Falls Lake Regulatory Framework (passed in 2011)

- Regulates several different sectors from where nutrient pollution originates
- Each sector owns part of the problem
- Each sector must find and fund their own reductions in stages
- Everything is quantified in pounds of nitrogen and phosphorus
- Reduction targets are set for two stages
- The second stage of the rules sets unrealistic targets (technically/logistically/financially)
- There is an upcoming opportunity to redefine what will be required in the second stage and re-design the framework.

Stage I is Being Fully Implemented

New development	• Rules in place since 2012 to limit nutrient loading from developed sites ✓
Agriculture	• Stage I reductions have been met ✓
plants (WWTPs)	• Exceeded Stage I reduction requirements ✓
Existing development	• Alternative investment-based compliance approach allows for full implementation ✓

Stage II Rules Require Reexamination for Existing Lands

Agriculture

- Stage II requires agriculture make further reductions to nutrient loading to Falls Lake
- Agriculture in this watershed is mostly small family farms
- Department of Agriculture and researchers at NCSU indicate limited additional opportunities to reduce loading

Existing development

- Stage II rules for existing development are not feasible and meeting them would not significantly reduce nutrient loading to Falls Lake

UNRBA Approach to the Re-examination of Stage II

Science-based approach to water resource management

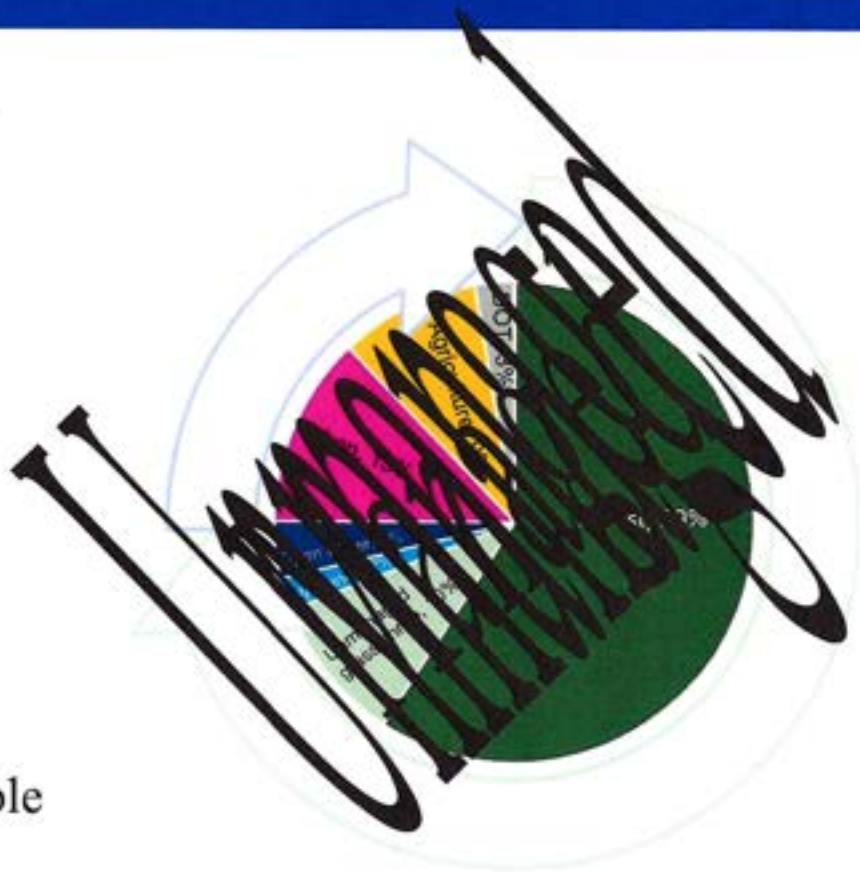
- Followed the requirements in the Rules and obtained DWR approvals
- Collected four years of monitoring data in the watershed and the lake
- Developed watershed model to understand sources of loading
- Developing three lake water quality models to illustrate impacts on water quality

Collaborative approach to water resource management

- Worked with other researchers and organizations to expand our knowledge base
- Meeting with internal and external stakeholders to discuss recommendations

Key Findings from the UNRBA Studies

- 75 percent of the watershed is natural, unmanaged land (like forests)
- Nutrient loads to Falls Lake have been reduced significantly since 2006 (baseline year of rules)
- Soils store and cycle nutrients for decades
- Rainfall is key driver of nutrient loads
- The designated uses of Falls Lake are being met (recreation, drinking water supply, aquatic life)
- Water quality and algae levels in the lake are stable



Implications for a Revised Nutrient Management Strategy

- Additional large-scale nutrient load reductions are not achievable
- Long-term nutrient management is most effective approach
- Protecting forests and other natural areas is key to long-term management of Falls Lake
- Collaborative action is needed to protect this resource and maintain uses
- A Watershed Organization is recommended to coordinate activities and partnerships

Land conservation site; photo courtesy of Person County

Stakeholder Input Essential for Developing Recommendations

- Agriculture representatives
- Environmental Groups
- Local Governments
- State agencies
- Final draft UNRBA recommendations including a summary of the 10-yr monitoring and modeling effort are available at https://unrba.org/reexamination
- A list of consensus principles considered for endorsement by local governments and utilities this fall will guide development of revised rules for Falls Lake

Principles for a Revised Strategy

- Use the best science available
- Set a realistic path
- Include reasonable projects and activities
- Allow for cost effective options
- Promote conservation
- Focus on watershed health

Consensus Principles II

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Consensus Principles II is scheduled for approval by the UNRBA Board on September 20, 2023.

The next step is approval by local boards and commissions for formal submittal by UNRBA to the Division of Water Resources and Environmental Management Commission.

Consensus Principles II

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Alignment with Town of Stem's Planning Goals

Example Planning Goals	Aligned Concepts
Protect natural spaces	Preservation of natural areas and implementation of forestry best management practices
Manage residential growth	Preservation of natural areas and continued implementation of new development rules
Maintain small town sense of community	Input and participation from the public and interest groups; expansion of public transportation

Planning goals are based on the Town of Stem's 20-year Plan

Next Steps for Submittals to the NC Division of Water Resources and the Environmental Management Commission

- UNRBA Recommendations and Consensus Principles II
  - Consideration by the UNRBA Board of Directors on September 20, 2023
  - Local government approvals in October and November 2023
  - Final submittal in December 2023
- UNRBA modeling reports submitted for review by DWR in December 2023
- UNRBA begin coordinating with DWR on the Rules readoption process
- Regulatory Forum in Spring 2024 regarding the Rules readoption process
- Ongoing negotiation/coordination with DWR and stakeholders on rule language
- DWR anticipates rules readoption by 2027

Additional Information

- Comprehensive website - https://www.unrba.org/
- General information website - https://upperneuse.org/
- Reference documents
  - UNRBA Infographic
  - UNRBA Fast Facts
  - Overview of the Work of the UNRBA
  - Comprehensive UNRBA Monitoring Data Report
- NC Collaboratory Falls Lake Study website - https://nutrients.web.unc.edu/resources/
- UNRBA Recommendations for a Revised Nutrient Management Strategy: https://unrba.org/reexamination

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