

Upper Neuse River Basin Association

Falls Lake Nutrient Management Strategy
November 9, 2020



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Upper Neuse River Basin Association (UNRBA)

UNRBA: Collaboration promoting innovative approaches to water quality planning and management.



- ❑ 770 sq mi
- ❑ 6 Counties
- ❑ 6 Municipalities
- ❑ South Granville Water and Sewer Authority

Source: Upperneuse.org

Falls Lake Regulatory Requirements



Address impairment related to excess nutrients

Attain and maintain water quality

Protect designated uses: water supply, fish & wildlife, recreation

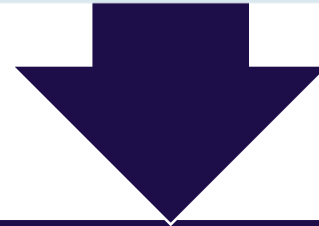
Falls Lake Regulatory Requirements

Stage 1

Meet water quality standards in
Lower Falls Lake

Water quality improvements in
Upper Falls Lake

Prevent nutrient loading
increases from new
development; existing
development offsets



Stage 2

Meet water quality standards in Upper and Lower Falls Lake

Upper Neuse River Basin Association (UNRBA)

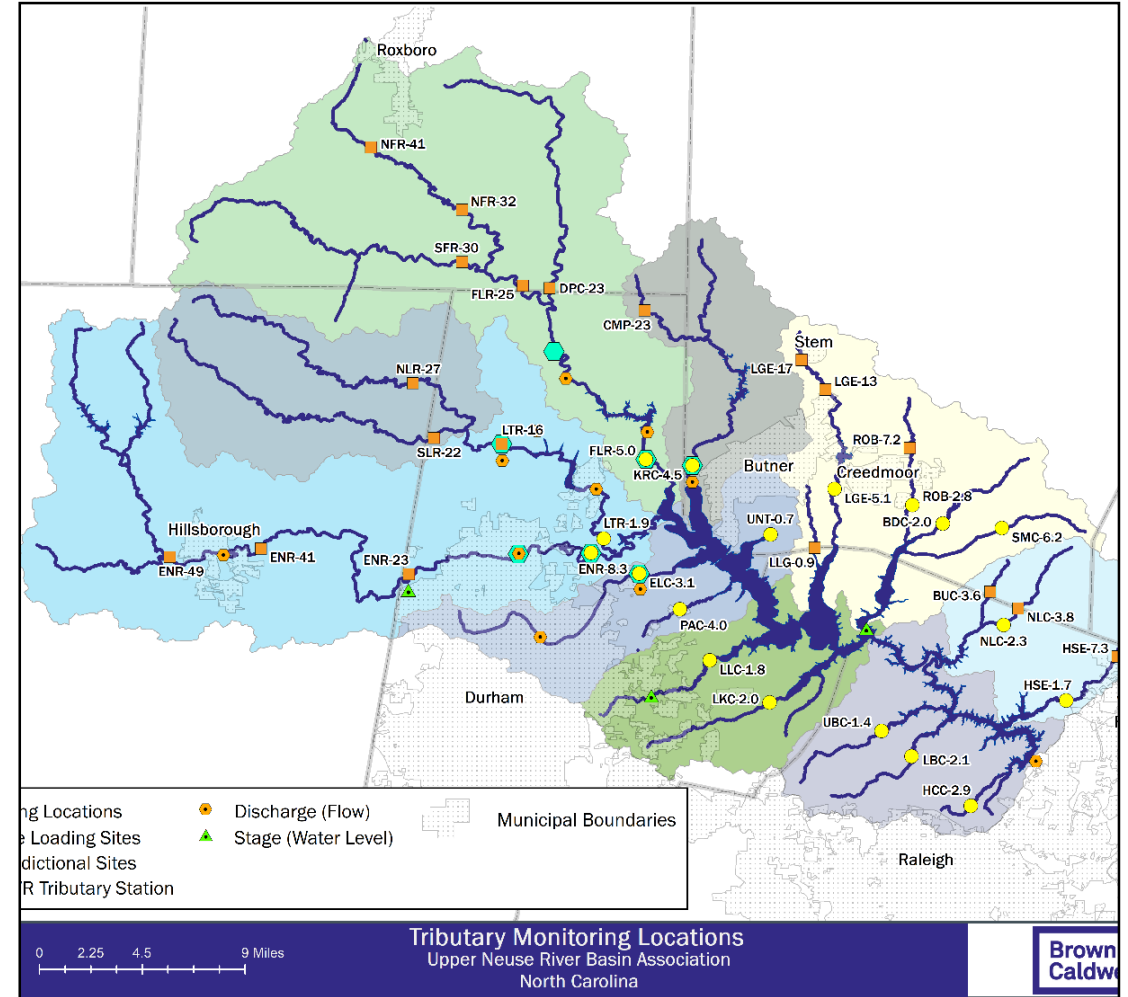
One Voice with NCDEQ

Collaboration on water quality improvements and Falls Lake Rules

4+ years of water quality monitoring for Rule Re-examination

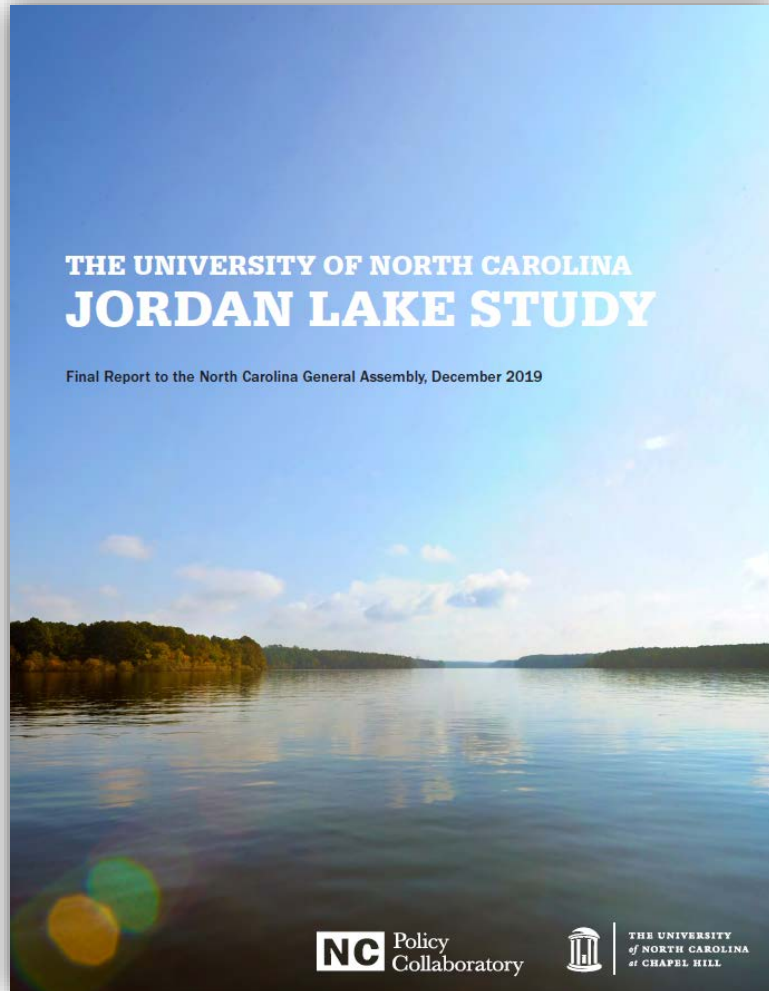
Water quality improvements to date:

- Wastewater treatment plant retrofits
- Implement stormwater rules for new development
- Reductions in agricultural nutrient contributions



NC Collaboratory Study

December 2019

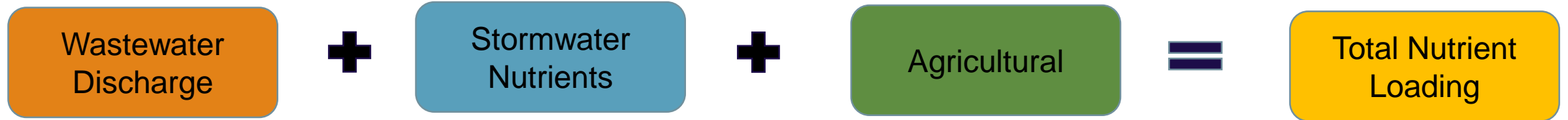


Falls Lake Study

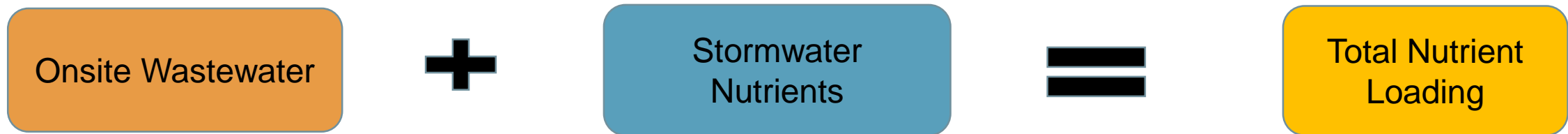
- Initiated 2020
- Final Report 2023

Falls Lake Rules-Nutrient Loads

Falls Lake Nutrient Sources



Wake County Jurisdictional Nutrient Loading



Falls Lake Rules

Nutrient Offset Project Examples



Stormwater
Control Measures



Wetland/Buffer
Restoration



Repair septic
malfunctions

Falls Lake Rules-Compliance

Existing Stage I Rule



Independent Compliance
"Go it Alone"

Interim Alternative Implementation Approach
(IAIA)



Joint Compliance

Stage 1 Compliance Alternatives

Existing Stage 1 Rules

Independent Compliance

County and NCDWR negotiate compliance (2020-2021)

County track nutrient pounds reduced

Limited project types restricted to County jurisdiction

Estimated Offset Cost ~ \$1,000,000*

Estimated Membership Dues~\$370,000

Staff time and resources

*Estimated cost based upon ILF fees for 30-year nutrient offset

Alternative Approach (IAIA)

Joint Compliance

Stage 1 Compliance met (2019)

County tracks water quality investment dollars

Flexibility in project type and location

Estimated Offset Cost ~ \$460,000**

Estimated Membership Dues~\$370,000

Staff time and resources

**Estimated cost based upon \$92,000 annual water quality investment and administration cost for 5 years;

Joint Compliance Funding Options

Wake County Self-Funded Projects

Green Infrastructure enhancements on County property
Open Space Bond projects in Falls Lake
Operation and Maintenance Program for Onsite Septic

ILA-Joint Project Funding

Participate in ILA with member jurisdiction to fund projects in larger watershed area

Local Organization Funding

Land conservation organizations
Soil and Water Conservation Districts

Contribution to Pooled Project Fund

Regional project opportunities
Mitigation banks

Stage 1 Compliance Alternatives

Independent Compliance- “Go It Alone”

NCDEQ approves offset requirements, limited project opportunities, higher cost

Wake County responsible for developing program and funding projects independently

Joint Compliance-IAIA

Collaborative approach, address nutrient sources, project flexibility, reduced cost

Independent and collaborative project funding options available

Non-Compliance

State imposed enforcement measures: civil penalties, criminal penalties, injunctive relief

Staff Recommendation

Interim Alternative Implementation Approach (IAIA)

Greatest water quality opportunity

Increased project flexibility

Avoids extensive negotiations with NCDEQ

Opportunities to build upon existing programs

Lower cost and greater Return on Investment

PlanWake alignment: Protecting natural areas, lakes and rivers voted #2 in community surveys

Supports BOC goals: Water Quality and Quantity, One Water



Estimated Annual Expenditures

Fiscal Year	IAIA Funding Request	Existing Approved CIP	New Funding Request
FY2022	\$92,000	\$92,000	\$0
FY2023	\$92,000	\$8,000	\$84,000
FY2024	\$92,000		\$92,000
FY2025	\$92,000		\$92,000
FY2026	\$92,000		\$92,000
Total	\$460,000	\$100,000	\$360,000

Next Steps

November 9, 2020: BOC Work Session-Request to advance UNRBA IAIA topic to full Board meeting



November 16, 2020: Wake County BOC-Request to endorse IAIA joint compliance



November 18, 2020: UNRBA Board Members vote on IAIA participation;
UNRBA, DWR, NGO presentation to Water Quality Committee of EMC



November 19, 2020: DWR Presents to Environmental Management Commission (EMC)



January 14, 2021: DWR submits Model Program to EMC for approval; initiates 6- month timeline for implementation of Wake County compliance approach



March 2021: Direct \$100,000 in current CIP funding to IAIA Year 1 (FY22);
Budget request of \$360,000 CIP funding for FY 22-FY 26



July 2021: IAIA Implementation begins