

# Path Forward Committee Meeting Butner Town Hall, August 1, 2023



# Agenda

- Opening Comments, Agenda Review/Revisions
- Contracts and Agreements for FY2024
- Modeling and Regulatory Support Status
- Developing Recommendations for a Revised Nutrient Management Strategy and a Petition for a Site-Specific Chlorophyll-a Water Quality Standard
- Closing

## Other Items Provided for Reference

- Gathering Data from Local Governments to Support the Cost Benefit Analysis
- Timeline for the Development of Recommendations for a Revised Strategy and Model Development Documentation
- Communications Support
- Other Status Items

# Opening Comments, Agenda Review/Revisions

- Today's PFC meeting is one hour, and will focus on the June 21, 2023 Draft Concepts and Principles Document and the Draft Consensus Principles II
- The Technical Stakeholders Workshop follows today's meeting (beginning at 10:30 AM), and a detailed review of modeling results will be provided at that time.

# **Modeling and Regulatory Support Status**

# 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
- Review is proceeding
- Next, it will be distributed to the MRSW, DWR, and PFC for review and additional comment
- Following additional refinements, the report will be formally submitted to DWR
- Revised WARMF model executable, input files, and output files have been provided to DWR based on requests during the DWR model training

# Lake Model Report

- The lake model report is under development and will address all three UNRBA lake models and there are extensive Appendices
- This report will include the results of the lake sensitivity and scenario evaluations.
- Model-specific appendices are also under development/Review

# 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.
- The subject matter experts and third-party reviewers funded by the NC Collaboratory began review of the input data and categorization in February, and we continued this discussion in March.
- Comparisons of data within the lake arms compared to the main lake is being conducted to inform model development
- Evaluations of loading to Falls Lake are being compiled
  - Monthly tributary loading from 4 tributaries back to the 1980s
  - Monthly estimates of atmospheric deposition from 2000 to 2020 based on NADP model estimates and extended back to the 1980s based on linear regressions using wet deposition data back to 1979 and dry deposition data back to 1991
  - Seasonal estimates of nutrient releases from Falls Lake sediments based on EFDC modeling

**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 Strategy

- Since November 2022, the PFC has been discussing concepts and principles for inclusion in the UNRBA's recommendations for a revised Falls Lake Strategy/Revised Falls Lake Rules.
- These discussions were used to develop a preliminary draft document that has been revised based on PFC and stakeholder input
- An updated draft was provided to the Board ahead of their June meeting for general consideration and to released as a draft for public comment. Comments were due by July 14<sup>th</sup>.
- A revised draft to address these comments will be provided in mid August
- A public-facing summary has also been developed to expand outreach and invite additional feedback; this has been reviewed by the PFC Co-Chairs and will be provided to the Board for review.
- The final version will be distributed for use by the local governments to distribute information to their mailing lists and social media accounts and seek feedback from the public on the UNRBA recommendations



# 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).

# 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.

# Coordination with DEQ/DWR/EPA

- The UNRBA met with DWR leadership on June 22<sup>nd</sup> to continue discussing coordination efforts
  - Review the technical findings of the reexamination
  - Discuss UNRBA recommendations for a revised nutrient management strategy
  - Discuss a petition for site specific criteria
  - Identified priorities requiring UNRBA and DWR cooperation and coordination
- DWR has filled two critical positions in their Classifications, Standards and Rules Review Branch. Paul Wojoski and Libby Liebig were in attendance at the meeting.
- John Huisman remains the primary DWR contact for work on an updated strategy.
- We have also invited staff from EPA Region 4 from the 303(d) TMDL unit and modeling unit to attend the today's UNRBA Technical Stakeholders meeting the EFDC model training being held tomorrow, August 2<sup>nd</sup>

# Coordination with Stakeholders and SMEs

- The UNRBA will continue to identify opportunities to work with other stakeholders as we move through finalizing our recommendations.
- 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.
- This team met on June 23<sup>rd</sup> to transfer input on this effort from Jay Sauber.



**Other items for your  
reference follow**

# **Gathering Data from Local Governments to Support the Cost Benefit Analysis**

# 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 the February PFC meeting we discussed the types of data and information we are seeking to initiate this process
- Please email initial information to [amatos@brwncald.com](mailto:amatos@brwncald.com) and [ashley@brindlecreek.com](mailto:ashley@brindlecreek.com) and copy [Forrest.Westall@mcgillassociates.com](mailto:Forrest.Westall@mcgillassociates.com).
- Structured data requests will follow after existing data and reports have been reviewed and compiled.

# **Timeline for the Development of Recommendations for a Revised Strategy and Model Development Documentation**

## **Timeline for the Development of Recommendations for a Revised Strategy and Model Development Documentation**

- The timeline for the development of strategy revision recommendations was set in 2018 as part of the modified Collaboratory legislation.
- December of 2023 has been ahead of us for about 5 years and all of our focus has been on achieving this goal.
  - C&P document under development
  - Need to draft Consensus Principles II to be the primary communication to the state (EMC, DEQ, DWR and General Assembly).
  - Model documentation and files that will be submitted to DWR for review by the end of the year
  - Forrest has discussed with the two Co-Chairs of the PFC the plan for this process and the schedule by report has been developed and was provided to the PFC ahead of the meeting.
- We need to keep in clear focus meeting this schedule because it is critical to placing before the state our recommendations for a revised strategy and for a site-specific water quality standard for chlorophyll-a.

# **Communications Outreach and Preparation**

# Communications Outreach and Preparation

- Continued engagement with DWR and Collaboratory researchers (meeting planning underway)
- 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.
- 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 in June 2023
  - Workshop with DWR/NC Policy Collaboratory/NGOs planned for summer 2023
  - Technical Stakeholder Workshop planned for today
  - 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
  - Presented to the City of Creedmoor Commissioners on July 17, 2023
  - Scheduled to present to the and the Wake County Growth & Sustainability Committee on September 18, 2023 and to the Durham County of Board of County Commissioners Work Session on October 2, 2023
  - Scheduled to meet with Raleigh Stormwater Committee on October 5, 2023
  - Scheduled to meet with the Durham City Council on October 19, 2023
  - Scheduled to meet with Orange County Commissioners on November 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—**NEED YOUR HELP!**
  - **Year 2 ended June 30<sup>th</sup> and annual reports to DWR are due September 30<sup>th</sup> (copy UNRBA)**
- Still 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



# Other Status Items

# Ongoing Items

- More intensive outreach and stakeholder engagement and management of expectations and resources—A lot to do between now and recommendations in December 2023
- Ongoing DEQ/DWR Items
  - Continued engagement with staff and leadership
  - Building agreement with timeline for EPA outreach
  - Neuse Watershed Model Information Session – Delivery Factors for WWTP—Update provided by John Huisman
  - The UNRBA provided comments on the DWR 20-yr status report for the Neuse and Tar-Pam Estuaries—We understand DWR is following up on this document

# **Future Meetings as Currently Scheduled:**

**UNRBA Technical Stakeholders Workshop:**

**Today from 10:30 AM to 3:30 PM**

**Next PFC Meeting: September 5, 2023, 9:30 AM to Noon**

**Next BOD Meeting: September 20, 2023, 9:30 AM to Noon**

# Closing Comments Additional Discussion