

Jordan Rules Overview Challenges and Alternatives

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DWR, Nonpoint Source Planning Branch

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Presentation Outline



BRIEF RULE
BACKGROUND AND
IMPLEMENTATION
STATUS

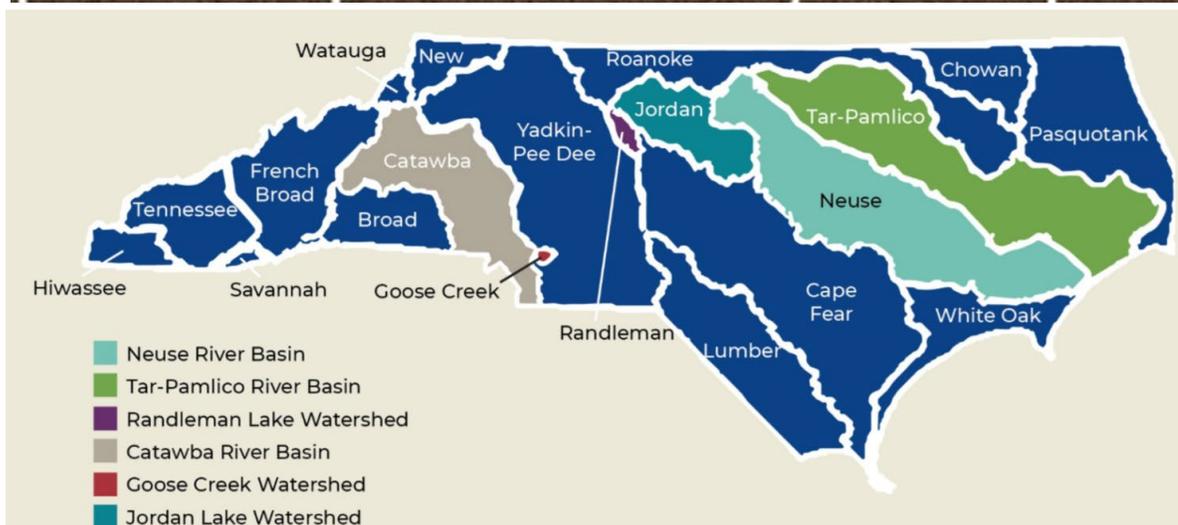
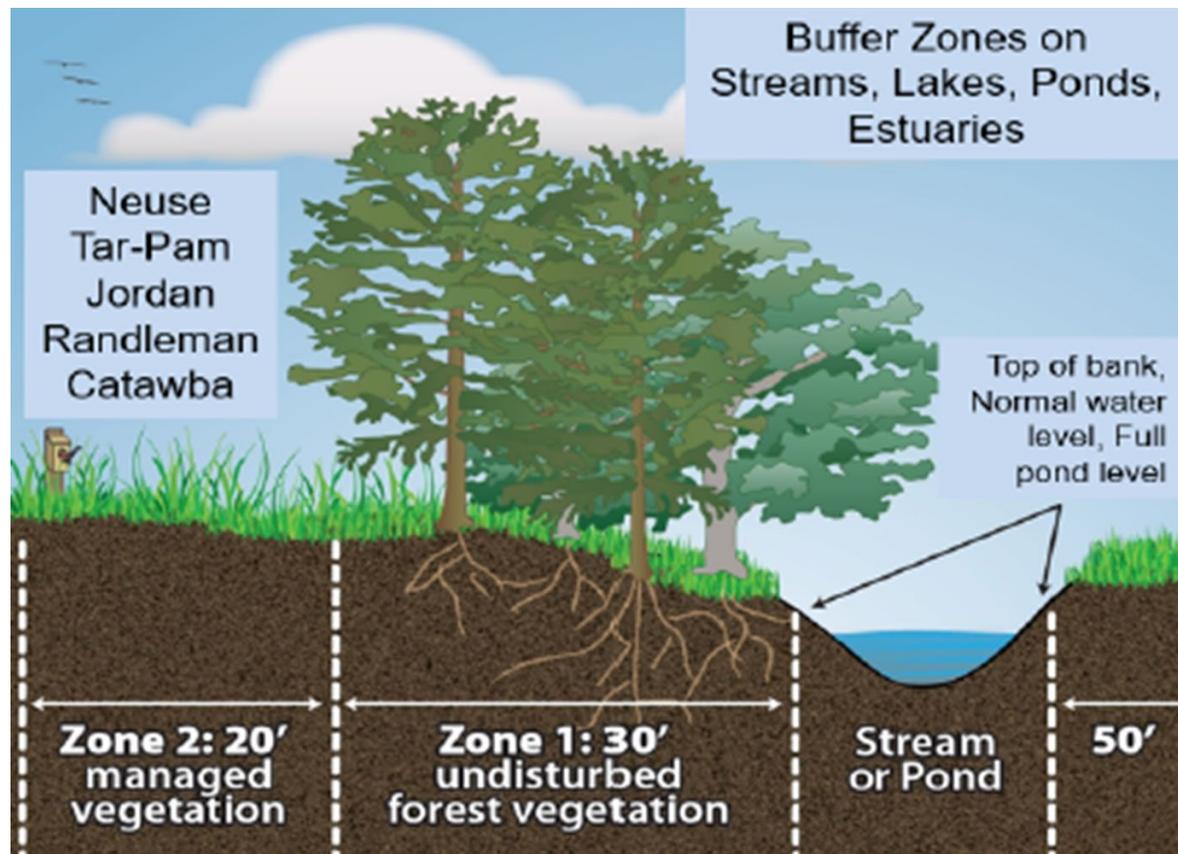


RULE MAIN
CHALLENGES AND
ALTERNATIVES



Q&A FOR EACH
RULE

Riparian Buffer Protection



- Protects existing vegetated riparian zones across all land uses
- **50 ft protected**
 - Zone 1 – 30 ft
 - Zone 2 – 20 ft
- **Change in existing use of buffer invokes restrictions**
- Jordan local governments implement and enforce programs in most cases
- In 6 watersheds, Randleman updated recently

Riparian Buffer Protection

Concerns:

- Some local governments have found **local implementation challenging**.
- Jordan RB is **not consistent** with more recently passed RB Protection Rules, such as Randleman, technical provisions should be updated.

Questions/Alternatives:

- Make **DWR implementation the default** for RP Protection Rule programs, and local governments can elect to continue implementation themselves.
- Bring Jordan RB Protection rule language up to the **same standard** as the currently implemented Randleman RB Protection Rule.

Agriculture

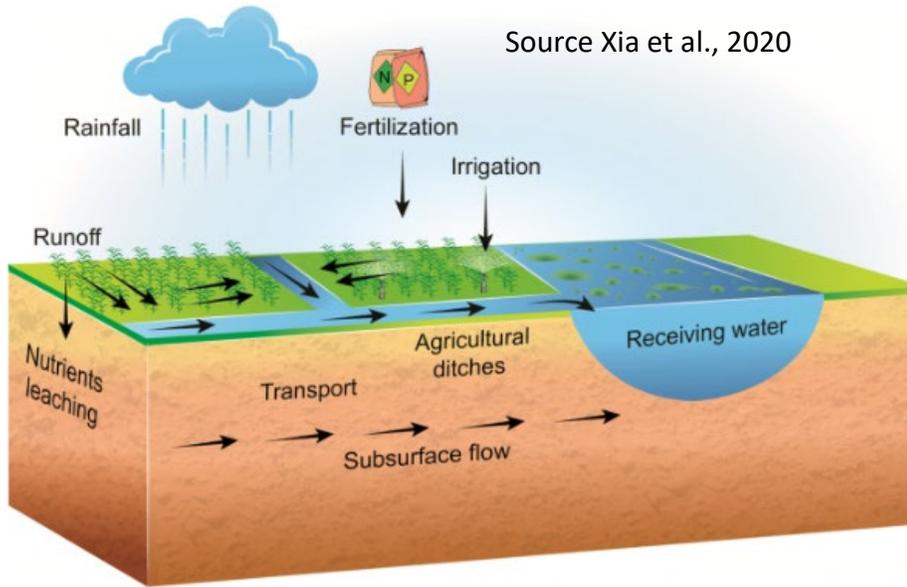
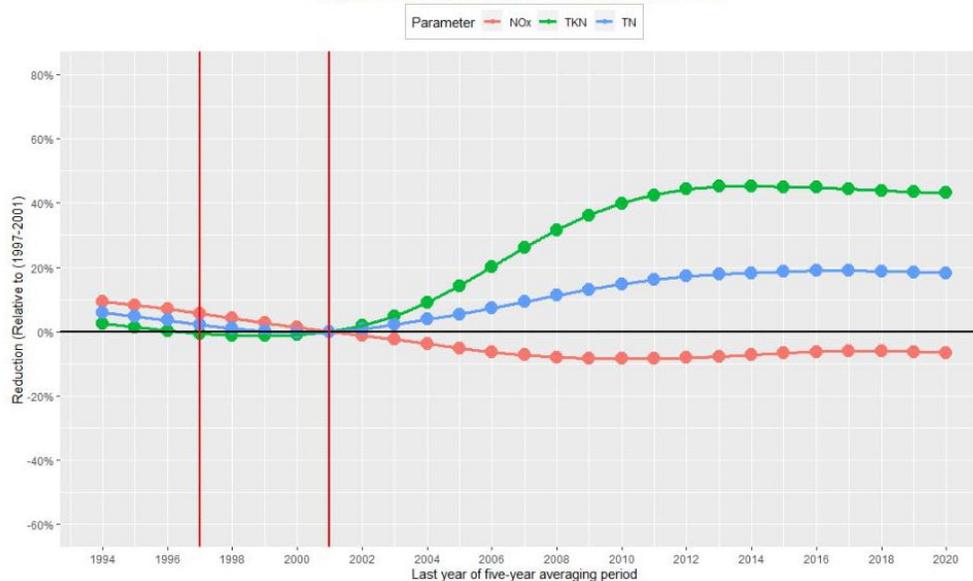
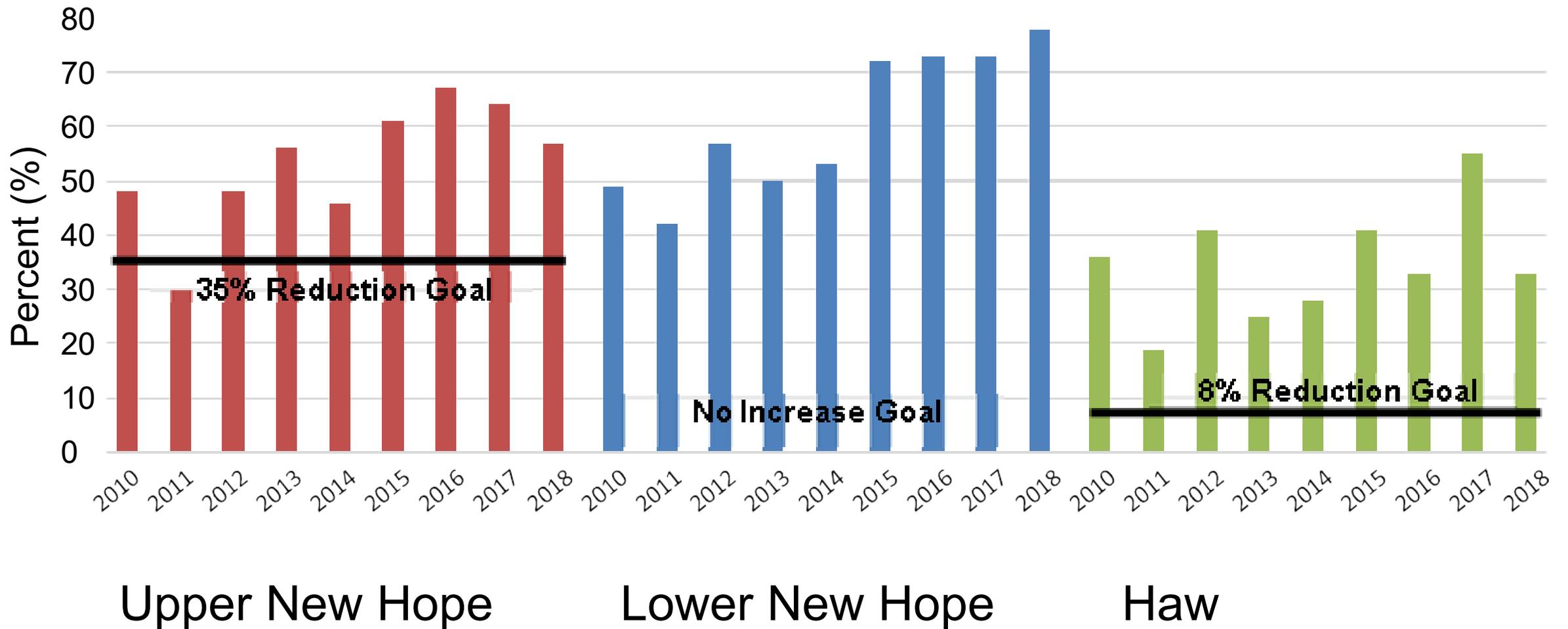


Figure 5a. How River at SR 1713 near Bynum (B2100000)



- Current rule:
 - Collective N and P reduction targets for cropland and grazed pasture
 - Watershed Oversight Committee (WOC) – oversees implementation and accounting
 - Full compliance with N loss targets from start (next slide)
- Studies: NCSU watershed model, DWR loading trends analysis:
 - Ag sizable contributor Haw watershed loads
 - Large NPS-driven organic N upswing throughout Jordan watershed since 2000, negated point source N gains, Haw side (graph)
 - Ag loads increase more under larger rainfalls
 - 30% ag fields unbuffered

Collective Cropland N Loss Reduction % by Jordan Subwatershed, 2010 – 2018, NLEW



Agriculture Rule Challenges and Alternatives

Challenges

- Collective compliance **accounting has limitations**: resource-intensive, data-challenged, N loss vs loading, pasture accounting partial, P tracking of qualitative indicators only
- Rule does not provide DEQ meaningful **enforcement authority**.

Questions/Alternatives:

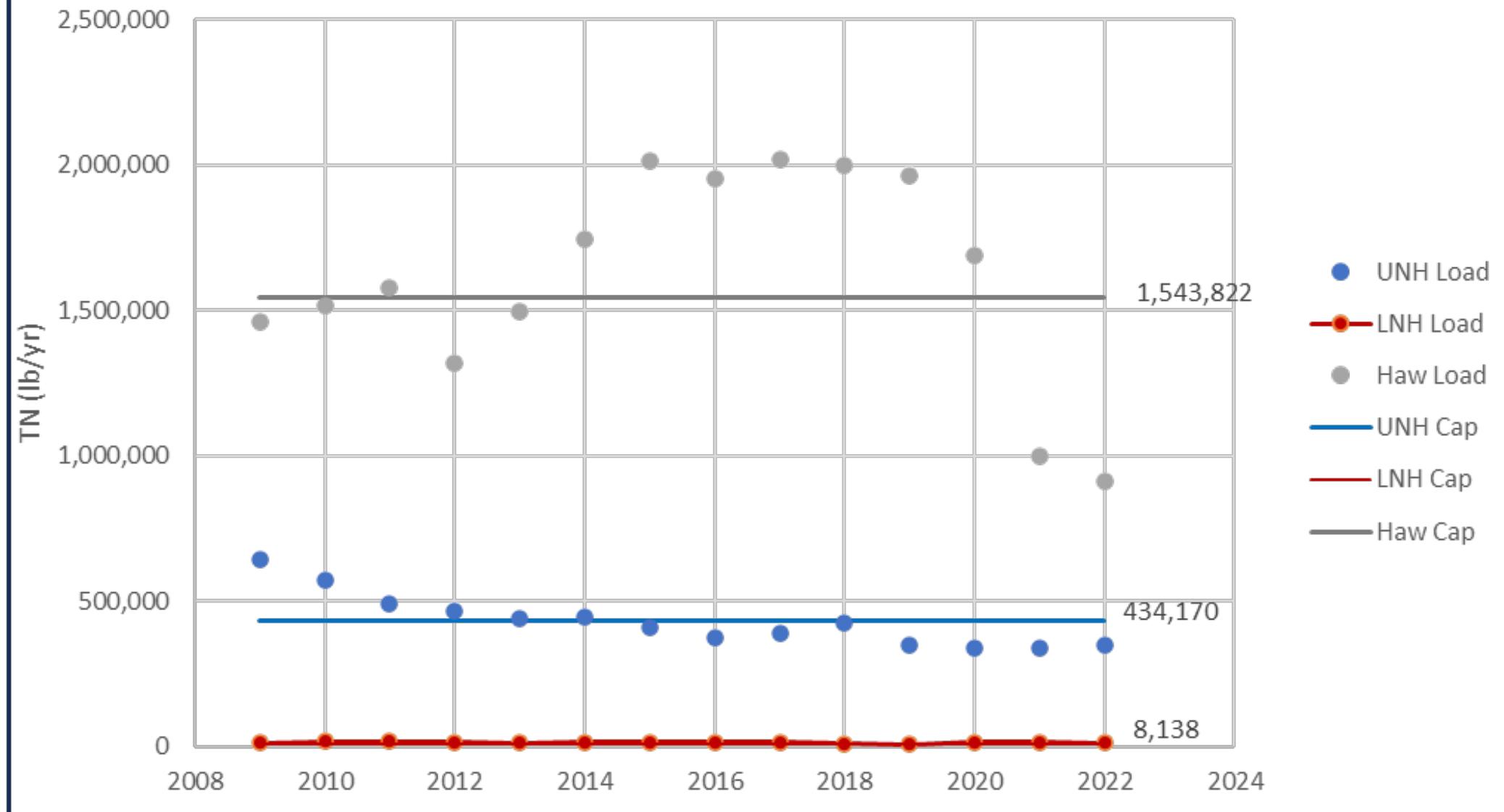
- Consider shifting entirely to qualitative indicators **tracking - more efficient, no qualifications needed**
- Consider regulating only key issues – cattle in streams, potential residuals/waste P over-application
- Are there ways to incentivize urban sectors (ED) to invest in agriculture practices that effectively reduce nutrient loading?

Wastewater

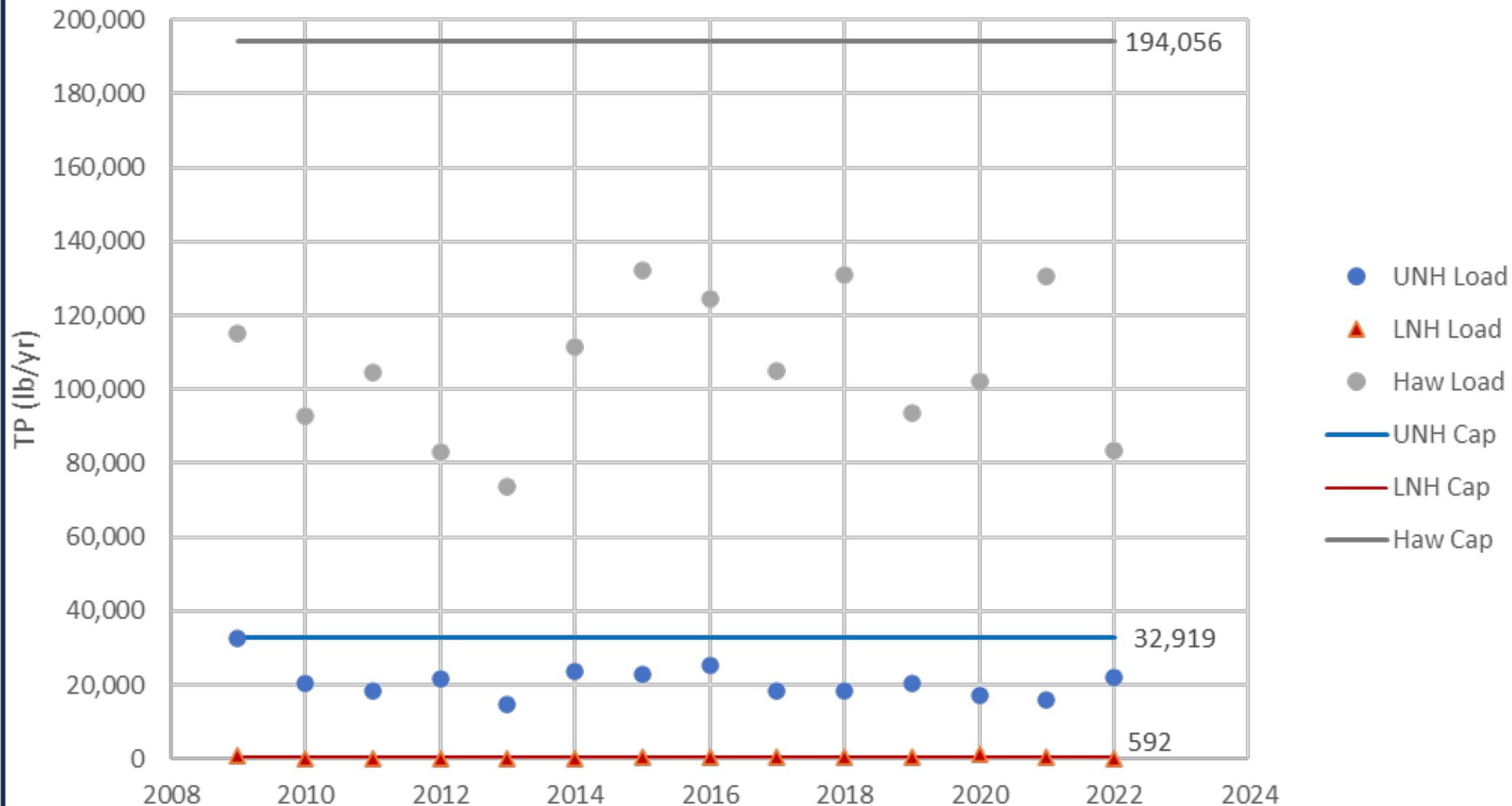


- Wastewater is treated at a facility prior to discharge to surface waters
- Wastewater treatment plants (WWTPs) must have an NPDES permit, individual or joint group compliance association with a group permit
- In the watershed:
 - 11 major NPDES municipal and industrial permits
 - 54 minor NPDES permits

Jordan Lake - Nitrogen Loads, 2009-2022



Jordan Lake - Phosphorus Loads, 2009-2022



Wastewater

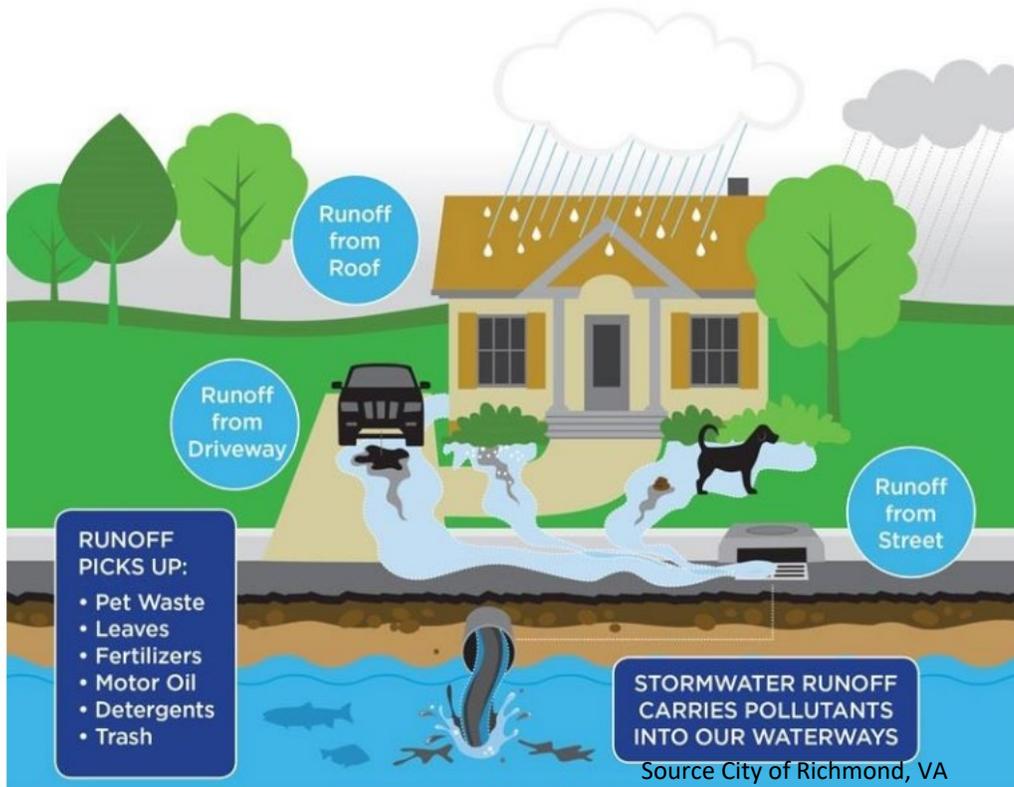
Concerns:

- Nutrient reductions from WWTPs are having measurable, sustained positive impacts on nutrient loading. Additional upgrades or process improvements to meet more stringent limits would have further positive impacts, although **upgrades are expensive**.

Questions/Alternatives:

- Are there sources of funding for local utilities upgrades?
- Would another Jordan Wastewater association foster exchange of technical expertise for upgrades and maintenance?

Stormwater



- Jordan rules – New D and Existing D – local implementation barred (SL 2016-94)
- Depending on local requirements, stormwater may/not be treated before discharge to surface water -
- NPDES MS4 rules, WSW rules active for New Development –
 - triggered by increase in Built-Up Area
 - > 24% BUA requires treatment, most locations
- Existing Development – great majority BUA pre-dates stormwater controls

New Development Stormwater

- Use of SNAP (Excel) Tool and Stormwater Control Measures

	A	B	C	D	E	F	G	H	I	J	K		
1	<u>Project Summary</u>									Introduction			
3	Project Name:		John's Surf Mart & Beach Emporium									Project Info	
4	Project Area (ft²):		100,000 ft ²		2.2957 acres		Submission Date:				Land Cover Characteristics		
5	Disturbed Area (ft²):		65,000 ft ²		1.4922 acres		December 1, 2016				SCM Characteristics		
6	County:		Durham			Local Jurisdiction:		Durham				Individual SCM Summaries	
7	Development Land Use Type:		Commercial			Owner Type:		Private				Nutrient Offset Form	
8	Development Activity Type:		Development - New			Designated Downtown Area?		yes				Print Summary	
9	Nutrient Management Watershed:		Jordan Lake			Subwatershed:		Jordan - Upper New Hope					
10	Phosphorus Delivery Zone:		Jordan Zone 9			Nitrogen Delivery Zone:		Jordan Zone 10					
11	Phosphorus Delivery Factor (%):		89%			Nitrogen Delivery Factor (%):		97%					
12	<i>Phosphorus Loading Rate Target (lb/ac/yr):</i>		0.82			<i>Nitrogen Loading Rate Target (lb/ac/yr):</i>		2.20					
13	Phosphorus Load Target at Site (lb/yr):		1.88			Nitrogen Load Target at Site (lb/yr):		5.05					
14	Phosphorus Load Leaving Site w/SCMs (lb/yr):		1.16			Nitrogen Load Leaving Site w/SCMs (lb/yr):		8.22					
15	P Offsite Buy-Down Threshold Load (lb/ac/yr):					N Offsite Buy-Down Threshold Load		10.00					
16	Total P Load Reduction Needed (lb/yr):		0.10			Total N Load Reduction Needed (lb/yr):		13.24					
17	P Load Treatment Balance at Site (lb/yr):		-0.72			N Load Treatment Balance at Site (lb/yr):		3.17					
18	P Load Treatment Balance at Lake (lb/yr):		-0.64			N Load Treatment Balance at Lake (lb/yr):		3.08					
19													

New Development Stormwater

Challenges:

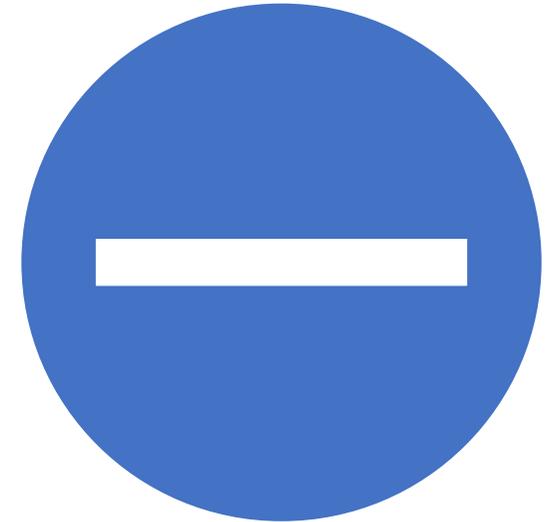
- N, P loading rate target-setting assumptions have issues.
- Nutrient calculations **involved, technical, create policy issues, slowdowns.**
- Current requirements not designed to protect receiving streams from flow impacts.
- Onsite control requirements are set separately from overall load requirement.

Questions/Alternatives:

- Can onsite control requirements be set to presumptively satisfy nutrient objectives?
 - While nutrient calculations are done simply for tracking purposes?
- Can control requirements include a hydrologic (flow/volume) component to protect receiving streams?

Existing Development

- Local load reduction requirements (Stage 2) **barred pending rules readoption**
- Stage 1: programmatic actions in an annual report – most addressed in MS4 permits
 - In effect
 - 2023: 26 of 33 in compliance for **Annual Report submission to DWR**
- Stage 2: develop and implement programs for 8% N, 5% P
 - On hold – no implementation required



Existing Development

Challenges:

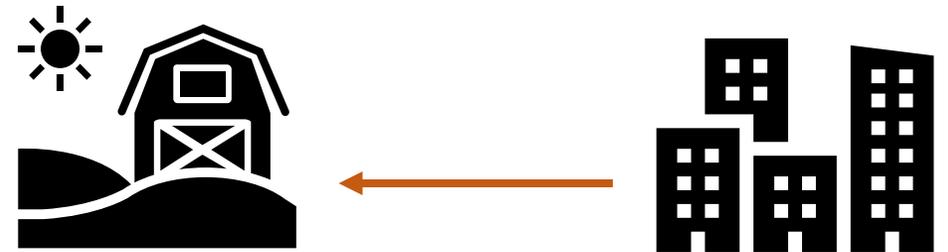
- Quantitative load target-setting and compliance technically challenging
- DWR resources insufficient to expand set of approved nutrient practices as desired
- Local legal authorities limited, development retrofit sites limited, costly

Questions/Alternatives:

- Provide a standard load-based approach in rule along with equivalent option meeting certain criteria.
- **Option: investment-based approach (Falls ED IAIA) – jurisdictions commit to invest in a larger list of eligible practices with nutrient benefit.**
- How to set equitable investment levels?
- What should restrictions be on moving from one approach to other?

Nutrient Crediting

- 2B .0703 Nutrient Offset Credit Trading
- 2B .0273 Jordan Trading Rule
- Criteria and process for transfer of load reduction credit between parties as allowed by source-specific rules
- To date virtually all projects = riparian restoration in rural areas



Buy/Sell offsetting practices through private banks or Division Mitigation Services (DMS)

Nutrient Crediting

Concerns:

- Since adoption of Jordan trading rule 2B .0273, Nutrient Offset rule 2B .0703 was readopted, given universal applicability across nutrient strategies, and expanded to encompass all trading activities, making .0273 moot.

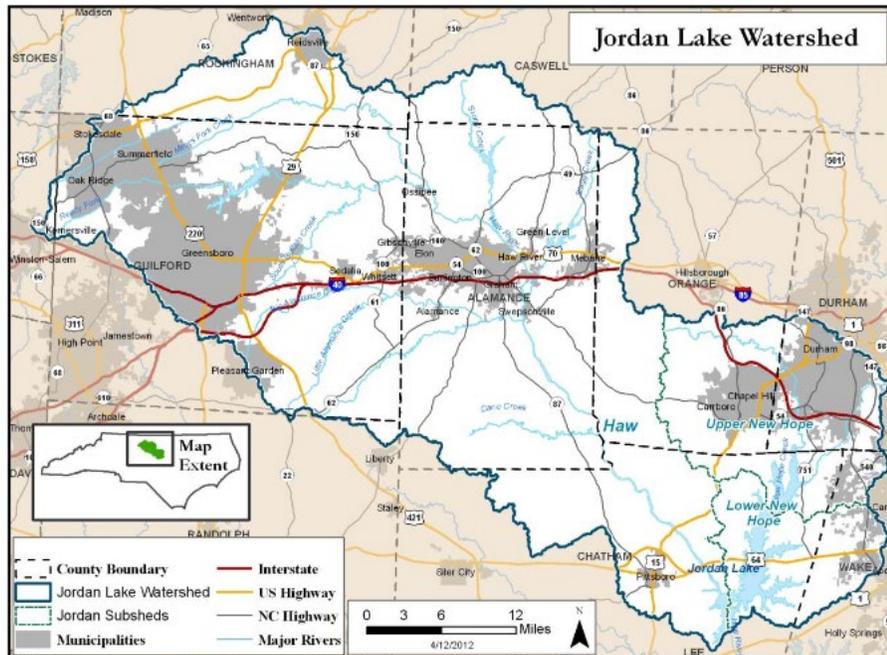
Questions/Alternatives:

- Repeal Jordan trading rule .0273 as unnecessary, **refer solely to Nutrient Offset rule 2B .0703. Amend offset rule if needed.**

More information available on the NC DWR Jordan Lake Strategy Website.

About > Divisions > Water Resources > Water Planning > Nonpoint Source Planning > Jordan Lake Nutrient Strategy

Jordan Lake Nutrient Strategy



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Address for those downloading ppt:
<https://www.deq.nc.gov/about/divisions/water-resources/water-planning/nonpoint-source-planning/jordan-lake-nutrient-strategy>

[Subscribe to the Jordan Lake Listserv](#)



Interest in a joining a TAG?

- Contribute your expertise and perspective for the rule making process.
- Goal to create a feasible, successful nutrient rule to meet our shared interests.

Thank you!

Please contact us with any questions or comments.

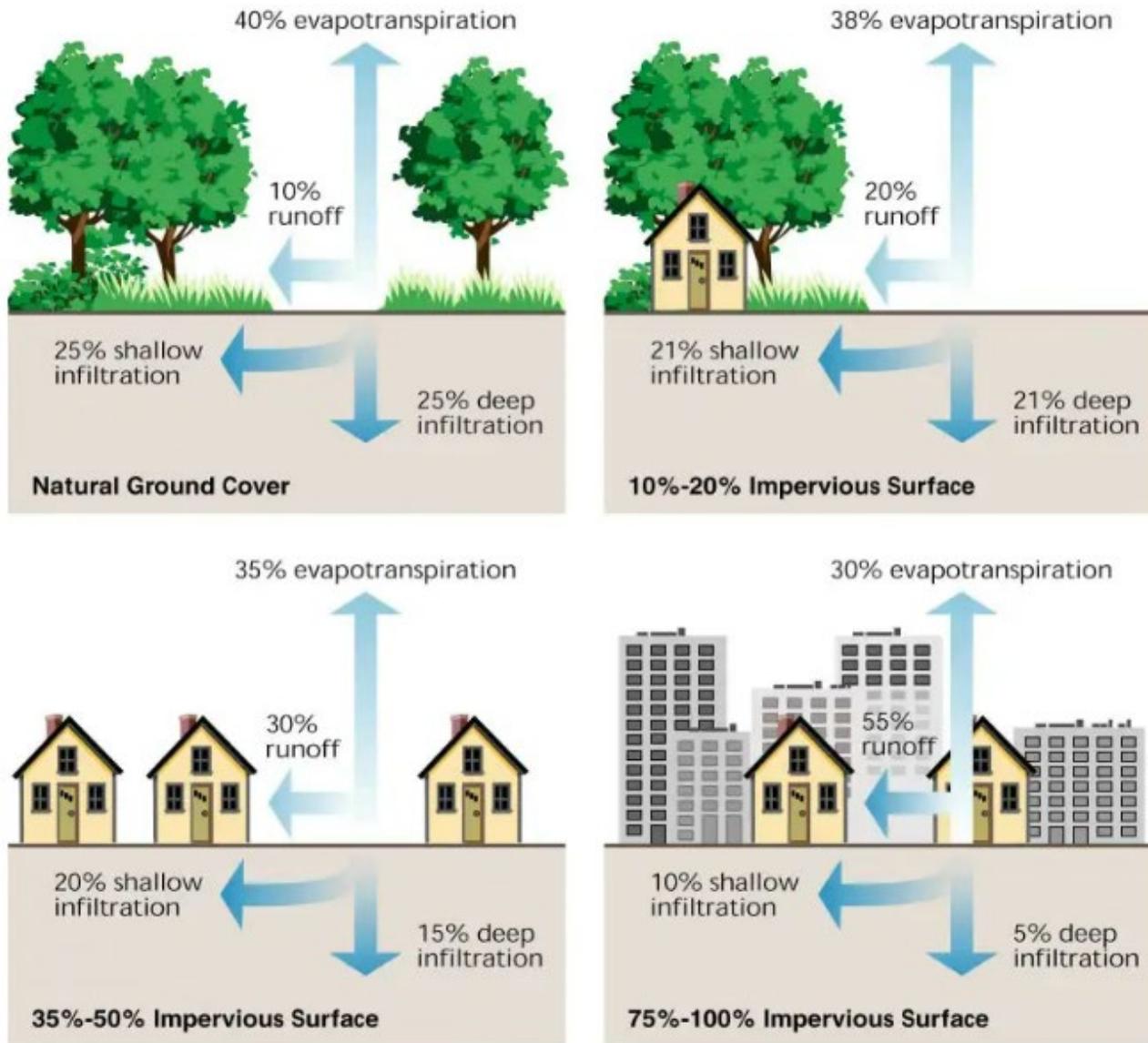
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NC Clean
Water
Education
Partnership

Fig. 3.21 – Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface runoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.
In Stream Corridor Restoration: Principles, Processes, and Practices (10/98).
By the Federal Interagency Stream Restoration Working Group (FISRWG) (15 Federal agencies of the U.S.)