

NC NUTRIENT SCIENTIFIC ADVISORY BOARD MEETING SUMMARY
OCTOBER 2, 2020 @ TJCOG
9:30 AM – 12:00 PM
REMOTE WEB MEETING

ATTENDEES

Members / Advisors

Michael Burchell – NCSU
Sally Hoyt – UNC
Alisha Goldstein – Chapel Hill
Josh Johnson – AWCK
J.V. Loperfido – Durham
Andy McDaniel – NCDOT
David Phlegar – Greensboro
Haywood Phthisic – LNBA
Allison Schwarz Weakley - Chapel Hill
Peter Raabe – American Rivers
Forrest Westall – UNRBA
Sandra Wilbur – Durham

DWR Staff www.deq.nc.gov/nps

Rishi Bastakoti
Patrick Beggs
Trish D'Arconte
Nora Deamer
Rich Gannon
John Huisman

Guests

Hannah Barg – TJCOG
Anne Coan – NC Farm Bureau Federation
Maya Cough-Schulz – TJCOG
Jacob Dorman
Stan Fortier
Tim Gannon
Joey Hester – NCDACS
Jason Hunt
Keith Larick – NC Farm Bureau Federation
Alix Matos – Brown and Caldwell
Dan McLawhorn – Raleigh
Sushama Pradhan – NC DHHS
Rick Savage – Carolina Wetland Association
Jen Schmitz – TJCOG
Emily Sutton – Haw River Keeper
Sarah Waickoski – NCSU

DEMLR Staff

Corey Anen

AGENDA TOPICS

1. Introductions
2. Approve May 2020 Meeting Summary
3. Streetsweeping Survey - Jason Hunt, Charlotte-Mecklenburg Storm Water Services
4. Neuse Tar-Pamlico New Development model program update - Trish D'Arconte, DWR
5. Falls Lake Existing Development model program update - John Huisman, DWR
6. Nutrient Credit Practice tracking update - John Huisman, DWR
7. Next meeting agenda
8. NSAB Member Updates - NSAB

Meeting Materials and the NSAB Charter are available online: www.deq.nc.gov/nps

MEETING SUMMARY

Patrick Beggs (DWR) opened the meeting with introductions and a review of the agenda.

The May 1, 2020 meeting summary was approved.

Streetsweeping Survey

Presenter: Jason Hunt, Charlotte-Mecklenburg Storm Water Services

[Jason's presentation slides can be found on the web at the Oct 2 Meeting Documents.](#)

Background

- Decided to do a local pilot study because there was not a lot of information on the performance or cost effectiveness of street sweeping, for example:
 - annuals cost as opposed to up-front costs of other stormwater quality monitoring methods
 - removal of phosphorus, nitrogen, metals, yard waste
- Charlotte streetsweeping is funded by the solid waste program, not the stormwater department.
- Surveyed Phase 1 communities in NC and selected a few cities that already had a good sweeping program (14 municipalities total).
- How does Charlotte's program compare to other municipalities?
- Should we be doing more?

Results of the Survey

- Found that it was a cost-effective approach to removing pollutants
- # of sweepers, annual costs and curb miles maintained were the most important survey questions
- Sweepers: all different types and brands were used
- Total cost per year (minus equipment costs): lots of variability, between \$50,000 and \$6 million
- Miles maintained seemed to be a better metric than miles swept/year. Most municipalities keep track of what they are responsible for sweeping but not year to year mileage data
- Most municipalities swept to improve water quality.
- Most municipalities collected data about tons of debris collected, miles swept
- Seattle sweepers equipped with scales – has a robust sweeping program

Next Steps

- Charlotte using this information internally to determine how much more time, money, and energy to invest in sweeping program.
- Upper management discussing and proposing how to move forward.

- May reach out to the private sector to gather more data.
- Sweeping is valuable, and Charlotte could be doing more to be comparable with peers.

Questions and Discussion:

- **Is it hard for municipalities to argue reasoning for street sweeping?** Within the City of Charlotte it has been challenging, it hasn't been a high priority. Most municipalities sweep for NPDES or other permit requirement which provides justification
- **How are you hoping to use this data? More equipment? More staff? Increased frequency, etc.?** There are several impervious locations where it does not make sense to put a bioretention pond, etc. and this is an effective pollutant removal strategy. Water main breaks deposit sediment on streets which end up in the storm drains. One limitation is that it does not impact hydrology unless you are removing debris from a clogged storm drain.
- Durham does not do leaf litter pickup with sweepers, instead there is a city ordinance that requires citizens to handle their yard waste and not put it in the street, but residents can bag their yard waste and put it curbside for the City to pick up.
- **Did you analyze samples with per pound of material collected? How did your results compare to Durham study?** Yes, we chose 4 parking areas to sweep. Every time a parking lot was swept, the content was weighed, and students from UNC-C would collect and dry samples to determine material content and compare pounds of sediment to pounds of metals. There is a slight difference between sweeping parking lots and sweeping streets.
- Surprised that municipalities do street sweeping for water quality. Provides triple bottom line benefit. NCDOT does street sweeping to elongate life of concrete bridges. DOT has some USGS data on bridge sweeping.
- **Catch basin inserts for debris collection?** Hesitant to require them broadly because there is a big maintenance burden. This is more of a site-specific scenario, they are allowed during construction, etc. Charlotte doesn't promote them because they often aren't maintained properly.
- DOT did a study on catch basin inserts, found it was a tremendous maintenance burden even with full-time staff maintaining daily. Autumn poses a particular problem.
- Referencing the strong program in Washington, DC – it is likely it may also driven by the Chesapeake TMDL and its very aggressive MS4 permit based on numerous TMDLs.

Neuse and Tar Pamlico New Development Model Program - Update

Presenter: Trish D'Arconte - NCDEQ DWR

- Based the model program on new phase II stormwater permit template
- Mirrors MS4 permit template
- Broken up into the 6 minimum measurements
- Tied to annual reporting metrics

- Neuse-Tar Pam overlaps with 3 of the 6 minimum requirements: post- construction, public education & outreach, IDDE
- Template provides a plan for what the local government stormwater program will do and how they will accomplish goals
- Self-assessment allows gov'ts to resubmit their plan with amendments
- DEMLR coordination: implementing phase 1 and phase 2 permits
- Qualifying alternative program – we ask that local governments adequately replace what is expected of MS 4 permitting.
- We have over 20 years of data collection so we are getting a better idea of what the requirements need to be, and what is expected
- New SWMP template gets at what needs to be looked at
- Consistency in expectations between MS4s and non-MS4s. Should be expecting similar things from both types of permittees.
- SWANC (Stormwater Association of NC) comments on proposals
 - **Concerned that SWMP changes would cascade up to MS4 permit and would require a change.** This is not required if you have a qualified alternative program.
 - **Concerned about differential treatment between MS4 and non-MS4s.** Only focusing on a subset of requirements: IDDE, public ed, and post-construction stormwater, and will have similar expectations for each.
 - **What happens if there is a suspension?** If the QAP changes, it would require a change in the SWMP
 - **Additional oversights, lawsuits?** We are not modifying the MS4 permits, this is only modifying the SWMP to make sure minimum measurements align
 - **Will this extend to other watersheds?** We are not trying to interfere or change other requirements.
 - **Time concern to revise programs - only have 6-12 months to revise the plan. This is not enough time to hire a consultant.**
 - Template is customizable for existing programs.
 - Specifics for what is expected of a base program will be included.

Questions and Discussion:

Concerned about writing effective programs and does a new development program overstep the legislative mandate. Concerns about what may happen in Jordan and Falls – just thinking ahead and some alarm bells go off.

For Jordan Stage 1 Existing Development, Durham references what is being done for NPDES permits in our annual reports. For many local governments reports it was hard to understand what they were doing in their program because it was vague/ not mentioned. This effort is to help standardize reporting and expectations for all governments. Tried to modify so that it makes sense.

In Durham, for Phase I of Neuse/ Tar-Pamlico, it will basically be what we are currently doing and adding what we anticipate doing the next year. The next year is only if you are evaluating/ changing process for how you are going to meet a specific requirement. Many local

governments are going through CWEP (Clean Water Education Partnership) which reports back to local governments.

For phase II auditing, please coordinate and incorporate it so required entities are not double reporting. Yes, this is happening! We want to mirror it directly so that reporting is seamless.

For Neuse, we submit Phase 2 and retrofits, we don't report anything beyond that. Do you want same thing as what is in MS4 report? Yes, submitting SNAP is required to submit for annual reports, we want to do this efficiently and not require much extra.

Are these new requirements for October 2021? Model program goes to the EMC in January or March. There will be a 6-month timeline for existing Neuse Tar-Pamlico regulated entities to submit their revised report. New reporting format would not be in effect until August 2023, 6 months further out for new folks. May have a need for a data base to collect data nutrient reductions, exports, larger-scale conditions and changes so that these can be tracked.

It is an enormous task to collect data in developing communities - lots of data and lots of work. A one-page summary is one thing, exporting this data is another. We are not asking for any more data collection beyond what is already being done, just asking for the data to be reported. We want this data to track larger scale impacts.

Is a ton of information. What will the state do with it? Will it be useful? It can help determine where studies may be done, or how many studies for each type. Also, looking at different screening, coming up with issues of not having enough data points, and variations for SCMs that don't have much data at all. When we get new data, how often do we recalculate and send it out to the users? Larger concerns may calculate to hundreds of pounds.

From the remote meeting chat, but was unanswered: Is there a change in requirements for public outreach during COVID? Several local governments rely on festivals, farmer's markets, and other things that have been cancelled.

Falls Lake Existing Development Model Program Update

Presenter: John Huisman - NCDEQ DWR

[Slides and Draft can be found on the web at the Oct 2 Meeting Documents.](#)

- Falls Lake Rules are being implemented, broken up into phase I and phase II
- Need to get the Phase 1 development in place
- Goal of expanding toolbox of what local governments could do to meet requirements
- The process to create new practices and standards is slow due to disagreements on calculation methods, implementation, etc.
- Local governments that chooses to include load reduction need to work with the state to develop final number for their plan
- Required elements of local programs: measurement, implementation plan, and annual reporting plan.

- Model program provides basic instructions and DWR’s supporting document expectations.
- The joint compliance approach is an investment-based approach that gets away from counting pounds of nutrients.
- This investment-based approach only applies to eligible activities as described in the Program Document. The list was developed with input from DWR and NGOs in addition to UNRBA and other regulated entities.
- Next steps: revising model program to address public comments, ideally want to bring to the water quality committee in November. [It was presented November 2020.]
- The catalog is a single reference for all the nutrient requirements, pulling information on current approved practices. Tentative plan is to have a draft of that in November for 30-day public comment period.
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Questions and Discussion:

- **Interim Alternative Implementation Approach (IAIA) is the name of the joint compliance investment based approach.**
- Reporting requirements for the IAIA are described in Section 4.0 of the draft Model Program.
- UNRBA is working toward producing a draft of the Interlocal Agreement (ILA) and finalizing the Program Document (a lot of work has been done on this already over the last year and half) that will represent the IAIA and can be submitted to comply with the Stage I Existing Development Rule under the Model Program. We hope to have a final draft of the ILA available before the November 18th UNRBA Board Meeting. Target is to have the IAIA in place by July 1, 2021. There has been a lot of progress, but work remains to develop the details of the program.
- **Does the potential Nutrient Credit Practices list coordinate with the catalog?** The catalog is limited to things that we have credit approved for. The list is the “whole universe of possible practices”.
- **What is DWR's position regarding the IAIA joint compliance approach and regulatory compliance with the rules?** We are supportive of this process and think it is promising. This could provide a good guide for how things are done once the rules are adopted.

Update on Nutrient Practices potential list

Presenter: John Huisman - NCDEQ DWR

[The practices list can be found on the web at the Oct 2 Meeting Documents.](#)

- The list encompasses all the practices suggested over the past several years. Some are approved, some in process, some for future discussion and still more that may not be considered for whatever reason.
- Once approved, the practices are posted to the DWR website.

- Approximately 30 are “in progress”

Questions to consider when reviewing this list:

- Are there any practices that you are currently implementing that are not yet listed as approved?
- Are there any you are interested in moving forward?
- Do you have any research or other info about these practices that we should consider moving forward?

Questions and Discussion:

- **Can we utilize the Chesapeake Bay info for Stream Restoration? To move it up the list of at least interim approval?**
 - Stream restoration is booming throughout the Chesapeake Bay region directly as a result of it being a worthy practice for nutrient removal. Streams and water quality are benefiting as a result. If we want to encourage vs discourage the practice, we should come up with at least some interim approval approach and credit worthiness sooner rather than later.
 - That does make sense but there are limitations, and we would all need to agree on a process to change things.
 - DWR has started a stream restoration based on Chesapeake Bay, but found it to be somewhat wanting. We have been working on what we think is the best approach, disambiguated from the 3-part Chesapeake program practice.
- These practices are so variable, it may be a while before we are able to generalize performance. We need more data.
- We had a lot of input in the last version of the riparian vegetation practice, but it was highly critical. May need to re-envision some parts of it. We need to have a meeting with scientists and subject matter experts present. Maybe we talk about it in terms of riparian nutrient reduction practice. There is a need to understand the science behind some of the stream restoration and riparian vegetation practices and whether this is strong enough support.
- **Due to limited time, this agenda topic is being moved to the next NSAB meeting.**

Future Agenda items:

- Localized flooding
- Nutrient discharges from small wastewater treatment versus what is being reported.
- Update on JLOW status. Please make this a standing agenda item at every meeting.
- The UNRBA IAIA Program Document will hopefully be finalized by the end of the year. UNRBA can present a review in early 2021.
- The Nutrient Practices list discussion will be on the next NSAB agenda.

NSAB Roundtable Updates / final comments:

- Patrick Beggs: JLOW is a few months behind schedule due to COVID issues. Workgroups have been meeting, developing their final reports/ recommendations which will go to the advisory committee to put together one set of recommendations and help determine if there are outstanding issues or conflicts that need to be addressed. After that it will go to the larger JLOW and Jordan community to get feedback on the plan, process, ideas. The advisory committee will incorporate that input and submit a JLOW plan for Integrated watershed management to DEQ.
- Andy McDaniel: We need to reconnect the public with these nutrient management decisions. This could add value and build support on decisions.
- Rich Gannon: Reiterate Andy's co-benefits comment. We had this as a part of our original plan but we need to revisit and update.
- Forrest Westall: I want to thank DWR on all their work on Model Programs. What I would strongly recommend is that the impacted and interested public should put in a good effort to review. These will become the form of future model programs elsewhere such as Yadkin, Catawba, and other watersheds. Decisions are being made that set the pathway on how these programs will be developed and judged.
- David Phlegar: Regarding stream restoration, I understand the world is not perfect and the science is not always as tight as we'd like it, but if its' good enough for the Chesapeake Bay area/rules and folks are implementing like gangbusters, then I think we should at least start with the level of credit that they're doing up there. We can revise later as we learn more or get localized data to refine.

The next NSAB meeting is planned for December 4, 2020.