



UNRBA Board Meeting May 18, 2022

Remote Access Only (see next slides)



Remote Access for UNRBA Board Meetings

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: 981 714 577# 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.
Phone only	(888) 404-2493 Passcode: 981 714 577# Please mute your phone unless you want to provide input.	Dial the toll-free number and enter the passcode.

Remote Access Guidelines

- This meeting will open 30 minutes prior to the official meeting start time to allow users to **test equipment** and ensure communication methods are working
- If you dial in through your phone, mute your microphone and turn down your speakers to **avoid feedback**
- Unless you are speaking, please mute your computer or device microphone and phone microphone to **minimize background noise**
- UNRBA meetings are open meetings; however, for this remote access meeting, please **limit the discussion to UNRBA Board Members** to facilitate moving through action items

May 18, 2022, UNRBA Board Agenda

- **Opening—Sig Hutchinson, Chair**
- **Action Items of UNRBA Board of Directors**
 - Approval of March 16, 2022, Meeting Minutes
 - Approval of the Treasurer’s Report
 - Board Decision on Future Meeting Format
 - Board Decision on Surplus Property
 - Revised Engagement Letter for Dr. Martin Lebo
- **Status Reports and Informational Items**
 - IAIA Status of Submittal to EMC
 - Submittal of Letters Regarding Proposed Chlorophyll-a Site Specific Standards for High Rock Lake
 - Modeling and Regulatory Support (MRS) Status
 - DWR 2022 Integrated Report and 303(d) Assessments
 - Statistical Model Development and Regulatory Options for the Chlorophyll-a Water Quality Standard
 - Summary of the Joint Symposium with the NC Policy Collaboratory
 - 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 March 16, 2021
Meeting Minutes**

Approval of the Treasurer's Report

Balance Forward: (per bank statement - 2/28/2022)	Checking	\$	636,712.15
	Savings		572,526.00
Debits:			
McGill Asso. (2022 Invs)		\$	16,289.10
Sauber Water Quality Consulting (2022 Invs)			14,490.00
Brown & Caldwell (MRS, FY 22, Invs)			203,934.72
Barnes & Thornburg (2022 Invs)			1,148.00
Smith Law (lobbyist registration)			252.00
Phthisic Consulting, Inc. (2022 Invs)			840.00
MFG Consulting, LLC (2022 Invs)			450.00
			<hr/>
Total Debits		\$	237,403.82
Credits:			
Interest (checking)		\$	133.18
Interest (savings)			718.06
Membership Fees			-
Bank Service Fee (stop payment)			-
			<hr/>
Account Balance (per bank statement - 4/30/2022)	Checking	\$	399,441.51
	Savings		573,244.06
			<hr/>
Total UNRBA Account Balance :		\$	972,685.57
			<hr/>
Outstanding invoices/deposits in process since the close of bank statement (3/31/2022):			
Debits:			
McGill Asso. (2022 Invs)		\$	34,992.67
Brown & Caldwell (MRS, FY 22, 2022 Invs)			62,147.44
MFG Consulting, LLC (2022 Invs)			150.00
Sauber Water Quality Consulting (2022 Invs)			2,590.00
Barnes & Thornburg (2022 Invs)			-
Phthisic Consulting, Inc. (2022 Invs)			752.65
Credits:			
Transfer from Savings to Checking		\$	<hr/> -
Current Account Balances:	Checking		298,808.75
	Savings		573,244.06
			<hr/>
Total UNRBA Account Balance :		\$	872,052.81
			<hr/>

Board Decision on Future Meeting Format

Board Decision on Surplus Property

- The UNRBA purchased an inflatable boat during the UNRBA Monitoring Program to assist with collection of bathymetric data along the lake shoreline and lake arms.
 - Boat: 2015 Zodiac 310AL (aluminum), purchased for \$1500, weighs 88 pounds, handled by two people and will carry up to 5 adults, or 1300 pounds, additional specifications:
<https://www.pacificinflatableboats.com/product/zodiac-cadet-310-aluminum/>
 - Motor: Prowler trolling motor
- The purchase was made when the contract was with Cardno, Inc. and the boat was transferred to the care of Brown and Caldwell when the contract was executed with that firm.
- Since the monitoring program is no longer active, the boat is no longer needed.
- The PFC, MRSW, and the Board in March discussed options for transferring the property to a member government or non-profit organization
- In March, the Board declared the boat and associated equipment as surplus property
- **The Board will vote on whom to transfer the property to or whether or not to sell the property if no organization indicates they could put the boat to good use.**

Revised Engagement Letter for Dr. Martin Lebo

- Dr. Martin Lebo was previously contracted by the UNRBA to support the statistical evaluation of site-specific criteria in Falls Lake.
- Dr. Lebo has changed firms, so the contract with the original firm needs to be terminated and a final invoice needs to be provided to the UNRBA for final payment for work that has already been conducted.
- This item was brought to the Board on March 16, 2022
- A termination letter has been submitted to the previous company and a new agreement with Dr. Lebo's firm is being finalized. The UNRBA will need to execute a new agreement with the new firm for this work to continue.
- The Board will consider 1) authorization of the Executive Director to complete the contract and review it with Don O'Toole and 2) the Chair to execute the new engagement letter within the previously allocated budget (not to exceed \$20,000, previously approved by the Board for this effort)

Status Reports and Informational Items

**Status of Interim Alternative
Implementation Approach (IAIA)
Submittal to the Environmental
Management Commission
(EMC)**

Status of Interim Alternative Implementation Approach (IAIA) Submittal to the Environmental Management Commission (EMC)

- During the March Board meeting, the Board voted to amend the UNRBA Bylaws to allow the Town of Stem to join the UNRBA.
- The Compliance Group Committee (CGC) voted to allow the Town of Stem to join the IAIA Program and voted to amend the Program Document to add Stem and make other updates such as adding Hydrilla removal as an eligible practice.
- The CGC also voted to allow the Chair of the CGC to execute an updated resolution to the EMC to add the Town of Stem and update the Program Document.
- The Chair executed the resolution and signed a submittal cover letter on May 2, 2022, for submittal to the State.
- The revised package was submitted to the Division of Water Resources (DWR) and the EMC on May 12, 2022.

Objection Letters Regarding Proposed Chlorophyll-a Site Specific Standard for High Rock Lake

High Rock Lake – NC Precedent for Site Specific Chlorophyll-a Criteria

- July 2021, EMC voted to send proposed High Rock Lake Site Specific Water Quality Standard for chlorophyll-a out to public hearing.
- Scientific Advisory Council (2015-2020)
[recommendations report High Rock Lake site-specific criteria](#)
- Significant Comments on the proposed criteria
 - Upper Neuse River Basin Association
 - Yadkin Pee Dee River Basin Association
 - NC Water Quality Association
 - Clifton Bell SAC Member
 - North Carolina Farm Bureau
 - Middle Cape Fear River Basin Association
 - Yadkin River Keeper

UNRBA Comments Highlighted Differences Between SAC Recommendations and DWR Proposal

SAC Recommendations	DWR Draft Criteria
Geometric Mean not greater 35 µg/L five different months April-October	Geometric Mean not greater 35ug/L five different months April-October
Exceedance Frequency: Allowable to be exceeded once in 3 years.	Exceedance Frequency: Not to be exceeded.
Excludes waters <10 feet depth, backwaters, isolated coves, protected by current narrative criteria.	No Excluded waters
Assessment include all observations within an AU over the period Apr-Oct	No Assessment Methodology
Excluded waters will be protected by current narrative criteria. (std and best usages but no mention of detrimental effect)	New Narrative: no detrimental effect defined by 02H.1002 a detrimental effect on water quality or best usages, including a violation of water quality standards

Status of Proposed Chlorophyll-a Site Specific Standard for High Rock Lake

- DWR reviewed the Yadkin Pee Dee River Basin Plan at the EMC's Water Quality Committee meeting in May.
- [Yadkin Plan Chapter 13](#) focuses on High Rock Lake but does not discuss significant differences between SAC recommendations and DWR proposed SSS.

Objection Letters Regarding Proposed Chlorophyll-a Site Specific Standard for High Rock Lake

- At the January 19, 2022, meeting,
 - The Board authorized the Executive Director to develop a letter of objection to the Rules Review Commission (RRC) if EMC proceeded to move forward with the rule as essentially released in the public notice, and
 - Contact and coordinate with the individual UNRBA jurisdictions for the consideration of formal objection letters.
- The UNRBA Board is scheduled to meet on June 15th and September 21st. However, at their July meeting, the EMC may vote on the High Rock Lake recommendations.
- The window for filing formal objections to the RRC is very narrow, and it may be necessary to act quickly.
- Should a letter be filed, the Executive Director will provide the letter to the Executive Committee for input and, once final, provide a copy to the Board members.

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

Watershed Modeling Report Status

- The Executive Director and the MRSW Chair are reviewing the watershed modeling report that describes development, calibration, and nutrient loading summaries to Falls Lake.
- Agricultural representatives have reviewed sections of the report describing agricultural inputs and outputs.
- Estimation of jurisdictional loads is underway
- The full modeling report will be distributed to the MRSW after the Executive Director and Chair reviews have been completed and those comments addressed by the modeling team.

Lake Modeling Status

- The three lake models are being developed
 - Water quality (WQ): WARMF Lake and Environmental Fluid Dynamics Code (EFDC)
 - WQ and designated uses: Statistical/Bayesian model
- The modeling team is coordinating local and national researchers to supplement the extensive database developed by the UNRBA, our members, and DWR.
 - Example: algal toxin data sets from the Center for Disease Control and Collaboratory-funded researchers
- Extensive vetting through identified SMEs, third-party reviewers, our membership representatives, and DWR
- The modeling team is working on the draft lake modeling report.

Status of Scenario Screening Workgroup

- The Scenario Screening Workgroup has completed its work to evaluate potential scenarios for evaluation with the models
- These scenarios were presented to the MRSW in March and will be presented to the PFC in June.
- In response to discussions in the Workgroup, the modeling team discussed options for modeling management activities on agricultural lands with agricultural representatives in April and May
 - The agricultural sector has already achieved significant reductions in nutrient loading to Falls Lake since baseline; these actions will be documented in UNRBA reporting
 - Representatives have discussed potential additional actions with the local districts and additional actions are not feasible
 - Agricultural acreages continue to decline in the watershed
- The Scenario Output workgroup has completed their charge of developing reporting formats to facilitate comparison of scenarios

Status of the 2022 NC DWR 303(d) List and Integrated Report

2022 303(d) list and Integrated Report

- The DWR Draft Integrated Water Quality Assessment Report and the Draft 303(d) List for 2022 were posted: [DWR website](#)
- The UNRBA submitted comments on the draft documents on February 18, 2022
- DWR submitted final documents for EPA approval April 1, 2022
- EPA approved the 303(d) List on April 28, 2022, as submitted
- Overall, The Big Picture
 - from the UNRBA perspective, no surprise.
 - Falls Lake not attaining the chlorophyll-a standard
- As related to UNRBA interests, EPA's approved 303(d) List seems to contain some inconsistencies with the UNRBA's comments and DWR's response to those comments.

Select UNRBA Comments and DWR Responses on the DWR Draft 2022 303(d) List

- Work group to modernize the current NC Water Quality Standard for chlorophyll-a. **DWR did not embrace.**
- Consistent Assessment Units should be established based on limnologic/morphologic and hydrologic characteristics. **DWR did not embrace.**
- Falls Lake Ledge Creek Arm should be re-evaluated. The EMC-approved evaluation methodology suggest this AU Meets the Criteria. **DWR agreed.**
- Barton Creek Arm to Falls Dam may be split into two AU's. DWR Response: **DWR agreed.**
- Three waterbodies located within the Falls Lake drainage area should not be 303(d) listed. **DWR partially agreed.**

UNRBA Comments and DWR Responses on the DWR Draft 2022 303(d) List

- Three waterbodies located within the Falls Lake drainage area should not be 303(d) listed because part of the Neuse Rules
Beaverdam Creek Reservoir
Little River (Little River Reservoir)
East Fork Eno River (Lake Orange)
- DWR Response-
“DWR can meet with stakeholders to begin the process of evaluating if Little River Reservoir chlorophyll a assessments can be recategorized to 4b or 5r based on existing rules and activities currently being implemented. Note a recategorization to 4b requires EPA approval and will have to show that implementation of the Falls Lake rules is occurring upstream of the reservoirs. However, because Beaverdam Creek drains directly into Falls Lake, it will be listed as Category 4b.”

New Additions to the 2022 303(d) List as Included and Approved by EPA April 28, 2022

- 27-12-(0.7)b
Beaverdam Creek Reservoir below normal pool elevation -
Chlorophyll a.
- 27-2-21-(3.5)
Little River Reservoir - Chlorophyll a
- 27-2-3b
East Fork Eno River (Lake Orange) - Chlorophyll a

Statistical Model Development and Regulatory Options for the Chlorophyll-a Water Quality Standard

Statistical Model Development and Regulatory Options for the Chlorophyll-a Water Quality Standard

- The UNRBA is developing a statistical/Bayesian model to link the water quality in Falls Lake to its designated uses
- The Technical Advisors Workgroup for the legal group, MRSW, and PFC have identified local subject matter experts to provide data and information regarding satisfaction with the designated uses of Falls Lake
- The modeling team has been conducting virtual meetings with these experts to understand the types of data and information that are tracked with respect to designated uses to inform development of the statistical/Bayesian modeling
- Development of a site-specific chlorophyll-a standard represents an important consideration for a revised Falls Lake management strategy and is linked to this modeling effort
- Subject matter expert, Dr. Marty Lebo, was approved by the Board in June and has begun his work in support of this effort.
- The UNRBA is also coordinating with the Environmental Finance Center on their Year 3 effort funded by the NC Collaboratory.

Summary of the Joint Symposium with the NC Policy Collaboratory

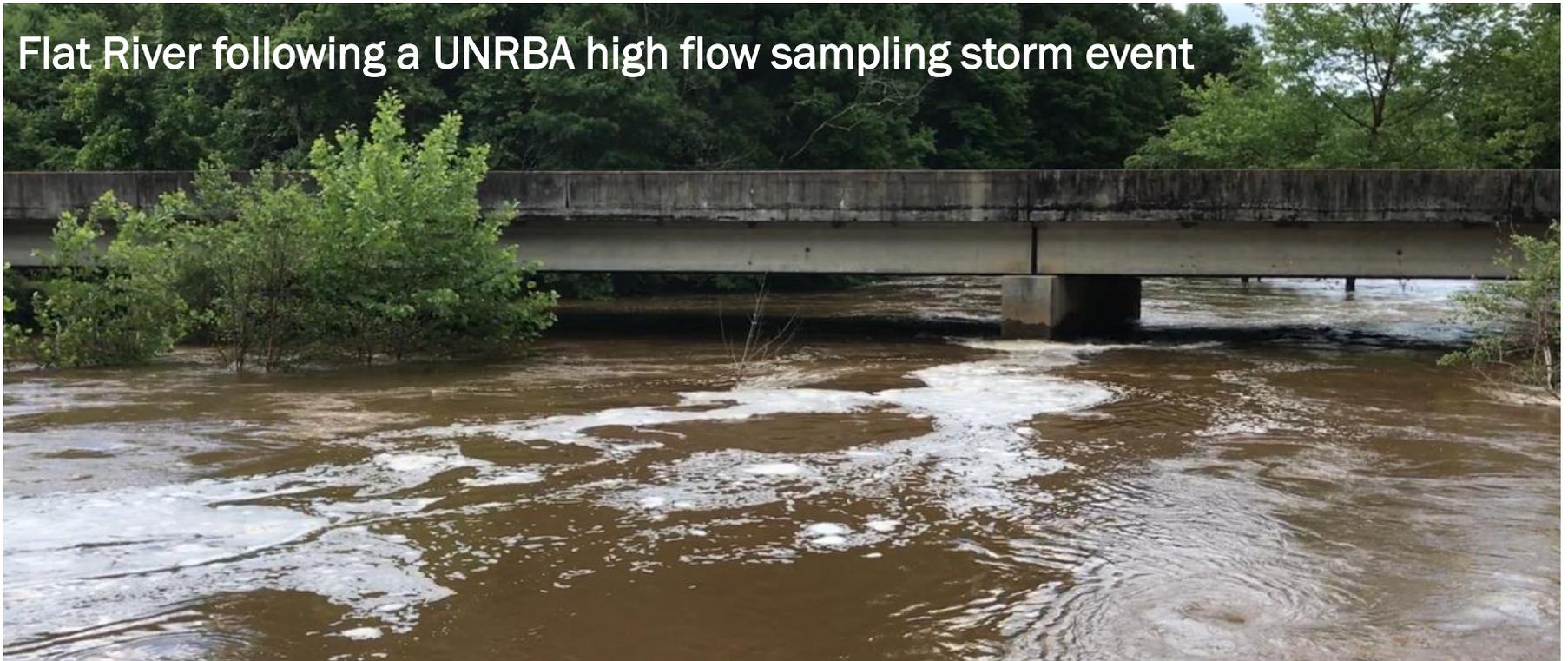
Summary of the Joint Symposium with the NC Policy Collaboratory

- The second joint symposium with the NC Policy Collaboratory was held on April 7, 2022.
- Several UNRBA member representatives were able to attend.
- This in- person meeting was very successful with substantive discussions about the challenges facing Falls Lake
- [Example slides from the Symposium follow](#)
- A summary of the small-group discussions was presented to the MRSW at their May meeting; slides available [here](#)
- The UNRBA would like to thank the NC Policy Collaboratory and the UNC Institute for the Environment for coordinating and hosting this important event

Impacts of Hydrology on Nutrient Loading

- At the last MRSW meeting we discussed how nutrient loading can be hundreds of times higher than baseflow conditions on days with high precipitation amounts
- We showed that data at the Symposium along with this picture showing the Flat River flow through the treetops and rising toward the bridge deck

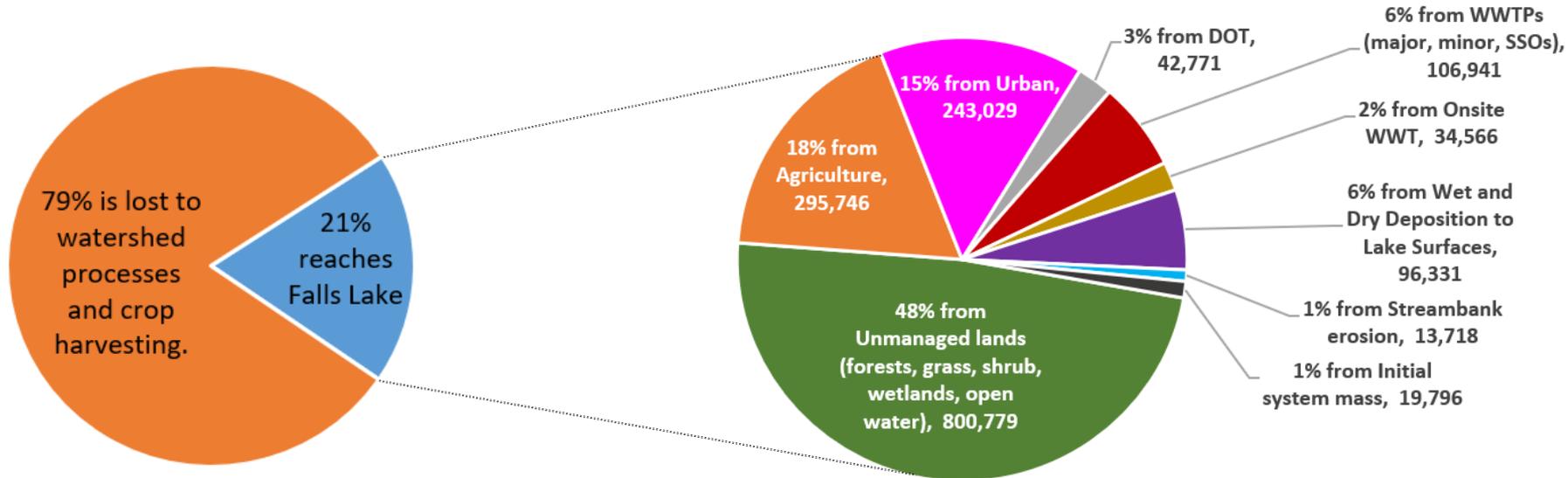
Flat River following a UNRBA high flow sampling storm event



Annual Average Applied and Delivered Total Nitrogen Loads

Gross inputs:
8.8 million pounds per year

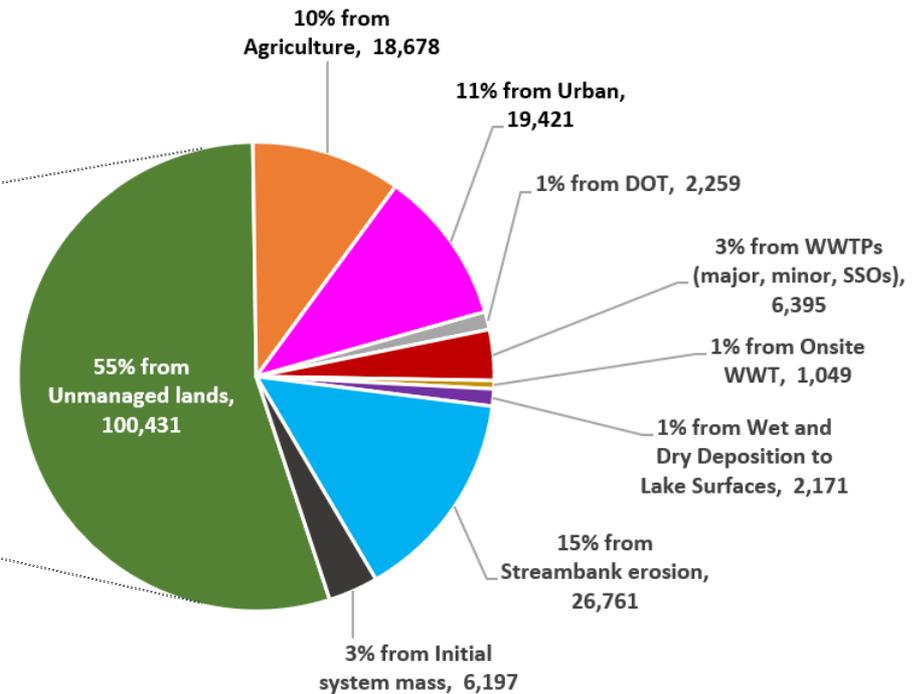
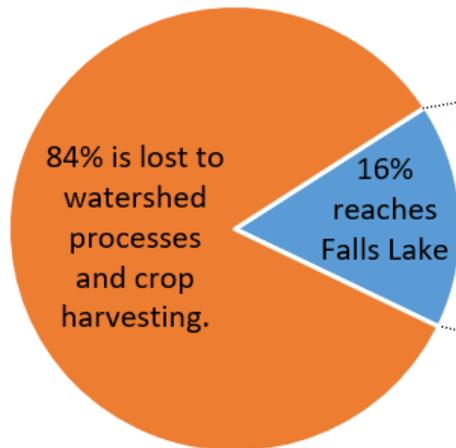
Delivered load:
1.65 million pounds per year



Annual Average Applied and Delivered Total Phosphorus Loads

Gross inputs:
1.1 million pounds per year

Delivered load:
180,000 pounds per year



Communications

Upcoming Stakeholder Workshops/Conferences

- UNRBA technical stakeholders' workshop for Fall 2022: status of the modeling efforts, hear input on a revised nutrient management strategy
- FY2023: Coordination with communications staff from the local governments to leverage existing platforms, accounts, and distribution lists to reach the general public regarding the UNRBA's goals, objectives, and revised recommendations (e.g., City of Durham re-examination [video](#))
- Planning a meeting with Richard Rogers, DWR Director, to discuss the work of the UNRBA, preliminary re-examination results, process for site-specific water quality standard petition, High Rock Lake rulemaking process.
- Meetings with DWR planning, modeling, and standards groups to review the technical work and discuss the approach for the re-examination.
- The “open” nature of all of the UNRBA meetings is a key component of a transparent communications approach.
- We continue to emphasize the importance of seeking Board member input to help identify their needs related to communicating the work of the UNRBA to their jurisdictions and the citizens of their local governments.

External Stakeholder Communication Needs

- Objectives continue to be reviewed relative to communication opportunities with stakeholders.
- To support the re-examination process and achieve broad support for the UNRBA recommendations, additional outreach to external stakeholders including DWR, DEQ, and other interested stakeholders is needed;
- Coordination with local leaders to convey messages and facilitate outreach will be necessary.
- This effort will require the support of the UNRBA membership, staff and Board representatives.
- As a reminder, the [Infographic](#) and [Fast Facts](#) are available online <https://upperneuse.org/resource-library>
- An [Overview of the Work of the UNRBA](#) provided to the UNC Collaboratory for inclusion in their reporting is available online <https://nutrients.web.unc.edu/resources/>

Ongoing Discussions/Issues

Ongoing Discussions/Issues

- Intensive workgroup activity and management of expectations and resources—A lot to do between now and recommendations in 2023
- Continue discussions on the MOA—reengage UNRBA on the goal of the MOA and work to reconnect with DEQ
- Neuse Watershed Model Information Session / Delivery Factors for WWTP

Closing Comments

**Next UNRBA Board Meeting is Scheduled
for June 15, 2022**

**This meeting may have a hybrid format
pending today's decision**