

High Rock Lake Nutrient Rules Engagement Process  
Agriculture Technical Advisory Group (TAG)  
Meeting 3: March 10, 2023, 10 am-noon

March 10, 2023 / **10 am-noon** / 1450 Fairchild Road, Winston Salem, NC

### Meeting Goals

1. Share updates on action items since the second meeting
2. Review the TAG report
3. Identify and evaluate implementation timeframes to meet the charge

## Participants

TAG Members: Brent Barnes, Jennifer Bedrosian, Allison Brown, Taylor Darnell, Adam Davidson, Bill Davis, Allie Dinwiddie, Julie Henshaw, Lee Holcomb, Keith Larick, Dwayne Livengood, Grace Messinger, Edgar Miller, Lance Parker, Dwayne Tate

DSC Facilitation Team: Maggie Chotas & Will Dudenhausen

## Meeting Summary

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### Agenda Overview

1. Updates from last meeting
2. Review TAG Report
3. Deep dive into two points with different perspectives:
  - a) Phosphorus over-application via waste/residuals
  - b) Livestock exclusion
4. Collective Compliance – How does it work
5. Where to from here: DWR staff recommendations
  1. DWR is comfortable with a non-numerical reduction target to regulated agriculture – and an incentive-based process, as long as there is accountability
  2. In lieu of NLEW modeling, track and report on progress
    - What should the report include?

### What's Next / Action Items from the meeting

1. Taylor Darnell will upload litter waste analysis report to ShareFile
2. Request to hear feedback from Steering Committee about DWR's proposed approach of an incentive-based system - not regulatory - for Agriculture in HRL
3. Joey will upload Deanna's report to the Ag TAG ShareFile folder
4. Joey will develop a survey to elicit input from TAG members on reports and data
5. Joey will draft the next part of the TAG charge and send to the team for review
6. Questions to address:
  - a. How much of livestock is fenced out already?
  - b. Do Clean Water Act regulations supersede deemed permits?
7. Team members are encouraged to make plans to attend the virtual All Stakeholders meeting March 29, 4-5:30 pm.
8. Next meeting of the Ag TAG will be May 8, 10-noon.

## Key Links

- [Slides for this meeting](#)

## Details on Discussion Topics

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### 1. Updates since meeting #2

#### Key Points

- Joe Hudyncia update on NCDACS litter waste records
  - Trends are insignificant
  - Litter not becoming more concentrated and potent
- Natural Resources Conservation Service (NRCS) update on BMP implementation:
  - \$38.4 million spent in HRL counties (not limited to HRL watershed)
  - 22,600 new acres of tillage management
  - 6,900 new acres of cover crops
  - 167 waste storage facilities
  - 870,900 feet of fencing (76 stream crossings, 579 acres of access control)
  - 4,400 acres of prescribed grazing
  - 3,900 acres of nutrient management

### 2. Review TAG Report

Overview: Joey shared the overview of the AG Tag report shared with the Steering Committee:

- Many farmers are already using precision nutrient management
  - Smaller producers generally cannot afford the time/resources/energy required
- Poultry industry has undergone significant changes
  - Slight overall increase in production (trend in point-in-time inventory unclear)
  - Litter being applied across the watershed
- Local conservation staffing capacity is an ongoing limitation
- TAG members highlight need for better education, outreach, and training

### 3. Deep Dive into two main points where there were differences of opinions and approaches

#### a) Phosphorus over-application via waste/residuals

- Litter testing
- Inspection and enforcement of waste utilization plans

- Education
- Application setbacks

#### Soil test results and Phosphorus Loss Assessment Tool (PLAT)

- Are farmers notified if their phosphorus levels go too high?
- Allie clarified from soil tests show Phosphorus index values - From soil tests results show low, medium; high, very high; along with zinc & copper
- During nutrient management planning, additional analysis PLAT – (Phosphorus Loss Assessment Tool)
- Federal or NPDS have to complete plans regarding Phosphorus every 5 years
- There are some application setbacks already in place - 25' set back on pretty much everything but swine
  - 25' setback from a stream or 100' from a well
- For the nutrient strategy, have to decide if we want to recommend additional setbacks
- Julie noted with nutrient management plans, need to be careful, knowing pasture folks don't apply nutrients at recommended amounts. With Jordan we made the decision that it would increase fertilizer or organic application
- Farmers apply less than recommended because it's expensive or if you're using litter, you're conservative because you don't have a lot
- Phosphorus generally doesn't travel; soluble Phosphorus moving through NC soils is a concern; PLAT tool accounts for soluble Phosphorus
- Joey: If there is any part of residuals, we need to hone in on, that's part of the conversation
- Lee shared PLAT is site, field-specific. It can be cumbersome – lots of charts and data entry. All-encompassing analysis and record keeping as well
- The PLAT results determine how you meet the crop needs. Low-medium applying on a Nitrogen rate. High means you're limited to crop removal of that particular crop. Very high means you can't apply animal waste/source to that field at all
- PLAT is time intensive. Staffing is a concern

#### Key Questions

- Edgar Miller asked questions about Phosphorus that has emerged through this process. Back to 2015 survey. 14% over fertilized and 57% did not need Phosphorus fertilizer?
  - It didn't trigger high or very high, so there wasn't a need for it – didn't have a Phosphorus deficit

- On general permit for swine, dairy and wet chicken litter, doesn't require PLAT analysis unless you are getting cost share through state or federal
- Rich: Did Deanna break out over-application by type of waste?
  - No. Just organic and inorganic waste

#### **b) Livestock exclusion**

Input from TAG members were all over the map about how to address:

- Education
- Technical assistance
- Regulate stream access
- Allow flash grazing
- Funding
- Tax credits
- Fines
- Drinking water fee assessment

#### **Key Points**

- Joey: Could we set a requirement to get all livestock out of streams by a certain date?
- Julie suggested being cautious in framing that way. It would be more palatable to set a target % of streams included and timeframes
- What is a waterway? Controversial
  - Joey: Could say “out of all perennial streams” or “to the extent practical”
- Keith: getting animals out of the streams also means animals need new water sources
  - Dwayne: \$60/month to water cows
  - Adam: \$15-20K getting well installed
  - Allison: when there’s power bill or water bill if you have to use County water
- Allison: trees are also usually by streams and cows need shade
- Allie: Who is farming in this watershed? Farmers not farming as their sole income – consider the burden
- Fencing can impact floodplain management

#### **Key Questions**

- How many cows are in streams now?
- Where does permitting follow into this? What are the practices that might hold up this process?
  - Well goes through County health department, even if digging for cows
- Stream crossing permitting?
  - It depends on the amount disrupted

#### 4. Collective Compliance – How does it work

- Overall Nitrogen loss reduction mandate applies in Neuse, Tar-Pamlico, Falls Lake, and Jordan Lake
  - Crop acres + fertilization rates + BMPs + yield expectations + NUE + soil groups  
Nitrogen loss estimate
  - All fields in watershed combined
  - Measured at “edge of management unit” (i.e. field boundary)
  - Loss at field, not loading to stream
  - Measured against baseline
  - Includes major crops, but not all
- Phosphorus loss tracking requirement applies in Tar-Pamlico, Falls Lake, Jordan Lake
  - Qualitative, not quantitative
  - Risk up or down
- Pasture Nitrogen loss reduction mandate applies in Falls Lake and Jordan Lake
- Ag Reduction Progress – data show that reductions start strong then tapers off for a number of reasons
  - There was a concentration of new resources in a limited timeframe that
- How is High Rock Lake different? Dominated by pasture compared to cropland. Fundamentally different from the other ones we have regulated

#### 5. Where to from here? DWR Staff Recommendations

Joey presented:

- Most TAG recommendations have been non-regulatory
- What we’ve learned from other watersheds is when funding is available, implementation happens
- No capacity to expand and re-design NLEW
- Pasture dominated watershed and it behaves differently than other watersheds which have more cropland
- Phosphorus is key for freshwater reservoirs like High Rock Lake; in NC we started with strategies focused on estuary-based which focus on Nitrogen. The approach we’ve taken elsewhere needs to be reconsidered
- At the staff level, DWR is comfortable with a non-numerical reduction target to regulated agriculture – and an incentive-based process, as long as there is accountability
  - Emphasis that this is from the staff level; don’t know about Director level or EMC
- In lieu of NLEW modeling, track and report on progress
  - What should the report include?
  - In other watersheds, there are committees per county which are time-consuming

- Pool resources – format to share data collection load with Allie

## Responses & Questions

- How do the local committees gather data?
  - Series of questions that are either positive or negative – look at the whole
- Allie: Woted being intentional about timeframe – recognizing generally most reductions occur in first 10 years and then 5 years
- Julie: Would love for Deanna’s study to be conducted at regular intervals – would be a meaningful measure of what’s happening in Ag as opposed to self-regulation
- Edgar: We need some sort of reduction goal – DWR’s work has made a difference – you see it in the charts shared
  - Joey: Yes – you see that in the data and there has been success because stand-alone system changes that contribute to increased reductions after the baseline. For example, there were animal regulations that came to be after the baseline and a lot of the money that resulted by the rules being put into place. Julie added there was work behind the scenes to try to get ahead of the rules – for example grants to support changes – more meaningful and effective way to do the work
- Julie: Assuming there will be stopgap measures. in other rules there are standard BMP option, if you don’t meet it the EMC can tell you what to do
  - Joey – would be part of the process: if you don’t do x, y, z something will happen
  - Implementation targets more useful – in 5 year increments – if you don’t reach, things will happen – eg., more CREP
- Edgar: From a credibility point of view, we have the opportunity to set a goal – if not, how will that fly with other sectors? Would like to see at least a voluntary reduction target
- Keith: Is there a set of reductions with new development stormwater? For example, with the Neuse rules, if new development is supposed to meet a 30% Nitrogen reduction, how does that work? They aren’t reducing overall contributions
  - Joey: there is a pounds load reduction target they have to meet that is 30% lower than approved rule reduction target. Rich: it’s designed to achieve goal on a project-by-project basis
- Edgar: The other challenge is accountability – I’m not necessarily seeking new regulations. When you say this would be non-regulatory. When you look at something like setbacks – could we recommend in this watershed we have requirements that they store litter piles 500’ from streams or they require a 50’ buffer?
  - Joey: Are we allowed to do that if deemed permit says a certain thing?
  - Keith: That’s a question for attorneys

- Joey: There is language in the CWA for waste if it's going to contribute to impairment
- Edgar: Anything we can do to increase transparency and public accountability that the waste utilization plans are in place and being followed – that goes back to inspection and enforcement. Is PLAT required for poultry farmers with cost-sharing? If so, is it a one-time thing?
  - Lee: It is required. At least for the contract. It's a snapshot in time
  - Allison: if it is a new operation and getting a loan, they'll have to
  - Keith: State law is written if you're a poultry grower over 30,000 birds, you have to have a waste plan – whether NRCS does it or a private group. If NRCS does it, there will be a PLAT. If it's a private group does it, may not have a PLAT. Plan is supposed to be updated. If your waste is hauled away, that's different
  - Edgar: Haulers are supposed to report if they are carrying over 100,000 tons, but there is a gap here and not much reporting
- Allie: Just checking – the staff proposal isn't about not having % decrease overall and targets for other sectors – it's just not having them for the Ag sector?
  - Joey: that's correct – there will be number targets in other groups that will have heavy cost objections for other sectors
- Julie: What about existing development?
  - We don't know. Might be opportunity for collaboration – Ag folks and Wastewater sit down together?
- Julie: I understand the perspective we should have a target. From my experience the question is how staff time and capital allocated and what they are focusing on. Looking at trade-offs and what is meaningful
- Grace: When money comes in, there are accountability measures. Maybe other sectors don't have those requirements?

## Next Steps

- Allie: would be helpful to hear what members of Steering Committee would like to see in terms of accountability. What are the questions/ requirements for them to be open to a non-regulatory approach?
- Joey: What does Ag accountability look like to the other stakeholders in terms of tracking and implementation goals?
  - Brent: Of the other TAGS –two groups are money makers and one is funded by taxpayers. Ag profitability is thin. It's mostly education in the Ag sector – most of the time, when farmers know about it, they do it



- Keith: Report from NC State - There are a lot of natural buffers due to the elevation. How many cattle are fenced out already?
- Brent: 20 years ago, dairy started fencing
- Keith: with livestock exclusion – what are we talking about? 50’? or more flexible?
- Julie: Who needs to endorse this idea next? Steering Committee? Up the DWR chain?
  - Joey: We wanted to give you something to respond to – we wanted you to disagree and share different perspectives. We can’t promise anything
  - Rich: For the purpose of this group, recommendations go to the Steering Committee and they might be have feedback
  - Julie: What do I want to ask my colleagues to contribute to?
  - Joey: When a recommendation comes from this group, your underlying data will have to show this
  - Allie: Don’t want to work on recommendations that the Steering Committee is going to reject. Want feedback along the way so it’s palatable to them and to us
- Lee: As a conservation agency, we want to maintain or improve conservation dollars – if we can do voluntary conservation programs we can lessen the financial burden and it’s a win-win for everybody
- Allison: If we can amend some of the policies to help encourage lands to stay in ag production, environmentally friendly and cost-effective before there’s a problem
- Allie: NC is second in the country in terms of land loss and it’s growing in this watershed. Is there collaboration in ag and development to help meet goals?
- Allison: Development drives land prices, puts farmers out of business, developers are buying up the land because they have the money