



UNRBA PFC Meeting

April 7, 2026

9:30 AM to 12:00 PM

Remote Meeting Only

(see agenda for remote access instructions)



Agenda

- Opening comments, agenda review/revisions
- Status and timeline for Falls rules readoption
- Review UNRBA Presentation from the 2026 WRR Annual Conference
- FY2027 Budget and Contract Process
- Planning PFC Workshop on Best Practices for Implementing Falls Rules
- Communications
- Other Items
- Closing comments

Opening Comments, Agenda Review/Revisions

Status and Timeline for Falls Rules Readoption

Status of Development of Draft Rule Language

Rule Section	Status
<p>Purpose and Scope, Existing Managed Lands, New Development</p>	<ul style="list-style-type: none"> • PFC discussed DWR’s February drafts at the March PFC meeting • PFC provided comments during and following the meeting • Board discussed concerns at their March meeting • *UNRBA and DWR staff discussed rules again on April 1st • *The slides have been revised accordingly with changes in bold font and “*” • *UNRBA has not received updated drafts – these revisions are based on the April 1st discussion with DWR
<p>Agriculture</p>	<ul style="list-style-type: none"> • PFC discussed DWR’s February drafts at the March PFC meeting
<p>Wastewater</p>	<ul style="list-style-type: none"> • DWR and UNRBA discussing since September 2025 • PFC and Board provided comments during the March meetings • DWR draft rule anticipated in March

Stakeholders will review refined drafts and DWR will host an “all stakeholders” meeting before rules are submitted for consideration by the WQC.

*Note for today

- The April 1st meeting with DWR had originally been scheduled for April 2nd
 - PFC meeting materials were distributed March 31st with an indication that the meeting would be held virtually as we anticipated providing mostly a status update with little discussion
 - We have inserted reminders to pause on revised slides to hear feedback on the revisions DWR has suggested
- PAUSE FOR FEEDBACK ON DWR SUGGESTIONS*
- Please interrupt us during the meeting if needed

UNRBA Comments on DWR's February Draft Purpose and Scope Rule

UNRBA Comments Received During March Meetings (PFC and Board)

- This is a 4B – goal should be to achieve the water quality standard and should not include load reductions
- The 40/77 percent reduction requirements from the original rule scaled up the requirements to offset load from unmanaged areas and atmospheric deposition
 - ***DWR mentioned on April 1st considering the unscaled reduction requirements of 30% N and 77% P**
 - Even these would not meet the standard
- This is an opportunity to establish a new framework to advance watershed health – P&S needs to reflect that shared vision
- DWR's draft is not consistent with NC's watershed action plans that EPA has approved
- ***DWR added some elements to the 5-year reporting to include if “readily available” (e.g., from others’ reporting on water treatability)**

PAUSE FOR FEEDBACK ON DWR SUGGESTIONS

UNRBA Comments Received During March Meetings (PFC and Board)

- We are driving billion-dollar decisions because of 40 µg/L which has no relationship to biological impairment or use attainment
- We can never achieve this target
- Having load reduction requirements opens risks of third-party lawsuits to the UNRBA members, even if DWR says these are aspirational goals
 - Also exposure for DWR and EMC if they fail to move forward on 40/77 over the next ten years (***same with 30/70**)
 - ***DWR removed compliance with the P&S rule from the enforcement section**
- The RRC may not approve some of this language – once rules get to that stage, revisions are between DWR and RRC – not a lot of outside input on that part of the process
- There are other ways to document the aspirational goals outside of rules (4B plan)

PAUSE FOR FEEDBACK ON DWR SUGGESTIONS

UNRBA Comments Received During March Meetings (PFC and Board)

- The alternative regulatory framework language has been removed from this rule – ***DWR has added back in along with “offramp” if meeting standard**
- The narrative in the P&S Rule should include that the lake is stable, there are no ecological problems resulting in public closures/advisories
- Tributary monitoring is needed to estimate loading
 - ***Discussed option of transitioning some lake stations (currently 12 DWR lake stations) to tributary stations**

UNRBA Comments Received During March Meetings (PFC and Board)

- Site-specific standard (SSS) language references the Nutrient Criteria Development Plan (NCDP) Scientific Advisory Council (SAC)
 - The schedule in the latest MOA has not been met - How would the SAC work in Falls when they are behind schedule with the Middle Cape Fear and Albermarle Sound?
 - MOA's can be changed to reflect improved science
 - ***April 1st – DWR noted that UNRBA can petition for their own SSS outside of this process, but that DWR needs to follow the NCDP if they are developing the SSS**

PFC Comments Received After March Meeting

- Would like to see language more reflective of integrated watershed health as initially proposed.
 - ***DWR suggests these comments should be noted during the public comment period along with comments on reducing regulatory burden**
- Concerning that 40% and 77% is referenced in goals.
 - If DWR sees this as aspirational or with parts that are unenforceable, it should not be included in the rule
 - This could lead to a lot of “interpretation” of rule based upon what is written and what was intended.
 - Ignores 12 years of study
 - ***Applies to 30/70 as well**

PFC Comments Received After March Meeting

- *** DWR agreed to “significant anthropogenic” sources in Scope**
- Rule references the Falls Lake Watershed Association – do we need to reference the establishing legislation?
- *** DWR noted that including specifics on state of emergency could limit flexibility of the Governor/legislators to respond and is already allowed as demonstrated by their handling of Helene**

UNRBA Comments on DWR's Draft New Development Rule

UNRBA Comments Received During March Meetings (PFC and Board)

- Consider if nitrogen loading target needs to increase to match the updated the SNAP tool
 - *** DWR never intended us to use 2.2 with the new tool; they understood we would keep the old tool, but it does not include soil improvement which local governments are interested in**
 - **If the new tool is going to be ready in 2026 as anticipated, it would be cleaner to address in these rules, but the new tool is not yet ready; DWR discussing how to approach**
 - **Impacts the loading rate (likely increased to 2.9 lb-N/ac/yr which would also be consistent with Jordan proposal)**
 - **May impact the onsite requirements (in Jordan, not a percent but an onsite loading rate and overall loading rate)**
- **Members should participate in beta testing and review carefully across several projects with old and new tool**

PAUSE FOR FEEDBACK ON DWR SUGGESTIONS

PFC Comments Received After March Meeting

- DWR's language says local government rules can be more restrictive than state/federal law – this is not our understanding and is a red flag to developers
- In Item (5)(a), specify (5)(h) rather than “elsewhere in this item”
- Very confusing language:
“Areas of other specialized land cover types determined to have runoff or nutrient export differing from the above types as approved for use by the Division through incorporation into a subsequent version of its tool or another tool approved pursuant to this Item”
- Item (5)(i) says “shall be”, but throughout the document, it references the option of an alternative tool that receives DEQ approval like Item (5)(f).
- ***UNRBA/DWR to continue discussions on institutional development with examples to identify issues and possible solutions and SNAP tool language/loading targets**

PAUSE FOR FEEDBACK ON DWR SUGGESTIONS

UNRBA Comments on DWR's Draft Existing Managed Lands (EML) Rule

UNRBA Comments Received During March Meetings (PFC and Board)

- Is there a definition of managed lands for this rule?
- Should not cap credits on investments or reductions made prior to 2006
 - Local governments told their councils they would get full early implementation credit based on the language in the 2011 rules
 - Not providing full credit after the fact erodes trusts
 - Members will delay projects in the future until requirements are binding (not be proactive)
 - Providing full credit will not limit activity – the members who implemented early are going to keep implementing
 - The 15% cap seems to penalize those that did projects before they would required in good faith. These projects cost less and have been reducing loads for years.
 - ***DWR agrees to issue full and immediate credit for all activities post baseline (2006)**

UNRBA Comments Received During March Meetings (PFC and Board)

- Should not eliminate operations, maintenance, and repairs from eligible investment activities
 - This incentivizes only new projects while old projects are left deteriorating
 - We could modify language to address DWR's concern that eventually all of the investment would be in O&M
 - Result in neglected SCMs with an attitude of "we already got the credit, so who cares if it functions".
 - Could support a cap on those types of expenses in order to prevent those from being the only cost a jurisdiction counts towards their commitment but not removing it entirely.
 - ***DWR considering 50% cap on recurring costs being claimed for investment credit rather than 0% allowance; Forrest suggested addressing in program plan**

PFC Comments Received Before March Meeting

- DWR's seeming insistence that jurisdictions complete projects each year just for the sake of doing it rather than making smart decisions that will actually improve water quality.
 - Will result in smaller more disperse projects than larger investments with bigger impacts.
- Why is there auditing language in the rule? Not used before; DWR can audit at anytime; every audit increases costs to the rate-paying public that then cannot be put toward reductions - adding more red tape. You already have the authority. No need for this.
- Why does the EML language reference “development” and not “existing development”?
 - ***Alix and John to work on language to clarify**

PFC Comments Received After March Meeting

- Recommend including activities by reference to an approved Program Document rather than including directly in rule to avoid need for continuous rule revisions.
- For example, DWR's draft is missing
 - Education and outreach
 - Soil improvement (an approved practice for existing development)
 - Green infrastructure and other best management practices (BMPs) that include water quality and quantity improvements
- Wake County changed their system to track O&M by rule
- People are afraid of required O&M for green infrastructure and some stormwater control measures, so they avoid those practices;
- Not providing O&M credit makes those fears worse
***see previous suggestion from DWR of 50% cap**

PFC Comments Received After March Meeting

- Why do members choosing the conventional load reduction approach need to track expenditures associated with practices development, implementation and maintenance?
 - Using city forces is often hard to calculate as they have a variety of duties and may not track each minute to multiply by their salary plus benefits. Changes for raises every year etc. Why are these needed? This is just a burden.

PFC Comments Received After March Meeting

- Would like to see language as written in IAIA:
 - Onsite wastewater treatment system inspection programs, maintenance tracking, repair, replacement, and pump-out programs, education of owners regarding proper maintenance, and training of professionals who inspect and repair onsite systems
 - IAIA called out greenways and parks with water quality and quantity benefits. Would just want to make sure this is captured in (e).

PFC Comments Received After March Meeting

- Is there a definition of managed lands? Does this exclude forest and other unmanaged lands? What about forest with a management plan?
- Is the 2023 North Carolina Stormwater Control Measure Credit Document a static document with no new SCMs to be added in the next 25 years?
 - Please allow for most updated version.

PFC Comments Received After March Meeting

- For the conventional load reduction option:
 - The IAIA list (land conservation) does not count since not all practices meet the requirements? So, this option will be harder to meet and with less tools.
 - If there are major revision needed to the draft plan, and we need to take to council three months is not enough time. Can we add a petition to request for time to Item (4)(f)?

PFC Comments Received After March Meeting

- Item (5)(c) references Item (7). Need to be more specific about what sub-item(s) is being referenced.
- Item (6)(h) discourages joint projects and separate agreements for maintenance - discourages joint compliance why not individual and use separate agreements.

Discussion of DWR's Draft Wastewater Rule Options

DWR Comments During March Meetings (PFC and Board)

- DWR had not provided a draft wastewater rule at the time of the March PFC meeting but anticipated providing the week of March 23rd (***not yet received**)
- DWR suggested during the PFC meeting to potentially
 - Set the allocation back to baseline levels and reallocate based on permitted flow ***(confirmed April 1st)**
 - Set effluent concentration limits to 3 mg-N/L and 0.1 mg-P/L
 - Allow nutrient offsets to get to full permitted flow

UNRBA Comments Received During March Meetings (PFC and Board)

- Durham had already upgraded prior to baseline, so going back to baseline puts them under the same unachievable requirements
- Hillsborough is going to run out of allocation soon
- Reallocating baseline loads among permitted flow results in TN effluent concentrations of 1.84 mg-N/L when limits of technology are 3 mg-N/L – results in the same unachievable requirements (upgrades or offsets)
- Our region is projected to increase by 3 million people and 2 million jobs over the next 30 years
- We need long-term solutions that fit the science and anticipate growth, not stifle growth

UNRBA Comments Received During March Meetings (PFC and Board)

- Wastewater allocations are based on loading
- Permits already allow use of offsets
- Offsets may not be available at the scale needed
- Offsets are market-based and cost will likely increase
- Requirements will not move the needle on water quality
 - WWTPs are only 5 to 10 % of the loading to the lake
 - Modeling shows little difference between discharging 260,000 or 160,000 pounds of nitrogen
 - 5-stage treated effluent is not readily treatable or bioavailable
 - In Lower Neuse, credits are expensive and not solving anything

UNRBA Comments Received During March Meetings (PFC and Board)

- Costs of upgrades or credits are borne by rate payers; for example, SGWASA
 - Already increased rates to pay for Stage I plus
 - \$27 million to address PFAS plus
 - \$80 million in infrastructure upgrades plus
 - Tens to hundreds of millions to meet nutrient allocations (upgraded infrastructure or offset credits if available)
 - **SGWASA only has 6,000 customers**
- This is a significant burden to many families
- Not getting the use of the lake as water supply
- Is the State going to support funding for these requirements?

DWR's Overall Suggestion April 1st

- *** DWR's overall suggestion April 1st was to move forward with the rules readoption process including percent reduction requirements in the Purpose and Scope and changing wastewater allocations back to baseline levels and agree to work on these “big picture” items in the following years:**
 - Assessment methodology
 - Site-specific standard

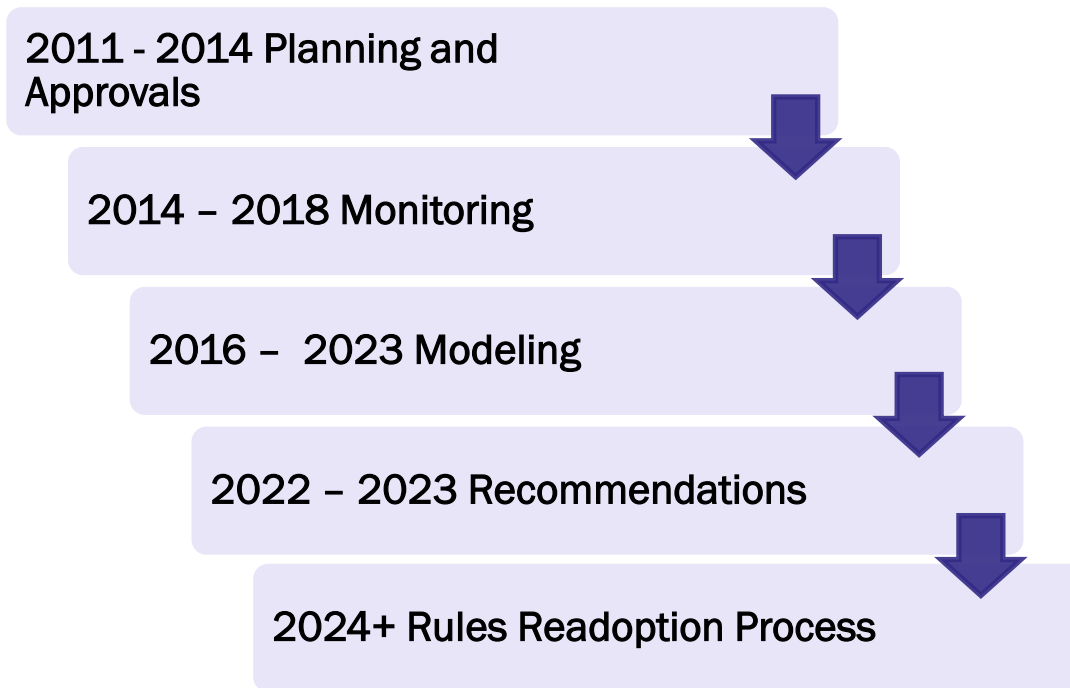
Review UNRBA Presentation from the 2026 WRRRI Annual Conference

Current Falls Lake Regulatory Framework

- Passed in 2011
- Two stages of nutrient load reductions
- Relative to a baseline year (2006)
- Adaptive management provision
 - Allows for re-examination
 - Specifies requirements that must be met to submit a revised set of rules



UNRBA Reexamination of Falls Lake Rules



\$11 million of local money funded the UNRBA re-examination.

Stakeholder engagement occurred throughout and continues during rules readoption.

Key findings of this effort follow.

Lake Uses are Being Met

Water Supply

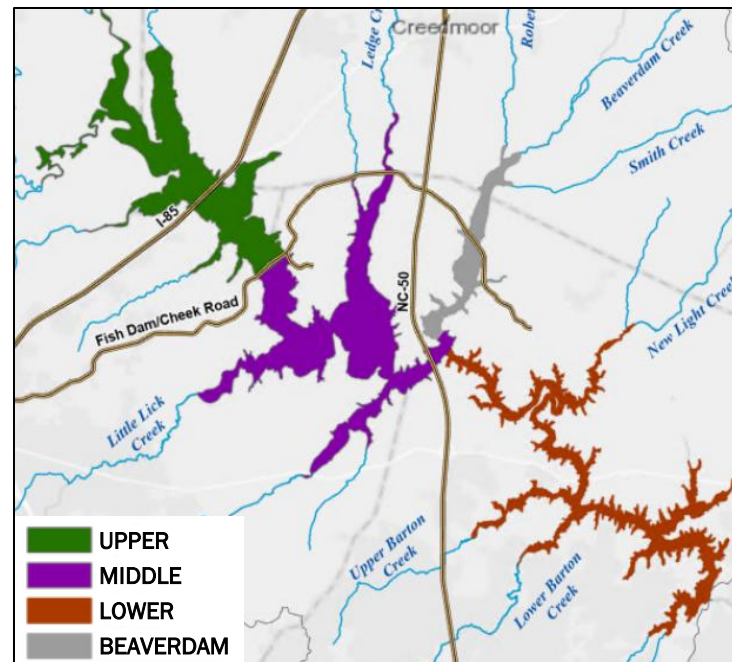
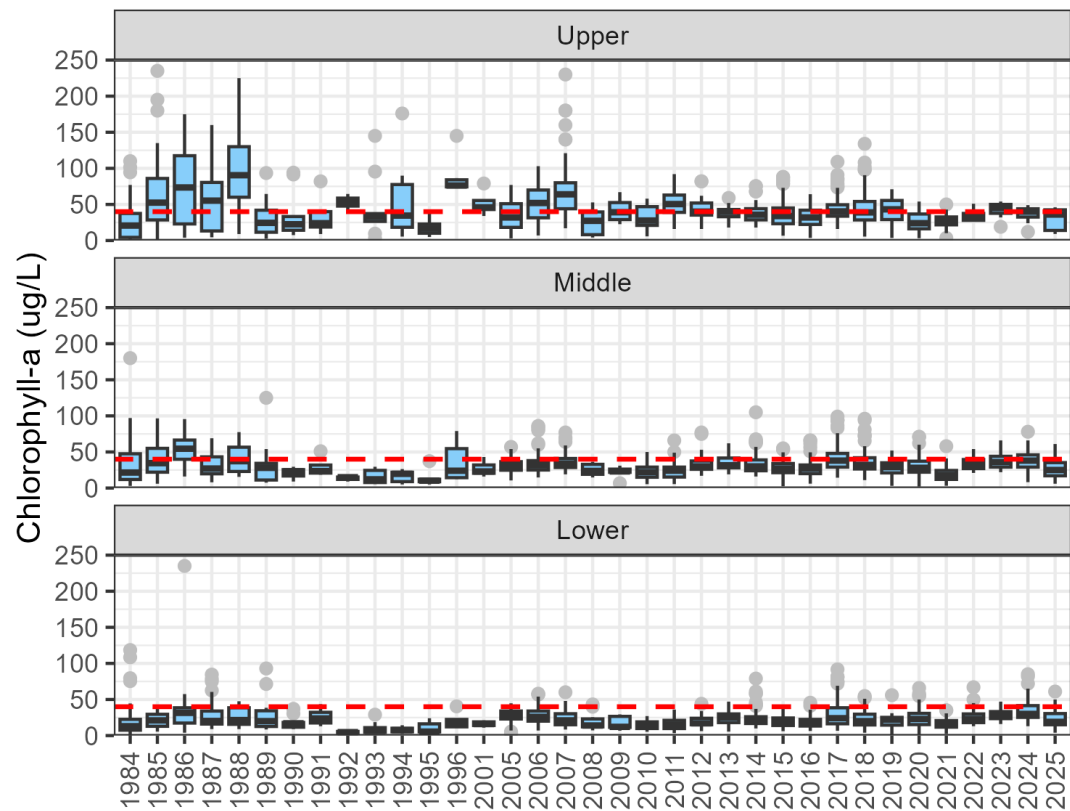
- Water is treated using conventional technology
- In 2023, the American Water Works Association ranked the City of Raleigh 3rd in its international “‘Best of the Best’ Water Taste Test”

Recreation and Aquatic Life

- No bloom related fish kills since Falls Lake was filled in the 1980s
- No public health advisories
- No algal toxin concentrations above guidelines or regulations

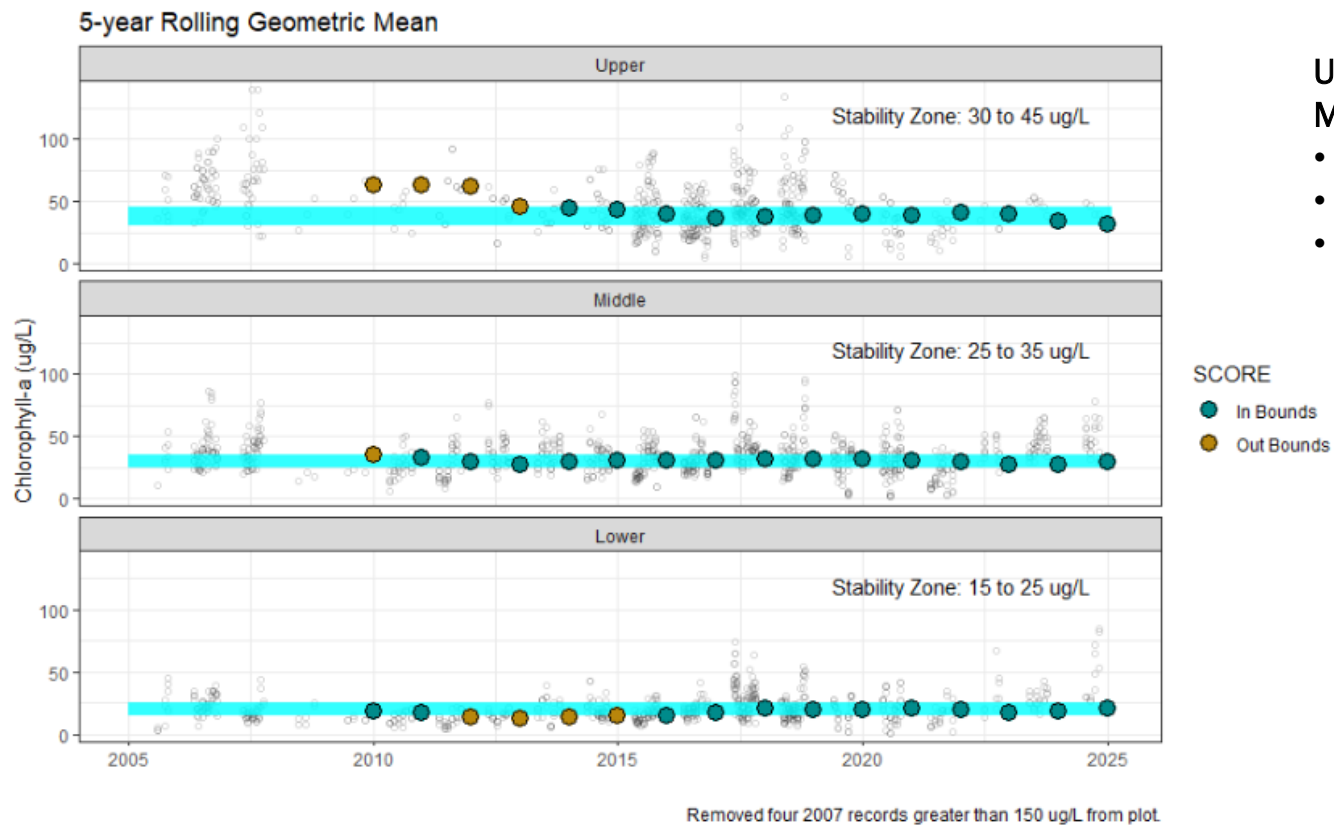


Lake Water Quality Has Improved and Stabilized



Chlorophyll-a distributions cycle up and down within stable ranges. Long-term averaging is more appropriate for assessing eutrophication.

Lake Water Quality Has Improved and Stabilized



UNRBA Proposed Stability Metric:

- Upper: 30 to 45 ug/L
- Middle: 25 to 35 ug/L
- Lower: 15 to 25 ug/L

Assessment of Chlorophyll-a in Falls Lake since 2008

2008-A	2010-A	2012-A	2014-B	2016-B	2018-C	2020-C	2022-C	2024-C		
Source to I-85	Source to I-85	Source to I-85	Source to I-85	Source to I-85	Source to I-85	Source to I-85	Source to I-85	Source to I-85		
Interstate 85 to the Dam	I-85 to P	I-85 to P	I-85 to P	I-85 to P	I-85 to P	I-85 to P	I-85 to P	I-85 to P		
	Panther Creek to the Dam	Panther Creek to the Dam	P to Le	P to Le	P to Le	P to Le	P to Le	P to Le	P to Le	
			Le arm	Le arm	Le arm	Le arm	Le arm	Le arm	Le arm	
			Le to Lick	Le to Lick	Le to Lick	Le to Lick	Le to Lick	Le to Lick	Le to Lick	
			Lick Creek to the Dam	Lick arm	Lick arm	Lick arm	Lick arm	Lick arm	Lick arm	Lick arm
				Lick Cr. to New Light	Lick to 50	Lick to 50	Lick to 50	Lick to 50	Lick to 50	Lick to 50
					50 to New	50 to New	50 to New	50 to New	50 to New	50 to New
			New arm	New arm	New arm	New arm	New arm	New arm	New arm	
			LB arm	LB arm	LB arm	LB arm	LB arm	LB arm	LB arm	
			New Light to the Dam	New Light to the Dam	New to LB	New to LB	New to LB	New to LB	New to LB	New to LB
					LB to Dam	LB to H	LB to H	LB to H	LB to H	LB to H
						H to Dam	H to Dam	H to Dam	H to Dam	H to Dam

- Three statistical methods applied by NC Division of Water Resources (A, B, C)
 - A: ten percent exceedance
 - B: Same as A with a 90 percent confidence test
 - C: Same as B with triggers for not meeting the standard based on a few measurements (4 for listing, 2 for delisting)
- Number of assessment segments has increased from 2 to 13
- **Lake appears to be “getting worse,” but chlorophyll-a has improved and stabilized**



The 2011 Falls Rules are Not Achievable or Appropriate

Reduce TN by 40%
and TP by 77%

- Half of the loads for TN and TP come from unmanaged lands like forests
- Unmanaged lands are 75% of the drainage area
- Point sources contribute 5% to 10% of nutrient loads

75% of land use in the watershed is unmanaged

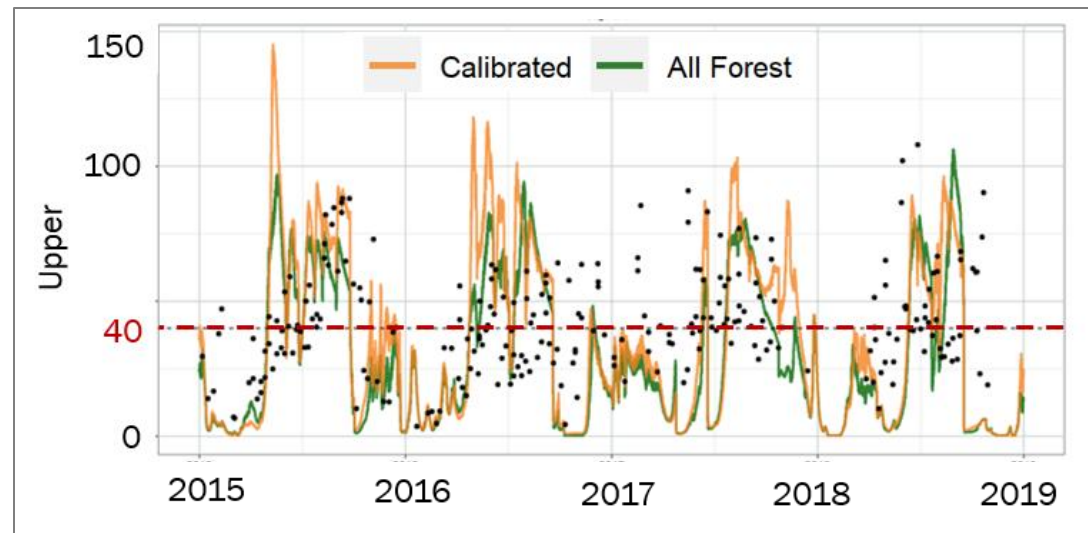


-  Unmanaged or natural areas (forests, wetlands, non-pasture grassland)
-  Managed lands (urban, agriculture)

The 2011 Falls Rules are Not Achievable or Appropriate

Meet the Chlorophyll-a Standard As Currently Applied

- Chlorophyll-a is an indicator for eutrophication
- “Meeting the chlorophyll-a standard” is not a designated use
- Converting all land to forests and removing wastewater effluent and nutrient applications would not meet the standard as applied



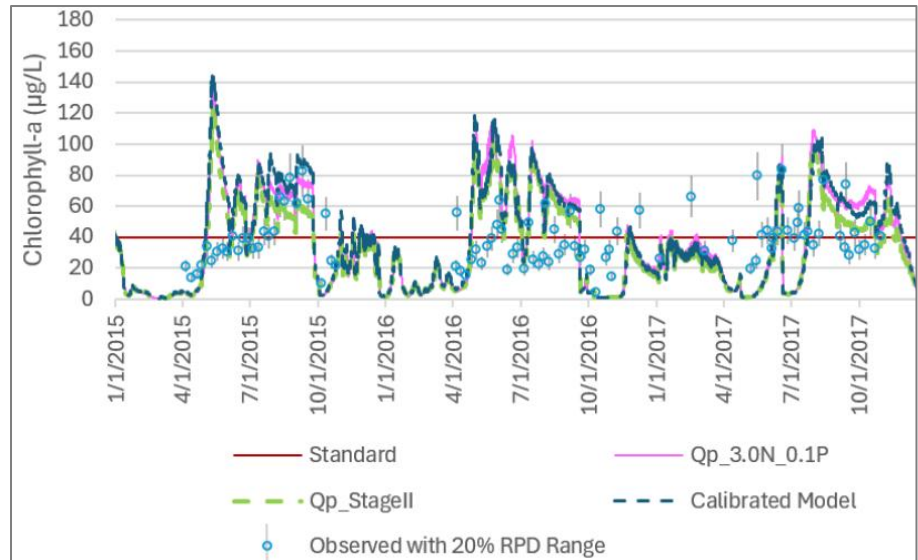
Simulated chlorophyll-a in the “upper” lake at Fish Dam/Cheek Road

Falls Lake Rules and Application of the Standard Should Promote Effective Nutrient Management

- Falls Lake will never meet the chlorophyll-a standard as currently applied
 - That's okay – all uses are being met!
- Nutrient management is needed to protect the lake
- Wastewater treatment plants should
 - Continue treating at limits of technology (5-stage biological nutrient removal, BNR)
 - Be allowed to use their permitted capacity – modeling shows insignificant changes in water quality even at 100% permitted capacity
- New development – should continue implementing nutrient controls
- Existing development – should continue investment in watershed health

Critical Example: Challenges with Wastewater Rule

- Limits economic growth and development beyond ten years
- Requires infeasible levels of treatment or purchase of offset credits (unseen scale)
- Neither significantly improves water quality
 - Point sources are a small fraction of total load
 - Following BNR, remaining nutrients are not readily treatable or available for algal growth



Simulated chlorophyll-a in the “upper” lake near I-85.

Qp is permitted flow.

Stagell effluent TN = 1.12 mg-N/L and TP = 0.06 mg-P/L.

3.0N_0.1P has effluent TN = 3 mg-N/L and TP = 0.1 mg-P/L

For Falls Lake, Let the Science Guide the Requirements and Continue Nutrient and Watershed Management

Water quality is stable

The lake is meeting its uses

The lake can never meet the standard as applied by the State

The current programs are succeeding

Management of nutrients and watershed health efforts should continue

Opportunity for an Innovative Approach

- The Clean Water Act has been highly effective for managing actual uses (early impairments like rivers on fire and fish kills are obvious examples)
- How the State is applying the law is not the appropriate approach for Falls Lake or the chlorophyll-a standard
 - Nutrients are naturally occurring in the environment
 - Piedmont reservoirs support algal growth which needs to be controlled but not eliminated
 - Chlorophyll-a is an indicator of eutrophication – it does not directly impact uses
- The Falls Rules readoption process is an adaptive 4B management program
- The revised rules should be reasonable and effective and based on a reasonable application of the standard

Additional Information

UNRBA website - <https://unrba.org/> including key reference documents:

- [Summary of UNRBA Model Development Process and Comparison To The Adaptive Management Provision of the Falls Lake Rules](#)
- [Developing An Innovative Approach to Nutrient Management](#)
- [UNRBA Concepts and Principles for a Revised Nutrient Management Strategy](#)
- [UNRBA Revised Consensus Principles](#)
- [Key Findings Lake Monitoring Data](#)
- [Key Findings Watershed Monitoring Data](#)
- [Falls Lake Chlorophyll-a Water Quality Standard Evaluation](#)
- [Historic Trends In Nutrient Loading](#)
- [Importance Of Precipitation On Nutrient Loading](#)
- [Sources Of Nutrient Loading 2014 2018](#)
- [Key Findings Watershed Modeling](#)
- [Key Findings Lake Modeling](#)

[NC Division of Water Resources 2021 Falls Lake Status Report](#)

NC Collaboratory Falls Lake Study website - <https://nutrients.web.unc.edu/resources/>

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FY2027 Budget and Contract Process

FY2027 Budget and Contract Process

- The Board approved the budget for FY2027 and sources of funding proposed by the PFC at their March meeting
- The Executive Director will work with the contractors to develop draft contracts and scopes of work for review by the PFC at their May and June meetings
 - Brown and Caldwell for the Modeling and Regulatory Support and Communications Support Project
 - WSP (Dr. Martin Lebo)
- Following review by the PFC, the contracts and scopes of work will be finalized for approval by the Board at their June meeting

Planning PFC Workshop on Best Practices for Implementing Falls Rules

Planning PFC Workshop on Best Practices for Implementing Falls Rules

- Granville County and Wake County have requested a comparison and best practices across local governments for their implementation of stormwater rules and regulatory requirements within the Falls Lake Watershed
- Earlier this year, we discussed a workshop approach for UNRBA members to gather information and discuss
- We will continue planning for this workshop after we get to a more stable status on the rules' drafting process with DWR resulting hopefully in rules that the UNRBA can “accept”

Communications

Additional Information and Activities

- Reviewing existing information for jurisdictional use in developing presentations and handouts
 - [Infographic](#)
 - [Fact Facts](#)
 - Presentation materials as requested
 - Provided copies of these at the January Board Meeting
- Continue meeting with DWR to work toward a joint set of rules to submit to the WQC
- Next EMC WQC: March 11, 2026
- Planning for a Falls Lake rules status presentation at the Water Resources Research Institute (WRRI) Annual Conference March 25 and 26, 2026
- Planning a meeting with staff from the NC Office of State Budget Management in coordination with DWR
- Planning additional meeting(s) with EPA, linking in DWR as appropriate

Other Items

Ongoing Discussions/Issues

- NCSU streambank erosion loading website and spatial data available soon
- Upcoming presentation by NC State University on the UNRBA and Jordan Lake One Water research study
- Impacts on implementation of nutrient requirements in light of PFAS/PFOS and other emerging requirements on wastewater management costs to local governments

Closing Comments

**Next PFC Meeting Scheduled for
May 5, 2026; 9:30 AM to 12:00 PM**

**Next Board Meeting Scheduled for
May 20, 2026; 9:30 AM to 12:00 PM**