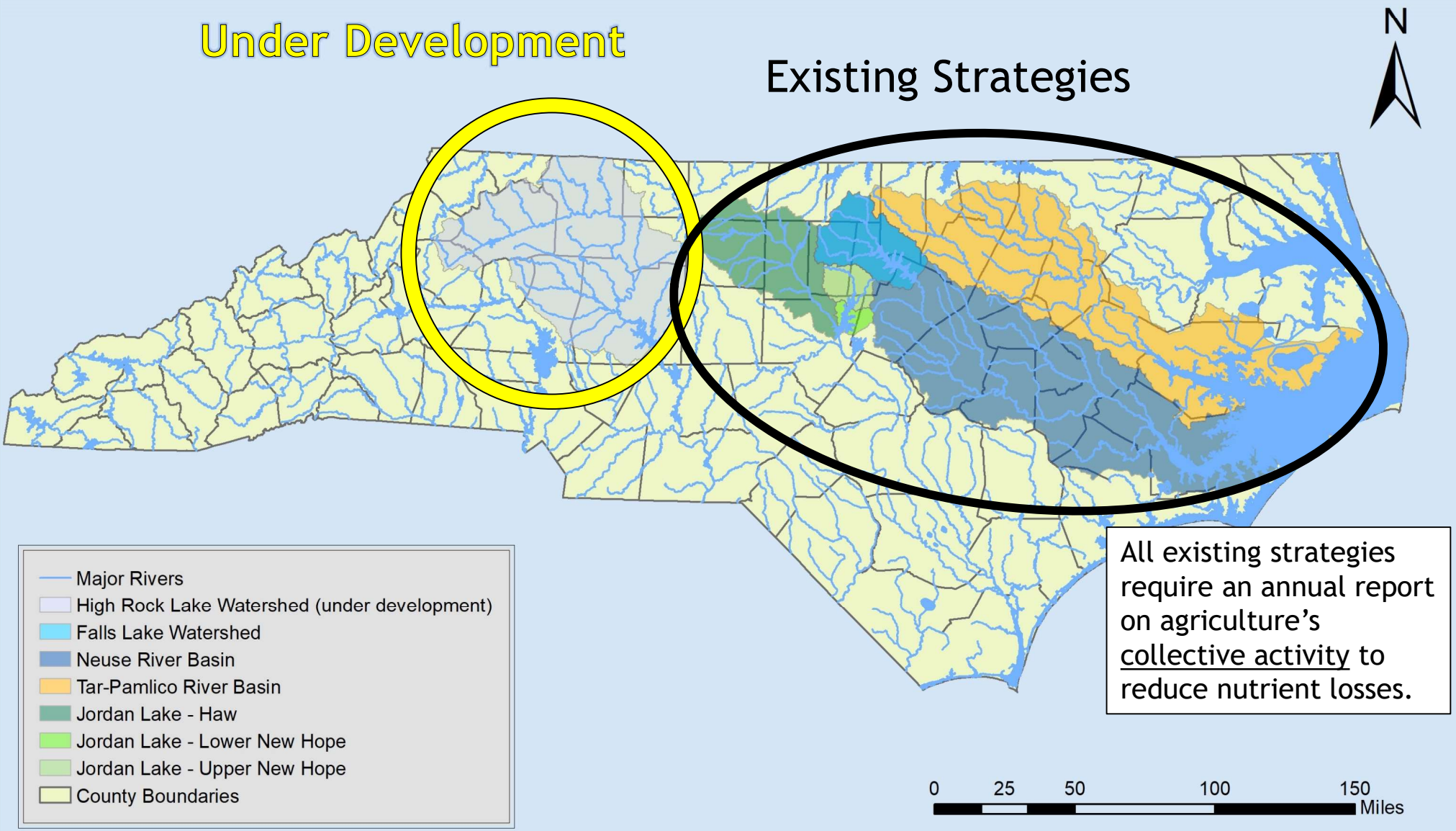
Nutrient Sensitive Waters

CY2022 Annual Progress Reporting for Agriculture Rule Implementation &
Nutrient Strategy Development and Readoption Updates

SOIL & WATER CONSERVATION

Nutrient Strategy Watersheds

ATTACHMENT 16

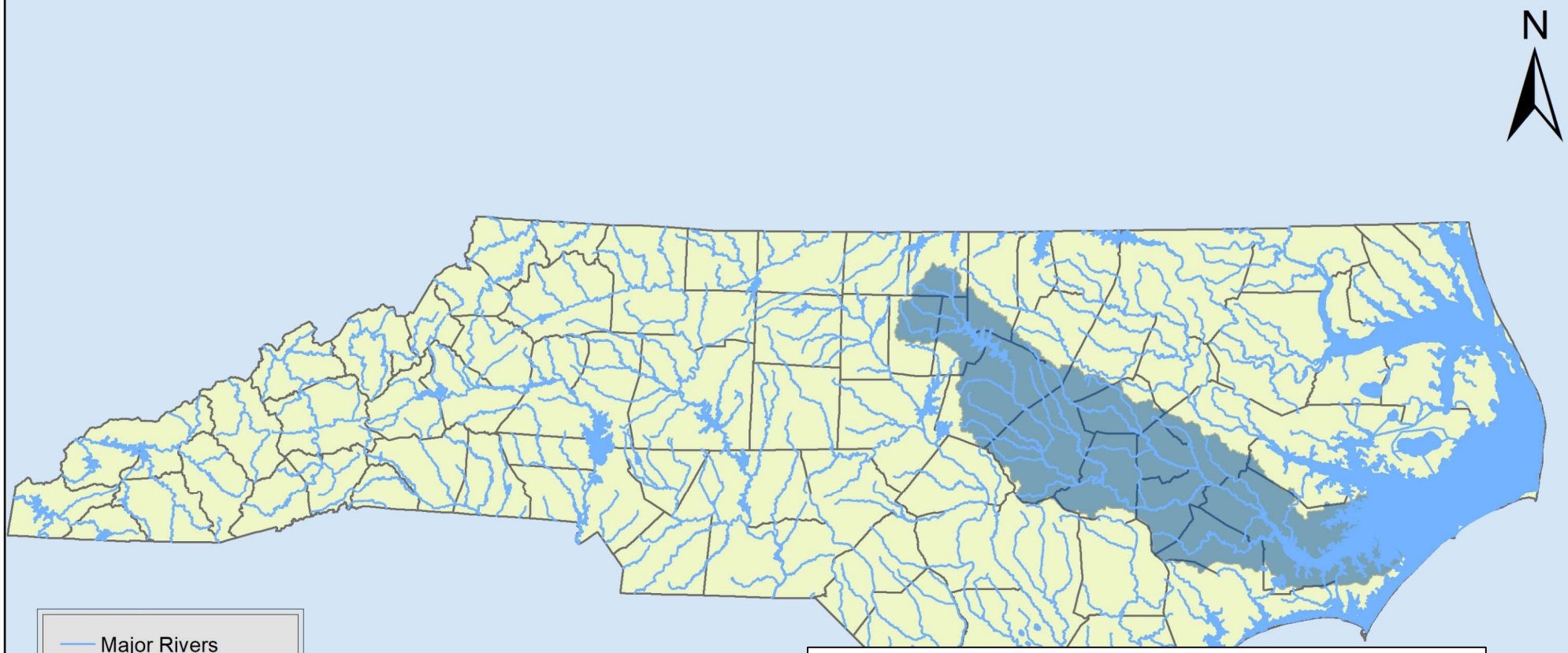


All existing strategies require an annual report on agriculture's collective activity to reduce nutrient losses.

SOIL & WATER CONSERVATION

Nutrient Strategy Watersheds

ATTACHMENT 16



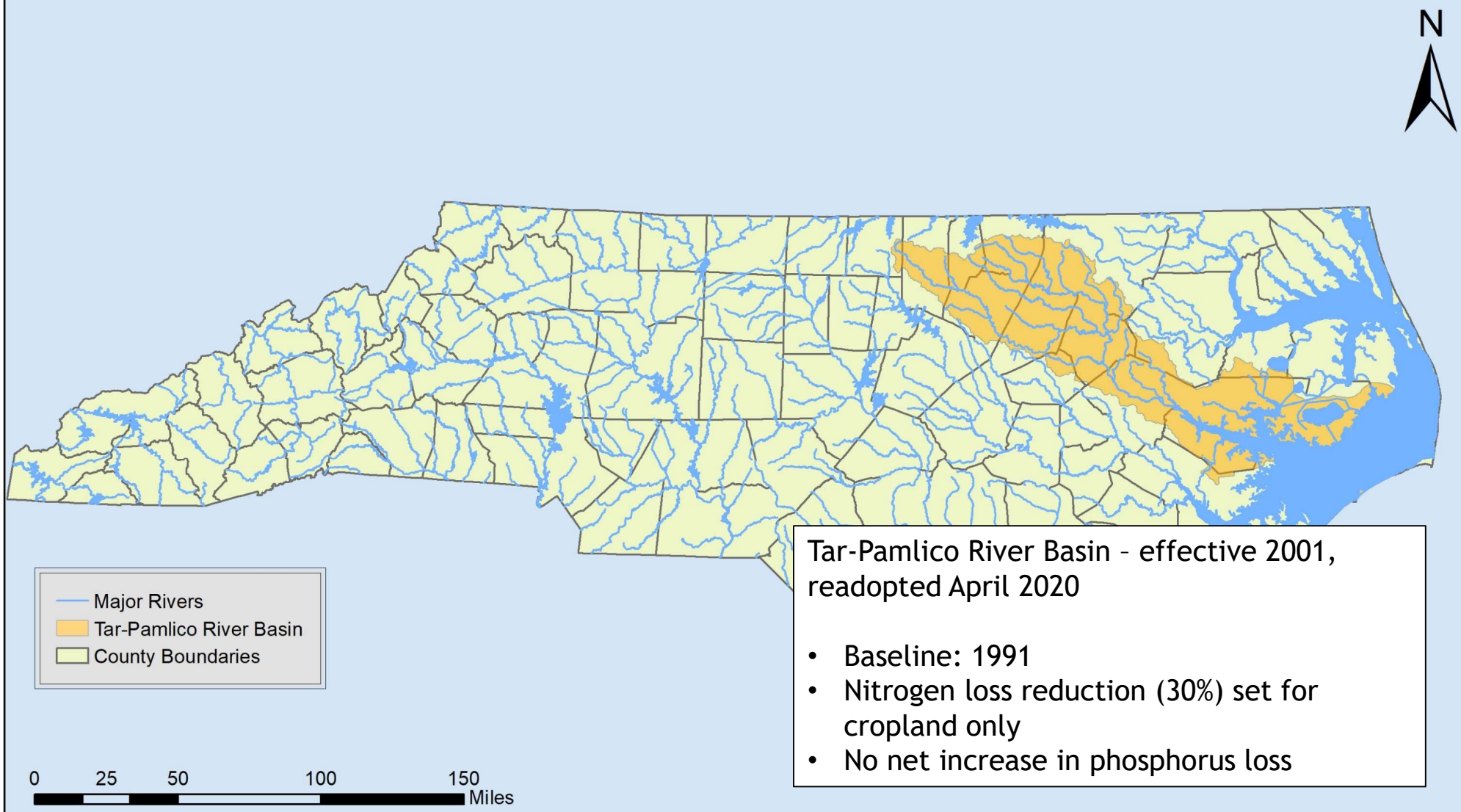
Neuse River Basin – effective 1997; readopted April 2020

- Baseline: 1991 – 1995
- 30% nitrogen loss reduction (cropland only)

SOIL & WATER CONSERVATION

Nutrient Strategy Watersheds

ATTACHMENT 16



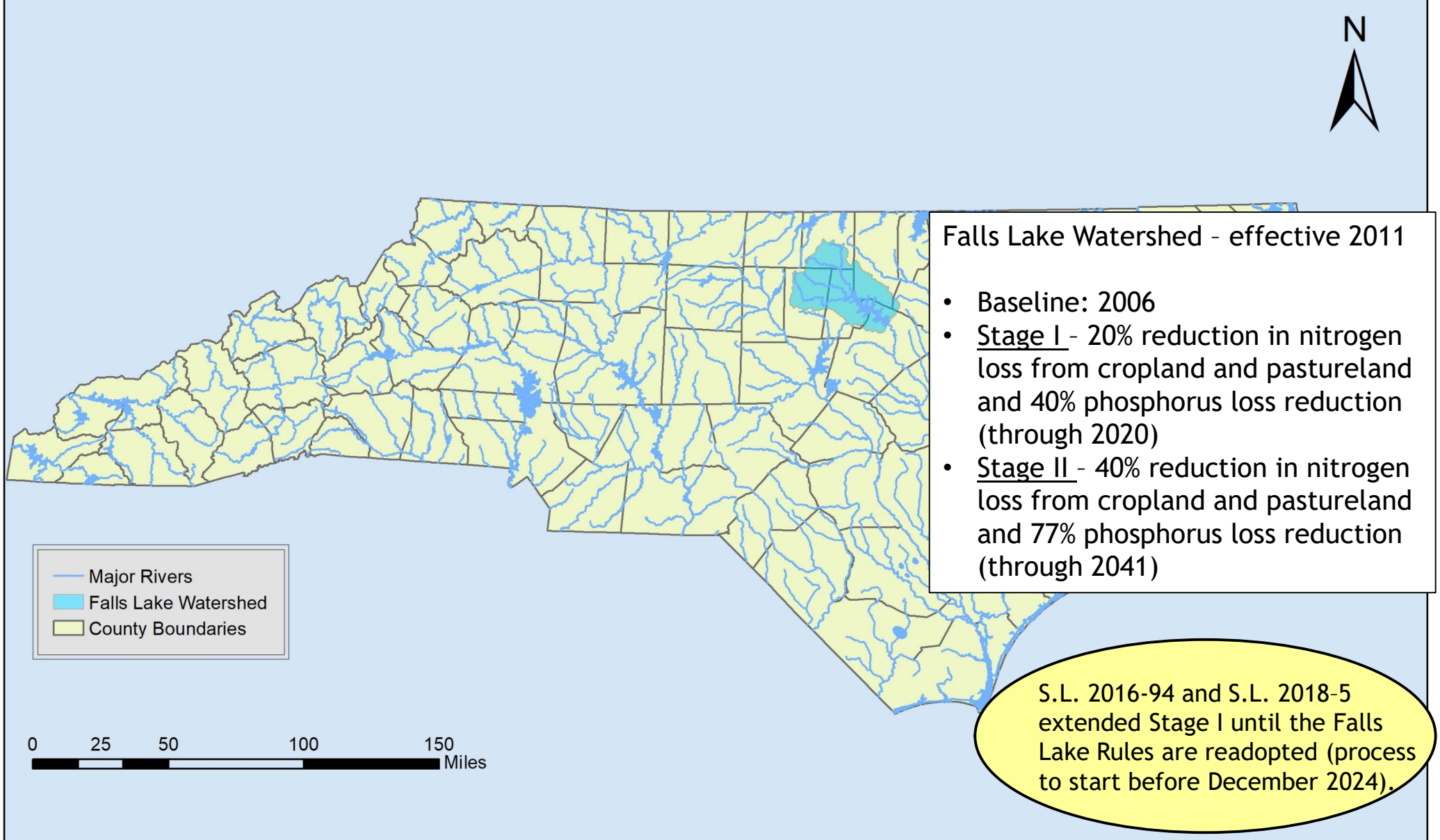
Tar-Pamlico River Basin – effective 2001, readopted April 2020

- Baseline: 1991
- Nitrogen loss reduction (30%) set for cropland only
- No net increase in phosphorus loss

SOIL & WATER CONSERVATION

Nutrient Strategy Watersheds

ATTACHMENT 16



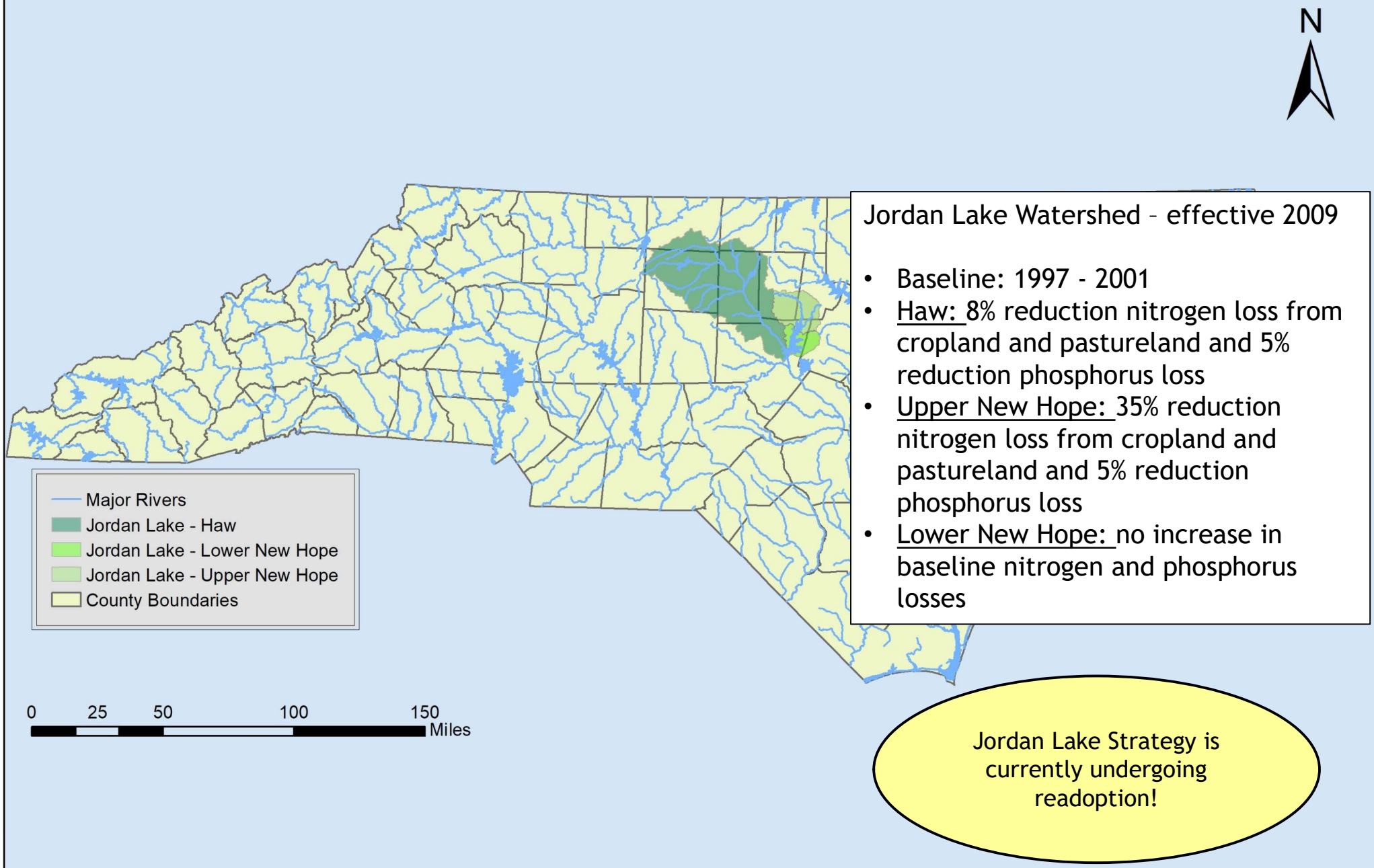
Falls Lake Watershed – effective 2011

- Baseline: 2006
- Stage I – 20% reduction in nitrogen loss from cropland and pastureland and 40% phosphorus loss reduction (through 2020)
- Stage II – 40% reduction in nitrogen loss from cropland and pastureland and 77% phosphorus loss reduction (through 2041)

S.L. 2016-94 and S.L. 2018-5 extended Stage I until the Falls Lake Rules are readopted (process to start before December 2024).

Nutrient Strategy Watersheds

ATTACHMENT 16



Jordan Lake Watershed – effective 2009

- Baseline: 1997 - 2001
- Haw: 8% reduction nitrogen loss from cropland and pastureland and 5% reduction phosphorus loss
- Upper New Hope: 35% reduction nitrogen loss from cropland and pastureland and 5% reduction phosphorus loss
- Lower New Hope: no increase in baseline nitrogen and phosphorus losses

Jordan Lake Strategy is currently undergoing readoption!

Reporting & Rule Compliance Process

Local Advisory Committees

- Consist of local agriculture stakeholders (Cooperators, SWCD, CES, etc.)
- Review and submit local crop, pasture, and BMP data for yearly reporting
- Other duties if collective nutrient reduction targets are not met

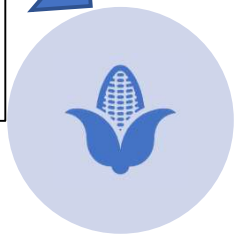
Basin or Watershed Oversight Committees

- Consist of agriculture and environmental stakeholders, agency staff and academics
- Develop, maintain, and update as needed tracking and accounting methods for N and P loss
- Submit annual reports on agriculture's collective reductions of N and P loss
- Other duties if collective nutrient reduction targets are not met

Division of Water Resources Receives Annual Reports

Data Used in Annual Reporting

Pulled CY2022 data from FSA



Farm Service Agency Annual Crop Reports or USDA NASS Annual Crop Data

This is informed by the LAC

Fertilization rate application data

USDA NASS livestock data & Agriculture Census Data

This is informed by the LAC

Local knowledge and data on farmer-implemented nutrient-reducing BMPs not supported by cost-share funding

Pulled CY2022 data for ACSP and NRCS

Select BMPs implemented using state and federal cost share funding

We rely on local knowledge and expertise to make sure collected data is correct. Special thanks to all LAC members, including district staff and Supervisors, who contribute to annual reporting efforts!

Reported Crops through NLEW

Not all crops are reported!

Bahiagrass (Hay)
Barley (Grain)
Caucasion/Old World Bluestem (Hay)
Common Bermudagrass (Hay)
Corn (Grain - Coastal)
Corn (Grain - Conventional)
Corn (Grain - No Till)
Corn (Silage - Coastal)
Corn (Silage - Conventional)
Corn (Silage - No Till)
Cotton
Cucumber
Dallisgrass (Hay)
Fescue (Hay)
Hybrid Bermudagrass (Hay)
Hybrid Bermudagrass overseeded with Rescuegrass (Hay)
Mixed Cool Season Grass (Hay)
Oats (Grain)
Orchardgrass (Hay)
Peanuts
Pearl Millet (Hay)
Rescuegrass (Hay)
Rye (Grain)
Small Grain (Silage)
Sorghum (Grain)
Sorghum Sudan (Hay)
Soybeans (Double Cropped - Manured)
Soybeans (Double Cropped)
Soybeans (Full Season - Manured)
Soybeans (Full Season)
Sweet Potatoes
Timothy Grass (Hay)
Tobacco (Burley)
Tobacco (Flue Cured)
Triticale (Grain)
Tropical Corn (Silage)
Wheat (Grain)

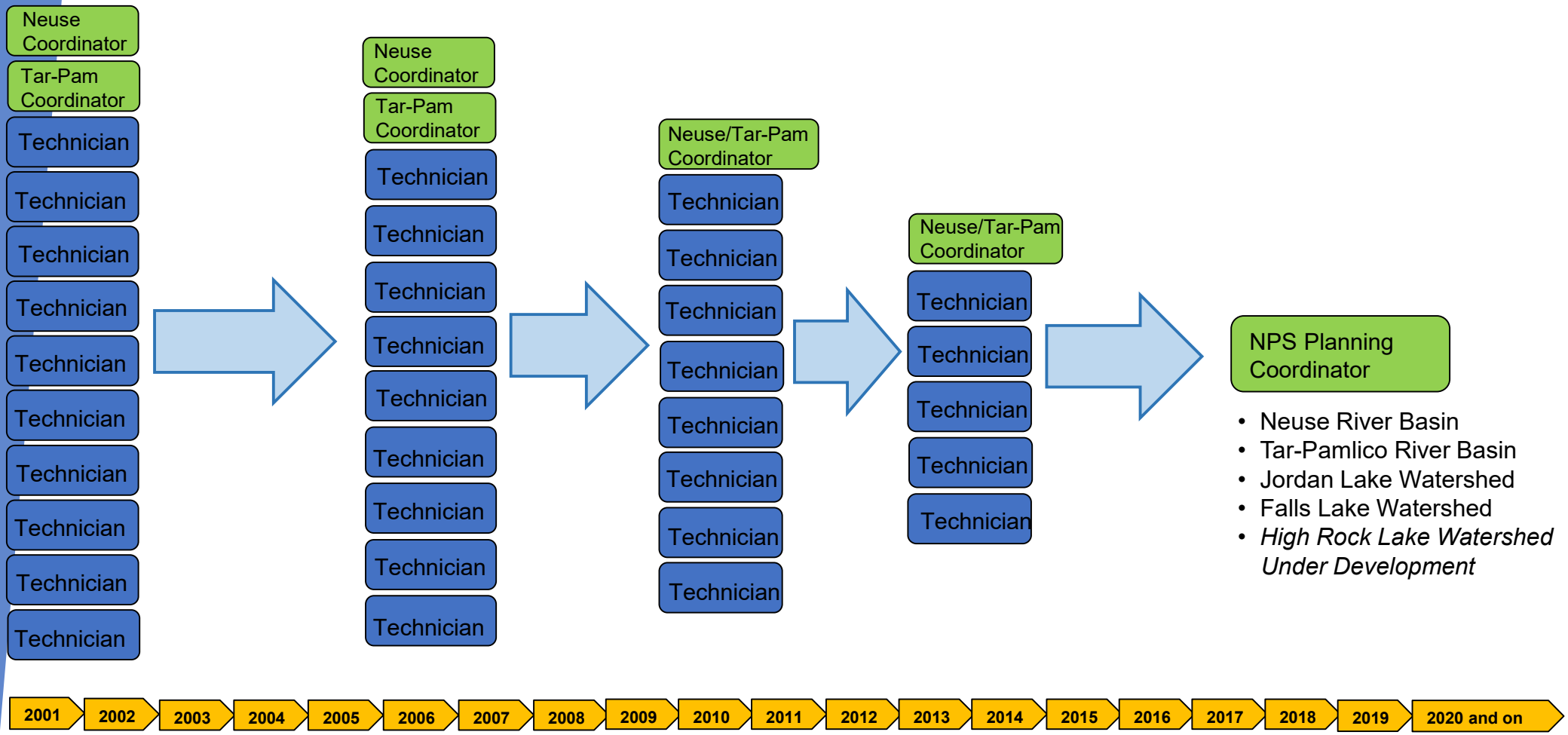
DIVISION OF SOIL & WATER CONSERVATION
NORTH CAROLINA

Nutrient Reduction Best Management Practices (NRCS & ACSP) – What Do We Report?

Receive N Reduction Credit	• Unfertilized Cover Crops
	  • Wheat, Rye, Oats, Triticale,& Barley
	• Buffers
	  • Riparian buffers
	  • Filter strips
	  • Field borders (only if adjacent to a blue line stream)
	• Water Control Structures **Starting in CY19 report active and cumulative WCS affected acres*
	  • Half round
	  • In-line
	• Livestock Exclusion Systems (pasture accounting only)
	  • Falls Lake & Jordan Lake only

Do **not** Receive N Reduction Credit	• Additional Nutrient Reducing BMPs
	  • Diversion, precision agriculture, sod-based rotation, tillage management, terraces, field borders, & grassed waterways
	  • Do not receive nitrogen-reduction credit for implementation of these practices; however cumulative and active contract acre totals are included in the Annual Progress Reports

Funding Changes



Crop Year 2022 Highlights – All Basins and Watersheds

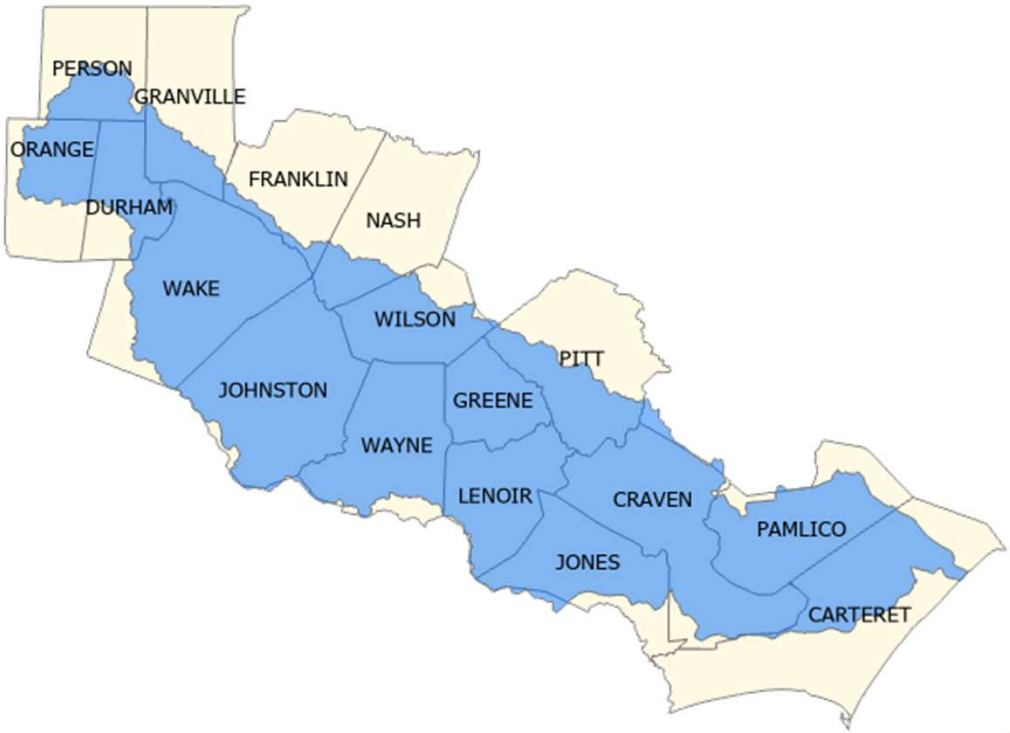
Oct. 1, 2021 – Sept. 30, 2022

Basin or Watershed	Reduction Requirements	CY2022 NLEW Cropland N Loss Reduction from baseline (%)	Phosphorus Loss Risk from Agricultural Lands
Neuse River Basin	30% N Reduction	55%	N/A
Tar-Pamlico Basin	30% N Reduction and No increase in P loss	57%	No net increase in P loss risk from agricultural land for 6 out of 9 parameters
Falls Lake Watershed	Stage I: 20% N and 40% P Reductions Stage II: 40% N and 77% P Reductions	66%	No net increase in P loss risk from agricultural land for 6 out of 8 parameters
Jordan Lake Watershed	Haw: 8% N and 5% P Reductions Upper New Hope: 35% N and 5% P Reductions Lower New Hope: No increase in N or P loss	N/A – Data availability change	No net increase in P loss risk from agricultural land for 4 out of 8 parameters (2 parameters affected by data availability)

Crop Year 2022 Highlights – Neuse Basin

Oct. 1, 2021 – Sept. 30, 2022

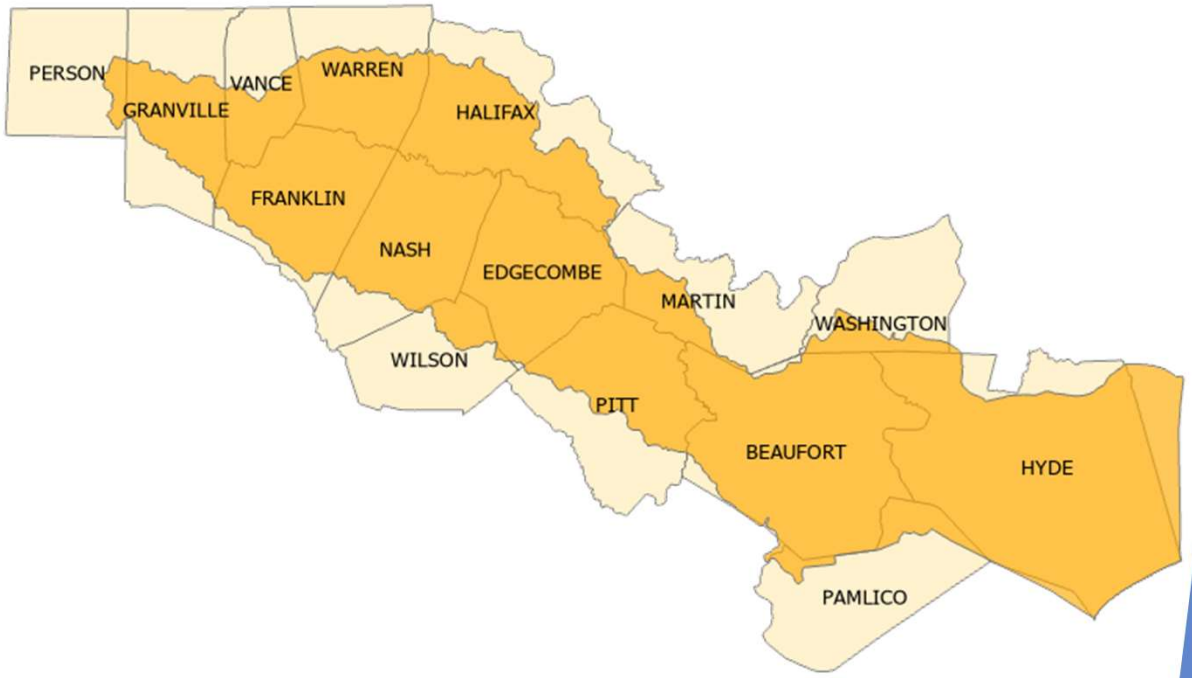
- 55% nitrogen loss reduction from baseline (30% mandate)
- Sixteen LACs individually exceeded the 30% N reduction goal
- Increase of nine acres of 20’ buffer, 32 acres of 30’ buffer, 24 acres of 50’ buffer, and one acre of 100’ buffer
- Over $676,000 ACSP and over $2,969,000 EQIP dollars spent



Crop Year 2022 Highlights – Tar-Pamlico Basin

Oct. 1, 2021 – Sept. 30, 2022

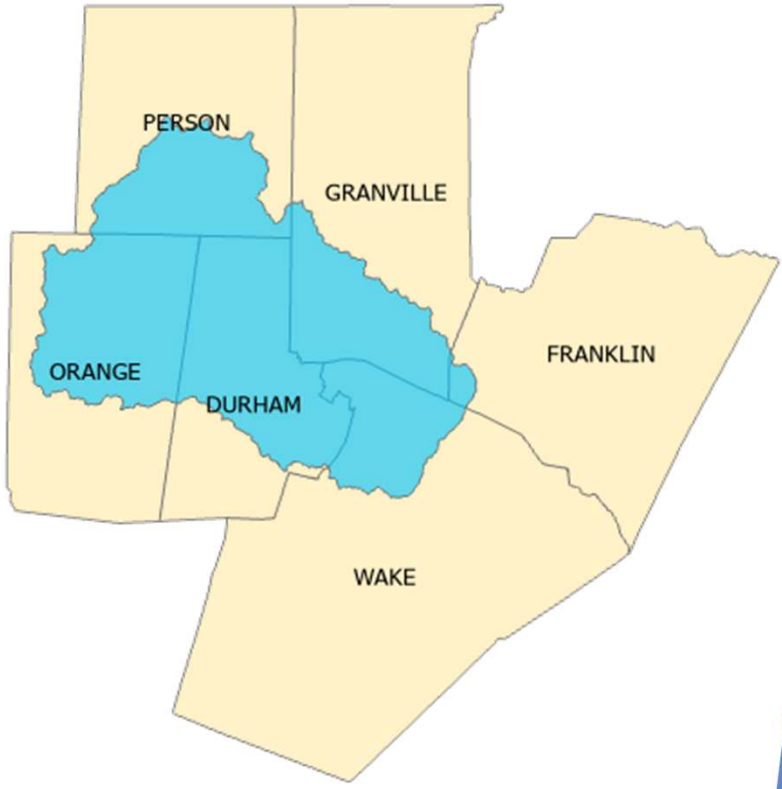
- 57% nitrogen loss reduction from baseline (30% mandate)
- Twelve LACs individually exceeded the 30% N reduction goal
- Six out of nine tracked parameters for P loss risk indicate reduced risk
- Increase of 40 acres of 30’ buffer and over 1,500 acres of cover crops
- Almost $340,000 ACSP and over $1,777,000 EQIP dollars spent



Crop Year 2022 Highlights – Falls Lake Watershed

Oct. 1, 2021 – Sept. 30, 2022

- 66% nitrogen loss reduction for cropland from baseline (20% mandate)
- Two LACs individually exceeded 70% N reduction
- Majority of tracked parameters for P loss risk indicate reduced risk
- Since 2006 baseline, there has been approximately a 50% reduction in NLEW-reported crops
- Over $149,000 ACSP and over $180,000 EQIP dollars spent



DIVISION OF SOIL & WATER CONSERVATION
NORTH CAROLINA

Crop Year 2022 Highlights – Jordan Lake Watershed

Oct. 1, 2021 – Sept. 30, 2022

- NASS crop data availability change so an annual % N reduction estimate for cropland was not calculated

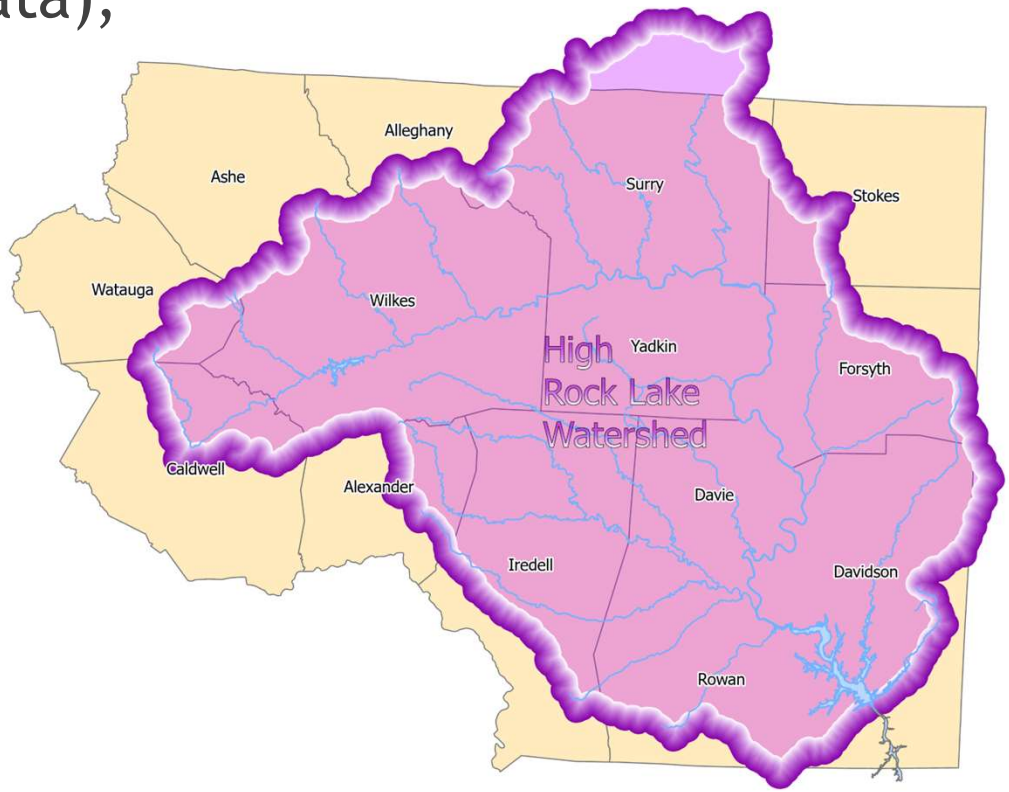
  Will be calculated in next year's report with US Agriculture Census data (released 2.14.2024)!
- Majority of tracked parameters for P loss risk indicate reduced risk
- Increase of 26 acres of 20' buffer, one acre of 30' buffer, and twelve acres of 50' buffer were implemented in the Haw subwatershed
- Substantial increase in unfertilized cover crop acreage in the Lower New Hope
- Almost $75,000 ACSP and over $412,000 EQIP dollars spent

Nutrient Strategy Activity- Status & Updates

- Neuse:
  - Agriculture Rule was readopted in 2020
- Tar-Pamlico:
  - Agriculture Rule was readopted in 2020
- Falls Lake:
  - Rule revision/strategy readoption activities to begin before December 2024
  - Upper Neuse River Basin Association (UNRBA) submitted its Concepts and Principles for the Reexamination and Consensus Principles II to DWR in November 2023
  - NC Policy Collaboratory submitted final report to the NCGA in December 2023

Nutrient Strategy Activity- Status & Updates

- <u>High Rock Lake Watershed:</u>
  - Model finalized (2005-2009 data); 2006 to be the baseline year
  - Site specific chlorophyll-a standard
  - Strategy development initial stakeholder process has concluded:
    - Seven Steering Committee Meetings
    - Five Agriculture Technical Advisory Group Meetings
    - Three Public Full Watershed Stakeholder Meetings

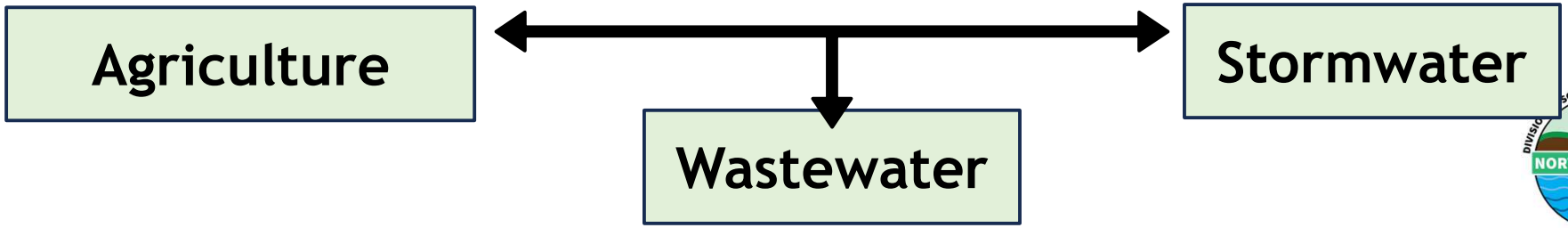


Nutrient Strategy Activity- Status & Updates

- High Rock Lake Watershed:

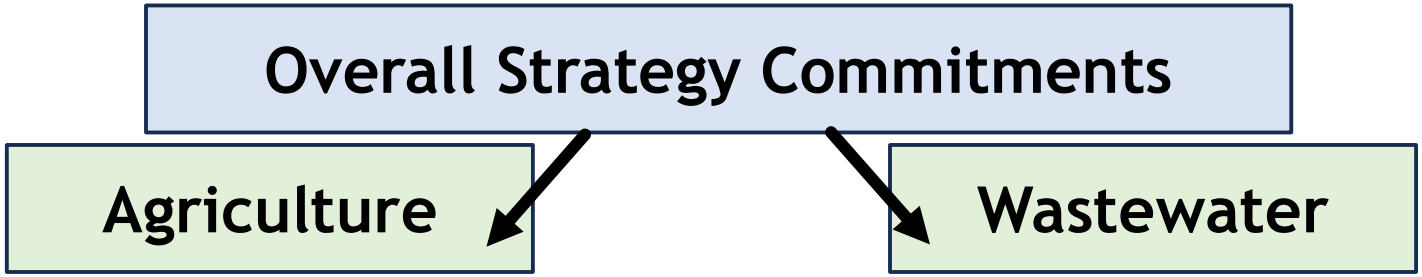
Overall Strategy Commitments

- Strategy Reductions:
  - 49% P
  - 25% N
- Equitable balance of reduction targets among various source groups
- Strategy to apply to all areas upstream of the High Rock Lake dam
- Administrative rules will mandate actions/requirements for agriculture, new development, existing development, and wastewater (public and industrial)



Nutrient Strategy Activity- Status & Updates

- High Rock Lake Watershed:



- Commitments:
  - Establish a centralized oversight committee
  - Committee to submit biennial (BMP implementation) and triennial (trends and recommendations) reports
- Remaining Considerations:
  - Collective livestock exclusion implementation targets
  - Poultry and biosolids waste application requirements

- Commitments:
  - Tiered end-of-pipe N and P concentration limits to achieve set reductions by first and second permit renewals
- Remaining Considerations:
  - Waste application requirements for biosolids
  - Industrial discharge load reduction requirements

Nutrient Strategy Activity- Status & Updates

- High Rock Lake Watershed:

Overall Strategy Commitments

↓

Stormwater

- Commitments:
  - Post-construction stormwater requirements to apply equally to all local government jurisdictions throughout watershed
  - Include an investment-based compliance mandate for existing development
  - Septic system program activities to be included for existing development reductions
- Remaining Considerations:
  - Lowering development densities requiring stormwater treatment
  - Specifics on treatment and/or volume reduction requirements

Nutrient Strategy Activity- Status & Updates

- High Rock Lake Watershed:

Overall Strategy Commitments

Buffers

- Commitments:
  - Existing uses to continue and establish a buffer protection requirement with ***any land use change***
  - At least 50-foot buffer
- Remaining Considerations:
  - Require establishment of 70-foot buffer (limit timber harvest within 50ft) with any land use change

Nutrient Strategy Activity- Status & Updates

- Jordan Lake:
  - Rules are currently opened for readoption
  - Two All Stakeholder Meetings (November and February)
  - Technical Advisory Groups (TAG) – Ag, Wastewater, Buffers, Stormwater, etc.
    - In process of organizing
    - Meetings to be scheduled Spring – Fall 2024
  - Goal is to finalize strategy readoption by 2025

Nutrient Strategy Activity- Status & Updates

- Jordan Lake:
  - New modeling completed (undergoing DWR review)
  - Potential new baseline 2014 – 2016
  - Potential new reduction targets:

Current Rules		
	N	P
Upper NH	35%	5%
Lower NH	0%	0%
Haw	8%	5%

Model Reduction Recommendations		
	N	P
Upper NH	70%	0%
Lower NH	30 - 50%	10 - 60%
Haw	0 - 30%	40 - 70%

  - Jordan Lake One Water (JLOW) updates
  - Cape Fear Basin Plan – Release expected FY2025

Questions?

Allie Dinwiddie
Nonpoint Source Planning Coordinator
Phone: 919-707-3795 (office) or 828-550-2104 (cell)
Email: alexandra.dinwiddie@ncagr.gov