

High Rock Lake Nutrient Rules Steering Committee Meeting 4 Notes

July 28, 2023 / 10 am – 12 pm / Virtual via Zoom

Meeting Goals

For Steering Committee members to:

1. Reach consensus on whether HRLNMS will include area that drains to W. Kerr Scott Reservoir
2. Reach consensus on whether HRLNMS will include additional regulations for septic systems
3. Identify and redistribute uncontrollable loads

Participants

Steering Committee members: Andy Allen, AnnMarie Clark, Jim Crawford, Bill Davis, Alexandra (Allie) Dinwiddie, Danica Heflin, Keith Huff, Bill Kreutzberger, Keith Larick, Jon Lowder, Grady McCallie, Andrew McDaniel, Grace Messinger, Edgar Miller, Chris Millis, David Saunders, Helen Simonson, Justin Somers, Judy Stalder, and Jonathan (JD) Williams.

DWR Team: Rich Gannon, Jenny Graznak, Joey Hester, Ellie Rauh, and Lon Snider

DSC Facilitation Team: Maggie Chotas, Will Dudenhausen, Paura Heo, Ian Ramirez, and Laura Swartz

Meeting Summary

Agenda Overview

- Welcome, Introductions, Purpose, & Agenda
- Steering Committee Meeting Trajectory
- Consensus items
 - NMS to include area that drains W. Kerr Scott Reservoir?
 - NMS to include additional regulations for septic systems?
- How will the Steering Committee identify and redistribute the uncontrollable loads?
- Identify Next steps
- Closing

Decisions made in the meeting

- The Steering Committee reaches consensus and agrees to include the area upstream of WKS in HRL NMS.
- The Steering Committee does not reach consensus and will continue to explore whether or not to include additional regulations for septic systems in HRL NMS.
- The Steering Committee identifies uncontrollable and redistributable sources.

What's Next / Action Items from the meeting

- Joey Hester and respective committee members will prepare a report presenting majority and minority opinions regarding the identification of septic systems as un-/controllable, redistributable/non-redistributable source.
- The next Steering Committee meeting will be on Wednesday, September 27, 2023 from 10a - 12pm; details forthcoming.

Key Links (for Quick Access)

- [Updated Charge Document](#)
- [Steering Committee Mtg5 Supporting Materials](#)

Detailed Summary of Meeting

Introduction, Purpose, and Working Together

- The Steering Committee meeting was attended by its regular members listed above. Danica Heflin was present in place of Grace Messinger as a representative of PTRC.
- Kin Hodges, a representative from NC Wildlife Resources, planned to attend this meeting. He had a last-minute conflict, so was not present.
 - Mr. Hodges forwarded information to DWR to share with committee members.
- Will Dudenhausen of DSC reviewed the committee's Working Agreements and shared the definition of consensus, per The HRL Engagement Process Charter.
 - Consensus requires the active participation of everyone in the group and an atmosphere where disagreements are respected. When someone

disagrees, the goal of the group shall be to discover the reason for the objection and to find a way to work toward meeting that need in a revised agreement. Consensus is being defined as at a minimum, "I can live with and support the decision."

Steering Committee Meeting Trajectory

Joey Hester provided the below status updates from each of the TAG's. He noted that the committee will continue to meet through the fall to review final TAG proposals.

Mr. Hester emphasized the need to reach consensus on the open items (listed under Meeting Purpose) since there will continue to be a lot of information to review in future meetings.

Technical Advisory Group (TAG) Status Updates

Wastewater Technical Advisory Group (WW TAG)

- Wastewater TAG has submitted a proposal.
- The Yadkin-Pee Dee River Association and their representatives have countered.
 - DWR is reviewing the counterproposal.

Agriculture Technical Advisory Group (Ag TAG)

- Reached consensus on the reporting process
- Is making incremental progress towards engagement with representatives from poultry producers
- The group still needs to discuss industry (human and animal) waste issues.

Stormwater Technical Advisory Group (SW TAG)

- Approved jurisdiction applicability
 - SW intending to regulate the entire watershed, uniformly
- Working at a high level to review and define a New Development Goal and Post-Construction treatment requirements
- Many topics of interest to discuss still with Existing Development rules
 - One Water Approach
 - Outside stakeholder issues, nutrient trading, etc.

Riparian Buffer Technical Advisory Group (Buffer TAG)

- DWR present an initial proposal that the Steering Committee has seen.
- Buffer TAG had concerns about this initial proposal, so the group is preparing a report stating majority and minority positions on the issue of buffer width.
- Findings from that report will be available at the next Steering Committee meeting.

Consensus Item #1

Steering Committee is charged with determining whether or not to include the subwatershed above W. Kerr Scott Reservoir in the HRL NMS.

Joey Hester refers members of the Steering Committee to "W. Kerr Scott Reservoir Watershed" document. He provides the following information for context.

Key Considerations.

- Tetra Tech's 2012 model excludes the area upstream of the W. Kerr. Scott Reservoir.
- Inclusion of the entire watershed means mandates would apply from High Rock Dam all the way up to the headwaters.
 - Would begin at Blowing Rock, NC
 - Would include Alexander and Caldwell Counties
 - Topography upstream is very steep in some areas.
- Per Wildlife Resources Representative Kin Hodges (who was not present at the meeting, but provided this information); fish communities have thus far responded favorably to the increase in nutrient productivity, however:
 - Certain days are experiencing worse conditions
 - There is a risk that unmanaged loading will result in unpredictable future impacts.
- At baseline, the area upstream of the reservoir was 8% agricultural and 6% developed
 - Agriculture: 8%
 - Pasture is the primary agricultural use
 - Apple orchards
 - Edgar Miller notes there are nurseries and many hundreds of acres of cropland (corn)
 - Mr. Miller notes there is a sturgeon farm that uses the river to dispose of waste.
 - Development: 6%
 - Little urban development
 - Roadways, parking lots, some residential development
- At baseline, the area upstream of the reservoir was about 80% forested
 - If included in the High Rock strategy would be subject to the forest harvest provisions of the riparian buffer rule, benefiting both W. Kerr Scott Reservoir and High Rock Lake.
- The bulk of nutrient source activity in the watershed is agricultural
 - Inclusion of the watershed under an agriculture rule would extend the focus of potential agricultural management improvements to deserving activities in the watershed, benefiting both W. Kerr Scott Reservoir and High Rock Lake.
- Joey Hester shares that most agriculture use in the area is in the form of pasture.

- Joey Hester notes croplands and poultry houses are observed via aerial imagery (NLCD)
 - There are even more poultry houses present now than at baseline.
 - Poultry houses are close to streams.
- Edgar Miller notes that he has observed several nurseries and hundreds of acres of corn. (Mr. Miller will try to get an estimation of acreage from farmers in the area).

Key Points

- Tetra Tech excluded the area upstream from W. Kerr. Scott Lake Reservoir from modeling due to insufficient data, not due to limited biological influence.
- DWR does not currently have modeled loading estimates of the various nutrient sources above the reservoir. Instead, in the High Rock watershed model, a simplified approach was taken using a single loading value for the water leaving the dam (see below).
- The reservoir has recently transitioned from mesotrophic to eutrophic (sometime between 2016 and 2018).
- Currently impaired for chlorophyll-a & pH
 - pH impairment often linked up with chlorophyll-a because they are linked biologically
 - W. Kerr Scott Reservoir is violating the state's water quality criteria for pH; impairment necessitates remediation plan regardless of HRL status.
- Reservoir performs some "treatment" of incoming loads due to sediment settling and nitrogen cycling.
 - Overall upstream is likely higher than the dam outflow contribution.
- Upstream catchment contributes a relatively small portion of overall nutrient loading to HRL
 - due to size
 - due to attenuation: the distance from W. Kerr Scott Reservoir to HRL is significant and nutrients are cycled over that distance.

Discussion

- Bill Davis firmly states his support for inclusion of WKS in the HRL NMS. He notes that the water quality upstream affects the river even if it may not affect HRL. And, anecdotally, he shares that the water quality of the Yadkin River has been impaired at various times since the 1990s, to the point, where swimming in the river was not recommended.

- Mr. Davis goes on to say that presently they are utilizing a \$500k grant to clean up debris and trash from the Yadkin River.
- Jonathan Williams also voices his support for inclusion. “At the upper reaches of WKS reservoir there is infilling and a lot of sedimentation.” Mr. went on to emphasize, “...and, we know that sedimentation and nutrient loading go hand-in-hand.”
- Grady McCallie poses this question via chat: “If you regulate WKS to manage conditions in the reservoir, is that more or less stringent than managing nutrients at the HRL watershed boundary (for HRL)?”
- Joey Hester cannot speak to nutrient sensitivity at WKS nor HRL. Joey Hester defers to Lon Snider regarding sensitivity to nutrient loading. Mr. Hester makes this point regarding buffer applicability, however.
 - DWR has proposed for a buffer rule to be consistent across the watershed.
 - Joey Hester emphasizes the need for stakeholder feedback regarding the steeper terrain in areas upstream.
 - Sloping in the far northern areas upstream of WKS change the implications of a 50-ft buffer rule.
- Lon Snider is not able to speak to specific sensitivity. He notes that he would want to see stratified data from the lake before speaking to its sensitivity to nutrient loading.
- Bill Kreutzberger weighs in.
 - He notes that summary data indicates that WKS contains trout waters.
 - Impairment is considered at 15 ug/L for trout waters, as opposed to 40 mg/L for standard waters.
 - Mr. Kreutzberger describes WKS as more likely to be sensitive to loading.
 - WKS waters visibly tend to be clearer, especially in drier weather
 - Less room for productivity increases, given sensitivity of reservoir species
 - Kerr Scott Reservoir, secchi depth = 1-2 meters
 - (Bill Kreutzberger thinks HRL secchi depth is at most 1 meter)
 - Mr. Kreutzberger also states that there is flexibility to have different buffer rules for steeper terrains.
- Edgar Miller recently collected data at HRL. He shares this data with the Committee members.
 - Confirms Mr. Kreutzberger’s statement; HRL secchi depth is ~1-2ft max
 - Last sample revealed chlorophyll-a levels at 35 ug/L
 - Depth-integrated sampling is not performed, so Mr. Miller would like to understand sampling methods DWR would use to determine the secchi depth figure(s).
 - Mr. Miller asks what the chlorophyll-a standard is at WKS?
 - Bill Kreutzberger notes that the documentation states that WKS chl-a standard is 15ug/L
- Edgar Miller supports inclusion of the upstream area for the following reasons.
 - Bill Kreutzberger’s statement indicating that WKS includes trout waters (the main body)

- Joey Hester's note that the reservoir is a water supply source
- The Yadkin River Association is working to include the upper part of the river in the Yadkin River State Trail/Park.
 - o 25mi of the Yadkin River above WKS is Happy Valley, much of which is farmland along the river = will need protections
 - o The last 20mi up to the mountains is where there would be outstanding resource waters.
- Grady McCallie voices his support for inclusion of WKS in the strategy citing that uniform regulation would not overcontrol while also potentially benefitting the area upstream of the reservoir.
- Rich Gannon says he appreciates the specificity of the information, further stating that it would be a long time before DWR (the division) would be able to get to a structured management strategy for WKS. Rich says it would be unfortunate and a missed opportunity to exclude it now. He adds, "we have yet to include a strategy that overcontrols for any water body..."
- DSC Facilitator notes that a majority of the opinions were in support of inclusion. Will Dudenhausen specifically requested counters to voice their opinions or concerns.
- Andy McDaniel noted that while he supports inclusion of the areas upstream in HRL NMS, he also sees an opportunity to explore easy options for nutrient management, especially, before increased urban development.
- There were no members opposed to inclusion, and the Steering Committee agrees to include the area upstream of WKS in HRL NMS.

Consensus Item #2

Steering Committee is charged with determining whether or not to include additional regulation for septic systems.

Joey Hester shares that additional regulations for septic systems are not included in other strategies. DWR proposes not to include additional regulation except in Existing Development.

Key Points

- Tetra Tech made estimates of the nutrient loading associated with poorly functioning septic systems in the watershed. This included developing quantitative estimates of failure rates, population using on-site wastewater systems, and malfunction discharge concentrations.

- The breakdown of this analysis is shown in **Figure 3-8**.

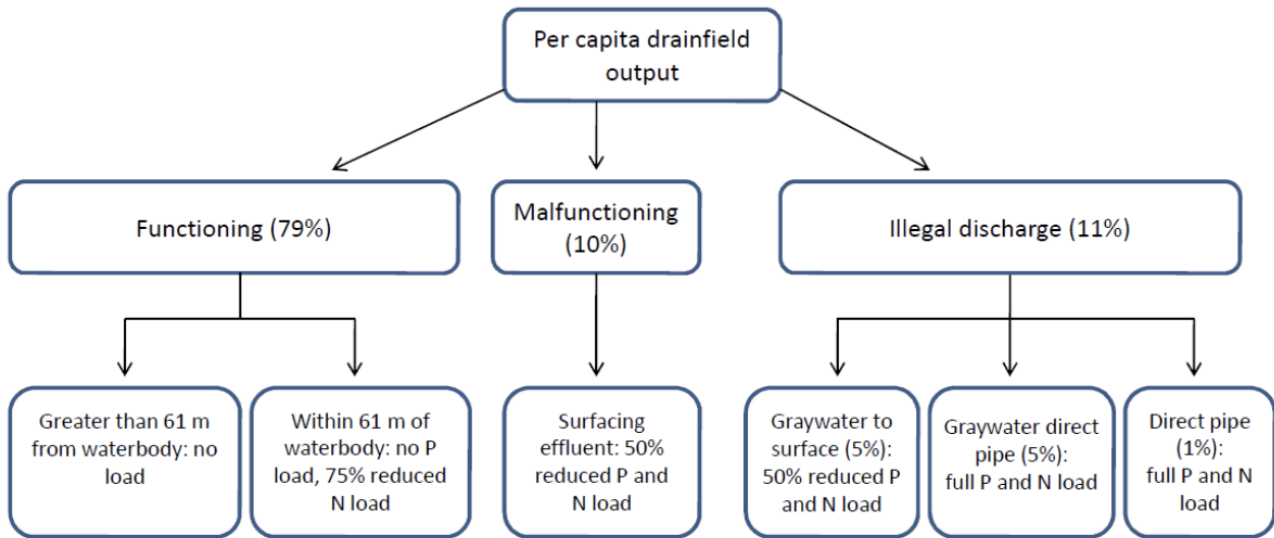


Figure 3-8. Conceptual Representation of Approach to Septic Systems

- Based on their model, Tetra Tech summarized the following key assumptions.
 - *The percentages for determining loading conditions presented in Figure 3-8 were first applied to any census tract in the study area.*
 - *Assumed failure rate of 10 percent.*
 - *Assumed one percent of systems represent straight piping of wastewater effluent.*
 - *Gray water, water that has been used in the home such as dish washing, shower, sink, and laundry. This excludes sanitary wastewater.*
 - *Non-failing systems within 61 meters (200 feet) of a waterbody were assumed to have no delivered phosphorus load and nitrogen concentrations that were equivalent to 25 percent of soil water quality concentrations at 1.2 meters drain field depth. The nitrogen was assumed to be all in the form of NO₃.*

Since baseline, there have been several regulatory changes related to septic systems. Joey Hester shares these regulations.

- 2006 – The North Carolina Onsite Wastewater Contractors and Inspectors Certification Board, an independent Occupational Licensure Board that administers the certification of septic tank system installers and Time-of-Sale Inspectors, was developed.
 - There were no protocol or procedures in place prior to this legislation that qualified the persons installing septic tank systems or conducting

time-of-sale inspections of existing septic tank systems at time of real estate transfer.

- 2015 – legislation passed that established the Engineer Option Permit as an option for developers and homeowners in obtaining a permit for the installation or repair of onsite wastewater systems.
 - Prior to this legislation, only the local environmental health departments within the counties, acting as authorized agents of the State were able to evaluate sites, design systems, or act as an agent of the owner.
- 2018 - legislation passed that established a “hybrid” protocol for obtaining a permit from the Local Health Department.
 - The owner hires a licensed soil scientist to do soil and site evaluations and then transfer the signed and sealed document to the LHD for continuation of the permitting process.
- 2019 - Authorized Onsite Wastewater Evaluator was created by Session Law.
 - This requires a Licensed Soil Scientist to obtain another level of training and gives the Evaluator the ability to permit sites where non-engineered systems are mandated.
- 2021, 15A NCAC 18E wastewater rules were adopted which added private sector abilities to not only better expedite the turnaround of permits, but to also make sure there were better qualified professionals to conduct site evaluation.

Key Considerations

- The overall proportion of baseline nutrient loading from septic systems is 1%, and the impact to other sources of redistributing is negligible.
- Septic system malfunction repair is already required by state statute and County-level health departments.
- Illicit discharge detection and elimination is already a component of municipal MS4 Stormwater permits.
- The landowners most likely to need repairs are the least likely to perform them without outside assistance.
- Under an existing development rule framework, local jurisdictions traditionally have trouble identifying and funding load-reducing retrofit and repair projects.
 - Retention of septic repair as a nutrient load reduction credit will be a valuable tool for compliance.

Discussion

- Grady McCallie, voiced that he was one of the primary advocates for additional regulation. He was impressed by the data DWR prepared.
 - He shared he would like to focus on providing funds for low-income landowners to repair malfunctioning systems.
- Andy McDaniel notes that septic systems being a point source for nutrients indicates that there is some failing in existing programs to manage failures. He thinks that there could be opportunities for additional rules to better manage septic failures (beyond nutrient credits in ED Rules) citing a One Water Approach.
 - There is a brief exchange regarding language, “uncontrollable” sources. Joey Hester operationally frames the word within the NMS. “Can the strategy effectively control the source?”
 - Atmospheric Deposition- controllable through emissions caps and reductions, but it is not controllable through a NMS.
 - Areas to explore – can local governments provide further insights (via basic reporting: total number, how many have failed, etc)?
- AnnMarie Clark offers up language to insert into NMS; “Landowners must comply with state regulations.”
 - Joey Hester notes that the redundancy would not serve the strategy because the rules themselves are not shared with landowners.
 - The report that comes out of this committee can recommend or advocate for stronger enforcement of existing regulation.
- Rich Gannon confirms that DWR would not be able to insert the type of rule language that AnnMarie Clark offered for HRL NMS. Instead, Mr. Gannon shares these opportunities outside of the rules to address known concerns;
 - Include strong language in the Management Recommendations outside of rules for better enforcement of existing local government regulations
 - Advocacy for funding for underserved communities needing financial assistance to repair malfunctioned systems.
- Mr. Gannon reflected that Andy McDaniel stated that he would not, not support additional regulation, meaning he could support DWR’s recommendation of excluding additional septic system regulations.
 - Andy McDaniel confirmed that this was the case.
- Bill Davis agrees with Andy McDaniel regarding language; if septic systems will be part of a strategy within the new development rule, then it should not be counted among the uncontrollable sources to be redistributed.
 - Joey Hester notes that this item would be discussed further in the next topic segment.

- Edgar Miller notes that baseline data indicating that septic systems account for 1% of overall nutrient loading is dated. He notes these points;
 - County Commissioners have doubled lots sizes in some areas of HRL
 - There has been much new development by the lake since 2006, all of which require septic systems.
 - Speaking directly to Danica Heflin, not that this indicates a community need for sewer
 - Flags single family residential discharges by the water as a large concern
 - Ultimately, he expressed that he was not opposed to supporting DWR's recommendation.
- Judy Stalder supports DWR's recommendation, to exclude additional regulations; stating that septic is a small source that is already regulated. She adds that if any funding is available, it would be better applied elsewhere.
- Jonathan Williams brought attention to non-MS4 communities. MS4 communities are regulated by the State-permitting process. These communities tend to be located in more urban areas, so there would likely be connected to city sewer.
 - Non-MS4 communities, smaller, older communities.
 - The larger issue is one of County health departments and their capacity for adequate inspection beyond the initial permit.
 - Even though septic systems add a small nutrient load, overall, they ought to be seriously considered.
 - Mr. Williams also expressed concern over Edgar Miller's statement about the explosion of new development, since 2006.
 - Stresses the importance of tracking these systems in collaboration with local governments.
 - Suggests inspections every five years for lots closest to the water in HRL watershed.
- Lon Snider notes that inspections would pose a great challenge to County health departments.
- David Saunders shares that his thoughts are shaped by 30+ years of public service in the wastewater sector.
 - Mr. Saunders notes that over time even the best maintained systems, will fail. He added that based on increased development especially around the lake itself his concern is that areas will run out of repair area, or the soils will not be able to support additional work.
 - Even though the overall contribution is small, Mr. Saunders thinks that the proximity of the systems to the lake (they would be the closest point source) warrant further exploration into control measures.

- He states, “we know the impact of aging and failed systems.... Nothing that there are POTW’s even for small package plants.”
- Even if some of the options are expensive or challenging in the short-term, in the long-term they may ameliorate loading from failures of the systems installed (since 2006).
- Would like to explore alternatives before placing it in the redistribution bucket.
- Maggie Chotas informs the group of that the time limit for this subject has been reached. She summarizes the overall sense of the Committee on the present issue, while urging for clear intention and action for the meeting moving forward.
- Joey Hester requests rule language that addresses the primary concerns of those Committee members holding countering opinions.

Committee members discuss various components of what might comprise a rule to address septic systems in HRL. Below is a summary of the primary items discussed.

- Andy McDaniel is compelled by the inefficient inspections process.
- Danica Heflin states that even within MS4 communities, IDDE was the most difficult aspect of the process.
 - Little to no training offered for disposal and elimination
 - Hazmat issues are costly in human and financial resources
 - Suggests a focus on education and sound tracking with a regional team for disposal and elimination aspects of the process.
- Mr. McDaniel also wants to know how Tetra Tech determined the figure for percentage failure, 1%.
 - Joey Hester notes that Tetra Tech based this rate on key assumptions from the data they collected.
- With further input and based on primary concerns voiced by David Saunders, Andy McDaniel, Edgar Miller, and Jonathan Williams, Joey Hester proposes this rule language, as an example;

Require Illicit Discharge Detection and Elimination in non-MS4 jurisdictions across the entire HRL watershed within X ft of surface waters, to be reported to DWR every X number of years

- The committee was called to vote on whether to continue exploring septic systems as a controllable source.
- A majority of the committee supports further exploration of rule(s) in HRL NMS to control for septic system failure.

Minority opinions summarized below

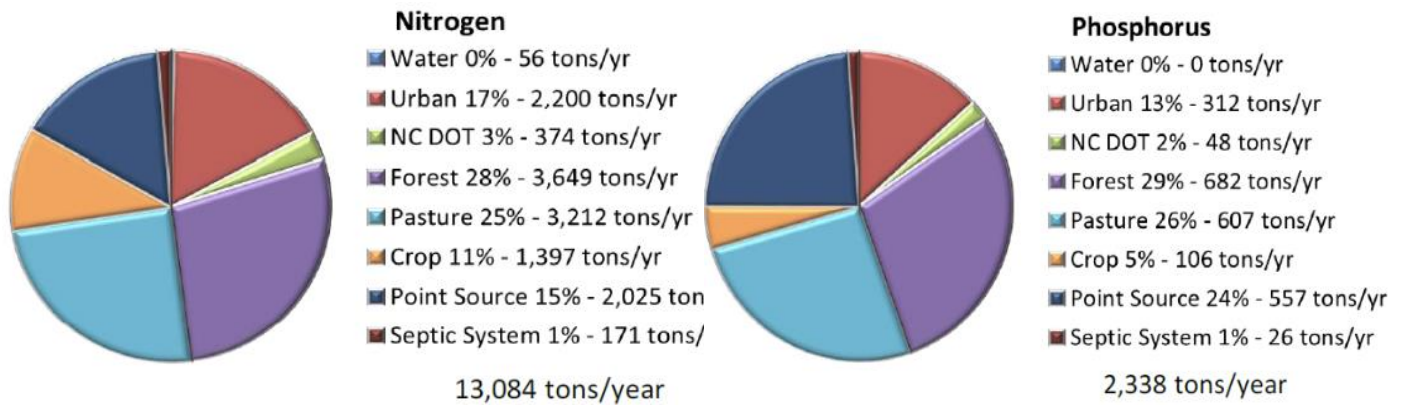
- Judy Stalder notes that in her experience working with regulatory bodies, new rules in stormwater were ineffectual. They were difficult to enforce, confusing and costly.
 - She cites little training and education for implementation of such new rules causing delays and legal issues.
 - Ms. Stalder is adamant that additional regulations are not worth the time nor the funds to explore as a controllable source.
 - Judy Stalder notes, “This kind of regulation would complicate our rules and the NMS.”
- Chris Millis succinctly states that the existing regulations would make additional regulations in HRL NMS redundant.
- Alexandra (Allie) Dinwiddie shares that her counter is based on the recent completion of another project.
 - She thinks inspection could be beneficial to reduce the contribution to nutrient loading.
 - However, she does not believe that additional regulation could be effectively implemented at this time based on a variety of factors, including local government and State resources.
 - Ms. Dinwiddie also expresses concern over data and reporting and privacy.
- Overall, the entire committee would like to be mindful regarding the time spent on researching this issue further and the results.

Identification and redistribution of uncontrollable loads

Steering Committee is charged with identifying which source loads are uncontrollable and which will be redistributed.

Joey Hester provides some context around the Clean Water Act mandate and nutrient source modelling that necessitates the identification and redistribution of loads. He explains, “when we set a reduction goal, attributing (and redistributing) it helps quantify the load reduction need.”

The graphs show pounds per source per year from Tetra Tech's baseline data (2006).



For the area upstream of Kerr Scott reservoir, there is neither model nor a data breakdown per source. Dam outflow as a whole is identified as a redistributable load, understanding that the reservoir itself acts as a “treatment” measure.

Sources that have been identified as uncontrollable in other strategies: atmospheric deposition, forest, septic systems, and we would include W. Kerr Scott Reservoir for HRL NMS.

These sources are all included the model with numeric values for load catchments.

1. Atmospheric Deposition (Nitrogen)

Given the model findings demonstrating a 20% reduction, we consider the question of whether to redistribute atmospheric loading to be insignificant for purposes of establishing overall reduction goals. For Nitrogen, our tentative scope was in the 20% reduction range, so we would propose not to redistribute it based also on the following additional factors:

- Total atmospheric nitrogen deposition in the area has been reduced by 20% since the 2006 baseline (see below).
- Continued reductions in atmospheric nitrogen deposition can be expected, attributable to stationary source and vehicle emission air quality regulations.

After much discussion, the group is in agreement. Atmospheric deposition is identified as uncontrollable. It will not be redistributed to other sources since the goal has already been achieved and is expected to be maintained.

2. Forest is considered uncontrollable because for the nutrient rate export/per land area, it is not possible to see a 40% reduction. It is the optimal land use or condition, so it could be considered the baseline of what is most desirable. We would not expect to achieve a reduction from Forestry.
- Edgar Miller had a difficult time understanding how there could be a zero-reduction potential for Forestry.
 - Joey Hester shared that there are forest provisions in the buffer rule but they would not result in a nutrient reduction. In terms of meeting the NMS mandate, Mr. Hester says forest is uncontrolled. And that this is consistent with other watersheds.
 - Andy McDaniel expresses some dissatisfaction with this exercise, noting that the cumbersome mathematical model takes away from the accessibility and the true intention of the NMS. He firmly believes that they should develop a NMS that will be successful as opposed to continuing to do what has been done in other watersheds.
 - Grady McCallie backs Mr. McDaniel up and notes that the confusion of allocations could have been handled differently from the beginning. He notes that forestry is not a source of excess nutrient loading. However, based on Tetra Tech's model, it was given a piece of that pie.
 - It is frustrating because it is not the source of the excess. But, yes it makes sense to call it uncontrolled.
 - What matters is that the direction and the speed of improvement and the steps we take in the watershed to make things better. I think we have the flexibility to comply with the rules without being burdened by measuring every pound but by being resourceful and collaborative. Mr. McCallie shares he is most excited to be having those conversations.
 - Allie Dinwiddie asks: "If Forest is uncontrollable does that remove it as an option for nutrient credits?" And, Joey Hester clearly responds, "No."
 - Andy McDaniel shares that Instead of spending too much on these allocations, focusing on concepts that are adaptable would be constructive.
 - Joey Hester responds that the mathematical models and negotiations are necessary in order to comply with the Clean Water Act mandate.
 - Due to the modeling data, these allocations and figures are required to have the modelers sign off on the NMS.
 - The NMS specifies a lake nutrient reduction goal that we have to measure compliance with and we are charged with deciding which sources are included in the assessment.

- Regardless of whether they are actionable, we need them as a compliance measure and they are meaningful for wastewater, and more specifically, point source dischargers.

3. DWR recommends that septic systems are identified as an uncontrollable source whose load is redistributed.

A majority of the members of the Committee who were in favor of exploring opportunities for septic system controls express strong interest in not identifying septic systems as an uncontrollable source and not redistributing the load.

Counters who support septic systems as an uncontrollable and redistributable load are DWR: Joey Hester, Rich Gannon, Allie Dinwiddie, Keith Larrick, Justin Sommers, and Judy Stalder. A majority/minatory report will be prepared describing the two positions.

4. W. Kerr Scott

Since Tetra Tech's model excludes the area upstream of the dam, there is no nutrient source breakdown. Source load is combined and identified as *dam outflow*.

- Joey Hester presents a spreadsheet that includes the figures for baseline loads for Nitrogen and Phosphorus. As he manipulates the percent reductions, the figures across the sources increase or decrease accordingly.
- For Nitrogen, if we are working towards a 40% reduction, then apply uncontrollable loads, we see we need to reach 54% in aggregate. Since we are including the area upstream of WKS, and let's say that area is 80%% forested, then that becomes 53%.
- Bill Kreutzberger states that his remark was just demonstrated by Joey Hester. Even if there were more controllable sources upstream, the reservoir itself is a treatment unit, so we would assume not that anything we do upstream would affect the outflow. Mr. Kreutzberger follows up with his support of Mr. Hester's assessment thus far.
- Mr. Hester and Mr. Kreutzberger emphasize that the +/- 1% is what we are discussing.
- Joey Hester notes that other areas (Ag, SW, WW) will need to overperform to get us to an overall reduction goal. Furthermore, he states "We understand that this is a necessary evil."

- While these figures may not be actionable for all areas/groups, they have very real implications for how expectations are set (especially for wastewater).
 - We are charged with provided a limit and that limit should be grounded in real science. We need to identify and redistribute sources so that we can give modelers final numbers that are definitive and defensible in court in case a party wants to challenge our authority in Court.
- David Saunders, states that he represents a group of stakeholders. He would like to table the vote until he can educate the Basin Association
 - Joey Hester urges the committee to move forward. To David Saunders he shares that this question is high level and would not require the input (at this present time) of the entire Basin Association.
 - Furthermore, he explains that there is much work that will be required in meeting moving forward. He would like to see a vote today
 - David Saunders recognizes this and abstains from voting.
 - Andy McDaniel notes that since wastewater is primarily affected by the operationalization of the management of the goal in their rule, he would like to hear from a wastewater representative.
 - Bill Kreutzberger explains that the objective of the wastewater TAG has been to evaluate various levels of technology in nutrient control and determine what type of reduction is most reasonable. He continues, ““What I can say is that mid-50s for phosphorus and mid-20s for nitrogen puts us at midlevel nutrient reduction targets. It is not as extreme in the Neuse case where the reductions put them at their limits in technology. If we are using something like Joey Hester showed in his spreadsheet, then we are in the midrange.”
 - The DSC notes ensures process integrity by checking to see that members can stay on longer, since the meeting time is near its end. All members note they are available to stay on and it is agreed that the meeting will run until 12:15pm.

Joey Hester calls to question the final items regarding identification and redistribution.

Should we redistribute baseline loads from forest, septic systems, and WKS reservoir?

- Will Dudenhausen asks if any member opposes Forest as uncontrollable and redistributed.
 - Grady McCallie states his support for forest as uncontrollable and to be redistributed.
 - Mr. Dudenhausen asks if any members are in opposition?
 - There are none and the Committee reaches consensus.

- Regarding septic systems; Edgar Miller interjects, “I thought in our last discussion we had said we were going to keep septic separate.”
 - Andy McDaniel voices agreement to identify septic systems as controllable.
 - Joey Hester clarifies that DWR’s recommendation will be to identify septic systems as uncontrollable and redistributed.
- Septic systems as uncontrollable and redistributable is called to questions.
 - Minority opinions are held by Allie Dinwiddie, Joey Hester, Rich Gannon, Keith Larick, and Judy Stalder.
 - Majority/minority opinions will be reported.
- W. Kerr Scott reservoir, as 80% or 100% redistributed is called to question.
 - Grady McCallie voiced his support for an 80% redistribution since 80% of the area upstream was forested at baseline collection.
 - Mr. McCallie clarified that he would support 100% redistribution as well.
 - Edgar Miller asked for a clarification around WKS as an uncontrollable source; “does this mean we accept the outflow as is?”
 - Joey Hester responds with an affirmative.
 - Joey Hester asks if members of the Committee could all live with 100% redistribution of WKS reservoir’s baseline load. All are in agreement.
 - Committee reaches consensus for 100% redistribution.
- As a final clarification, Joey Hester calls to question atmospheric deposition as an uncontrollable source that will not be redistributed. The committee is in consensus on this matter, as well.

The below table summarizes the Steering Committee’s final identification of sources. Cells highlighted in green contain the items on which members have reached consensus.

Nutrient Source	Uncontrollable?	Redistributed?	
1. Atmospheric Deposition	YES	NO	
2. Forest	YES	YES	
3. Septic Systems	Minority - YES	Minority - YES	
	Majority - NO	Majority - NO	
4. W. Kerr Scott Reservoir	YES	80%	100%