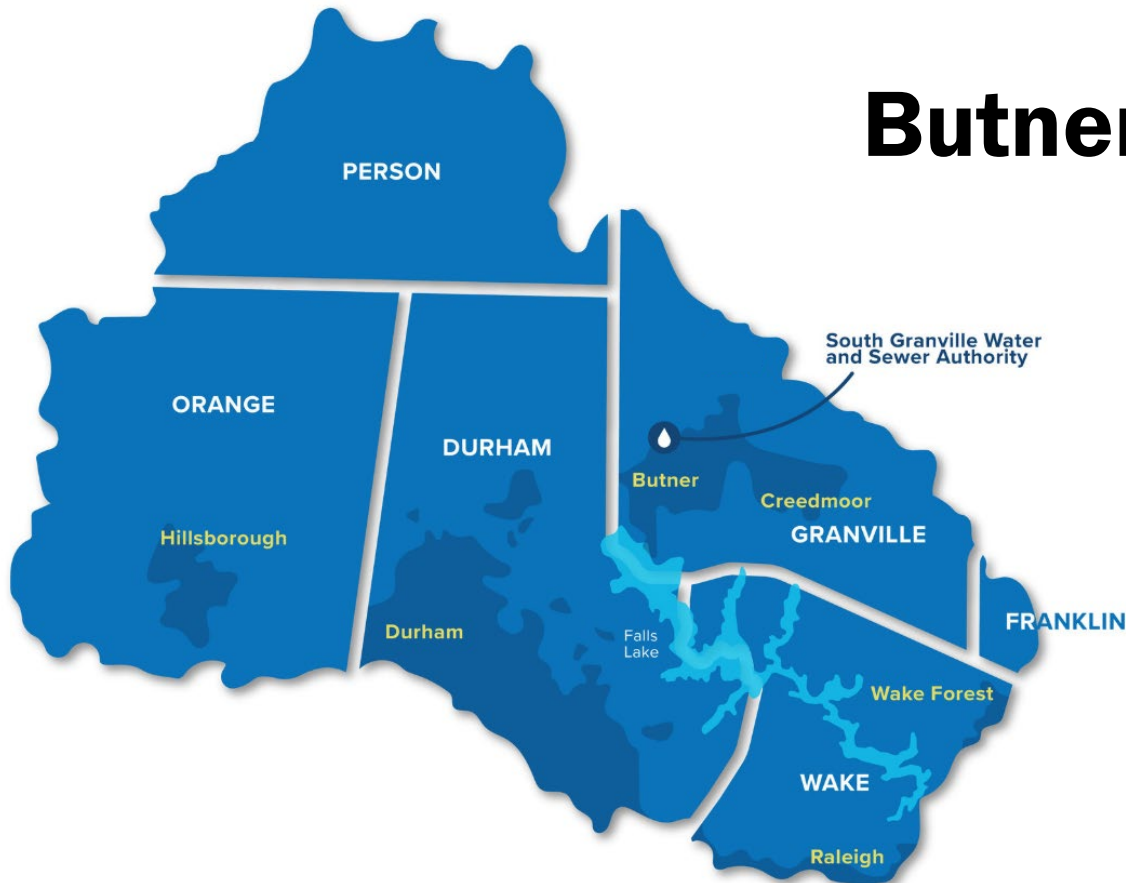




UNRBA Board Meeting June 21, 2023

Butner Town Hall



June 21, 2023 UNRBA Board Agenda

- **Opening—Sig Hutchinson, Chair**
- **Action Items**
 - Approval of May 17, 2023 Meeting Minutes
 - Approval of the Treasurer's Report
 - Approval of FY2024 Contracts
 - Set Potential Meeting Date for December 2023
- **Status Reports and Informational Items**
 - Developing Recommendations for a Revised Nutrient Management Strategy and a Petition for a Site-Specific Chlorophyll-a Water Quality Standard
 - Schedule for Reexamination
 - UNRBA Comments on the DWR 20-year Status Report for the Neuse and Tar-Pamlico Estuaries
 - Modeling and Regulatory Support (MRS) Status
 - Gathering Data from Local Governments to Support the Cost Benefit Analysis and Example Costs to Reduce Nitrogen Loading by 50 Percent
 - 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

Action Items of UNRBA Board of Directors

**Approval of May 17, 2023
Meeting Minutes**

Approval of the Treasurer's Report

Upper Neuse River Basin Association, Inc. Treasurer's Report

6/10/2023

Balance Forward: (per bank statement - 1/31/2022)	Checking	\$	229,008.78
	Savings		1,080,648.77
Debits:			
McGill Asso. (2023 Invs)		\$	76,586.91
Sauber Water Quality Consulting (2023 Invs)			10,710.00
Barnes & Thornburg (2022 - 23 Invs)			14,114.10
Brown & Caldwell (MRS, FY 23, 2022 Invs)			336,013.98
Phthisic Consulting, Inc. (2023 Invs)			2,821.75
WSP, Inc. (Invs, 2023)			4,853.75
MFG Consulting, LLC (2023 Invs)			1,095.60
Total Debits		\$	446,196.09
Credits:			
Interest (checking)		\$	102.26
Interest (savings)			5,537.41
Transfer from Savings Acc't to Checking Acc't			250,000.00
Account Balance (per bank statement - 5/31/2023)	Checking	\$	32,914.95
	Savings		836,186.18
Total UNRBA Account Balance :		\$	869,101.13
Outstanding invoices/deposits in process since the close of bank statement (5/31/2023):			
Debits:			
McGill Asso. (2023 Inv)		\$	19,447.21
MFG Consulting, LLC (2023 Inv)			210.00
Sauber Water Quality Consulting (2023 Inv)			2,030.00
Barnes & Thornburg (2023 Invs)			-
WSP, Inc. (2023 Inv)			3,245.25
Phthisic Consulting, Inc. (2023 Inv)			93.75
Brown & Caldwell (MRS, FY 23, 2022 Inv)			138,706.14
Credits:			
Transfer from Savings to Checking		\$	250,000.00
Current Account Balances:	Checking	\$	122,427.85
	Savings		586,186.18
Total UNRBA Account Balance :		\$	708,614.03

**Set Potential Meeting Date for
December 2023**

Contracts and Agreements For FY2024

**Review of the Modeling and Regulatory Support
and Communications Support (MRS&C)
Contract and Scope of Work for FY2024**

Review Process for the Draft Scope of Work

- The Executive Director and Chairs of the PFC have reviewed the draft scope of work and contract
- Board will review and act during the June 21, 2023, meeting
- The total budget is proposed at \$675,000
 - BC (labor and miscellaneous expenses): ~\$395,000
 - Systech Water Resources (WARMF): ~\$75,000
 - Dynamic Solutions (EFDC): ~\$75,000
 - KDV (Statistical, Bayesian, Decision Support): ~\$90,000
 - Brindle Creek (economist): ~\$40,000

Review of the Executive Director Services Contract

Executive Director Services Contract

- The UNRBA Personnel Committee reviewed Executive Director services for the calendar year 2022 in December 2022 and made recommendations to the Board in January.
- The Board approved contract provisions for FY2024 at the January 2023 meeting.

PAYMENT. Contractor’s annual budget for completing the Work for each fiscal year, beginning with fiscal year 2024 (July 1, 2023 through June 30, 2024) shall be \$235,440.00 unless modified as set out herein. Contractor’s general budget for the Work shall be as follows:

Executive Director compensation (hourly, \$120/hour)	\$190,800.00
Travel and other reimbursable support costs	\$ 20,000.00
Other support services	\$ 24,640.00

Review of Legal Support

Review of Legal Support

- The UNRBA began collecting legal support funding from its members in FY 2019.
- The UNRBA selected Fred Andes with Barnes and Thornburg to provide legal support to the UNRBA.
- There have been two letters of engagement approved by the Board since June of 2018 with a total budget of \$100,000.
- The last engagement letter was in 2020 and that budget has been used.
- Fred Andes has prepared a new letter and scope and it has been reviewed by the Executive Director.
- This letter and scope is under informal legal review and will be adjusted based on input received.
- The new letter will include a not to exceed budget of \$50,000.
- The new letter will be put before the Board on June 21, 2023 for approval.

Status Reports and Informational Items

**Developing Recommendations
for a Revised Nutrient
Management Strategy and a
Petition for a Site-Specific
Chlorophyll-a Water Quality
Standard**

Development of Concepts and Principles for a Revised Nutrient Management Strategy

- The UNRBA PFC and Board have been discussing concepts and principles for a revised nutrient management strategy since November 2022
- Preliminary drafts of a concepts and principles document have been reviewed by full PFC distribution list
- A revised draft was discussed by the PFC at their June 6th meeting
- The latest draft was provided to the Board for review today
- Following review and input by the Board, this document will be finalized for Board approval at their September meeting
- A public-facing summary of the draft concepts and principles document has been developed by the communications team
- This document will be distributed in July to the member local governments to share via social media platforms and websites; this will allow for public participation in the review process and finalization of the UNRBA recommendations

Petition for Site-Specific Chlorophyll-a Criteria and Evaluations of Legal Approaches

- The subject matter experts continue to evaluate other State's site-specific standards for chlorophyll-a and nutrient-related standards.
- Dr. Marty Lebo continues to integrate his work into the statistical modeling and regulatory support efforts.
- The modeling efforts will also inform development of an appropriate, attainable site-specific criteria

Coordination with DEQ

- The UNRBA is meeting with DWR on June 22nd to discuss coordination efforts to finalize the models, develop a revised nutrient management strategy, and develop a petition for site specific criteria.
- Plans are under development on how to coordinate with DEQ and EPA on our general objectives for a revised strategy and a site-specific standard.
- DWR has hired a standards coordinator that replaces the former coordinator who retired. As a result, we anticipate the Division will identify a contact for us to work with on developing the site-specific standard recommendation/petition.
- The UNRBA will continue to work with other stakeholders on these items as well.

Stakeholder Engagement

- We have reached out to other regulated stakeholders, specifically agriculture, DOT and forestry, to provide input and participate in these discussions.
 - UNRBA met with representatives of agriculture on June 7th
- We will expand this outreach to include stakeholders impacted by all aspects of the current rules, including
 - General public (in coordination with member staff)
 - Other state and federal facilities
 - Development community (new development rule)
 - Farmers and landholders
 - USACE
 - County Health Departments
 - EPA
 - NC Attorney General and Administration
 - EMC Water Quality Committee

Potential Statutory and Regulatory Revisions

- As the UNRBA works to develop its recommendations for a revised strategy and a site-specific standard, it will be necessary to consider potential statutory and regulatory revisions that will allow a more flexible watershed management approach.
- This will involve some legal and legislative actions that will require coordination with the agency and the Legislature.
- The Executive Director is authorized generally to undertake these activities including outreach to the agency and legislators during the current Long Session of the General Assembly.
- The Executive Director will continue to seek assistance from the Legal Group and the UNRBA's Advisory Attorney as approaches are considered and evaluated
- The Board voted at their March meeting to note this ongoing authorization.

Schedule for the Reexamination

Overview of Schedule

- **June through August 2023**
 - Continue to expand stakeholder engagement
 - Board to review draft concepts and principles document (the “Document”)
 - Meetings with Director of the Division of Water Resources (DWR)
 - Technical stakeholder workshop to review key findings and recommendations (August 1, 2023)
 - Discussion with DWR and NGOs to discuss concepts and principles
 - Develop draft Consensus Principles II based on the Document
 - Executive Director continue presentations on concepts and principles to local government commissions, councils, and boards
- **September 2023**
 - Finalize Document; provide to Collaboratory for reference
 - Finalize Consensus Principles 2
 - UNRBA Board to endorse Document and Consensus Principles 2
 - Meetings with the Chairs of the Environmental Management Commission (EMC) and its Water Quality Committee
- **October/November 2023**
 - Local government commissions & councils approve Consensus Principles 2
 - UNRBA Board to approve package for submittal to DWR and the EMC including Concepts and Principles Document and Consensus Principles 2 (tentative Board meeting schedule in December if needed)

Overview of Schedule

- **December 2023 - Legislative requirements for Submittals**
 - NC Collaboratory final Falls Lake report
 - Submittals from other groups (UNRBA)
- **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
 - 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**

Continued engagement with Collaboratory researchers

Schedule of the Reexamination

- A final package of recommendations will need to be completed well before December 2023
- The UNRBA draft recommendations for a revised nutrient management strategy for Falls Lake will be submitted to the state in December 2023.
- We will repeatedly review the schedule and activities for the next several months
- These reviews will include the status of development of Consensus Principals 2 and activities leading to the final approval of the Board at the November 2023 meeting
- Priority on setting meetings with the Director of the Division of Water Resources (DWR), DEQ, and the Chairs of the Environmental Management Commission (EMC) and its Water Quality Committee prior to submission as well as outreach to stakeholders and local citizens.

UNRBA Comments on the DWR 20-year Status Report for the Neuse and Tar-Pamlico Estuaries

UNRBA Comments Submitted on the DWR 20-year Status Report for the Neuse and Tar-Pamlico Estuaries

- On May 16, 2023, DWR released its 20-year Neuse and Tar-Pamlico Nutrient Management Strategy Retrospective, An Analysis of Implementation and Recommendations for Adaptive Management.
- DWR set a 30-day comment period for the draft report.
- UNRBA submitted comments on June 9th that addressed these main points
 - Significant reductions in nutrient loading have been achieved
 - Algal blooms and fish kills have declined; uses are met
 - The chlorophyll-a standard is not being met
 - Local governments and farmers should not be required to offset loading from natural areas which have increased due to climate change and large rain events
- The UNRBA drafted comments on the report, and these were reviewed by the Co-Chairs of the PFC and the Executive Committee of the Board prior to submittal to DWR.
- The Board and PFC have also received a copy of the UNRBA comments

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

Watershed Model Report and Training Status

- The Watershed Analysis Risk Management Framework (WARMF) model for the Falls Lake watershed has been calibrated for stream flows and water quality
- The model has been evaluated for scenarios which have been incorporated into the watershed model report.
- The MRSW and DWR has reviewed a draft watershed model report
- Once the Executive Director and the Chair of the MRSW have reviewed the revised draft report in response to comments, the revised report will be distributed to the MRSW, DWR, and PFC for review
- As a result of comments received during the WARMF model training, the model interface was updated and submitted to DWR for review

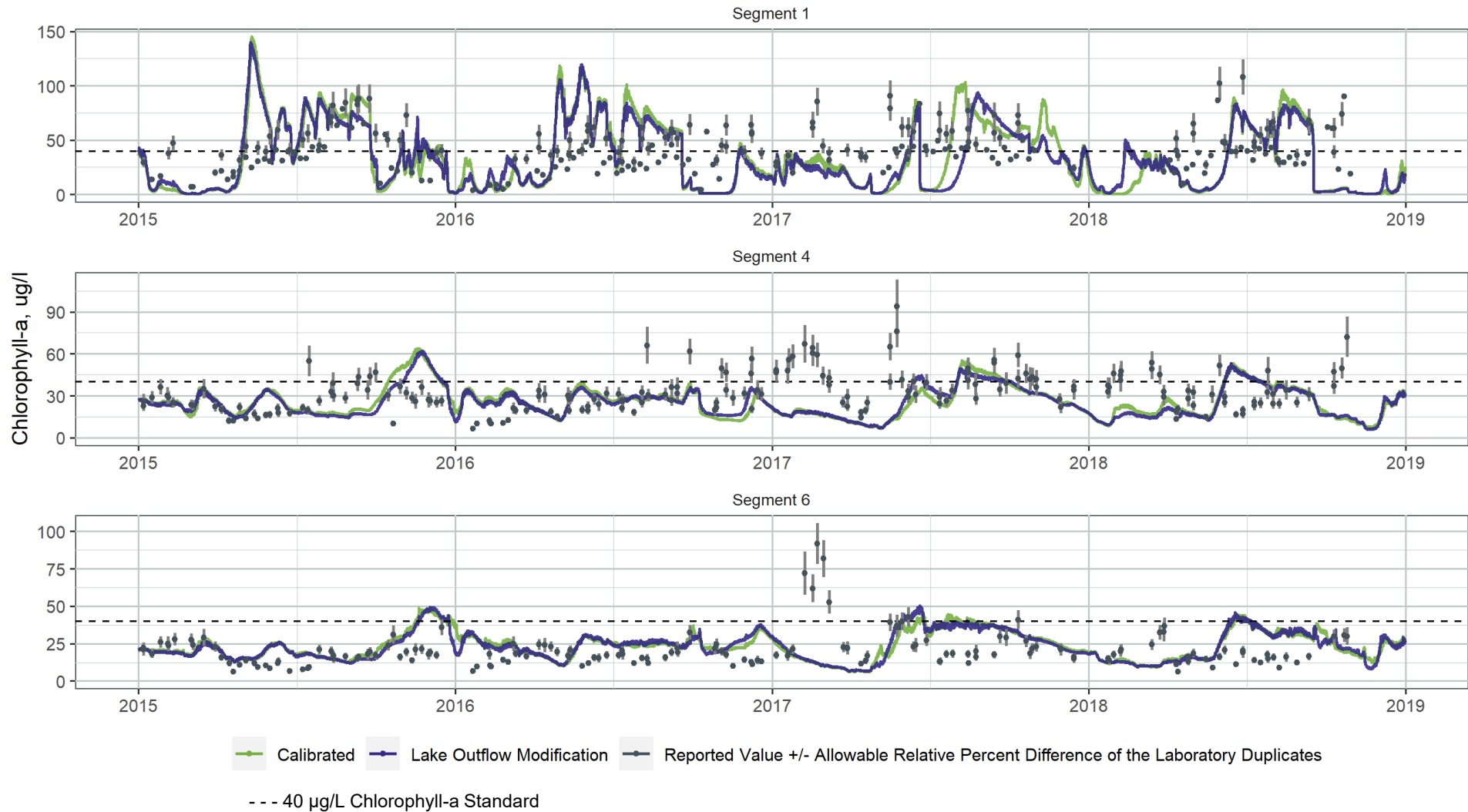
Lake Modeling Status

- The three lake water quality models are being developed considering the information generated by the watershed model (stream flows, nutrient concentrations, and delivered loads to Falls Lake)
 - Both WARMF Lake and EFDC have been calibrated for water quality in Falls Lake with approval by the MRSW and are being used to evaluate scenarios
 - The datasets for the statistical model have been compiled and are being evaluated to address questions about the relationships among precipitation, nutrient loading, chlorophyll-a, and satisfaction with designated uses.
 - This model will inform the proposed revised nutrient management strategy and the petition for a site-specific chlorophyll-a standard.
 - Third-party review of the statistical model by the Collaboratory researchers has begun
- Lake model reporting is under development.

WARMF Lake Dam Operation Scenario

- The USACE operates Falls Lake as a flood control structure to protect downstream communities
- Water level is controlled for a target elevation of 251.5 feet above mean sea level, but following large storms, water is retained in the lake and released it slowly once downstream flooding risk has passed
- This operation affects retention of storm water in Falls Lake, residence time, and lake water quality
- A scenario was evaluated to determine the effect of changing the lake operation from a flood control structure to one with a weir release at normal pool
 - Lowered the spillway from 264.9 ft to 251.5 ft
 - Specified minimum release of 100 cfs from April 1st to October 31st and 60 cfs from November 1st to March 31st
- Simulated lake water quality changes some, but not drastically because the USACE already targets 251.5 ft

Chlorophyll-a for the Dam Operation Scenario



Gathering Data from Local Governments and Utilities to Support the Cost Benefit Analysis and Example Costs to Reduce Nitrogen Loading by 50 Percent

Gathering Data from Local Governments to Support the Cost Benefit Analysis

- An important component of the re-examination is understanding the costs of past and possible future actions in the watershed as well as the benefits
 - Nutrient load reductions
 - Improvements in lake water quality
- At their [February meeting](#), the PFC discussed the types of data and information being compiled to initiate this process
- Structured data requests will follow after existing data and reports have been reviewed and compiled.

Nutrient Load Reductions Needed to Meet Chlorophyll-a Standard 90% of Time

- 75 percent of the Falls Lake watershed is forest or other natural area; these areas contribute $\frac{1}{2}$ of the nutrient load to Falls Lake
- Other sources cannot be eliminated completely and have already reduced nutrient loading significantly
- The chlorophyll-a standard for Falls Lake is 40 $\mu\text{g}/\text{L}$ which must be met all the time, everywhere in the lake
- UNRBA lake modeling indicates that meeting this standard at least 90% of the time at Interstate 85 would require an additional 50% reduction in delivered total nitrogen loads beyond what has already been achieved
- This would require reducing delivered loading by 825,000 pounds each year
- Pump and treat systems are the only way to meet this level of load reduction to address all sources of loading

Cost to the Meet 50 Percent Reduction with Algal Floway (without land costs)

- The City of Durham has studied an Algal Floway system to reduce nutrient loading to Falls Lake
- Based on the pilot study, to reduce nitrogen loading to Falls Lake by 50 percent from current levels would require
 - Siting, designing, and permitting 130 full-scale systems
 - Treatment of 1.3 billion gallons of water per day
 - Handling of 260,000 tons of algae each year
 - Cost over \$8 billion to construct (not including the cost of land) and more than \$22 million per year to operate



Communications

Communications Outreach and Preparation

- Continued engagement with DWR and Collaboratory researchers (meeting planning underway)
- Development of a high-level, public-facing document to describe the challenges for the Falls Lake watershed and the concepts and principles under consideration by the UNRBA to maintain and improve water quality in Falls Lake.
 - To be distributed by the local governments and utilities to their contact lists and social media accounts
 - Broaden outreach and input from the general public and other interested organizations
- Several events recently held or being planned
 - WRRRI Falls Lake Session held on March 23, 2023
 - Symposium with NC Collaboratory held on April 19, 2023
 - Meeting with DWR to discuss reexamination June 22, 2023
 - Workshop with DWR/NC Policy Collaboratory/NGOs planned for summer 2023
 - Technical Stakeholder Workshop planned for Summer/Fall 2023
 - Regulatory forum to discuss rules revision process planned for Spring 2024

Communications Outreach and Preparation

- The Executive Director will continue scheduling presentations at the local government's Board, Council, and other meetings to discuss the recommendations for a revised nutrient management strategy
 - Presented to the City of Durham Environmental Affairs Board on April 12, 2023
 - Plans to present to the City of Creedmoor on July 17, 2023; Wake County Growth & Sustainability Committee on September 18, 2023; and the Durham County Board of Commissioners on October 2, 2023.
- The Executive Director will continue to reach out to local government staff to identify needs and support staff with implementation of the IAIA Program
- Planning a press release on the Neuse River of the Year for the upper part of the watershed following event details from American Rivers
 - The Board suggests including the IAIA successes as part of this release
 - BC communications staff have been identified to support development of press releases and videos

Ongoing Discussions/Issues

Ongoing Discussions/Issues

- Intensive workgroup activity and management of expectations and resources—A lot to do between now and recommendations at the end of 2023
- Ongoing DEQ/DWR Items—MOA, Neuse Watershed Model Information Session / Delivery Factors for WWTP, etc.—we plan to address in our follow-up meetings with DEQ/DWR

Closing Comments

**Next UNRBA Board Meeting is Scheduled
for September 20, 2023**

Butner Town Hall 9:30 AM to Noon

WORKING ON RECOMMENDATIONS!

Have a good summer!