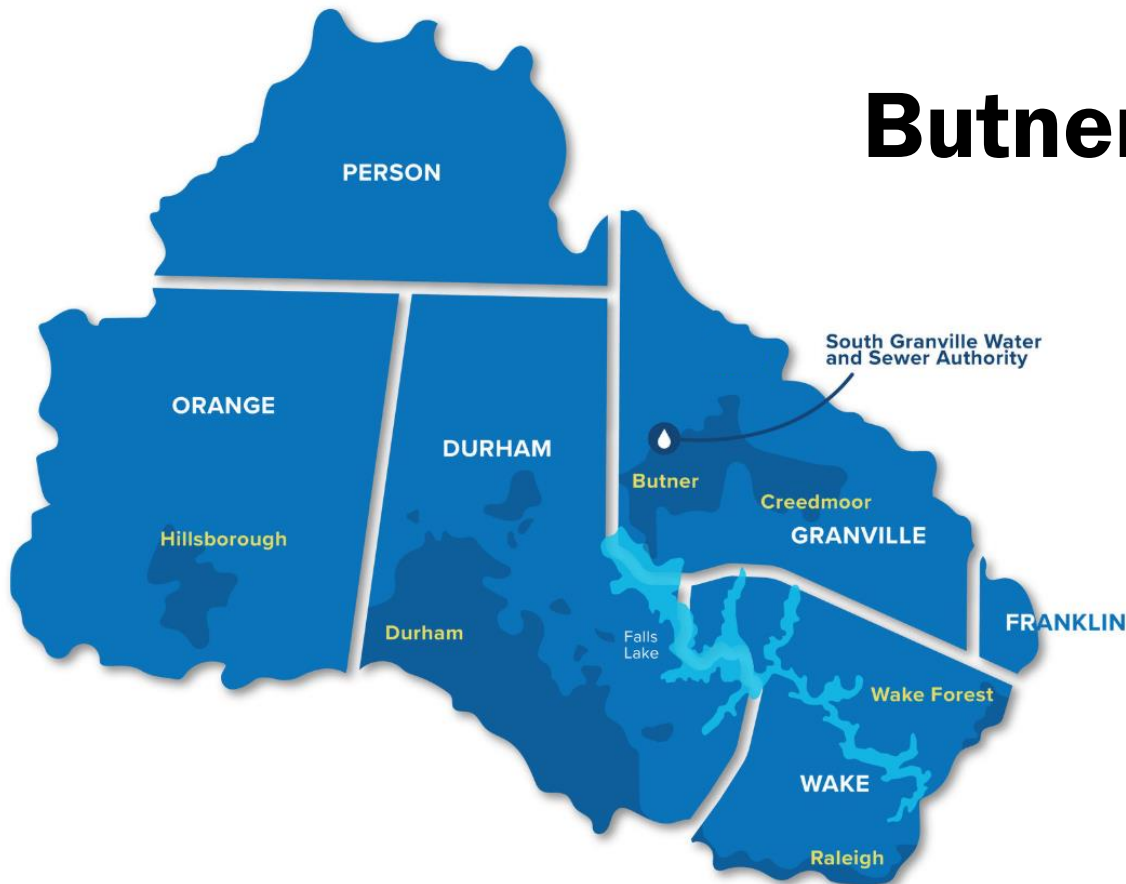




# UNRBA Board Meeting September 20, 2023

## Butner Town Hall



# September 20, 2023, UNRBA Board Agenda

- **Opening—Sig Hutchinson, Chair**
- **Action Items**
  - Approval of [June 21, 2023, Meeting Minutes](#)
  - Approval of the [Treasurer's Report](#)
  - Approval of Funding for Updating the UNRBA Technical Website
  - Approval of the Concepts and Principles Document and Consensus Principles II for Consideration by Member Governing Bodies
- **Status Reports and Informational Items**
  - Evaluation of a Site-Specific Chlorophyll-a Water Quality Standard
  - Modeling and Regulatory Support (MRS)
  - Economic Analysis
  - Communications
  - Ongoing Discussions/Issues
- **Closing Comments**

# Opening—Sig Hutchinson

# Opening

- Introductions, Board member changes, and announcements
- Roll call for quorum
- Identification of any conflicts
- Review and approval of agenda
- 2022 990 tax return was submitted to the Board for their review

# **Action Items of UNRBA Board of Directors**

**Approval of**  
**June 21, 2023 Meeting Minutes**

# Approval of the Treasurer's Report

<b>Balance Forward: (per bank statement - 5/31/2022)</b>	Checking	\$	32,914.95
	Savings		836,186.18
<b>Debits:</b>			
McGill Asso. (2023 Invs)		\$	56,894.50
Sauber Water Quality Consulting (2023 Invs)			4,830.00
Smith, Anderson Law (lobby registration)			252.00
Brown & Caldwell (MRS, FY 23, 2022 Invs)			178,316.04
Phthisic Consulting, Inc. (2023 Invs)			1,054.58
WSP, Inc. (Invs, 2023)			7,480.75
MFG Consulting, LLC (2023 Invs)			630.00
			<u>630.00</u>
		\$	249,457.87
<b>Credits:</b>			
Interest (checking)		\$	99.37
Interest (savings)			5,316.82
Membership Fees (Deposit in MM Acc't)			852,832.32
Transfer from Savings Acc't to Checking Acc't			500,000.00
			<u>500,000.00</u>
<b>Account Balance (per bank statement - 8/31/2023)</b>	Checking	\$	283,556.45
	Savings		1,194,335.32
			<u>1,477,891.77</u>
<b>Total UNRBA Account Balance :</b>		\$	<u>1,477,891.77</u>
<b>Outstanding invoices/deposits in process since the close of bank statement (8/31/2023):</b>			
<b>Debits:</b>			
McGill Asso. (2023 Inv)		\$	21,930.61
MFG Consulting, LLC (2023 Inv)			210.00
Brown & Caldwell (July & August, FY 2023 & 2024)			99,659.01
Penn National Insurance			646.00
Barnes & Thornburg (2023 Inv)			-
WSP, Inc. (2023 Inv)			-
<b>Credits:</b>			
Transfer from Savings to Checking		\$	<u>-</u>
<b>Current Account Balances:</b>	Checking	\$	161,756.83
	Savings		1,194,335.32
			<u>1,356,092.15</u>
<b>Total UNRBA Account Balance :</b>		\$	<u>1,356,092.15</u>

# Approval of Funding for Updating the UNRBA Technical Website

- The UNRBA has been setting aside funding to update the Association's technical website
- The software used to develop the website (Drupal) is in version 7 and cannot be upgraded.
- The new version is 10, and the website will have to be updated using this version.
- The Lower Neuse Association and Neuse River Compliance Association are in the process of upgrading their website (80-85% complete), and their contractor would provide support to the UNRBA.
- We have significant funding in the budget but will likely need approximately \$10,000 from contingency to cover the total cost of the upgrade.
- We are asking the Board to authorize the Executive Director to cover this cost and bring a contract back to the Board in November to have the site updated.



**Approval of the Concepts and Principles Document and Consensus Principles II for Consideration by Member Governing Bodies**

# Development of Concepts and Principles for a Revised Strategy / Revised Rules

- The UNRBA has been working for the past year on recommendations for the revised strategy / revised rules
- At their September 5<sup>th</sup> meeting, the PFC approved bringing the final draft of these Concepts and Principles to the Board of Directors for consideration at the September 20, 2023, Board meeting
- This draft incorporates feedback and responses to comments from the PFC, DWR, and representatives of agriculture and environmental advocacy groups
- The UNRBA also developed a two-page summary (see next two slides) of the reexamination effort and need for revised rules for local governments to distribute to their social media accounts and post online
- The Concepts and Principles document was used to develop a focused list of revised consensus principles called Consensus Principles II which will be reviewed as well



# Upper Neuse River Basin Association's Concepts for Nutrient Management in Falls Lake

## UNRBA plays an important role in managing Falls Lake Reservoir



UNRBA unites stakeholders from many organizations to create innovative solutions for an updated nutrient management strategy. UNRBA has invested over \$10 million in research on the watershed and lake to craft scientifically-based, fiscally responsible, and effective solutions.



### **Watershed and Lake Successes:**

- Falls Lake is the most studied reservoir in North Carolina.
- Nutrient loading has decreased significantly since 2006 when the State began tracking. Wastewater treatment plants have reduced phosphorus loads by 80 percent and nitrogen loads by 40 percent.
- Water quality in this man-made lake has stabilized and improved; water quality is better than originally predicted.
- The lake serves all anticipated needs: nurturing wildlife, providing recreational opportunities and drinking water supply for Raleigh, and preventing downstream flooding.
- An investment-based approach to watershed management was approved by the NC Environmental Management Commission to continue progress in the watershed and lake. This approach allows for projects with maximum flexibility to address not only nutrient reductions, but also climate impact and sustainability.

### **Why a New Strategy is Necessary:**

- 75 percent of the watershed is natural land like forests; nutrient loading from these areas cannot be easily reduced.
- The current strategy is estimated to cost over \$1 billion and would not necessarily improve water quality.
- Even if human impacts were removed and all the watershed was forested, the goals of the existing management strategy could not be met.
- Eliminating the existing management strategy is not an option. Without appropriate management, water quality in the lake may decline due to development pressures.
- Data and modeling suggest that large storms and climate change are significant drivers of nutrient loading.
- A holistic, data driven management strategy is needed to protect this lake in the future.

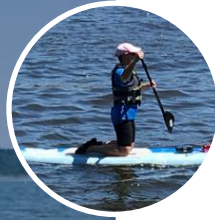


# What's next on the path to support Falls Lake Reservoir?

## ACTION IS NEEDED

In-depth research and analysis show the need for a revised nutrient management strategy for Falls Lake. Chlorophyll-a concentrations are stable, but still above the criteria in parts of the lake.

Based on monitoring and modeling studies, these areas are unlikely to ever meet the criteria, but the lake is meeting its uses. Therefore, the UNRBA is reevaluating strategies that take a more holistic approach to nutrient reduction actions and activities to achieve the greatest possible benefits.



The UNRBA is developing recommendations for a revised nutrient management strategy that incorporate the latest data and information. The UNRBA encourages input during the crafting of the revised strategy from all stakeholders to identify opportunities, constraints, and solutions. Our internal and external stakeholders have a shared vision to maximize the life of the reservoir and continue to maintain its uses and benefits.

## A Reflection on the Best Path Forward

The UNRBA is looking at the big picture...taking a step back and focusing on watershed health using sustainable, fiscally responsible actions. The UNRBA has spent the last decade collecting water quality data and using models to simulate the lake and the watershed. These tools improve our understanding and support development of a long-term nutrient management strategy.

### MOVING FORWARD, THE UNRBA SUPPORTS:

**INVESTING** in projects and communities.

**SUPPORTING** climate change and sustainability goals.

**RECOMMENDING** a new strategy, based on science and research.

**SEEKING** input and support from the State, environmental groups, and local communities to develop consensus-based recommendations.

**SUPPORTING** economic development while protecting Falls Lake with fiscally responsible implementation plans.

**LISTENING** to the community's ideas and concerns to inform strategies to protect Falls Lake and the interests of current and future businesses, farms, and neighborhoods.

## ADDITIONAL INFORMATION

An initial draft of the UNRBA's recommendations is available for your review at: <https://unrba.org/reexamination>.

The UNRBA welcomes your review and input as it develops recommendations (the final proposal is due in December 2023). Please send your comments to the UNRBA Executive Director, Forrest Westall, [forrest.westall@unrba.org](mailto:forrest.westall@unrba.org).

# Development of Consensus Principles II (CPII)

- The UNRBA Concepts and Principles document has been used to develop a focused set of consensus principles for readoption of the Falls Lake Rules called Consensus Principles II (CPII).
- This document has been reviewed by the UNRBA legal group.
- The PFC has received the final draft of CPII voted to recommend CPII for Board approval along with the Concepts and Principles document at the September 20<sup>th</sup> Board meeting.
- Following review of each consensus principle, the Board will be asked to vote on approval of CPII and its companion, Concepts and Principles Document

# Consensus Principles II (CPII)

1. Revised rules are needed to promote effective action and sustainable investment by local governments, utilities, and other partners to meet the goals of maintaining, protecting, and improving water quality in Falls Lake into the future. The UNRBA recognizes the importance of this lake as a water supply source, an ecological and recreational resource, and a flood control reservoir.
2. NC DEQ-DWR and the EMC should move forward promptly with the revisions to the Falls Lake rules, taking into consideration these Consensus Principles.

# Consensus Principles II (CPII)

3. The revised rules should embrace a systems approach focusing on solutions that consider interactions among surface water, land surfaces, groundwater, soils, and atmospheric and climatological drivers. This watershed-health approach should consider environmental benefits, costs, and impacts to users of the water resource and those asked to pay the costs of the regulations. The revised rules should improve water quality throughout the watershed, and not prioritize activities solely based on the reduction of nutrients to Falls Lake.



# Consensus Principles II (CPII)

4. The revised rules should include adaptive management. Implementation of the rules should be reviewed every 5 years, with a report to address new information, conditions, or concerns that have developed during the previous 5 years. The UNRBA proposes that the adaptive management provision also include a detailed reevaluation of the rules completed 25 years after the date the revised rules are enacted. A detailed reevaluation should incorporate additional monitoring data collected by DWR and other organizations, data analysis, modeling evaluations, and consideration of technological advancements for improving water quality. The 25-year review should include a reexamination of the rules, so that changes may be proposed and put forward for consideration.



# Consensus Principles II (CPII)

5. The revised rules should include a provision for a watershed organization to promote voluntary coordination of an investment-based, joint-compliance approach.
6. The revised rules should not require nutrient load reductions from natural or unmanaged areas including forests, land in forest succession, scrubland, non-pasture grassland, and isolated or connected wetlands. Nutrient loads from these areas should not be directly or indirectly assigned to other source categories.
7. The revised rules should promote land conservation and preservation of natural or unmanaged areas as an investment credit.
8. The revised rules for managed lands should be an investment-based, joint-compliance approach. Managed lands include residential, commercial, institutional (schools, hospitals, other state and federal facilities, etc.), agricultural (cropland and pasture), road rights of way, recreational (parks), etc.

# Consensus Principles II (CPII)

9. The revised rules should maintain the annual loading limits specified in the current new development rule, provide a more flexible evaluation-of-need for stormwater nutrient control for individual residential lots or for the subdivision of large family parcels for the purposes of passing land to heirs for building their homes, allow local governments to consider more innovative approaches to stormwater management, and include joint consultation among watershed organization members to assess and document consistent application of new development requirements.

10. Major and minor wastewater treatment plant owners should continue to optimize treatment performance using currently installed technologies. Review of plant performance should be included as a provision of the 25-year review. Plant and collection system owners should continue to track emerging technologies that may become technically and financially feasible in the future for further improvements to plant operations and biosolids handling; and identify and eliminate exfiltration from sewer lines and sanitary sewer overflows.

# Consensus Principles II (CPII)

11. The revised rules should incorporate requirements for new wastewater treatment facility requests or expansion requests including provisions for technology upgrades, joint-compliance permits (e.g., the Lower Neuse Compliance Association's permit), nutrient offsets, and/or nutrient credit trading using practices on managed lands.
12. Investment credits should continue to be available for inspecting, identifying, and repairing or replacing malfunctioning onsite wastewater treatment systems and, as appropriate, for connecting onsite systems to sewer systems.
13. Separate, State-required nutrient management requirements should not be applied to managed lands in separate areas of the watershed (draining to an upstream watershed impoundment, arms of Falls Lake, etc.). However, water quality in all areas of the watershed should be tracked, particularly sub-watersheds with water-supply impoundments. The adaptive management provisions of the revised rules should address changing conditions in these waterbodies and allow for revisions to the program to address concerns as they arise.

# Consensus Principles II (CPII)

14. The revised rules should expand the types of projects that qualify for investment credit, include the option of developing new credit types, and provide opportunity for other voluntary partners. The revised rules should promote local government participation in other watershed improvement actions.

15. The revised rules should encourage local governments to base implementation decisions on the principles of the fair and equitable treatment of members, and the residents of the watershed. The revised rules should promote opportunities for equitable stakeholder participation by encouraging input and participation from the public and interest groups.

## Consensus Principles II (CPII)

16. The chlorophyll-a standard and water quality 303(d) assessment methodology for Falls Lake should be adjusted to better represent conditions in Falls Lake. The UNRBA supports an adjusted 303(d) assessment methodology and site-specific chlorophyll-a standard for Falls Lake and will continue to cooperate and collaborate with DEQ-DWR, Environmental Protection Agency (EPA), and other stakeholders on these revisions. The UNRBA does not recommend delaying rule revisions while these objectives continue to be developed and evaluated. Readoption of the Falls Lake Rules remains the priority so ongoing implementation efforts in the watershed can proceed.

Board discussion of CPII and consideration for approval.

# Schedule to Submit Recommendations

- **September 2023**
  - Discussion with DWR and NGOs to discuss Concepts and Principles
  - Finalize Concepts and Principles Document and Consensus Principles II (CPII)
  - UNRBA Board to endorse Concepts and Principles Document and CPII at September 20<sup>th</sup> meeting
  - Executive Director continue presentations to local government commissions, councils, and boards
- **October/November 2023**
  - Local government commissions & councils approve CPII
  - Meetings with the Chairs of the Environmental Management Commission (EMC) and its Water Quality Committee
  - UNRBA Board to approve package for submittal to DWR and the EMC including Concepts and Principles Document and CPII at November 15<sup>th</sup> meeting (tentative, virtual Board meeting scheduled December 13<sup>th</sup> if needed)
- **December 2023 - Legislative requirements for Submittals**
  - NC Collaboratory final Falls Lake report
  - Submittals from other groups (UNRBA)

# Schedule for Rules Readoption

- **January to March 2024**
  - UNRBA/DWR meeting to discuss process for rule making and approval of UNRBA products
  - Regulatory Forum to present rule making process to UNRBA members and other stakeholders
  - UNRBA annotate existing rule language to mark for potential changes and review with DWR
- **DWR to begin rule making within 6 months of submittals and no later than December 2024**
  - DWR to begin their stakeholder process
- **DWR anticipates rules readoption by 2026/2027**
- **With UNRBA and member engagement on the readoption process, we hope to achieve rules readoption earlier**

Continued engagement with Collaboratory researchers

# **Status Reports and Informational Items**



# **Evaluation of a Site-Specific Chlorophyll-a Water Quality Standard**

# Evaluation of a Site-Specific Chlorophyll-a Water Quality Standard

- The subject matter experts continue to evaluate other State's site-specific standards for chlorophyll-a and nutrient-related standards.
- The UNRBA continues to work with Dr. Marty Lebo to complete his work and integrate his results into the site-specific standard evaluation, statistical modeling, and regulatory support efforts.
- The UNRBA will coordinate with DWR, Collaboratory researchers, and other stakeholders throughout this process
- As stated in the Consensus Principles II, the UNRBA does not recommend delaying rule revisions while a site-specific assessment methodology or chlorophyll-a standard are being developed because this will limit and delay ongoing implementation efforts in the watershed.

# **Modeling and Regulatory Support for the Re-examination of Stage II**

# WARMF Watershed Model Report

- The [watershed modeling report and appendices](#) have been revised
  - Address MRSW and DWR comments
  - Include results of the watershed model sensitivity analyses and scenarios
- The Executive Director and Chair of the MRSW have reviewed the revisions and responses to comments; the editor is finalizing the draft
- The redline/responses-to-comments version have been distributed to the MRSW, DWR, and subject matter experts
- Clean versions have been distributed to these groups as well as the PFC, the Board, and the participants in the UNRBA Technical Stakeholders Workshop
- Following additional refinements as needed, the report will be formally submitted to DWR by December 2023
- The WARMF model executable, input files, and output files have been provided to DWR

# Lake Model Report and EFDC Model Training

- The lake model report is under development and will address all three UNRBA lake models
- This report will include the results of the lake sensitivity and scenario evaluations.
- Model-specific appendices are also under development
- The technical appendix for EFDC has been drafted and reviewed by the Executive Director and Chair of the MRSW.
- Once the main lake report has been drafted and reviewed by them, the main report and EFDC appendix will be provided to MRSW, DWR, and subject matter experts for review.
- The training for the EFDC model will be scheduled after these files have been distributed so trainees can review the materials prior to the training.
- This training had previously been scheduled for August 2, 2023, but had to be rescheduled to finalize file conversion so DWR can review the files without a proprietary tool.

# UNRBA Statistical/Bayesian Modeling

- The third lake model is the Statistical/Bayesian/Decision Support model which is based on an extensive data base dating back to the 1990s.
- Developing the linkages between the model variables to build the network with “parents” and “children”
- Building tables of probabilities (conditional probability tables) to explain how the variables relate to one another
- Work with subject matter experts and Technical Advisors Workgroup to fill in gaps where we have too little data

# **Economic Analysis**

# Status of the Economic Analysis

- The UNRBA planned an economic analysis of alternatives to support development of the UNRBA recommendations for the revised strategy
  - Would update the DWR Fiscal Analysis and
  - Compare potential nutrient management actions that would meet the chlorophyll-a standard in Falls Lake
- However, none of the scenarios or options investigated can comply with the chlorophyll-a standard as currently applied
- Thus, a formal economic analysis of alternatives could not be conducted during development of the UNRBA recommendations
- Rather, the recommendations focus on an investment-based, joint compliance, watershed-health approach that focuses on incremental improvements rather than attainment of the current chlorophyll-a standard.
- The UNRBA will support DWR in developing a more thorough economic analysis during the rule revision process to evaluate impacts of rule language and alternative strategies as needed
- The UNRBA continues to compile information from the local governments and other stakeholders to support this effort to understand
  - Costs of past and possible future actions in the watershed
  - Environmental, ecological, and societal benefits.



# Communications

# UNRBA Technical Stakeholders Workshop

- The UNRBA held a Technical Stakeholders Workshop on August 1, 2023
- Over 70 people participated either online or in person representing several organizations and entities
  - UNRBA members
  - Subject matter experts
  - Four non-governmental environmental organizations
  - Six State agencies
  - Two federal agencies
  - One local chamber of commerce
  - Representatives of agriculture
  - EPA Region 4
- Participants provided feedback on the recommendations for the revised nutrient management strategy which have been incorporated into the document distributed to the Board in September

# Coordination with DWR and EPA

- The UNRBA continues to coordinate with DWR
  - Preparations for the rules readoption process
  - Potential adjustment to the water quality assessment methods for Falls Lake
  - Evaluation of a site-specific chlorophyll-a criteria for Falls Lake
- Staff from EPA Region 4 from the 303(d) TMDL unit and modeling unit attended the UNRBA Technical Stakeholders Workshop
  - Provided encouraging feedback regarding the need for a site-specific standard for Falls Lake
  - We will schedule a follow up call to discuss

# Coordination with Governing Bodies

- The Executive Director will continue scheduling and conducting presentations at the meetings of UNRBA member governing bodies to discuss the Concepts and Principles and CPlI under their consideration.
- Earlier this year he presented to
  - City of Durham Environmental Affairs Board
  - City of Creedmoor Board of Commissioners
  - Granville County
- Presentations by member representative or the Executive Director are scheduled as follows:
  - September 18<sup>th</sup> - Wake County Growth & Sustainability Committee
    - Town of Stem Commissioners
  - October 2<sup>nd</sup> - Durham County Commissioners
    - Franklin County Commissioners
  - October 3<sup>rd</sup> - Town of Wake Forest Commissioners
  - October 5<sup>th</sup> - City of Raleigh Stormwater Committee
    - Town of Butner Council
  - October 16<sup>th</sup> - Person County Commissioners
  - October 19<sup>th</sup> - Durham City Council
  - November 2<sup>nd</sup> - Orange County Commissions

# Upcoming IAIA Submittals

- The Executive Director will continue to reach out to local government staff to identify needs and support staff with implementation of the IAIA Program
- Year 2 of the IAIA ended June 30<sup>th</sup>, and annual reports to DWR are due September 30<sup>th</sup> with a copy to UNRBA.

# Upcoming Regulatory Forum

- A regulatory forum is being planned for spring 2024 to discuss the next steps in the rules readoption process.
- Following submittal of the UNRBA and NC Collaboratory reports and recommendations in December 2023, we anticipate that DWR will begin to formulate a plan for readoption of the rules.
- We continue to seek engagement with DWR on that process and, as already mentioned to DWR, work cooperatively with them as the new rules are drafted.
- DWR has been very positive in their feedback.

# Coordination on River of Year Event

- American Rivers is still planning a “Neuse River of the Year” event for the upper part of the basin.
- The UNRBA is planning a press release to coincide with the timing of the event.
- This press release will also reference the successes of the IAIA and note the efforts to provide consensus principles for a revised set of rules.
- Plans to develop videos and messaging for UNRBA members to distribute on their social media accounts is being planned to coincide with this event to streamline videography.

# Coordination with Stakeholders and SMEs

- The UNRBA will continue to identify opportunities to work with other stakeholders as we move through rules readoption.
- The “open” nature of all UNRBA meetings remains a key component of a transparent communications approach.
- We encourage member representatives and interested individuals to speak up about ideas and opportunities to communicate our work and the importance of our recommendations on a revised strategy and a site-specific standard.



# Ongoing Discussions/Issues

# Ongoing Discussions/Issues

- Neuse Watershed Model Information Session – Delivery Factors for WWTP—Update provided by John Huisman
- The UNRBA provided a letter of support for a US Forest Service proposal for a research study on the impacts of prescribed burns on water quantity and water quality

# Closing Comments

**Next UNRBA Board Meeting is Scheduled  
for November 15, 2023  
Butner Town Hall 9:30 AM to Noon**