



Upper Neuse River Basin Association (UNRBA) Board of Directors (BOD) Meeting Agenda
January 17, 2024, 9:30 AM to Noon
In Person Meeting at Butner Town Hall, Camp Butner Room
[Remote Access Option \(see last page for instructions\)](#)

Materials related to this BOD Meeting have been placed on the UNRBA website unless noted otherwise on the [Meeting page](#). See items under the January 17, 2024, meeting date.

I. Opening—Sig Hutchinson, Chair

- A. Introductions, Note Board Member Changes and Announcements**
- B. Roll Call for Quorum**
- C. Identification of any Conflicts**
- D. Review and Approval of Agenda**

II. Action Items

- A. Approval of [November 15, 2023, Draft Board Minutes](#)**
- B. Approval of the [Treasurer's Report](#)**
- C. Officer Elections for 2024: Nominating Committee Recommendations**

Item Summary (Nominating Committee): The [UNRBA Bylaws](#) call for its Annual Meeting to be held in January and provides for the election of Association Officers for the calendar year. The Board appointed a Nominating Committee during the November 15, 2023, Board Meeting to make recommendations at the January Meeting: Sig Hutchinson, Carolyn Bachl, and Terry Hackett. [A summary of the recommendations of the Nominating Committee will be provided for the consideration of the Board.](#)

D. Personnel Committee Report

Item Summary (Sig Hutchinson): The Personnel Committee met December 13, 2023, and reviewed the work of the UNRBA during 2023 and the support provided under the Executive Director Services Contract. Sig will provide the Committee's report and make recommendations to the Board on behalf of the members of the Committee. [The Board will consider approval of the Personnel Committee recommendations.](#)

III. Status Reports and Informational Items

A. Background for New Board Members

Item Summary (Forrest Westall): An overview of history of the UNRBA will be provided with a focus on the UNRBA's role in the readoption of the Falls Lake Rules. [Please refer to the last two pages of this agenda for a summary of what will be presented during the meeting.](#)

B. NC Collaboratory Releases Final Research Reports and Recommendations for Falls Lake

Item Summary (Steve Wall and Dan McLawhorn): The NC Collaboratory released the final research reports for Falls Lake in December 2023. In addition to finalization of interim reports, several new reports are available on streambank erosion, community engagement, policy implications, and model reviews. The NC Collaboratory recommendations for the revised Falls Lake Nutrient Management Strategy were submitted in December 2023 and distributed by the Executive Director to the PFC and Board. The research reports and Falls Lake Report are available online at <https://nutrients.web.unc.edu/resources/>. The NC Collaboratory also released their annual summary report of activities which the Executive Director distributed to the PFC and Board. Steve Wall, Policy Research Associate/Outreach Director for the UNC Institute for the Environment and NC Collaboratory) will

provide an overview of the Collaboratory's full report. Dan McLawhorn will review his reports, included in the overall report, on regulatory/policy considerations of an updated nutrient management strategy.

C. DWR Proposed Changes to New Development Rules for the High Rock Lake Watershed

Item Summary (Forrest Westall): At the December 1, 2023, meeting of the Nutrient Scientific Advisory Board (NSAB), the Division of Water Resources (DWR) provided a status update regarding a draft proposal for changes to new development rules for the High Rock Lake Watershed. Stakeholders in the High Rock Lake watershed have not yet come to consensus on this proposal. One of the new components in the proposal would require some volume reduction depending on the intensity of the development. The Executive Director distributed the draft proposal to the PFC on December 8, 2023 for review and input. [The UNRBA should provide comments on the proposal as changes in the High Rock Lake watershed may influence the Falls Lake Rules readoption process.](#)

D. Inquiries and Issues Regarding Nutrient Credits

Item Summary (Forrest Westall): **Conventional Failing Onsite Wastewater Systems**--Staff from the Southeast Rural Community Assistance Project, Inc. (SERCAP) reached out to the Executive Director regarding availability of nutrient credits for repair or remedy of conventional, failing onsite wastewater treatment systems. While a State-approved credit for discharging sand filters (DSF) does exist, nutrient credits for addressing conventional systems does not. Investments credits are available under the Stage I Existing Development Interim Alternative Implementation Approach (IAIA). Wake County has participated in projects with SERCAP to invest in these types of projects. There is interest moving forward to continue work on the nutrient crediting for this practice as implementation shifts from IAIA to revised rules which may include additional metrics.

Credit for New Development using Soil Improvement—As noted in the item above, during the December NSAB meeting, DWR's draft proposal includes volume reduction requirements for some new developments (depending on the percentage of built upon area). Staff from the NC Division of Energy, Mineral, and Land Resources (DEMLR), which regulates credits for new development projects, also participated in the NSAB meeting. UNRBA staff inquired again about application of the soil improvement practice to new development projects. While soil improvement receives nutrient credits for existing development projects, the State had indicated that a trial period for existing development was needed before approval for new development. This practice was approved for existing development in 2017 and is also a new-development practice in Virginia, Maryland, and Pennsylvania. DWR staff indicated that discussions about this practice with stakeholders had identified some challenges to implementation. Following the NSAB meeting, DWR staff provided a list of questions to the UNRBA. UNRBA staff and Town of Hillsborough stormwater staff provided responses to the questions on December 15, 2023. The UNRBA will schedule a follow-up meeting to discuss approval for new development which is when the practice is most effective.

E. Modeling and Regulatory Support Status

Item Summary (Alix Matos): At their December 5, 2023, meeting, the PFC approved the final revisions to the Watershed Analysis Risk Management Framework (WARMF) watershed modeling report and submittal of the final report to the DWR. The report and provides documentation that the development of the WARMF Watershed Model followed the [UNRBA Modeling Quality Assurance Project Plan \(QAPP\)](#) approved by DWR for this modeling effort. The report supports the review and approval by DWR of the model development under Falls Lake Rule 15A NCAC 02B .0275. The watershed modeling report and appendices were submitted to DWR and the Environmental Management Commission (EMC) on December 20, 2023. WARMF watershed and lake

modeling files and model executable were provided to the agency in May 2023. EFDC lake modeling files and model executable were provided to the agency on December 19, 2023.

The lake model report addresses all three UNRBA lake models as well as lake model sensitivity and scenario evaluations. Technical details are described in model-specific appendices. In mid-October, the main lake report and EFDC model appendix were distributed to the PFC, Modeling and Regulatory Support Workgroup (MRSW), DWR, and subject matter experts/third-party model reviewers for review and comment. The WARMF Lake appendix and literature review conducted by NC Collaboratory researchers on nutrient releases from the lake sediments of eutrophic lakes was distributed on December 8, 2023, for review and comment. Comments on these files are requested by January 23, 2024. The UNRBA will submit the lake report and appendices to DWR for review and approval under Falls Lake Rule 15A NCAC 02B .0275 following this initial review process.

The statistical model appendix is under development; model input for the statistical model is summarized in the main lake report. Segment boundaries for the statistical model have been revised to align with available data and analysis by Marty Lebo. The PFC discussed this change at their November 2023 meeting. The revised draft of the main lake report will summarize the lake data using the revised segments. We are targeting March to finalize the lake modeling report pending completion of the statistical modeling.

F. Updating the UNRBA Technical Website

Item Summary (Forrest Westall): The UNRBA has been setting aside funding to update the Association's technical website where data, documents, and meeting history are provided. The website is being updated to Drupal version 10. The technical website and public facing website will be merged during this process. The Executive Director and support staff are working on a preliminary layout for the website to provide to the contractor. At their November meeting, the Board authorized the Chair to sign a contract to begin this work for an amount up to \$20,000. At their September meeting, the Board authorized the use of up to \$10,000 from contingency to increase the contract to \$30,000 if necessary. The UNRBA monitoring database will be available online using simple file access with no data base sign-in or data analysis capabilities. The PFC membership was provided a link to older content currently available on the site. We would like feedback on the PFC's view of removing or updating this information. In general, we would appreciate input on the website as a whole. Please provide comments to us on any changes or suggestions that you have about the site and how we can improve it.

G. Budget Considerations for FY2025

Item Summary (Forrest Westall): The UNRBA is moving into support of the rules readoption process. This will change the focus of the organization but will require significant effort and technical support throughout the process. The UNRBA will need to forge a strong relationship between DWR, EMC, and the General Assembly to support an effective readoption process. Working closely with DWR, the UNRBA should strongly engage on redrafting of the rules and provide technical support and public input to stakeholders and DWR. We hope this process will go smoothly, but it is already clear that the UNRBA will need to work diligently to keep Consensus Principles II and the technical data analysis and modeling before the agencies and the stakeholders. The recommendations developed lay out a path that is unique for Falls Lake and a departure from previous nutrient management efforts. This new approach will need significant support to develop rules that make sense and are effective in maintaining uses in Falls Lake. The UNRBA will remain committed to working through this with DWR and the staff responsible for developing revised rules. In addition, the UNRBA will proceed with working on getting a specific 303(d) assessment methodology for Falls Lake and for continuing the development of a site-

specific chlorophyll-a standard. At their November meeting, the Board indicated that it made sense to maintain the current funding level to support the rules re-adoption process. The Executive Director and consultant team are working on a draft budget and planned scope of work for review and approval by the PFC at the February meeting. The budget will need to include:

- UNRBA Management and Administration—support to the Executive Director for meetings, minutes and follow-up to all of the meetings/interactions between the Executive Director and the membership.
- Continue to support implementation of current rules during the rules re-adoption process
 - o Support development of nutrient crediting or alternative metrics for eligible projects and activities
 - o Continue administration and technical support of IAIA program
 - o Coordinate joint consultation among UNRBA members to assess and document consistent application of new development requirements
- Support development of draft rule changes
 - o Modeling support and data analysis to address specific questions that are likely to occur during rule development and negotiation as well assessment and criteria development
 - o Provide technical responses to issues raised by stakeholders about specific rule proposals
 - o Assist DWR in the coordination of working groups, drafting and compiling proposed language, and facilitating discussions
 - o Coordinate legislative engagement in the rule development process
 - o Draft modifications to UNRBA Bylaws to align with the structure of the revised rules
- Strategy support in developing alternatives for legislative action needed to go with the new rules
- Preliminary reporting template for the 5-yr and 25-yr status reports discussed in the UNRBA recommendations and Consensus Principles II
- Support development of Falls Lake assessment methodology and site-specific chlorophyll-a criteria
 - o Support for the development of a revised 303(d) methodology for Falls Lake
 - o Development of a site-specific chlorophyll-a standard for Falls Lake
 - o Planning and presentation support for needed meetings with DWR and stakeholders on the site-specific proposals prior to submittal and after
- Communication support
 - o Respond to questions from stakeholders and media
 - o Develop materials to support communication to elected officials, legislators, general public, technical staff, and stakeholders
 - o Host workshops for UNRBA members, stakeholders, and NC Collaboratory researchers to discuss proposed rule language, discuss site-specific proposals, etc.
 - o Present to annual conferences, EMC meetings, NSAB meetings, etc.
- Provide fiscal evaluation of proposed rule changes and prepare for coordination with DWR on the State's fiscal analysis
- Preliminary planning for UNRBA monitoring program design.

H. Submittal of Recommendations for a Revised Nutrient Management Strategy and Developing a Petition for a Site-Specific Chlorophyll-a Water Quality Standard and Falls Lake Assessment Methodology
Item Summary (Forrest Westall): As noted in the background discussion, the UNRBA submitted the [UNRBA Concepts and Principles for the Reexamination](#) and [Consensus Principles II](#) to DWR and the EMC on November

22, 2023. The next phase of work is the readoption of the Falls Lake Rules. The UNRBA will continue to identify opportunities to work with other stakeholders as we begin coordinating, collaborating, and supporting DWR in the rules review process.

The UNRBA continues to develop information to support a petition for a site-specific chlorophyll-a standard for Falls Lake and is working with Dr. Marty Lebo to integrate his results into the site-specific standard evaluation, statistical modeling, and regulatory support efforts. We are also using this information and other information to develop a specific Falls Lake 303(d) methodology with the current standard.

I. Communications Support

Item Summary (Forrest Westall): The UNRBA continues to coordinate with DWR on preparations for the rules review process, potential modifications to the water quality assessment methods, and development of a site-specific chlorophyll-a criteria for Falls Lake. The work with DWR will intensify greatly following submittal of the UNRBA's and NC Collaboratory's recommendations in December 2023. Additional meetings to gather input from NC Collaboratory staff, researchers, and representatives of NGOs are being planned. Jurisdictions should identify additional meetings where support from the UNRBA team is needed. Additional information and activities:

- Responded to questions about development in Durham from a student at the UNC-Chapel Hill Hussman School of Journalism and Media; planning a follow-up call to discuss
- Planning for a joint stakeholder workshop with DWR and UNRBA on the rules readoption process
- Planning for meetings/workshop with UNRBA and NC Collaboratory regarding the recommendations for a revised nutrient management strategy
- Planning for a Falls Lake session at the Water Resources Research Institute Annual Conference March 20 and 21, 2024
- A public-facing, two-page summary was developed and distributed to expand outreach and invite additional feedback on the final Concepts and Principles document.
- A question-and-answer style document was developed and distributed to respond to questions from Preserve Rural Durham regarding developments near Falls Lake and their impacts on lake water quality
- American Rivers is still planning a "Neuse River of the Year" event for the upper part of the basin.

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.

J. Ongoing Discussions/Issues:

Item Summary (Forrest Westall):

- Intensive activity and management of expectations and resources—A lot to do
- Ongoing DEQ/DWR Items— Neuse Watershed Model Information Session / Delivery Factors for WWTP, Jordan Lake rules readoption process, etc.—we plan to address in our follow-up meetings with DEQ/DWR.

K. Closing Comments—Board Members and Chair

Next PFC Meeting: February 6, 2024, 9:30 AM to Noon
 Next Board Meeting: March 20, 2024, 9:30 AM to Noon
 This schedule may be revised, and notices will be provided about any change.

Remote Access Instructions for UNRBA Board Meetings

This meeting will open 10 minutes prior to the official meeting start time to allow for users to test equipment and ensure communication methods are functioning.

Equipment Type	Access Information	Notes
Computers with microphones and speakers	Join Microsoft Teams Meeting Please mute your microphone unless you want to provide input.	Press control and click on this link to bring up Microsoft Teams through the internet. You can view the screen share and communicate through your computer’s speakers and microphone.
Computers without audio capabilities, or audio that is not working	Join Microsoft Teams Meeting (888) 404-2493 Passcode: Sent morning of meeting Please mute your phone unless you want to provide input.	Follow instructions above. Turn down your computer speakers, mute your computer microphone, dial the number through your phone and enter the passcode. See note below on pass code
Phone only	(888) 404-2493 Passcode: Sent morning of meeting Please mute your phone unless you want to provide input.	Dial the toll-free number and enter the passcode. The system issues a new phone passcode for each meeting. We will distribute the telephone passcode the morning of each meeting.

Remote Access Guidelines

- If you dial in through your phone, mute your computer microphone and turn down your speakers to **avoid feedback**
- Unless you are speaking, please mute your computer/device microphone or phone microphone to **minimize background noise**
- UNRBA meetings are open meetings; however, please **limit the discussion to UNRBA Board Members** to facilitate moving through action items

Background for New Board Members (to be presented under Agenda item III. A.)

Item Summary (Forrest Westall): The UNRBA was formed in 1996 to promote water quality protection in the basin. The [Falls Lake Nutrient Management Strategy](#) (aka the Falls Lake Rules) was passed in 2010 by the State. The nutrient management strategy specified two stages of nitrogen and phosphorus reductions to the lake. The State developed watershed and lake models to determine the required amount of nutrient reductions. Based on the state's [Fiscal Analysis](#) of the Rules, the strategy was estimated to cost over \$1.5 billion.

The goal of the Falls Lake Rules was to meet the chlorophyll-a standard of 40 micrograms per liter. Chlorophyll-a is a green pigment used by plants and algae for photosynthesis. It is an indicator for algae in water but does not correlate to designated uses like fishing, swimming, and water supply. While algae forms the base of the food chain, excessive amounts can cause water quality issues.

The State set the [chlorophyll-a standard](#) in the 1970s under its delegated authority under [Section 303\(d\)](#) of the [Federal Clean Water Act](#). Authorized states and tribes can establish their own water quality standards and assessment methodologies. Waters that do not meet a standard are placed on the 303(d) list. The state or tribe must develop a plan to remove the waterbody from the list. The NC chlorophyll-a standard applies to all locations in all waterbodies at all times unless a site-specific standard is developed and approved by the State.

The Falls Lake Rules also require implementation of stormwater projects so new development does not increase nutrient loading to Falls Lake. The New Development Rules have been implemented by every local government since mid-2012. New development projects must use a State-developed tool called the [Stormwater Nitrogen and Phosphorus \(SNAP\) tool](#) to ensure the stormwater projects meet the requirements of the New Development Rules. Local governments in the Falls Lake Watershed manage the New Development programs with oversight from the NC Division of Water Resources (DWR). Construction activities are governed by [State Sediment and Erosion Control Rules](#).

After the Falls Lake Strategy was passed, the UNRBA focused on supporting its members with implementing Stage I existing development requirements and reexamining Stage II. While agriculture and wastewater treatment plants were able to meet their Stage I reduction requirements, the existing development requirements were difficult to quantify. Reduction credits for State-approved practices were relatively low and difficult to retrofit on existing development. In 2013, the UNRBA began its [Nutrient Credit Project](#) to expand the types of projects with State-approved nutrient reduction credits for water quality improvement. This project added practices and sizing variants to provide more flexibility to local governments. However, the local governments and DWR were not able to agree on the amount of nutrient reduction required under Stage I. Fortunately, the wastewater treatment plants in the watershed had reduced their nutrient loads by much more than required under Stage I and many times more than the potential range of existing development requirements. Staff from local environmental advocacy and land conservation groups recommended a new approach for Stage I compliance that would focus on project implementation rather than counting pounds of nutrients. This innovative program would be voluntary and use investment to track compliance. DWR and UNRBA agreed this would be a helpful approach and a good pilot for the reexamination. Over the next three years, the UNRBA developed a program called the [Stage I Existing Development Interim Alternative Implementation Approach \(IAIA\)](#). All UNRBA members voluntarily joined the Compliance Group Committee (CGC) which was formed under amended [UNRBA Bylaws](#) to implement the program. The IAIA is in the third year

of implementation. Members are required to collectively invest at least \$1.5 million per year. The [second annual report](#) shows that in each of the first two years of the program, members doubled to tripled the required investment.

The Falls Lake Rules included an adaptive management provision that allowed for reexamination of Stage II if an interested party conducted at least three years of water quality monitoring and developed revised watershed and lake models. This allowance for a reexamination was based on the Consensus Principles developed by the UNRBA members. The members had agreed to implement Stage I, but that a reexamination of the Stage II requirements was needed. The technical work of the reexamination was led by the UNRBA Path Forward Committee (PFC) and several workgroups like the Modeling and Regulatory Support Workgroup (MRSW).

Planning for the reexamination began in 2011 and included several planning-level documents including a [Communications Plan](#), a [Decision Framework](#), and a [Description of the Modeling Framework](#) to guide the process. It also included quality assurance project plans for [monitoring](#) and [modeling](#) to ensure best practices. These documents were approved by DWR as required. Monitoring included monthly monitoring at [38 locations](#) in the watershed as well as special studies designed to help build the lake models. The [Final UNRBA Monitoring Report](#) provides a comprehensive summary of the data and studies. Modeling included a watershed model and three lake models. The UNRBA selected the same types of models that DWR had used to establish the nutrient reduction requirements. The Watershed Analysis Risk Management Framework ([WARME](#)) was used for the watershed modeling and one lake model. The Environmental Fluid Dynamics Code ([EFDC](#)) was developed as a more complex lake model. There is also a data-driven, statistical model to understand how water quality impacts designated uses in Falls Lake. This model will also inform development of a site-specific chlorophyll-a standard for Falls Lake.

The UNRBA applied information from the monitoring and modeling to develop its [recommendations](#) for a revised Nutrient Management Strategy and revised Falls Lake Rules. The [UNRBA Concepts and Principles for a Revised Nutrient Management Strategy](#) summarizes key findings from the reexamination activities and recommends an investment-based, watershed health approach for long-term protection of Falls Lake. The recommendations were condensed into a two-page set of revised consensus principles. [Consensus Principles II](#) was approved unanimously by every UNRBA member and the Association. On November 22, 2023, the UNRBA submitted both of these documents to DWR and the Environmental Management Commission (EMC), and on November 27, 2023, the Southeast Regional Director submitted a letter of support for the UNRBA recommendations. The NC Collaboratory also submitted its recommendations to DWR, the EMC, and the General Assembly in December 2023. The [NC Collaboratory](#) was formed in 2016 by the NC Legislature to study nutrient management issues in NC in general and for Falls and Jordan Lakes specifically.

[Submittal of recommendations by the UNRBA and NC Collaboratory initiates the rule making process that will be conducted by DWR. While this process is managed and carried out by the agency, the UNRBA is fully committed to remaining an active participant as described in the following items.](#)